

TRANSFORMATION IN DEVELOPMENT PLANNING FRAMEWORKS  
FOR PROMOTION OF SUSTAINABLE DEVELOPMENT OF  
AGRICULTURE IN BANGLADESH

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DEDICATION

TO MY PARENTS

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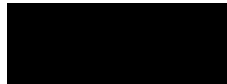
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## STATEMENT OF AUTHENTICATION

The work presented in this thesis is, to the best of my knowledge and belief, original except as acknowledged in the text. I hereby declare that I have not submitted this material, either in full or in part, for a degree at this or any other institution.



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MD. MAHMUDUR RAHMAN

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Source: M. Kahn, 'Concepts, definitions, and key issues in sustainable development: the outlook for the future' (Proceedings of the 1995 International Sustainable Development Research Conference, Manchester, England, March 1995) 2-13 quoted in A. D. Basiago, 'Economic, social, and environmental sustainability in development theory and urban planning practice' (1999) 19 *The Environmentalist* 149

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Adopted from Scott D. Campbell, 'Sustainable Development and Social Justice: Conflicting Urgencies and the Search for Common Ground in Urban and Regional Planning' (2013) 1 *Michigan Journal of Sustainability* 83

## LIST OF SELECTED ACRONYMS

ACC	Anti-corruption Commission
ADP	Annual Development Programme
AOB	Allocation of Business
APA	Annual Performance Agreement
ASEAN	Association of South East Asian Nations
BCCRF	Bangladesh Climate Change Resilience Fund
BCCSAP	Bangladesh Climate Change Strategy and Action Plan
BCCTF	Bangladesh Climate Change Trust Fund
BCM	Billion Cubic Metres
BECA	Bangladesh Environment Conservation Act
BELA	Bangladesh Environmental Lawyers' Association
BNA	Basic Needs Approach
BPC	Bangladesh Planning Commission
BPS	Basic Payment Scheme
CAG	Comptroller and Auditor General
CAP	Common Agriculture Policy
CBD	Convention on Biological Diversity
CBDR	Common but Differentiated Responsibilities
CC	Climate Change
CCD	Climate Compatible Development
CCVI	Climate Change Vulnerability Index
CDKN	Climate & Development Knowledge Network
CIP	Country Investment Plan
CRSA	Climate Resilient Sustainable Agriculture
CSA	Climate-Smart Agriculture
CSO	Civil Society Organisation
CVC	Central Vigilance Commission
CWC	Central Water Commission
DAP	Di-Ammonium Phosphate
DJF	December-January-February
DPC	District Planning Committee
ECNEC	Executive Committee of the National Economic Council



EIA	Environmental Impact Assessment
EPI	Environmental Performance Index
ERD	Economic Relations Division
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FD	Finance Division
FFW	Food for Work
GDP	Gross Domestic Product
GED	General Economics Division
GHG	Greenhouse Gas
GIS	Geographical Information System
GMO	Genetically Modified Organisms
GOB	Government of Bangladesh
GR	Green Revolution
HDA	Human Development Approach
HDI	Human Development Index
HYV	High Yielding Variety
ICARD	International Conference on Agrarian Reform and Rural Development
ICT	Information Communication Technology
IDM	Integrated Disease Management
IDS	International Development Strategy
IFPRI	International Food Policy Research Institute
ILA	International Law Association
ILO	International Labour Organisation
IMED	Implementation Monitoring and Evaluation Division
IMF	International Monetary Fund
INDC	Intended Nationally Determined Contributions
IPM	Integrated Pest Management
IUCN	International Union for Conservation of Nature
JD	Johannesburg Declaration
JFM	Joint Forest Management
JJA	June -July-August
JPOI	Johannesburg Plan of Implementation

KCC	Kisan Credit Card
KP	Kyoto Protocol
LCG	Local Consultative Groups
LDC	Least Developed Countries
LGD	Local Government Division
M&E	Monitoring and Evaluation
MAM	March-April-May
MDG	Millennium Development Goals
MIC	Middle Income Country
MOA	Ministry of Agriculture
MOEF	Ministry of Environment and Forests
MOP	Muriate of Potash
MSP	Minimum Support Price
MTSBP	Medium Term Strategy and Business Plan
NAAEC	North American Agreement on Environmental Cooperation
NAP	National Agriculture Policy
NAPA	National Adaptation Programme of Action
NAPCC	National Action Plan for Climate Change
NBS	Nutrient Based Subsidy
NDC	National Development Council
NEC	National Economic Council
NEMAP	National Environment Management Action Plan
NGO	Non-governmental Organisation
NGT	National Green Tribunal
NIS	National Integrity Strategy
NITI	National Institution for Transforming India
NLASO	National Legal Aid Services Organisation
NMSA	National Mission for Sustainable Agriculture
OECD	Organisation for Economic Co-operation and Development
OMS	Open Market Sale
PA	Protected Areas
PAC	Public Accounts Committee
PBR	People's Biodiversity Register
PC	Planning Commission

PD	Planning Division
PIB	Project Implementation Bureau
PIL	Public Interest Litigation
PIM	Public Investment Management
PP	Perspective Plan
PPA	Public Procurement Act
PPP	Polluter Pays Principle
PPR	Public Procurement Rules
PPT	Parts per Thousand
PRS	Poverty Reduction Strategy
RCH	Resource Curse Hypothesis
RDPE	Rural Development Programme for England
RTI	Right to Information
SAARC	South Asian Association for Regional Cooperation
SAF	Structural Adjustment Facilities
SAP	Structural Adjustment Programmes
SDA	Sustainable Development of Agriculture
SD	Sustainable Development
SDG	Sustainable Development Goal
SIA	Strategic Impact Assessment
SPCR	Strategic Programme for Climate Resilience
SSWHS	Sub-surface Water Harvesting Structures
STAMP	SusTainability Assessment and Measurement Principles
TI	Transparency International
TSP	Triple Super Phosphate
UK	United Kingdom
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNGA	United Nations General Assembly
UP	Union Parishad

USA	United States of America
USAID	United States Agency for International Development
UZP	Upazila Parishad
WB	World Bank
WCED	World Commission on Environment and Development
WCS	World Conservation Strategy
WSSD	World Summit on Sustainable Development
WTO	World Trade Organisation
WUA	Water User Associations
WW II	Second World War
WWF	World Wildlife Fund
ZP	Zila Parishad

## GLOSSARY

Aman	<i>Aman</i> is a monsoon rice crop in Bangladesh. There are two types of <i>Aman</i> Rice, they are <i>Broadcast Aman</i> (usually sown in the month of March/April) and <i>Transplanted Aman</i> (usually planted during June and July). Aman rice crops are harvested in the month of November and December.
Aus	<i>Aus</i> is a kind of rice crop that grows in Bangladesh. There are two types of <i>Aus</i> Rice, they are <i>Broadcast Aus</i> (usually sown in the month of March/April and harvested in July/August) and <i>Transplanted Aus</i> (usually planted in late February to April and harvested in July/August).
Boro	<i>Boro</i> is a kind of rice crop grown in Bangladesh which is planted usually in November to January and harvested during April-June.
City Corporation	<i>City Corporation</i> is an urban local government institution in Bangladesh having larger jurisdiction than a municipal corporation (Pourashava).
Flash flood	<i>Flash flood</i> is one of the most common forms of natural disaster in the hilly region of Bangladesh that causes huge damage to agricultural production.
Kharif-I	Early monsoon cropping season in Bangladesh (16 March to 15 July).
Kharif-II	Monsoon cropping season Bangladesh (16 July to 15 October).
Landless	These farmers own less than 0.05 acres of land in Bangladesh.
Large Farmers	These farmers own more than 7.50 acres of land in Bangladesh.
Middle Farmers	These farmers own between 2.50 to 7.49 acres of land in Bangladesh.

Parishad	<i>Parishad</i> means a committee combination with elected (selected, in absence of election) chairman and members of a local government in Bangladesh.
Pourashava	<i>Pourshava</i> is synonymous to a Municipal Corporation. It is an urban local government institution in Bangladesh.
Rabi	<i>Rabi</i> is the winter cropping season in Bangladesh (16 October to 15 March).
Small farmers	These farmers own between 1.50 to 2.49 acres of land in Bangladesh.
Union	<i>Union</i> is the lowest local government unit in Bangladesh declared in accordance with the Article 59 of the Constitution of the People's Republic of Bangladesh.
Union Parishad	<i>Union Parishad</i> means an elected Union Council constituted under the law in Bangladesh.
Upazila	The <i>Upazila</i> is the second tier of the local government in Bangladesh. It literary means a sub-district. Previously, it was called Thana. Upazila has the jurisdiction over some unions' areas and it is declared a part of administrative system.
Upazila Parishd	<i>Upazila Parishad</i> means an elected Upazila Council constituted under the law in Bangladesh.
Yield gap	The comparison between simulated potential yields and production with observed yield and production of crops currently grown.
Zila Parishad	<i>Zila</i> literary means district. A <i>Zila Parishad</i> is a council of elected (selected, in absence of election) persons at district level in Bangladesh.

## PRESENTATIONS

‘National Planning Frameworks for Sustainable Agricultural Development in Bangladesh’, paper presented at the School of Law Postgraduate Colloquium, Western Sydney University, 29 October 2015.

‘Regulatory Framework for Sustainable Agricultural Development Planning in Climate Change Context in Bangladesh’, thesis synopsis presented in 3Minutes Competition at the School of Law, Western Sydney University. Runners-up prize winner.

‘Transformation in Development Planning Frameworks for Promotion of Sustainable Development of Agriculture in Bangladesh’, thesis synopsis presented in 3Minutes Competition at the School of Law, Western Sydney University. Peoples’ choice prize winner.

## THESIS ABSTRACT

This research provides a critical investigation of Bangladesh agricultural development planning frameworks in light of principles of sustainable development of agriculture (SDA) with a view to guide the government in finding ways to promote sustainable development in the agriculture sector through planning process. Even though development planning is not a panacea for the promotion of sustainable development at the national level, this process is suggested in many important international consensuses for implementing the internationally agreed agendas at country level. The international consensus on sustainable development as formulated in the United Nations (UN) Sustainable Development Goals (SDGs) also suggest that governments find ways for internalisation of SDGs in governments' planning processes and synchronise the SDGs with relevant ongoing processes of development.

The integrated and universally applicable Sustainable Development Goals (SDGs) incorporate some sustainable agriculture goals that have relevance to the principles agreed in different international forums for promotion of sustainable development. Moreover, sustainable agriculture goals are integrated with other relevant sustainable development goals, such as poverty eradication, elimination of inequality, biodiversity protection, addressing climate change and promotion of governance and citizen participation, right to information and access to justice at country level. These diversified but integrated goals are critical for sustainable development of the agriculture sector.

Given that the SDGs are aspirational and seek internalisation at country level through development planning frameworks, this research finds some internationally agreed principles as the basis for internalisation of the goals of sustainable development of agriculture at country level. This policy research examines the appropriateness of Bangladesh development planning frameworks in promoting the SDA in light of seven SDA principles, derived from internationally agreed guidelines on sustainable development in the context of agriculture. These principles provide the basis for reviewing the adequacy of development planning frameworks at national level. Before reviewing the Bangladesh development planning frameworks, the research examines the agricultural development approaches of India that pursues sustainable development of agriculture through its planning frameworks. India has been selected for this purpose because of its similarities with Bangladesh in respect to planning frameworks, legal system and agricultural development approach. The Bangladesh



development planning framework is reviewed to identify the gaps and improvements required for the promotion of SDA based on internationally agreed SDA principles and comparative experiences. This research finally recommends transformative proposals for filling the competency gaps in planning frameworks for promotion of SDA in Bangladesh.

The promotion of SDA through development planning frameworks in Bangladesh requires an integrated agenda by different agencies, at different levels of the government, in a co-ordinated way. This change will need political commitment both at national and local level as well as good governance through transparent, participatory and accountability processes. The strong commitment of the government can advance the transformational agendas as has been seen in assistance to subsidies and other safety net programmes in Bangladesh. International cooperation in respect of technological development, capacity building and financing for implementing sustainable development interventions is also critical in promoting the SDA in Bangladesh.

# CHAPTER I

## INTRODUCTION

### *A Introduction*

This research proposes to examine the competence of development<sup>1</sup> planning<sup>2</sup> frameworks<sup>3</sup> in Bangladesh in pursuing sustainable development of agriculture (SDA)<sup>4</sup> and to recommend necessary transformational changes in the development planning frameworks of the government of Bangladesh.<sup>5</sup> The development planning approach of the government of Bangladesh in this research is identified as ‘determination of long-term development perspective of priorities and objectives, goals and strategies of medium and short-term plans within the framework of the long-term perspective and formulation of policy measures for the achievement of planned goals and targets.’<sup>6</sup>

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<sup>1</sup>Reidar Dale, *Development Planning Concepts and Tools for Planners, Managers and Facilitators* (Zed Books, 2004)1[2-3]. Development is considered as a desirable ongoing or intended process of change that generates some perceived benefits for people, or as a state of perceived human well-being attained through such a process.

<sup>2</sup> Tracy B. Augur, 'Land Planning for States and Regions' (1936) 2(1) *Journal of the American Institute of Planners* 1[2];

Stephanie B. Kelly, *Community Planning* (Rowman & Littlefield Publishers, 2004)xii[2]486[1];

Diana Conyers and Peter J Hills, *An Introduction to Development Planning in the Third World* (John Wiley & Sons, 1984)3

Planning is considered a proactive continuous process in the public domain for decision making or designing a desired future, and of effective ways of achieving future goals through using available resources.

Development planning in this thesis refers to a proactive process that is used for developing policies and programs to fulfil diverse needs and goals, and where planners project the needs of the residents and link them with specific action plans and programmes for the future.

<sup>3</sup> The Law Dictionary, *What is Framework?*< <http://thelawdictionary.org/framework/>>; Business Dictionary, *Framework* <<http://www.businessdictionary.com/definition/framework.html#ixzz4956o590i>>.

The framework is a broad outline of integrated items that promotes a particular approach to achieve a specific purpose, and serves as a guide that can be adjusted as and when needed by adding or deleting items.

<sup>4</sup> J. Brian Hardaker, *Guidelines for the Integration of Sustainable Agriculture and Rural Development into Agricultural Policies*. (Food and Agriculture Organization of the United Nations, 1997) [2.1]; M. Carley, *Policy Management Systems for Sustainable Agriculture and Rural Development* (International Institute for Environment and Development and FAO, 1994) cited in J. Brian Hardaker, *Guidelines for the Integration of Sustainable Agriculture and Rural Development into Agricultural Policies* (Food and Agriculture Organization of the United Nations, 1997)[2.2].

Food and Agriculture Organization of the United Nations (FAO) includes rural development with agricultural development and identifies sustainable development of agriculture as :

the management and conservation of the natural resource base, and the orientation of technological and institutional change so as to ensure the attainment and continued satisfaction of human needs for present and future generations. Such sustainable development (in the agriculture, forestry and fisheries sectors) conserves land, water, plant and animal genetic resources, is environmentally non-degrading, technically appropriate, economically viable and socially acceptable.

The successful implementation of sustainable development of agriculture requires

integrated policy, planning and social learning processes; its political viability depends on the full support of the people it affects through their governments, social institutions and private activities linked together in participative action.

<sup>5</sup> The development planning framework means the integrated system of rules or procedures, processes, principles and ideologies that work as the basis for development decision making. This research identifies both the central or national and local level planning frameworks as development planning framework of Bangladesh. However, in the case of Indian example, development planning frameworks include federal or national level and State and local level planning frameworks.

<sup>6</sup> Government of the People’s Republic of Bangladesh, Planning Division, *Planning Commission Handbook* (1983)1-2.

The ‘development planning’ as a government process in Bangladesh includes policy planning, sectoral planning, project and program planning, their implementation, monitoring and evaluation by the government.

The global consensus in the form of United Nations Sustainable Development Goals (SDGs),<sup>7</sup> particularly includes the goals for promotion of sustainable development of agriculture.<sup>8</sup> The internationally agreed sustainable development principles have shaped the preparation of these aspirational SDGs at the United Nations (UN) and the specific goals of agricultural development are integrated with other goals, such as poverty eradication, eco-integrity, citizen participation, and access to justice.<sup>9</sup> The promotion of the agriculture sector under this approach of sustainable development (SD) requires pursuing these goals together.

Given that the SDGs are aspirational and these goals suggest governments find ways for internalisation in governments' planning process and to synchronise the SDGs with relevant ongoing processes of development,<sup>10</sup> this research has identified some standard principles necessary for guiding the promotion of sustainable development of agriculture (SDA) through the planning process at country level. These SDA principles are prepared in light of internationally promoted sustainable development principles, the major planning principles relevant to sustainable development as well as principles applied in climate change treaties. The planning principles are integrated with SD principles to synchronise the two processes, however principles relevant to climate change treaties are examined to find their relevance to promotion of SD and more particularly SDA.

The integrated SDA principles identified in this research are considered guiding principles for the governments to apply in the process of internalisation and customisation of global goals at country level through planning processes. This research intends to examine the state of competency of development planning frameworks in the government of Bangladesh in applying these guiding SDA principles for shaping the development interventions in the agriculture sector. This analysis of the extent of competence of country planning frameworks will seek to articulate necessary changes in planning frameworks for internalisation of SDA principles to promote SDA in Bangladesh.

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<sup>7</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/RES/70/1 (25 September 2015)Preamble[2]-[5].

<sup>8</sup> *Ibid* goals 2.3-2.5, 2a-2c.

<sup>9</sup> *Ibid* [10-13], [55].

<sup>10</sup>*Ibid* [55].

This research has to some extent relevance to the approach adopted by Berke and Conroy to review some community plans in light of some basic principles.<sup>11</sup> They suggested six basic principles – ‘harmony with nature, liveable built environments, place-based economy, equity, polluter pays and responsible regionalism’<sup>12</sup> for evaluating some community level plans to find the competency of those plans for promotion of sustainable development.<sup>13</sup> Their research focus was however very narrow and limited to the substantive perspectives of planning and did not include the process perspectives of development planning. Their approach was very general and did not include many important principles of sustainable development such as precaution, governance and citizen participation in decision making process.<sup>14</sup> Moreover, their research was not intended to suggest the internalisation process of international goals into country practices. This research has however a more broad perspective and includes both substantive and procedural aspects of planning to comprehensively address the planning perspectives. The principles for SDA have been identified in light of three sets of principles relevant to promote sustainable development in the agriculture sector.

Although the scope of this research is limited to Bangladesh planning frameworks and it has focused on agriculture, this policy research examines international approaches and principles relevant to sustainable development of agriculture, some good examples of sustainable agricultural practices in different countries and more particularly the Indian government’s approaches for promotion of sustainable development of agriculture. This research finally analyses the Bangladesh perspective to articulate potential improvements for planning frameworks of the government to facilitate the Bangladesh government’s preparation in promoting the sustainable development agenda in the agriculture sector.

This introductory chapter presents the background of planning for sustainable development of agriculture in Bangladesh and the justifiability of this research because it contributes to knowledge about this area that has not yet been explored in a holistic manner in Bangladesh. This chapter will explicitly present the research questions that this research intends to answer and illustrate the scope of this research. A discussion on research methodology applied in

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<sup>11</sup> Philip R. Berke and Maria Manta Conroy, ‘Are We Planning for Sustainable Development?’ (2000) 66(1) *Journal of the American Planning Association* 21.

<sup>12</sup>Ibid 23.

<sup>13</sup>Ibid 24.

<sup>14</sup>Ibid 23.

conducting this study is also presented in this chapter along with a brief background of SDA and its challenges in Bangladesh. This chapter will conclude with an overview of different chapters of this thesis.

## *B Background and Justification of Study*

This section will briefly discuss the background of promotion of sustainable development of agriculture (SDA) in Bangladesh through the development planning process. It also illustrates gaps in knowledge base about promotional status of SDA in Bangladesh and presents justification for studying the competency of planning frameworks for advancing the SDA agenda in light of sustainable development approach.

### *1 Promotion of Sustainable Development of Agriculture*

Sustainable development (SD) as an integrated approach of development refers to ‘a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are made consistent with future as well as present needs.’<sup>15</sup> SD embraces the difficult task to pursue economic improvement, equity and maintain ecological integrity over the generations in an integrated manner.<sup>16</sup> SD requires meeting the basic needs of all that demands economic growth with equity in distribution of resources for sustaining the growth supported by political systems that secure effective citizen participation in decision making.<sup>17</sup> The promotion of SD is an ongoing process and the characteristics of SD ‘change over time, across space and location and within different social, political, cultural and historical contexts.’<sup>18</sup>

Agriculture,<sup>19</sup> as a fundamental instrument for SD in the twenty first century, can work in conjunction with other sectors to produce faster growth, reduce poverty, and sustain the

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<sup>15</sup> United Nations World Commission on Environment and Development, *Report of the World Commission on Environment and Development: Our Common Future*, Annex to document A/42/427- Development and International Co-operation: Environment (1987) ch1[30].

<sup>16</sup> Jennifer A. Elliott, *An Introduction to Sustainable Development* (Routledge, 4<sup>th</sup> ed, 2013) 54.

<sup>17</sup> United Nations World Commission on Environment and Development, *Report of the World Commission on Environment and Development: Our Common Future*, Annex to document A/42/427- Development and International Co-operation: Environment (1987) ch1[27-28].

<sup>18</sup> Susan Baker, *Sustainable Development* (Routledge, 2006) 8.

<sup>19</sup> Chris Park and Michael Allaby, *A Dictionary of Environment and Conservation* (Oxford University Press, 2<sup>nd</sup> ed, 2013)<<http://www.oxfordreference.com/view/10.1093/acref/9780199641666.001.0001/acref-9780199641666-e-181>>.

environment.<sup>20</sup> It is therefore suggested in the *World Development Report 2008* that interconnectedness among agriculture, natural resource conservation, and the environment is an integral part of using agriculture for sustainable development.<sup>21</sup> Moreover, in order to contribute to goals of sustainable development the agriculture sector needs to be developed in such a way that farming systems becomes resource-conserving, socially supportive, commercially competitive and environmentally sound and have the ability to maintain their productivity and usefulness indefinitely.<sup>22</sup>

Although there are tendencies that the scholars sometimes interchangeably use the term sustainable agriculture and sustainable development of agriculture,<sup>23</sup> this research has focused on ‘sustainable development of agriculture’ which is beyond the technical sustainability of agriculture to produce food. It is beyond the sustainable agriculture concept that refers to agricultural processes which do not exhaust any irreplaceable resources essential to agriculture and use of biological based ‘organic fertilisers’ without recourse to agro-chemicals.<sup>24</sup> Moreover, sustainable development of agriculture is not only limited to environmental protection and resource conservation aspects of sustainability.<sup>25</sup> The underlying principles for sustainable development of agriculture suggested by different scholars, institutions and development organisations basically follow the principles of sustainable development.<sup>26</sup>

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‘Agriculture’ is basically the practice of cultivating the soil, growing crops, or raising livestock for human use, including the production of food, feed, fibre, fuel, or other useful products.

Noel Castree, Rob Kitchin and Alisdair Rogers, *A Dictionary of Human Geography* (Oxford University Press, 2016) <<http://www.oxfordreference.com/view/10.1093/acref/9780199599868.001.0001/acref-9780199599868-e-34?rskey=T3k11X&result=34>>; World Encyclopedia, *Agriculture* (Philip's, 2014) <<http://www.oxfordreference.com/view/10.1093/acref/9780199546091.001.0001/acref-9780199546091-e-181?rskey=SofYjp&result=167>>.

In many cases fishing and forestry are added to the crops and livestock subsectors of agriculture. However, these are generally not regarded as part of agriculture. This research has however focused on crop agriculture only and crop agriculture will be defined as agriculture throughout this thesis.

<sup>20</sup> The World Bank, ‘Agriculture and Development’ (World Development Report 2008, The World Bank, 2007) (‘World Development Report’)1[3-4].

<sup>21</sup> Ibid 1-4.

<sup>22</sup> Christian Anton Smedshaug, *Feeding the World in the 21st Century: A Historical Analysis of Agriculture and Society* (Anthem Press, 2010)284[5]; John Ikerd, ‘Sustainability's Promise’ (1990) 45(1) *Journal of Soil and Water Conservation* 4.

<sup>23</sup> John Mason, *Sustainable Agriculture* (Landlinks Press, 2003)3[2]; Eric Lichtfouse, *Sustainable Agriculture* (Springer, 2009)3, quoting Mohamed Gafsi et al, ‘Towards sustainable farming systems: Effectiveness and deficiency of the French procedure of sustainable agriculture’ (2006) 90(1) *Agricultural Systems* 226.

<sup>24</sup> Hugh Lehman, E. Ann Clark and Stephan F. Weise, ‘Clarifying the Definition of Sustainable Agriculture’ (1993) 6(2) *Journal of Agricultural and Environmental Ethics* 139[1];

Dr Rajiv K. Sinha, ‘The Concept of Sustainable Agriculture: An Issue of Food Safety and Security for People, Economic Prosperity for the Farmers and Ecological Security for the Nations’ (2009)5(S) *American-Eurasian J. Agric. & Environ. Sci.* 2.

<sup>25</sup> Riley E. Dunlap, Curtis E. Beus, Robert E. Howell and Jack Waud, ‘What is Sustainable Agriculture?’(1993)3(1) *Journal of Sustainable Agriculture* 35.

<sup>26</sup> Food and Agriculture Organization of the United Nations (FAO), *The Post-2015 Development Agenda and the Millennium Development Goals* <<http://www.fao.org/post-2015-mdg/14-themes/sustainable-agriculture/en/>>.

Agriculture as a key sector in addressing the overarching poverty alleviation and equity promoting goals of sustainable development also has been distinctly included in the SDGs immediate after the first goal – end poverty.<sup>27</sup> The goals identified in the SDGs for sustainable agricultural development are beyond the environmental protection and resource conservation aspects of sustainability. These goals include, among others, the goals of improvement of agricultural productivity and incomes of small farmers, equitable access to resources and fair and equitable sharing of benefits accruing from genetic resources.<sup>28</sup> These goals also include the non-distorted operation of international agricultural markets, investment in agricultural research, extension, technology development and rural infrastructure.<sup>29</sup> These goals are now to be pursued along with other goals of the SDGs. However, the aspirational goals included in the SDGs have to be customized through country driven planning processes in light of specific country context.<sup>30</sup>

## *2 Country Driven Planning Process for Agricultural Development*

Apart from the role of agriculture in facilitating food security, agriculture is at least twice as effective in reducing poverty as gross domestic product (GDP) growth originating outside agriculture.<sup>31</sup> The developing countries need to pursue social goals through a more conducive policy framework and increased investment in agricultural and rural development.<sup>32</sup> This requires the visible hand of the government of different countries. The government can facilitate by providing core public goods, improving the investment climate, regulating natural resource management and securing desirable social outcomes. However, the government, in doing this, requires greater capacity to coordinate across sectors and to form partnerships with private and civil society actors.<sup>33</sup>

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<sup>27</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/RES/70/1 (25 September 2015)Goal 2.

<sup>28</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/RES/70/1 (25 September 2015)Goals 2.3, 2.4, 2.5.

<sup>29</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/RES/70/1 (25 September 2015)Goals 2a, 2b.

<sup>30</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/RES/70/1 (25 September 2015)[55].

<sup>31</sup> *World Development Report 2008* above n 20, 6.

<sup>32</sup> Bingxin Yu, Lingzhi You and Shenggen Fan, 'Toward a Typology of Food Security in Developing Countries' (Discussion Paper, International Food Policy Research Institute, 2010)3[4].

<sup>33</sup> *World Development Report 2008* above n 20, 2.

While the state's responsibility for development has been reiterated over the generations in different international conventions, declarations and agreements,<sup>34</sup> the effort to address environmental concerns about development through development planning was firmly instituted in the *Declaration of the United Nations Conference on the Human Environment*. In Principle 13 of this Declaration it has been stated that:

in order to achieve a more rational management of resources and thus to improve the environment, States should adopt an integrated and coordinated approach to their development planning so as to ensure that development is compatible with the need to protect and improve environment for the benefit of the their population.<sup>35</sup>

Planning has been an instrument for directing the development of society through process of achieving agreements.<sup>36</sup> However, the planning for development is now not only important to direct our actions for future positive progress but also to advocate the design, development, and implementation of plans, programmes, and laws to eliminate or substantially mitigate very long-term environmental problems while maintaining short-term social goals.<sup>37</sup>

The state interventions for facilitating development, and more particularly agricultural development, have been quite visible around the world for centuries. The states have been doing it through different mechanisms, such as creating trade barriers in early periods, then implementing schemes or projects and providing direct and indirect subsidies.<sup>38</sup> Now, under the auspices of World Trade Organisation (WTO) where agricultural trade is to some extent regulated through different mechanisms,<sup>39</sup> the nomenclature and nature of assistance to agriculture sector has to some extent changed. Instead of creating trade barriers, now the countries around the world support development of agriculture sector through providing incentives to farmers for income support, developing public goods and food security.

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<sup>34</sup> *Declaration on the Right to Development*, GA Res 41/128, UN GAOR, 41<sup>st</sup> sess, 97<sup>th</sup> plen mtg, UN Doc A/RES/41/128(4 December 1986); *Agenda for Development*, GA Res 51/240, UN GAOR, 51<sup>st</sup> sess, Agenda Item 96(b) UN Doc A/RES/51/240(15 October 1997)art 44,H175; *Declaration on the Establishment of a New International Economic Order*, GA Res S-6/3201, UN GAOR, 6<sup>th</sup> special sess, 2229<sup>th</sup> plen mtg, Agenda Item 7, UN Doc A/RES/S-6/3201(1 May 1974).

<sup>35</sup> *Declaration of the United Nations Conference on the Human Environment*, UN Doc A/Conf.48/14/Rev.1(1973) .

<sup>36</sup> K. Lass and U. Kase, 'International and Local Level Planning Cooperation' in E. Beriatos et al (eds), *Sustainable Planning and Development* (WIT Press, 2003)

<sup>37</sup> Bruce E. Tonn, '500-Year Planning: A Speculative Provocation' (1986)52(2) *Journal of the American Planning Association* 185[2].

<sup>38</sup> Daniel A. Sumner, *Agricultural Subsidy Programs* (The Concise Encyclopaedia of Economics) <<http://www.econlib.org/library/Enc/AgriculturalSubsidyPrograms.html#>>.

<sup>39</sup> *Marrakesh Agreement Establishing the World Trade Organisation*, opened for signature 15 April 1994, 1867 UNTS 3 (entered into force 1 January 1995) annex 1A(Agriculture Agreement) pt IV, art 6 Domestic Support Commitments.



Despite the local nature of agriculture, expanding food production requires active state intervention because new reclamations and innovations entailed a glutting of markets.<sup>40</sup> It has also been evident that agriculture is among the regulated sectors in almost all countries of the world where state interventions are visible through structural policies and direct and indirect assistance to farmers and the agriculture industry.<sup>41</sup>

Some developed countries now directly promote the SDA through policy and planning frameworks. For example, European countries do it through Common Agriculture Policy (CAP) and their planning regulations.<sup>42</sup> Some other countries do it through regulatory functions. For example, the United States of America (USA) directly assists sustainable agricultural development processes through legislative provisions and planning regulations.<sup>43</sup> Developing countries also assist the agriculture sector through direct subsidies and implementing development projects and programmes. They do it through policy planning frameworks. India promotes its sustainable development effort in the agriculture sector through implementing different development projects and subsidies.<sup>44</sup> The state role in integrating the three defining aspects of SDA is thus expressed through planning and policy interventions, be it through national planning frameworks or local level planning.

### *3 Agricultural Development in Bangladesh through Development Planning*

The government of Bangladesh, like many developing countries, took the responsibility for building the country through development planning immediately after the independence of Bangladesh in 1971.<sup>45</sup> The government of Bangladesh has adopted planned development of

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<sup>40</sup> Smedshaug, above n 22, 11[3].

<sup>41</sup> Giovanni Federico, *Feeding the World: An Economic History of Agriculture, 1800-2000* (Princeton University Press, 2005)187.

<sup>42</sup> See, eg, *Regulation (EU) No 1305/2013 Of the European Parliament and of the Council of 17 December 2013 on support for rural development* [2013] OJ L 347/487;

*Regulation (EU) No 1306/2013 of the European Parliament and of the Council of 17 December 2013 on financing, management and monitoring of the common agricultural policy* [2013] OJ L 347/549;

*Regulation (EU) No 1307/2013 of the European Parliament and of the Council of 17 December 2013 on establishing rules for direct payments to farmers under support schemes within the framework of the common agricultural policy* [2013] OJ L 347/608;

*Regulation (EU) No 1308/2013 of the European Parliament and of the Council of 17 December 2013 on establishing a common organisation of the markets in agricultural products* [2013]OJ L 347/671.

<sup>43</sup> *Food, Agriculture, Conservation, and Trade Act of 1990*, KF 1692.A 31 Public Law 101-624, Title XVI, Subtitle A, Section 1603, The USA (1990).

<sup>44</sup> Government of India, Ministry of Agriculture, *The National Mission for Sustainable Agriculture* (2010); Government of India, Department of Fertilisers, *Fertiliser Policy* < <http://fert.nic.in/page/fertiliser-policy>>.

<sup>45</sup> Government of the People's Republic of Bangladesh, Planning Commission, *The First Five Year Plan 1973-1978* (1973)2.

agriculture as one of the prime constitutional principles.<sup>46</sup> The public investments accompany the constitutional commitment for planned development growth. The planning for development, including enhancing food security through increased production, receives a high priority. The government has resorted to development planning as resources are limited and plans and priorities need to be identified for resource allocation and its proper management.<sup>47</sup>

Over the past forty-five years, since independence, Bangladesh has practiced development planning to direct agricultural improvement, poverty alleviation and other aspects of development. The government prepares long, medium and short term plans such as a master plan for 100 years, a perspective plan for 10 years, five-year plans and annual development programmes. It also prepares projects and implements them to translate the vision into reality.<sup>48</sup> The policies are also prepared to express the government's priorities. The government also enacts laws and rules to facilitate the development process and motivate people to development in accordance with the greater interest of the country.<sup>49</sup> The government's intervention is also expressed through different safety nets and rehabilitation programmes and schemes.<sup>50</sup>

The country's agricultural development is pursued with direct state support in the form of public goods creation such as varieties development, irrigation infrastructure creation and seed supply.<sup>51</sup> The development also is facilitated by direct and indirect subsidies for fertiliser and other implementers of agriculture, human capital improvement through training, credit support at lower interest rate and rehabilitation assistance.<sup>52</sup> The safety net programmes in conjunction with output price support also support the development of agriculture.<sup>53</sup> Many of these interventions are meant to be managed through implementing plans in the form of development projects, policy implementation through schemes and direct and indirect

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<sup>46</sup> *The Constitution of the People's Republic of Bangladesh* arts. 15, 16.

<sup>47</sup> Government of the People's Republic of Bangladesh, Planning Commission, *Sixth Five Year Plan FY 2011- FY 2015*(2011) pt 1,10-11.

<sup>48</sup> *Planning Commission Handbook* above n 6, 1-2.

<sup>49</sup> See, eg, *The Seeds Ordinance 1977* (Bangladesh), Ordinance No XXXIII of 1977; *The Seed Rules 1998* (Bangladesh)

<sup>50</sup> See, eg, Government of the People's Republic of Bangladesh, Finance Division, *Safety net Programmes (2015-2016)* < [http://www.mof.gov.bd/en/budget/15\\_16/safety\\_net/safety\\_net\\_en.pdf](http://www.mof.gov.bd/en/budget/15_16/safety_net/safety_net_en.pdf)>.

<sup>51</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, *5 Years' Activities of the Ministry of Agriculture (2014)* 3-4('5 Years' Activities of the Ministry of Agriculture').

<sup>52</sup> *Ibid* 4-6.

<sup>53</sup> Hamid Miah, 'Agriculture Sector Development Strategy' (Background paper for preparation of the Seventh Five Year Plan of the government of Bangladesh, 2015)20.

subsidy distribution and rehabilitation programmes.<sup>54</sup> Moreover, the agricultural development interventions have also relevance to different legislation of agriculture sector as well as legislation and policies of other sectors such as environment and climate change, water resources and disaster management.<sup>55</sup>

#### *4 Necessity of Development Planning for Sustainable Development of Agriculture (SDA) in Bangladesh*

There could be debate about the role of development planning process for development of agriculture sector; but the reality indicates that agriculture has so far progressed with the planned development process of the government. Agricultural development has helped the country to achieve self-sufficiency in food grains,<sup>56</sup> and released almost 30 per cent of the labour force to other sectors and the national growth of Bangladesh is significantly associated with the growth of agriculture.<sup>57</sup>

The country's self-sufficiency in food grain production is a remarkable success. However, at the same time a serious question relating to the sustainability of agricultural production is also raised as most of the success has come at the cost of natural resource degradation. The inequity widens,<sup>58</sup> and the profitability of farmers without the support of government is at risk, although poverty alleviation has also seen a major success in reducing the poverty rate by 53 per cent in last 25 years.<sup>59</sup> The concern for sustainable agricultural development also raised another question that non-sustainability of agriculture may lead to increased poverty in the future since the large majority of the rural poor depend heavily on crop agriculture. Therefore, the agricultural sector needs to be more efficient and more diversified, improving the prospects of its sustainability.<sup>60</sup>

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<sup>54</sup> 5 Years' Activities of the Ministry of Agriculture above n 51; Government of the People's Republic of Bangladesh, Planning Commission, *Sixth Five Year Plan FY 2011- FY 2015*(2011) pt 2, 12-14; Government of the People's Republic of Bangladesh, Ministry of Agriculture, *National Agriculture Policy 2013* (2013).

<sup>55</sup> *The Bangladesh Irrigation Water Rate Ordinance 1983* (Bangladesh) Ordinance No XXXI of 1983; *The Ground Water Management Ordinance 1985* (Bangladesh); জলবায়ু পরিবর্তন ট্রাস্ট আইন ২০১০ [Climate Change Trust Act 2010] (Bangladesh); বাংলাদেশ পানি আইন ২০১৩ [Bangladesh Water Act 2013] (Bangladesh) Act No 14 of 2013; দুর্যোগ ব্যবস্থাপনা আইন ২০১২ [Disaster Management Act 2012] (Bangladesh) Act No 34 of 2012.

<sup>56</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, *Focused Write-up of the Ministry of Agriculture for Seventh Five Year Plan*(2015)9.

<sup>57</sup> Ebney Ayaz Rana and Rashed Al Mahmud Titumir, 'Recent Trends of Growth in Agriculture, Industry and Power' (2014) 5(3) *Bangladesh Economic Update* 3.

<sup>58</sup> S R Osmani, 'Linking Equity and Growth in Bangladesh' (Background paper prepared for the Seventh Five Year Plan, Government of Bangladesh, Planning Commission, 2015)15.

<sup>59</sup> Government of the People's Republic of Bangladesh, Planning Commission, *Millennium Development Goals Bangladesh Country Report 2013* (2014)15.

<sup>60</sup> Q K Ahmed and Ahsan Uddin Ahmed, *Bangladesh: Citizens' Perspective on Sustainable Development* (Bangladesh Unnayan Parishad, 2002)4.

Now, the sector will have to contribute to the economy at least at a rate of more than four and half per cent to advance the country vision for 2021 in becoming a middle income country and by 2041 a developed country.<sup>61</sup> The sustainable development goals for 2030 also place some targets for doubling the productivity of agriculture and poverty alleviation along with maintenance of ecological integrity and social development.<sup>62</sup>

The planning now becomes more critical as the development of agriculture faces some real challenges on sustainability grounds. While some of the challenges have a direct linkage with the development policies of the government, others such as climate change negativities are linked to global and domestic development policies. The production and productivity is now under threat due to the magnitude of climate change impacts such as sea level rise, flooding, salinity, drought and cyclones.<sup>63</sup> The government therefore intends to promote sustainable development of agriculture through planned investment along with protection from climate change and natural disasters.<sup>64</sup>

The urgency for improving natural resource integrity, improvement in productivity, as well as ensuring social equity in the context of poverty eradication agenda of the government, demands an integrated planning framework. While development planning is the predominant coordinating mechanism in the hands of the government, it needs to be attuned with the sustainable development principles and goals. It is also necessary to bring consistency among different interventions of individual sectors and between sectors.<sup>65</sup> Given the challenges to pursue development interventions in an integrated manner, the government of Bangladesh has stressed efficient planning to improve the efficiency of public spending in an environment of weak administrative capacity and limited budgetary resources.<sup>66</sup>

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<sup>61</sup>Prime Minister Sheikh Hasina, 'Conference Opening Speech' (Speech delivered at the *South Asia Food Rights Conference-2015, Dhaka, Bangladesh*, 30 May 2015) 2  
<[http://pmo.portal.gov.bd/sites/default/files/files/pmo.portal.gov.bd/pm\\_speech/4d1b0b88\\_ca1b\\_44da\\_ad12\\_938f02093006/food\\_right\\_conf\\_300515.pdf](http://pmo.portal.gov.bd/sites/default/files/files/pmo.portal.gov.bd/pm_speech/4d1b0b88_ca1b_44da_ad12_938f02093006/food_right_conf_300515.pdf)>.

<sup>62</sup>*Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/RES/70/1 (25 September 2015) Goals 1, 2.

<sup>63</sup> Gulshan Ara Parvin and S. M. Rezaul Ahsan, 'Impacts of Climate Change on Food Security of Rural Poor Women in Bangladesh' (2013) 24(6) *Management of Environmental Quality: An International Journal* 804-805.

<sup>64</sup> Government of the People's Republic of Bangladesh, Planning Commission, *National Sustainable Development Strategy* (2013)26-27.

<sup>65</sup> Food and Agriculture Organization of the United Nations (FAO), *Incorporating Climate Change Considerations into Agricultural Investment Programmes: A Guidance Document* (2012)11.

<sup>66</sup> Government of the People's Republic of Bangladesh, Planning Commission, *Sixth Five Year Plan FY 2011- FY 2015*(2011) pt 2, 10.

## 5 *Gaps in the Study of Development Planning in Bangladesh*

### *(a) Focus of the Research*

This research focuses on development planning frameworks of the government of Bangladesh that deal with substantive and procedural aspects of development planning that aim to improve the state of sustainable development of the country. The development planning agenda is examined in this research as an integrated agenda and the research explores gaps in both substantive and procedural aspects of the government's planning frameworks. As agricultural planning is part of national planning frameworks and it is not separated, the discussion on agricultural planning frameworks includes overall development planning aspects of Bangladesh and agricultural planning issues under the overall framework.

This research is conducted at a time when the government of Bangladesh launches a new Five Year Plan for the duration of 2016 to 2020 and intends to prepare a long-term plan for the next twenty years. The global consensus on sustainable development goals at the United Nations also form part of development agendas for Bangladesh to pursue through its development planning frameworks in the next fifteen years. Given the existing planning framework of the country becomes more important because of its potential role in pursuing integrated promotion of diversified agenda items of SDGs, the planning framework has therefore needed to be competent in addressing the goals of the government as well as pursuing global commitment at country level.

### *(b) Weaknesses in Available Studies of Development Planning Frameworks*

Given the competence of development planning frameworks is important for a developing country like Bangladesh to pursue the sustainable development agenda of different sectors, available studies about development planning lack any comprehensive direction in this

respect. The studies are fragmented in nature and concentrate on specific aspects of development planning. Some studies have concentrated on specific plans, substantive areas<sup>67</sup> and others have concentrated more on process.<sup>68</sup>

Development planning in Bangladesh has sometimes been identified as a political and economic action that has been imported from the West as part of government process that produces new sources of power to regulate the receiving society.<sup>69</sup> It is also characterized by a failed process that could not successfully integrate the politics and bureaucracy with the planning mechanism.<sup>70</sup> In respect to sustainable development, it is the opinion of Ijaz and Tamim that, despite having a number of policies, legal instruments, and guidelines at the national level to translate the vision to reality, the progress has been extremely limited.<sup>71</sup> However, they have not identified where the limitations lie and how they can be solved.

The available scoping study on procedural aspects of planning argues that the overall planning frameworks lack institutionalization.<sup>72</sup> The existing policies, plans and strategies suffer from authority gaps, dualism in terms of authority and other procedural gaps,<sup>73</sup> in addition to poor governance in terms of lack of accountability and trust among institutions.<sup>74</sup> Although the scoping study identified these gaps, the research did not have any relevance to policy, sectoral and programme planning parts of the development planning framework of Bangladesh. The monitoring and evaluation also has not received appropriate concentration

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<sup>67</sup> See, eg, Joanna Watkins, 'National Planning Commission Arrangements' (GET Brief, The World Bank, 2009)4-5; Khurshid Alam et al, 'The Political Economy of Climate Resilient Development Planning in Bangladesh'(2011) 42(3) *Institute of Development Studies Bulletin*; Syed Aminul Hoque, 'Our Planning Our Sovereignty: A Review of PRSP impact in Bangladesh' (Report, Equity and Justice Working group, 2008); Nazneen Hossain, *The Development Plan of Bangladesh with Special Reference to Agriculture* (Master's Thesis, Kansas State University, 1979); A. H. M. Salimullah and Mohammad Jahirul Quiyum, 'Poverty Reduction Strategy Paper and Bangladesh: An Analysis' (2005) 3(7) *Pakistan Journal of Social Sciences*.

<sup>68</sup> See, eg, Mohammad Shahidul Hasan Swapan, *The Realities of Participation in Planning in Bangladesh: The Role of Institutional and Socio-political Factors in Shaping Participatory Planning in Developing Countries* (PhD Thesis, Curtin University 2013); Waheduzzaman, *People's Participation for Good Governance: A Study of Rural Development Programmes in Bangladesh* (PhD Thesis, Victoria University, 2010); Mohammad Hamiduzzaman, 'Planning and Managing Development Projects in Bangladesh: Future Challenges for Government and Private Organisations' (2014) 6(2) *Journal of Public Administration and Policy Research*; Saleh Ahmed, *Problems of ADP Implementation in Bangladesh: An Analytical Review* (Master's Thesis, BRAC University, 2010); Sheikh Noor Mohammad, *People's Participation in Development Projects at Grassroots Level: A Case study of Alampur and Jagannathpur Union Parishad* (MPP Thesis, North South University, 2010).

<sup>69</sup> Abul Hossain Ahmed Bhuiyan, Aminul Haque Faraizi and Jim McAllister, 'Planning for the Deployment of Development in Bangladesh' (2008) 8(3) *Progress in Development Studies* 239.

<sup>70</sup> Syed Abul Hasnat, 'The Practice and Effect of Development Planning in Bangladesh' (1987)7 *Public Administration and Development* 62.

<sup>71</sup> Ahmed and Ahmed above n 60, 8-9.

<sup>72</sup> Government of the People's Republic of Bangladesh, Economic Relations Division, *GOB Project Approval Process-A Scoping Study* (2010) 17.

<sup>73</sup> *Ibid* iv.

<sup>74</sup> *Ibid* 18.

in this study. Another study of the government finds the planning process elitist in approach.<sup>75</sup> The planning and managing of development projects in Bangladesh are conventional, top down and non-participatory.<sup>76</sup> The local level planning is weak and political influence is partially responsible for the inefficient implementation and any potential discontinuity of projects.<sup>77</sup> The problems in planning lie with implementation that lacks proper monitoring and evaluation.<sup>78</sup> All these findings are discrete in nature and they are more relevant to limited areas of planning frameworks. The governance agendas are not dealt with in these studies.

There are some studies that exposed the inefficiency in appropriate integration of climate related strategies into government policy and implementation,<sup>79</sup> and more particularly between agricultural planning and environmental management.<sup>80</sup> The debate about the exceptional authority and legal mandate over the separate climate change planning mechanism against an established framework for development planning was also identified by a study.<sup>81</sup> However, these studies concentrated more on climate change planning and did not address sustainable development approaches and principles relevant to agricultural development.

Despite the constitutional commitment for local level planning,<sup>82</sup> the spirit of decentralized planning is negated by the central government's excessive control over the local authorities. The lack of funds at the local government level is a major issue; however the local governments also lack the experience and expertise to plan.<sup>83</sup> Several studies find that the promotion of citizen participation in development programmes is hindered by multidimensional limitations including the lack of awareness among stakeholders, patron-client relationships and elite capture are also included as impediments to participation in

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<sup>75</sup> Government of the People's Republic of Bangladesh, Planning Commission, *Bangladesh Climate Public Expenditure and Institutional Review* (2012) 11(2).

<sup>76</sup> Government of the People's Republic of Bangladesh, Planning Division, সরকারি খাতে উন্নয়ন প্রকল্প প্রণয়ন, প্রক্রিয়াকরণ, অনুমোদন ও সংশোধন পদ্ধতি [Guidelines for Project Preparation, Processing, Approval and Revision in the Public Sector] (2008).

<sup>77</sup> 'Planning and Managing Development Projects in Bangladesh': Future Challenges for Government and Private Organisations' (2014) 6(2) *Journal of Public Administration and Policy Research* 22.

<sup>78</sup> Shamsul Alam, 'Development Planning: The experience of Bangladesh' *The Financial Express* (Dhaka), 26 April 2013.

<sup>79</sup> 'Bangladesh Climate Public Expenditure and Institutional Review' above n 75, 11(1).

<sup>80</sup> Neha Rai, Saleemul Huq and Muhammad Jahedul Huq, 'Climate Resilient Planning in Bangladesh: A Review of Progress and Early Experiences of Moving from Planning to Implementation' (2014) 24(4) *Development in Practice* 540-541.

<sup>81</sup> Khurshid Alam et al, 'The Political Economy of Climate Resilient Development Planning in Bangladesh' (2011) 42(3) *Institute of Development Studies Bulletin* 58.

<sup>82</sup> *The Constitution of the People's Republic of Bangladesh* art 59 [2c].

<sup>83</sup> Shafiqul Haque Ahmed, 'The Administration of Decentralized Planning in Bangladesh' (2014) February, *Asian Journal of Public Administration* 166.

planning process.<sup>84</sup> While the gaps were identified in the context of promotion of local level planning, the focus of available studies was limited to project planning agenda that is only one part of development planning frameworks in Bangladesh.<sup>85</sup> Nevertheless, different aspects of sustainable development such as, ecological integrity, equity, precautionary approach and governance have not been highlighted in these studies.

*(c) Filling the Gaps in Knowledge Base*

The weaknesses in the planning frameworks in Bangladesh identified by different studies discussed above present only a partial picture of the whole system as these studies were conducted in a fragmented manner. There has been a failure to focus on the overall planning framework for planning sustainable development, and particularly sustainable agricultural development. The adoption of different principles of sustainable development in planning frameworks, particularly for agricultural planning in Bangladesh perspective has also not yet been reviewed in any integrated study. There is a study by the Ministry of Agriculture in Bangladesh on policy actions for sustainable development for the crop sector. However, that study basically identified systemic weaknesses in the crop sector and prescribed some policy measures to correct these problems.<sup>86</sup> The study concerned subsidy and other investment issues without developing any guidelines for planning frameworks which directly impact the process of public goods creation through government agencies.<sup>87</sup> It did not have any directions about equity, the precautionary principle, the right to participation or access to information and justice. This study did not include the climate change (CC) agenda necessary for planning for the agriculture sector and fell short of internalisation of CC threats in the agriculture sector. It also did not consider the environmental rules and regulations that are critical to the sustainable development of agriculture.<sup>88</sup> Moreover, solving the problems in crop agriculture sector was viewed in isolation and the integration agenda was neglected.<sup>89</sup>

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<sup>84</sup> Swapan, above n 68, iv; Waheduzzaman, above n 68. Mohammad, above n 68, iii.

<sup>85</sup> Ibid.

<sup>86</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, *Transformation of Agriculture for Sustainable Development and Poverty Alleviation in Bangladesh: Actionable Policies and Programmes* (2006) 5-15.

<sup>87</sup> Ibid 5.

<sup>88</sup> Ibid 4-6.

<sup>89</sup> Ibid 6.



Given the commitment of the government of Bangladesh to promoting a sustainable development and sustainable agricultural development agenda through planning frameworks, the appropriateness of government initiatives is now an issue for study as the agenda is relatively new and requires transformation to the whole planning process. The available discrete studies having limited scope and have become partly irrelevant in post-MDG era when the goals of sustainable development of agriculture are supposed to be pursued by the government of Bangladesh in coordination with other SD goals. Given this gap in knowledge base about promotion of sustainable development of agriculture in a holistic manner in Bangladesh, this research proposes to examine both substantive and procedural aspects of sustainable development of agriculture in an integrated manner to advance the knowledge base on sustainable development planning in Bangladesh.

### *6 Justification of Study*

Given this vacuum in knowledge base, it becomes a necessity to study the efficacy of overall planning frameworks that can help the government transform its planning frameworks for promotion of sustainable development of agriculture. This study about the development planning framework will serve that purpose and aims to specifically identify necessary changes required in relevant plans, policies and legislation to promote the sustainable development of agriculture in Bangladesh.

When the government led processes are given priority for pursuing development,<sup>90</sup> and particularly sustainable development,<sup>91</sup> this study can play a very important role in articulating directions for an appropriate development planning framework. The appropriateness in planning frameworks can therefore support proper development interventions in agriculture that can create opportunities for rural people to move out of poverty.<sup>92</sup>

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<sup>90</sup> Organisation for Economic Cooperation and Development, *The Paris Declaration on Aid Effectiveness 2005* (2 March 2005) art 14 <<http://www.oecd.org/dac/effectiveness/34428351.pdf>>.

<sup>91</sup> *Agenda for Development*, GA Res 51/240, UN GAOR, 51<sup>st</sup> sess, Agenda Item 96(b) UN Doc A/RES/51/240 (15 October 1997) Annex, art 2, 44, 46.

<sup>92</sup> 'World Development Report 2008' above n 20, 1.

This study will help identify the gaps in existing development planning frameworks for the internalisation of principles of SDA to advance the government agenda towards building an equitable society. It becomes urgent to address the pattern of dichotomy in agricultural development policies in Bangladesh that negotiates between state intervention in agricultural development and neo-liberal economic principles of the country.

The market failure in agriculture sector is addressed in Bangladesh through public goods creation, but fixing the limit to assistance to farmers under the world trade rules and regulations and domestic resource constraints also becomes an issue. The externalities of policy interventions of the government added a further dimension to planned investment scenarios in Bangladesh. The public sector planned investment, therefore needs to be aligned with the sustainable development principles and priority of donors for exploring financial, technological and technical assistances for promoting sustainable development at country level. This research, with its examination of global and other country approaches, will provide experiences and lessons to review the country framework in Bangladesh. The experiences of other countries will extend the opportunity to the policy-makers to reconsider the current development planning frameworks as the basis for future decision-making.

This study is primarily undertaken with a Bangladesh perspective. This may provide insight for other developing countries which are also pursuing sustainable development of agriculture through their state mechanisms. It will be an extension of knowledge in addressing the challenges of sustainable development of agriculture in a globalised world.

### *C Objectives of the Study and Research Questions*

Sustainable development of agriculture is not only a goal in Bangladesh; it is a necessity in the milieu of the government's development efforts to address poverty alleviation. Feeding a huge population from a decreasing land base, maintaining profitability of farmers along with minimising inequity and ensuring ecological integrity is a major concern for the government. The policy and plans of the government have been directed to promote goals of being equal to developed countries and development planning frameworks become a key driver to steering the process. The overall national development planning framework is therefore an important area of research on which promotion of sustainable agricultural development depends to a large extent.

This study has been undertaken to analyse the existing development planning framework of the government of Bangladesh to examine its adequacy to promote a sustainable development agenda for the agriculture sector and to suggest reforms to make the framework more effective. This research will focus on the following research question:

What development planning frameworks will promote sustainable development of agriculture in Bangladesh?

In order to answer the abovementioned core research question of this study, some other questions have been identified. These questions will follow a sequence for examining first the global approaches of sustainable development of agriculture and then country level experiences in practicing internationally accepted principles and approaches. After examining the global approach and other country practices for understanding the alignment processes, the next steps will be to critically examine the status of agricultural development planning in Bangladesh. This analysis aims to identify the gaps in government's planning frameworks in the context of guiding principles of sustainable development of agriculture and other country experiences. This study will finally recommend changes to make agricultural development planning compatible with sustainable development approach in regard to the particular context of Bangladesh.

This task will be undertaken by analysing the following set of six questions that are central to making recommendations on future development planning frameworks for sustainable development of agriculture in Bangladesh.

1. What is the global approach of sustainable development (SD)? What guiding principles of SD are universally relevant?
2. What are the major approaches of planning for development? What principles of planning are relevant to sustainable development?
3. What are the major international approaches and principles of SDA? What SDA principles are relevant for promotion through development planning frameworks?

4. How adequately are SDA principles and approaches applied to national planning frameworks for agriculture in India?
5. To what extent, and how adequately, are SDA principles and approaches applied to planning frameworks for agriculture in Bangladesh? What is the relevance of experiences of India for Bangladesh?
6. What changes will be necessary in development planning frameworks to promote future sustainable development of agriculture in Bangladesh?

The foregoing research questions concentrate the research premise to focus on the transformation of the development planning frameworks in Bangladesh. The discussion therefore centres on the reform in the planning frameworks to advance the principles of SDA for effective internalisation of the goals of sustainable development of agriculture to finally promote the SD in Bangladesh. There are some other issues that have not been included in this study, such as technical aspects of agricultural production and urban planning issues because of limited relevance of them to this research. The following section discusses these issues in detail to provide a clear picture about the areas of concentration of this research.

#### *D Scope of the Research*

This research will specifically consider the changes in the process and issues in the future development planning frameworks in Bangladesh. These changes will consider facilitation of production and productivity improvement in agriculture along with maintaining natural resources integrity and promoting social development of farming communities. It will also consider the climate change effect on agriculture and its relevance to the sustainable development of agriculture in Bangladesh.

This research will concentrate on crop agriculture in Bangladesh and will use the term agriculture synonymously with crop agriculture. It will not discuss other subsectors of the agriculture sector, although they are important for sustainable development of the country. However, to limit the study scope the researcher has deliberately chosen the most influential crop subsector of the overall agriculture sector in Bangladesh.

The research will examine the Bangladesh development planning frameworks in light of some guiding principles of sustainable development of agriculture. The primary focus of this research is on SDA principles to review their application in national planning frameworks. The sustainable development goals as agreed in the United Nations will be part of discussion, although they are not the basis for analysis of SDA in Bangladesh. The reason behind choosing principles is that based on these principles governments will customize the SDGs for implementation in their respective countries. The goals may be different in the context of each country's circumstances; however the principles have universal application. The states can identify and prioritize their goals based on different principles of sustainable development of agriculture. For example, in England, the sustainable agriculture goal for doubling the agricultural productivity by 2030 may not be appropriate, though an ecological improvement principle is appropriate, and they prepare their goals with this aspect in mind after proper consideration of their circumstances. Moreover, the principles of SD are used to define the goals for development and particularly sustainable development as has been seen in the case of agreement on SDGs.

Given that there is an existing framework for development planning, this research is not proposing a new framework for Bangladesh. It aims to identify gaps in existing frameworks and propose changes needed for making the existing framework attuned with the sustainable development agendas and guiding principles. Agricultural planning in Bangladesh is not a separate process; it is practiced under the general development planning framework. Therefore, although the research will primarily focus on agricultural development issues, it will also review central and local level planning frameworks and recommend necessary changes in these frameworks as part of the comprehensive discussion.

This research will concentrate on public sector planning frameworks that are applicable to the agriculture sector. The study will neither focus on the scientific and technical aspects of agriculture (such as crop production processes, genetic propagation of crops or improvements of irrigation systems) nor specifically design any legal instruments for enactment in Bangladesh. This research will recommend the pathways for reform for effective development planning management that is most relevant to public sector interventions directed to sustainable development of agriculture in Bangladesh. The study will not provide any detailed review of any particular sustainable agricultural practices but the discussion will include how sustainable agricultural practices can be promoted through planning frameworks.

The development planning frameworks in this research will not have any focus on urban planning or physical planning or strategic planning issues. The research will examine the land use issue as it is related to sustainable development of agriculture in Bangladesh, however, it will not undertake any discussion on land use planning as this occurs too late in the process and is usually relevant to urban planning agendas.

The framework for development planning will specifically be examined with a view to identifying necessary changes in national plans, policies, strategies and relevant laws, rules-regulations along with their implementation in the public sector. The legislation enacted in different sectors other than agriculture and the role of judiciary in development process will also be particularly discussed in this research when they are found relevant to promotion of sustainable development of agriculture. The SDA principles will be the evaluative criteria for making the framework attuned with the international standards and their customization at country level in the context of climate change and its potential threats to Bangladesh agriculture.

The research questions discussed in previous section and the scope of this research discussed above has set a direction about the issues to be explored and their nature. These discussions provide the background that the issues to be examined have policy orientation that have relevance to the decision making processes for development of agriculture sector in Bangladesh. The study needs to apply a multidimensional research method that can study the legal, economic and socio-political aspects of government's decision making process, interaction between government and its citizens as well as application of international approaches and principles and other country experience in Bangladesh context. The following section discusses this methodological aspect of this study in detail.

## E *Research Methodology*

The research areas encompass the government plans, policies, rules, legislation, international agreements, conventions, treaties, and government planning procedures. This research will also be studying and characterizing the interaction between government and citizens in the perspective of different domestic and international legislative provisions relevant to planning for sustainable development of agriculture. This scope and content of this research are more

relevant to policy research design methodologies that explore changes especially within the government.<sup>93</sup> This study, in order to explore changes in development planning frameworks, adopts a policy research design that has been characterized by Hughes, as a way of studying and characterizing the interaction between government and its clients.<sup>94</sup> This policy research design has long-term focus,<sup>95</sup> which matches with the long-term issue of SDA of this research. The scope of the research also ties with the approach of Ann Majchrzak who finds policy research as a study of fundamental social problems for providing the policy makers action-oriented reform proposals for addressing the problem.<sup>96</sup>

This reform-oriented research that evaluates the adequacy of existing rules and recommends necessary changes is also suggested as a policy reform research by the Pearce Committee in Australia.<sup>97</sup> The study of competence of the government frameworks in promoting public interest is an area of public policy and in this perspective law has been recognized as ‘a subset of public policy’ as being ‘one of the ways in which policy is expressed’.<sup>98</sup>

Considering the different dimensions ranging from the legal perspective of planning to implementation of the plan, its monitoring and evaluation where a diversity of issues are necessary aspects to research this policy research employs non-doctrinal research method,<sup>99</sup> and more particularly the comparative research methodology is used to conduct this research. This comparative research methodology has been used for studying the ways for promoting harmonization of international approaches and goals in Bangladesh context.<sup>100</sup> This method has been used to learn more about Bangladesh system by comparing it with identified evaluative criteria of SDA for promoting national integration of transnational issues. It also serves the purpose to identify recommendations for promoting SDA that has been the goal in many other developing countries including India.<sup>101</sup> This method is particularly used in exploring the approaches of sustainable development, sustainable development of agriculture and their principles and finally identifying a set of SDA principles for using them as evaluative criteria for examining the competence of development planning frameworks in

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<sup>93</sup> Terry C. M. Hutchinson, *Researching and Writing in Law* (Lawbook Co, 2010)71.

<sup>94</sup> Owen E. Hughes, *Public Management and Administration: An Introduction* (Palgrave Press, 3<sup>rd</sup> ed,2003) 113.

<sup>95</sup> Hutchinson, above n 93,71[3].

<sup>96</sup> Ann Majchrzak, *Methods for Policy Research* (Sage Publications, 1984)12.

<sup>97</sup> Terry C. M. Hutchinson, 'Defining and Describing What We Do: Doctrinal Legal Research' (2012) 17(1) *Deakin Law Review* 101.

<sup>98</sup> Terry R. Carney, *Law at the Margins: Towards Social Participation?* (Oxford University Press, 1991)112-125.

<sup>99</sup> Michael McConville and Wing Hong Chui (eds), *Research Methods for Law* (Edinburgh University Press, 2007)20, 40.

<sup>100</sup> Hutchinson, above n 93,118.

<sup>101</sup> *Ibid.*

Bangladesh. The comparative method in this respect follows an approach that explores the standard of development planning frameworks for promotion of SDA and the current state of development planning frameworks.<sup>102</sup> The competence of development planning frameworks is evaluated through comparing the current practices with the identified SDA principles. The recommendations for transformation in development planning frameworks are proposed in light of this comparison and also through a comparison of practices in India in light of the same SDA principles.

The benchmarking process of comparative methodology has also been used in this study that consists of gathering data on other countries or jurisdictions or institutions and then analysing it with a view to changing and improving performance.<sup>103</sup> This method is particularly used to focus on question number four and five that intends to review the planning framework of India, to review its approach in promoting sustainable agricultural development and to examine the potential of planning practices for application in the Bangladesh context.

In answering the research questions, this research primarily employs a desktop review method. The questions about global approaches and principles of SD, development planning and SDA have been explored using secondary data and information available in books, journals, reports, and in other forms of available secondary sources. The limited time for this research limits the discussion as it focuses on major literature and the discussion is not based on exhaustive review of all literature.

In order to analyse Bangladesh planning frameworks the majority of the data used for analysis for this research has been collected from secondary sources, such as books, journals, websites of different organisations and newspapers. The researcher also visited different offices of the government of Bangladesh to collect documents relevant to development planning that are not readily available in government websites. The internal orders of ministries and different divisions of the Planning Commission are also collected through visiting relevant offices. The data and information about India's planning frameworks are gathered through a desktop literature review. Given the limited data provided in government and other institutions' websites and the dearth of relevant literature, the review of Indian planning process is limited to available books, journals and other published materials.

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<sup>102</sup> Ibid 119.

<sup>103</sup> Ibid 123.



The researcher's personal observation is applied to critically analysing the current legal, policy and institutional aspects of sustainable development planning for agricultural improvement in Bangladesh. Finally, recommendations are presented based on the qualitative judgment of the global approach, the experience in India, domestic SDA planning frameworks, and their appropriateness to the future needs of the country.

While there are risks that comparative methodology may not address the problems of superficiality or getting the foreign law wrong,<sup>104</sup> this research has included the discussion on approaches proposed by scholars, different international institutions as well as representative world body, such as the UN to identify a set of standard universal principles as well as practices. These principles are used as evaluative criteria for comparing the country practices, learning from them and finally to recommend transformation in Bangladesh planning frameworks. The problem of undertaking comparisons between jurisdictions of the comparative method<sup>105</sup> has been resolved through choosing India that has similarities with Bangladesh in different aspects, such as legal system, economic principles, planning frameworks, agricultural development approach as well as climate change planning for agricultural development. As a developing country, India is pursuing SDA through its country driven process that is common to Bangladesh.

The limitation of applying the methodology is that the data used in this research is not exhaustive as the time for this research was limited. Nevertheless, the current electronic research context has made it easier to review international and national practices. There were also limitations in collecting data on some procedural aspects of planning in India as government orders, circulars and decision making process relating to procedural aspects of planning were in some perspectives not readily available on their websites. As this research has also used personal observation methods for data collection, the researcher tried to be neutral so that his personal views are not mingled with the research findings.

In order to be neutral in studying the Bangladesh perspective the researcher has therefore prepared a background of sustainable development of agriculture based on secondary data through exploring different studies as well as government documents. The following section's background information and data presented in the sixth chapter of this research will

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<sup>104</sup> Ibid 119.

<sup>105</sup> Ibid 121.

serve as a baseline and status of agricultural development in Bangladesh. The background is discussed here to provide a primary conception about the studied country, Bangladesh and the challenges before the country in promoting SDA. The climate change (CC) threats to agricultural development in Bangladesh are particularly discussed here as the CC is considered a defining factor in promoting SDA in Bangladesh.

### *F Background of Sustainable Development of Agriculture in Bangladesh*

This section will discuss background issues of sustainable agricultural development in Bangladesh. The discussion on existing agricultural conditions, and projected changes to them, will include brief overviews of location, climate, natural resources and agricultural development achieved in last forty-five years in Bangladesh. This discussion will follow the illustration of impacts of natural hazards, including climate change on agriculture in Bangladesh. Climate change is discussed in this section as it is one of the most disruptive threats to the sustainable development of agriculture in Bangladesh. Finally this section will conclude with a brief overview on the challenges for sustainable development of agriculture in Bangladesh.

#### *1 Context of Agriculture in Bangladesh*

##### *(a) Location, Population and Climate*

Bangladesh is located in South Asia with an area of about 147,570 square kilometres. It is surrounded by India on the west, the north and the northeast and Myanmar on the south-east. The Bay of Bengal draws the southern border of the country.<sup>106</sup> The floodplains occupy about 80 per cent of the country. About 10 per cent of the country is less than one metre above sea-level while one-third is under tidal excursions; 32 per cent of the country is situated along and near the coast. About 12 per cent of the country is occupied by hilly areas.<sup>107</sup> Bangladesh has three broad physiographic regions: hills, terraces, and floodplains and these regions are divided into 30 Agro-Ecological Zone (AEZ) units.<sup>108</sup>

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<sup>106</sup> Government of the People's Republic of Bangladesh, Ministry of Environment and Forests, *Second National Communication of Bangladesh* (2012) i ('Second National Communication of Bangladesh').

<sup>107</sup> Ibid 3-5.

<sup>108</sup> Ibid 4.

Bangladesh is located in the tropical monsoon region and its climate is characterised by high temperatures, heavy seasonal rainfall, high humidity, and seasonal variations.<sup>109</sup> While the mean annual temperature is about 25°C, the highest temperatures throughout the year range between 38°C and 41°C. The average annual rainfall in the country is about 2,200 mm, mostly occurs during May to September.<sup>110</sup>

The total population of the country is around 158.90 million.<sup>111</sup> Nearly 70 per cent of its population live in rural areas. The population growth rate is 1.21 per cent.<sup>112</sup> The population will reach 171.6 million in 2021 and 216.5 million in 2051 at medium variant fertility level.<sup>113</sup> The requirement of food, especially cereals for increasing population of Bangladesh in 2050 will be 44.54 million metric tons.<sup>114</sup>

#### *(b) Natural Resources for Agriculture*

Land and water are the major fixed resources for crop agriculture in Bangladesh. The crop land is 61 per cent of total land area. The per capita crop land is 0.05 hectare.<sup>115</sup> Loss of agricultural land is a common phenomenon in Bangladesh and the annual loss of crop land was 0.73 per cent during the 2000 to 2010 period.<sup>116</sup>

Bangladesh is a lower riparian country with a network of about 200 rivers that carry an abundance of water during the rainy season (June to October), however there is a scarcity of water in the dry season (January to May). In the dry season, leaving aside the non-consumptive demand of in-stream use (56 per cent of the total water demand), the dry season water demand is dominated by irrigated agriculture that is about 32 per cent.<sup>117</sup> Water use efficiency in Bangladesh is very low as 70-75 per cent of irrigation water is lost due to

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<sup>109</sup> Sirajul Islam (ed), *Banglapedia: National Encyclopaedia of Bangladesh* (Asiatic Society of Bangladesh, 2003).

<sup>110</sup> 'Second National Communication of Bangladesh' above n 106, i.

<sup>111</sup> Government of the People's Republic of Bangladesh, Bangladesh Bureau of Statistics, 'Key Findings of Sample Vital Registration System' (Report on Bangladesh Sample Vital Statistics 2015, 2015)i.

<sup>112</sup> The World Bank, *Population Growth (Annual, %)(2015)*<<http://data.worldbank.org/indicator/SP.POP.GROW>>.

<sup>113</sup> Government of the People's Republic of Bangladesh, Bangladesh Bureau of Statistics, *Population Projection of Bangladesh: Dynamics and Trends 2011-2061* (2015)17-20. The Second National Communication of Bangladesh has however projected that the population in Bangladesh in 2051 would be 238.077 million. See, eg, 'Second National Communication of Bangladesh' above n 106, 115.

<sup>114</sup> 'Second National Communication of Bangladesh' above n 106, 118.

<sup>115</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, *Medium Term Strategy and Business Plan* (2013)6, 9.

<sup>116</sup> Nazmul Hasan, 'Trend in the availability of agricultural land in Bangladesh'(Study Report, National Food Policy Capacity Strengthening Programme, Bangladesh, 2013) 62[1].

<sup>117</sup> Government of the People's Republic of Bangladesh, Planning Commission, *Draft Outline Perspective Plan of Bangladesh 2010-2021*(2010)71.

faulty flood irrigation systems.<sup>118</sup> Conservation of rainwater during monsoons that could be utilized for irrigating crops during dry season is virtually non-existent.<sup>119</sup>

Bangladesh is rich in biodiversity where more than 500 species of medicinal plants, 224 species of timber plants and 130 species of fibre plants are found and about 300 species of angiosperms are being cultivated.<sup>120</sup> The government has declared 28 Protected Areas (PAs) to protect threats to biodiversity. The total PA is about 1.8 per cent of total land area of Bangladesh and includes 15 national parks and 13 wildlife sanctuaries. However, many of them are located in areas that will face the threat of impacts of climate change.<sup>121</sup> Biodiversity is already under threat as a result of the pressure of an increasing population and other factors.<sup>122</sup>

## *2 Development Scenario in the Agriculture Sector in Bangladesh*

Bangladesh achieved an average six per cent growth rate per year in last decade.<sup>123</sup> Agriculture is the second largest producing sector of Bangladesh economy since it comprises about 16.01 per cent of the country's Gross Domestic Product (GDP) and employs around 45.1 per cent of the total labour force.<sup>124</sup> Shares of the specific sub-sectors in the overall agricultural GDP have remained by and large invariant over time. Crops have accounted for about 60 per cent of the agricultural value since the late 1990s.<sup>125</sup>

The production of crops is organized primarily in marginal and small landholding farms. Agriculture in Bangladesh is dominated by smallholders. About 84 per cent of farms hold no more than 2.5 acres (about 1 hectare) of land.<sup>126</sup> At the other end of the scale, large farms

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<sup>118</sup> Mohammad H. Mondal, 'Crop Agriculture of Bangladesh: Challenges and Opportunities' (2010) 35(2) *Bangladesh J. of Agril. Res.* 238 quoting Z. Karim. 'Accelerated Agricultural Growth in Bangladesh' (Paper presented in seminar on Agricultural Research on Development in Bangladesh, Bangladesh Agricultural Research Council, 1997).

<sup>119</sup> Mohammad H. Mondal, 'Crop Agriculture of Bangladesh: Challenges and Opportunities' (2010) 35(2) *Bangladesh J. of Agril. Res.* 238.

<sup>120</sup> 'Second National Communication of Bangladesh' above n 106, 23.

<sup>121</sup> *Ibid* 24.

<sup>122</sup> *Ibid* 23, 157.

<sup>123</sup> Government of the People's Republic of Bangladesh, Planning Commission, *Millennium Development Goals Bangladesh Progress Report 2012(2013)*14[1].

<sup>124</sup> Government of Bangladesh, Finance Division, *বাংলাদেশ অর্থনৈতিক সমীক্ষা* [Bangladesh Economic Review](2016)21,28 ('*Bangladesh Economic Review*').

<sup>125</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, *Medium Term Strategy and Business Plan* (2013)12.

<sup>126</sup> Government of the People's Republic of Bangladesh, Bangladesh Bureau of Statistics, *Agriculture Census 2008(2010)*xv.

holding at least 7.5 acres (3 hectare) of land accounted for only 1.54 per cent of farms. Thus, any adverse agricultural occurrence in Bangladesh will negatively and heavily affect small and marginal farmers.<sup>127</sup>

The initial growth rate of agriculture sector in 1970s was at around two per cent per year. The growth rate accelerated during the 1990s and early 2000s to around four per cent per year.<sup>128</sup> In last decade the growth in crop agriculture was however very volatile, it ranges from 0.15 per cent in 2004-05 to 6.13 per cent in 2009-10.<sup>129</sup> Against the Sixth Five-Year Plan target of achieving average growth of 4.5 per cent during the plan period between 2011 and 2015 the growth of the agriculture sector did not reach to its optimum. The average growth rate of the overall agriculture sector fell sharply in 2011-12 to 2.7 per cent, and weakened further to only 2.2 per cent in 2012-13 due to slower growth of the crop sub-sector. The explanation behind this slower growth rate of crop agriculture is that most of the easily accessible productivity gains have already been captured.<sup>130</sup>

The crop sub-sector is dominated by rice, which accounts for more than 62 per cent of the crop sub-sector value added and 90 per cent of cereal production in the last ten years. Winter rice or *boro* is the dominant crop, which occupies about 56 per cent of total rice production.<sup>131</sup> There is a declining trend in the land area under rice production that has fallen from 78.5 per cent in 2009-10 to 76 per cent in 2012-13. However, the decline of share of high yielding variety (HYV) rice area in the total rice area by about four per cent becomes a concern for productivity increases in coming years.<sup>132</sup>

There has been a success in developing new crop varieties in the last few years. The government has released 23 new varieties of rice and five new varieties of vegetables during the last four years. The released varieties are expected to withstand the adverse climatic

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<sup>127</sup> Ibid xv.

<sup>128</sup> Miah, above n 53, 1-2.

<sup>129</sup> Prepared by the Author based on Bangladesh Economic Review (2006, 2008, 2013) published by the Government of Bangladesh.

<sup>130</sup> Miah above n 53, 1.

<sup>131</sup> Prepared by the Author based on Bangladesh Economic Review (2006, 2008, 2013) published by the Government of Bangladesh.

<sup>132</sup> Miah above n 53, 6.

conditions and other natural hazards.<sup>133</sup> However, the improved seed supply by the institutions has dropped especially for rice and wheat by about 12 per cent that may affect the production unless quality of seed at farmers' end is improved.<sup>134</sup>

The area under irrigation has increased by 11.60 per cent in 2014-2015 compared to 2006-2007 period. The recent development includes solar energy in irrigation pumps in Bangladesh.<sup>135</sup> However, the share of surface water irrigation area in total irrigated area remained almost the same at around 21 per cent despite the government efforts to increase the surface water irrigation facility.<sup>136</sup>

Fertiliser use has increased by 35 per cent during 2007 to 2015 fiscal year. The striking feature in fertiliser use is that the overall share of urea has reduced by about 15 per cent during this period. This happened because of increased use of (ranging from 100 per cent to 420 per cent) three important non-urea fertilisers, Muriate of Potash (MOP), Di ammonium Phosphate (DAP) and Triple Super Phosphate (TSP). This shows incentive induced diversity in fertiliser use during this period.<sup>137</sup>

There has been an increase in development budget in the last five years. It has increased by about 58 per cent in the last four years. The development budget is complemented with a huge subsidy that consumes about 70 per cent of total budget of the Ministry of Agriculture.<sup>138</sup> Agricultural credit disbursement has increased by almost threefold in the last decade, however the overdue credit has also increased by twofold.<sup>139</sup> Allocation for safety net programmes through rehabilitation of farmers has also increased by 30 per cent in the last five years.<sup>140</sup>

Despite the government's increased efforts, the performance of agriculture is not as good as expected. Given the limitations of different initiatives for promotion of this sector, it now needs a boost in an integrated manner to coordinate development efforts to combat natural

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<sup>133</sup> Ibid 7.

<sup>134</sup> Ibid 8.

<sup>135</sup> Bangladesh Economic Review above n 124, 88.

<sup>136</sup> Miah above n 53, 7.

<sup>137</sup> Bangladesh Economic Review above n 124, 87.

<sup>138</sup> Government of the People's Republic of Bangladesh, Finance Division, *Medium-Term Budgetary Framework (MTBF) 2015-16 to 2017-18* (2015)515-548.

<sup>139</sup> Bangladesh Economic Review above n 124, 89; Miah above n 53,9.

<sup>140</sup> Government of the People's Republic of Bangladesh, Finance Division, *Safety Net* <[http://www.mof.gov.bd/en/index.php?option=com\\_content&view=article&id=217&Itemid=1](http://www.mof.gov.bd/en/index.php?option=com_content&view=article&id=217&Itemid=1)>.

hazards, including climate change, posing challenges for development of this sector. The discussion on natural hazards and climate change in the following section will provide the basis to understanding how Bangladesh agriculture currently operates and likely changes in the future.

### *3 Current and Future Natural Hazards and Climate Change Threats to Bangladesh Agriculture*

#### *(a) Natural Hazards and Climate Change Projection for Bangladesh*

Bangladesh experiences different types of natural hazards that include floods, cyclones and tidal surges, salinity, drought, heat waves, cold, fog and water logging.<sup>141</sup> Climatic change also exacerbates the intensity and magnitude of natural hazards and adds extra threats to agricultural development. According to the Climate Change Vulnerability Index (CCVI) developed by Maplecroft considering exposure to extreme climate-related events, the sensitivity of populations, and the adaptive capacity of countries to combat the impacts of climate change Bangladesh ranks number one in the list of most vulnerable countries.<sup>142</sup>

Bangladesh ranks first among 162 nations in terms of population exposure to flooding.<sup>143</sup> Regular flooding in Bangladesh inundates about 30-50 per cent of land area almost every year, however severe floods occur in intervals of four to five years inundating 60 per cent of the country that primarily affects crop agriculture.<sup>144</sup> It is projected that the flooded area would increase in the future by 10 per cent by the year 2050. Moreover, the flooding intensity would worsen due to increases in monsoon rainfall and greater inflows into Bangladesh in a future climate change situation.<sup>145</sup>

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<sup>141</sup>Dwijen Mallick, Ashraful Amin and Atiq Rahman, 'Case Study on Climate Compatible Development (CCD) in Agriculture for Food Security in Bangladesh' (Final Report of Bangladesh Country Study, Bangladesh Centre for Advanced Studies, 2012) 4[2].

<sup>142</sup> Maplecroft, *Climate Vulnerability Index* (2013) <<http://maplecroft.com/portfolio/new-analysis/2013/10/30/31-global-economic-output-forecast-face-high-or-extreme-climate-change-risks-2025-maplecroft-risk-atlas/>>.

<sup>143</sup> 'Second National Communication of Bangladesh' above n 106, 51.

<sup>144</sup> Bangladesh Disaster Knowledge Network, *Hazard Profile* (21 February 2013) <[http://www.saarc-sadkn.org/countries/bangladesh/hazard\\_profile.aspx](http://www.saarc-sadkn.org/countries/bangladesh/hazard_profile.aspx)>('Bangladesh Hazard Profile').

<sup>145</sup> Ibid.

Bangladesh ranks sixth among the 89 countries exposed to cyclones.<sup>146</sup> Currently, 8.06 million people in coastal Bangladesh are vulnerable to inundation depths greater than one metre resulting from cyclonic storm surges. With population growth, that number is projected to increase 68 per cent by the year 2050 under the baseline scenario. Without further adaptation measures, the figure would rise to 110 per cent by 2050 under the climate change scenario.<sup>147</sup>

Drought in Bangladesh is generally considered for the two cropping periods of the year during November to June, with a critical dry period during March to May and September and October.<sup>148</sup> In Bangladesh, about 2.7 million hectares is a severely drought prone area that causes hardship to poor agricultural labourers and others. Usually severe drought occurs in the north-western and south-western regions of the country. In Bangladesh, nearly 642,277 people are exposed in areas under the threat of drought.<sup>149</sup>

The coastal region of Bangladesh covers almost 29,000 square kilometres, which is about 30 per cent of the cultivable lands of the country and about 53 per cent of the coastal area is affected by salinity. During the monsoon (June-September) the high salinity, that is more than 5 parts per thousand (PPT) occurs in 5,707 square kilometres while during the dry season (December-March) the high salinity occurs in 13,712 square kilometres, which is about 10 per cent of the total landmass of the country.<sup>150</sup>

The sea level may rise by 27 centimetres by 2050 and 19,722 square kilometres will be inundated in Bangladesh. By 2080 the rise would be 62 centimetres with possible inundation of 21,839 square kilometres.<sup>151</sup> An Organisation for Economic Co-operation and Development (OECD) study suggested that one metre rise in sea level would inundate 18 per cent of Bangladesh's total land mass,<sup>152</sup> and it could impact 13 million people in Bangladesh, with 16 per cent of national rice production loss.<sup>153</sup>

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<sup>146</sup>Government of the People's Republic of Bangladesh, Ministry of Environment and Forests, *Bangladesh Climate Change Strategy and Action Plan 2009*(2009)11.

<sup>147</sup> Susmita Dasgupta et al, 'Cyclones in a Changing Climate: the Case of Bangladesh' (2013) *Climate and Development* 1.

<sup>148</sup> Winston H Yu et al, *Climate Change Risks and Food Security in Bangladesh* (Earthscan, 2010).

<sup>149</sup> 'Bangladesh Hazard Profile' above n 144.

<sup>150</sup> Yu et al above n 148,19.

<sup>151</sup> 'Second National Communication of Bangladesh' above n 106, 124.

<sup>152</sup> Shardul Agrawala et al, *Development and Climate Change in Bangladesh: Focus on Coastal Flooding and the Sundarbans* (Organisation of Economic Cooperation and Development, 2003)19.

<sup>153</sup> R. J. Nicholls and S. P. Leatherman, 'The Potential Impact of Accelerated Sea Level Rise on Developing Countries'(1995)Special Issue 14 *Journal of Coastal Research* 306.



There is already a rise in the minimum temperature by 0.45°C and 0.52°C during the winter (December-January-February) and monsoon (June-July-August) seasons respectively. It is also observed that the maximum temperatures have also increased during the pre-monsoon (March-April-May) and post-monsoon (June-July-August) by 0.87°C and 0.42°C respectively.<sup>154</sup> A joint study of the International Food Policy Research Institute (IFPRI) and United States Agency for International Development (USAID) also has the projection of increased temperature. It has been projected that by the 2020s, temperatures will rise by 0.9 and 1.0°C (for the A2 and B1 scenarios respectively) and by the 2050s, warming is projected at 2.0 °C (A2) and 1.6 °C (B1).<sup>155</sup>

The pattern of observed changes in the rainfall is mixed.<sup>156</sup> The IFPRI-USAID report concluded that -

The climatic model averages suggest little or no change in annual rainfall by the 2020s (0 % and -1 % for A2 and B1 respectively). The seasonal changes are also modest: possible wetter winters, at +3 % (A2) or 0 % (B1); and wetter monsoon summers, at +1 % (A2) or + 4 % (B1). By the 2050s, average changes are shown slightly larger, with winters drier (-3%, -4%) and summers wetter (+2%, +7%).<sup>157</sup>

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<sup>154</sup> Second National Communication of Bangladesh above n 106, vii.

<sup>155</sup> Thomas S. Timothy et al, 'Agriculture and Adaptation in Bangladesh: Current and Projected Impacts of Climate Change' (Discussion Paper, International Food Policy Research Institute, 2012) 153;

IPCC, *Special Reports* <<http://www.ipcc.ch/ipccreports/sres/emission/index.php?idp=98>>.

The A2 marker scenario quantification is based on relatively slow demographic transition and relatively slow convergence in regional fertility patterns, relatively slow convergence in inter-regional GDP per capita differences, relatively slow end-use and supply-side energy efficiency improvements (compared to other storylines), delayed development of renewable energy, no barriers to the use of nuclear energy.

The B1 marker scenario illustrates the possible emissions implications of a scenario in which the world chooses consistently and effectively a development path that favours efficiency of resource use and "dematerialization" of economic activities. The scenario entails in particular rapid demographic transition driven by rapid social development, including education, high economic growth in all regions, with significant catch-up in the presently less-developed regions that leads to a substantial reduction in present income disparities, comparatively small increase in energy demand because of dematerialization of economic activities, saturation of material- and energy-intensive activities (e.g., car ownership), and effective innovation and implementation of measures to improve energy efficiency and timely and effective development of non-fossil energy supply options in response to the desire for a clean local and regional environment and to the gradual depletion of conventional oil and gas supplies.

<sup>156</sup> 'Second National Communication of Bangladesh' above n 106, vii.

<sup>157</sup> Timothy et al, above n 155,153[1].

*(b) Impact of Climate Change (CC) and Climate Variability Induced Natural Disasters on Bangladesh Agriculture*

Bangladesh is inherently vulnerable to climate change and it is a key challenge to sustainable development of Bangladesh.<sup>158</sup> Although there is uncertainty in the future projection, magnitude and direction of effects of climate change there are different studies which have identified the vulnerability of agriculture sector due to the changing climate. It has been identified through simulation studies that climate change will put additional effects on food production beyond those of climate variability.<sup>159</sup> CC may cause a reduction of 3.1 per cent in agricultural GDP during 2005 to 2050 periods (it may vary between 3.6 to 4.3 per cent). This is equivalent to an average 1.15 per cent reduction in total GDP during this period. The loss amount per year would increase from US \$ 570 million to US \$1 billion based on emission reduction scenarios.<sup>160</sup> Titumir and Basak's estimate also has similar projection about the total discounted economic loss of agriculture sector during this period.<sup>161</sup> It is also projected that in each of the sub-regions of Bangladesh production loss will occur for at least one crop. Among different regions, the southern region is most vulnerable due to sea level rise.<sup>162</sup>

The projection of less rainfall during winter, erratic rainfall, floods, coastal cyclones and storm surges during monsoons will be likely to affect the cropping system in Bangladesh.<sup>163</sup> It is estimated that when all climate impacts are considered for projections up to 2050, the median of all rice crop projections shows a declining trend. While *aus* will decline by -1.5 per cent, *aman* will decline by -0.6 per cent, *boro* production may decline by five per cent. However, wheat production may increase by three per cent up to the year 2050.<sup>164</sup> The IFPRI study however projected that wheat production may decline by 2 per cent by 2030 and 1.4 per cent in 2075 compared to base year loss accounts due to moisture stress in drought conditions. However, potato and pulses show significant decreases in 2030 by five per cent and 11 per cent respectively.<sup>165</sup> A more long term projection estimated that boro rice production may decline by eight per cent by the year 2080 under climate change scenarios.<sup>166</sup> The evidence of

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<sup>158</sup> Yu et al, above n 148, xv.

<sup>159</sup> Ibid xvii-xviii.

<sup>160</sup> Ibid xviii.

<sup>161</sup> Rashed Al Mahmud Titumir and Jayanta Kumar Basak, *Agriculture and Food Security in South Asia, A Historical Analysis and A Long Run Perspective* (Unnayan Onneshan, 2010) 78.

<sup>162</sup> Yu et al, above n 148, xvii.

<sup>163</sup> Ibid xvii.

<sup>164</sup> Ibid 41.

<sup>165</sup> Timothy et al, above n 155, 177[1].

<sup>166</sup> Yu et al, above n 148, 106.

loss of about 0.57 million metric tons of *boro* rice during 2000 to 2004 period in the north eastern part of Bangladesh also added potential reduction of production of this major rice crop in the country.<sup>167</sup>

The *Bangladesh Climate Change and Sustainable Development Report* of the World Bank projected that the maximum crop losses in the saline affected southern region of Bangladesh would be nearly 40 per cent by the 2080s.<sup>168</sup> Soil salinity may reduce the yields of local transplanted *aman* between 11 and 35 per cent on moderately saline soil and increases with salinity to a maximum of 72 per cent on highly saline.<sup>169</sup>

Drought is extremely damaging to crop yield. A strong drought can cause greater than 40 per cent damage to broadcast *aus* rice.<sup>170</sup> For transplanted *aman* even during moderate drought, a 35-40 per cent yield reduction may take place.<sup>171</sup> For more severe drought there may be a reduction of up to 45 per cent. For wheat and potato, for moderate drought the yield losses are estimated to be up to 50 per cent.<sup>172</sup> The IFPRI study also showed that soil moisture deficit will affect winter rice (high yielding variety *boro* rice) by reducing yield by extra two per cent in 2030 and four per cent in 2075.<sup>173</sup> The IFPRI report suggests that for *aman*, adapting to climate change would mean changing the variety of rice being planted, while for *boro*, adapting to climate change would mean changing the planting month. In Bangladesh, where cropping intensity in many places is 200 percent or higher, the latter approach might be problematic.<sup>174</sup>

There is a dearth of statistics about the production losses due to natural resources degradation and impact of different inputs on crop production. However, the available statistics about production losses due to natural hazards such as floods, cyclone, and drought, salinity, and climate change impacts have presented a very alarming picture for the sustainable development of agriculture. The estimated climate variability cost for agriculture is US \$ 26

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<sup>167</sup> Second National Communication of Bangladesh above n 106, 139.

<sup>168</sup> The World Bank, *Bangladesh Climate Change and Sustainable Development* (2000).

<sup>169</sup> Government of the People's Republic of Bangladesh, Ministry of Environment and Forests, *Second National Communication of Bangladesh to the United Nations Framework Convention on Climate Change* (2012)140 quoting MPO, National Water Plan (3<sup>rd</sup> vol, 1986), Prepared for the Ministry of Irrigation, Water Development and Flood Control, Government of the People's Republic of Bangladesh and UNDP and the World Bank by HARZA Engineering Company International and Sir McDonald & Partners.

<sup>170</sup> Bangladesh Hazard Profile above n 144.

<sup>171</sup> Second National Communication of Bangladesh above n 106, 141[3].

<sup>172</sup> *Ibid.*

<sup>173</sup> Timothy et al, above n 155, 177[1].

<sup>174</sup> *Ibid* 5[2].

billion in 2005 to 2050 period in lost agricultural GDP which is about 3.1 per cent lower in each year during this period.<sup>175</sup> The recent report of Bangladesh Bureau of Statistics about impact of natural disasters aggravated by climate change has justified the projection. The estimated loss of agriculture in 2009 to 2014 period was on an average about US \$ 1.3 billion in each year that is more than that of already made projection.<sup>176</sup>

Given the severe threats of disasters, it would difficult to increase production from a declining land base.<sup>177</sup> While the total factor productivity in Bangladesh has been 0.57 per cent per year during 1948 to 2008,<sup>178</sup> and there are projections of huge crop loss due to climate change and climate variability it would be difficult to attain a 64 per cent productivity increase in cereals (rice, wheat, maize and other cereals) required for local consumption by 2050.<sup>179</sup> It would be a very challenging task when the natural resources are degrading and replenishment is not yet been factored in production process. This situation therefore demands an integrated approach to address natural resources protection including loss of agricultural lands. It also requires the addressing of the impacts of natural hazards and adaptation to climate change. This integrated approach however needs to consider the challenges for sustainable development of agriculture. The following section will present the challenges Bangladesh will face in attaining a comprehensive development of the agriculture sector.

#### *4 Challenges for Sustainable Development of Agriculture in Bangladesh*

The challenges for sustainable development of Bangladesh agriculture are multimodal and conflicting in nature in some respects. Apart from multimodal constraints climate change impacts have also created further stress to sustainable agricultural development in

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<sup>175</sup> Yu et al, above n 148, xviii.

<sup>176</sup> Government of the People's Republic of Bangladesh, Bangladesh Bureau of Statistics, *Bangladesh Disaster-Related Statistics 2015: Climate Change and Natural Disaster Perspectives* (2016)JJ;J.

<sup>177</sup> Hasan, above n 116, 62[1].

Total crop land has been estimated based on annual rate of loss of crop land in last decade and the data on total crop land available in this study.

<sup>178</sup> Sanzidur Rahman and Ruhul Salim, 'Six Decades of Total Factor Productivity Change and Sources of Growth in Bangladesh Agriculture (1948–2008)'(2013)64(2)*Journal of Agricultural Economics* 275.

<sup>179</sup> Second National Communication of Bangladesh above n 106, 118; Hasan, above n 116, 62[1];Government of the People's Republic of Bangladesh, Planning Commission, *Seventh Five Year Plan* (2016-2020) 263-264.

Authors own calculation based on food requirement projection of Second National Communication of the Government of Bangladesh and trends of land losses per year. The crop land is estimated 8.75 million hectares in 2011 when cereal production was 36.06 million metric tons. The projected volume of land in 2050 would be 6.57 million hectare and the requirement for cereals is 44.54 million metric tons.

Bangladesh.<sup>180</sup> This sub-section will highlight some of the critical challenges that Bangladesh faces in promoting different aspects sustainable development of agriculture. This background discussion will contribute in articulating recommendations for a transformation proposal in Bangladesh development planning frameworks.

The sustainable management of natural resources is the first challenge that the agriculture sector will have to address.<sup>181</sup> When the population is increasing by 1.21 per cent and crop land is declining at a rate of about 0.73 per cent each year it will be a great challenge to prevent the conversion of agricultural land. Additionally, reversing the soil degradation is a major challenge when soil organic matter in different parts of the country has declined by more than a half.<sup>182</sup> While the increased use of highly subsidised chemical fertilisers and adulterated fertiliser pose a challenge for agricultural productivity enhancement and soil fertility, the protection of biodiversity loss would be another challenge because of intensified chemical fertiliser and pesticide use.<sup>183</sup>

Given the share of surface water irrigation has not increased over the years, the massive decline in the ground water table that drops to 6 meters low from the ground in 2013 from 3.7 meters in 1981 in the northern districts emerges as a dire threat to the poverty stricken northern region of the country.<sup>184</sup> With the decline of rainfall during winter and reduction of surface water availability due to upstream withdrawal and increased salinity,<sup>185</sup> the reversal of excessive withdrawal of underground water will be a challenge because the farmers are likely to resort to underground water despite high irrigation costs in the context of low availability of surface water.<sup>186</sup> Conversely, the mitigation of emissions from rice field is also a challenge in the context of subsidised irrigation.<sup>187</sup>

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<sup>180</sup> Miah above n 53, 2-3.

<sup>181</sup> Ibid 21.

<sup>182</sup> M. Jahiruddin and M A Sattar 'Agricultural Research Priority: Vision- 2030 and Beyond' (Final Report, Bangladesh Agricultural Research Council, 2010) xii.

<sup>183</sup> Miah above n 53,34

<sup>184</sup> Miah above n 53,12.

<sup>185</sup> Ainun Nishat and Nandan Mukherjee, 'Climate Change Impacts, Scenario and Vulnerability of Bangladesh' in Rajib Shaw, Fuad Mallick and Aminul Islam (eds), *Climate Change Adaptation Actions in Bangladesh*(Springer, 2013)35; Government of the People's Republic of Bangladesh, Ministry of Agriculture, *Focused Write-up of the Ministry of Agriculture for Seventh Five Year Plan*(2015)6.

<sup>186</sup> A.S. Qureshi, Z. Ahmed and T. J. Krupnik, 'Groundwater Management in Bangladesh: An Analysis of Problems and Opportunities' (Cereal Systems Initiative for South Asia Mechanisation and Irrigation Project Research Report No. 2, 2014)21.

<sup>187</sup> Miah above n 53, 21-22.

The agriculture sector will face a serious challenge in producing more food, especially rice in the saline prone southern and flash flood prone eastern parts of the country leaving the northern part for industrialisation because of less water availability.<sup>188</sup> The diversification of agriculture will face challenges due to declining rice production because of the impacts of climate change. This will happen because land will not be released for the cultivation of other crops to keep the main staple, rice growing area unaffected.<sup>189</sup>

The assurance of profitability is also a challenge as it is associated with the subsidies of fertiliser, irrigation and seed and the output market price also depends to a large extent on the government's intervention and requires continuity. Addressing the profitability through mechanisation is also a challenge due to the fragmented land structure and low purchasing power of poor farmers against the insufficient volume of credit for them.

There is a challenge to maintain biodiversity for agricultural productivity as there are no special efforts for the conservation of Bangladesh's unique agricultural biodiversity through budgetary allocation. It would be difficult to shift the resource allocation from short term measures to long term production factors such as the wise use of local high yielding varieties and promoting ecological agriculture.<sup>190</sup>

Climate change will also challenge the profitability of farmers as intensive agricultural input use to minimise the threats of soil fertility loss resulting from the impacts of climate change will drive the cost of production up further.<sup>191</sup> When climate change becomes a cause for displacement of labourers it will increase the wages in vulnerable areas that will drive up the cost of production and reduce the profitability, if appropriate mechanisation does not happen.<sup>192</sup> Early occurrences of flash flooding would require small and marginal farmers to invest more for extra labour to speedily harvest their crops. That will also increase the production costs and reduce profitability.<sup>193</sup> As profitability reduces due to increased adaptation costs, the large and middle-sized farmers will abandon farming leaving cultivation

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<sup>188</sup> Miah above n 53, 29.

<sup>189</sup> National Sustainable Development Strategy of Bangladesh above n 64, 56.

<sup>190</sup> Mohammed Abdul Baten, *Agriculture Biodiversity and Food Security: Two Sides of a Coin* (Unnayan Onneshan-The Innovators, 2010)8.

<sup>191</sup> Mallick et al, above n 141, 25[2].

<sup>192</sup> Quazi Shahabuddin and Paul Dorosh, 'Comparative Advantage in Bangladesh Crop Production' (MSSD Discussion Paper No. 47, International Food Policy Research Institute, 2002)22.

<sup>193</sup> International Fund for Agricultural Development, 'Bangladesh Environmental and Climate Change Assessment' (Main Report, Environment and Climate Division, 2013)18.

to marginal landowners, share-croppers and agriculture labourers.<sup>194</sup> These marginal farmers will exploit all parts of the crops to increase their profits that will challenge recovery of the serious decrease of organic matter content in agricultural land.<sup>195</sup>

While public spending for agricultural and rural development is necessary for the largest positive effects on growth and poverty reduction,<sup>196</sup> the demand for an additional 10-30 per cent fund in future under a climate change scenario would adversely create a huge burden on public sector investment.<sup>197</sup> It is estimated that in order to adapt to climate change on top of annual government investments a total of US \$69.67 billion will be needed up to 2030 at 2011 year level price. About 60 per cent of this amount will be needed for supporting agricultural infrastructure and irrigation facility creation.<sup>198</sup>

The yield gap between researchers' and farmers' field is a major issue to address for improving the profitability of farmers in the context of promotion of integration of activities of research and extension agencies and farmers.<sup>199</sup> While low investment in research is considered a challenge for technological development, the absorptive capacity of research organisations is also a major issue. The research institutes also suffer from brain drain due to insufficient incentive structures and motivation.<sup>200</sup>

The insufficient rural infrastructure facilities, low market integration and low diversification of high value crops are also impediments to the profitability of farmers apart from weaknesses in government's output support programmes. Despite an increase in the volume of credit by the lending institutions, it is still a major challenge to reach more than half of the farmers with formal credit at a lower interest rate. With the loss of production, the entitlement to cope with the situation of certain groups, especially the landless and marginal farmers, women and indigenous community, will be under challenge because their livelihood depends

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<sup>194</sup> Miah above n 53,27-28.

<sup>195</sup> National Sustainable Development Strategy of Bangladesh' above n 64, 56.

<sup>196</sup> Mallick et al, above n 141, 34.

<sup>197</sup> Ahsan Uddin Ahmed, Saleemul Haq, Mahbuba Nasreen and Abu Wali Raghieb Hassan, 'Climate Change and Disaster Management' (Sectoral Inputs towards the formulation of Seventh Five Year Plan, Final Report to Planning Commission of Bangladesh)22-23.

<sup>198</sup> Z. Karim, 'Assessment of Investment and Financial Flows to Adapt to the Climate Change Effects in the Agriculture Sector' (Draft Final Report, Capacity Development for Policy Makers to Address Climate Change, UNDP Global Project: Capacity Development for Policy Makers to Address Climate Change UNDP Global Project, 2011)34.

<sup>199</sup> Miah above n 53, 3.

<sup>200</sup> Ibid 22.

on agriculture.<sup>201</sup> The marginalisation of women because of their limited working opportunities and restricted mobility will lead to further decline.<sup>202</sup>

The insecurity of livelihoods and repeated and prolonged disasters will create displacement so climate refugees will increase in number.<sup>203</sup> Climate change will have negative impacts on access of farmers to different resources. While the access of human capital for farmers may reduce by about 15 per cent due to an increase in health hazards,<sup>204</sup> natural resource access may also come down to 44 per cent from 64 per cent due to the changing climate. The low access of labourers to natural capital may further decline by 16 per cent along with reduction in financial capital from 58 per cent to 44 per cent because of the huge reduction in daily income due to less work in the fields in changing climatic conditions.<sup>205</sup>

While public spending for agricultural and rural development is necessary for the largest positive effects on growth and poverty reduction,<sup>206</sup> the subsidies will reduce the option to invest in agricultural infrastructure when an additional 10-30 per cent fund will be needed to sustain the current level of benefits and get the desirable outcomes in the future under a climate change scenario.<sup>207</sup>

Given the decline in the availability of fertile land under a climate change scenario, ensuring equity will be another challenge as women in this situation will lose access to land first,<sup>208</sup> and the distributional equity will face challenges when decision-making process will take an elitist pattern.<sup>209</sup> Finally, the challenge for sustainable development of agriculture would be to maintain the achievements gained to-date.<sup>210</sup>

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<sup>201</sup> Saleemul Huq and Jessica Ayers, 'Climate Change Impacts and Responses in Bangladesh' (Note No IP/A/CLIM/NT/2007-09, prepared for European Parliament, 2008)9; Government of the People's Republic of Bangladesh,, Planning Commission and the UNDP Bangladesh, 'The Probable Impacts of Climate Change on Poverty and Economic Growth and the Options of Coping with Adverse Effect of Climate Change in Bangladesh' (Policy Study, Government of Bangladesh and UNDP, 2009)72.

<sup>202</sup> Tahera Akter, 'Climate Change and Flow of Environmental Displacement in Bangladesh' (Research paper, Unnayan Onneshan-The Innovators, 2009)10-11.

<sup>203</sup> Ibid.

<sup>204</sup> Muhammad Anwar Saadat and A.K.M. Saiful Islam, 'Impact of Climate Change on Rural Livelihood: A Case Study' (Paper presented at the 3<sup>rd</sup> International Conference on Water & Flood Management, ICWFM-2011)5.

<sup>205</sup> Ibid 5-6.

<sup>206</sup> Mallick et al, above n 141, 34.

<sup>207</sup> Ahmed et al, above n 197, 22-23.

<sup>208</sup> Huq and Jessica Ayers, above n 201.

<sup>209</sup> Mahbuba Nasreen and Md. Abul Kalam Azad, 'Climate Change and Livelihood in Bangladesh: Experiences of people living in coastal regions' (Proceedings, Int. Con. of Building Resilience, 2013)6.

<sup>210</sup> Ahmed et al, above n 197,13.



The nature of challenges identified above leads to the conclusion that these multipronged challenges are to be addressed in an integrated manner through direct state policy and programme interventions through an evidence based planning. The government has thus needed to pursue these development challenges through its development planning frameworks as that is the best coordination mechanism government has at this moment. However, for efficient, integrated and informed planning the planning framework needs to embrace the basic principles for sustainable development of agriculture to advance the SD in agriculture sector. The aim of the research has carried forward that agenda to examine how adequately government planning frameworks are addressing this integrated agenda as a whole. The following section presents an overview of this research that will give a brief idea about how this research goal is achieved through exploring different dimensions of challenges of promoting SDA through development planning frameworks in Bangladesh.

#### *G Overview of the Study*

The second chapter will discuss the theoretical and legislative background of sustainable development as well as the principles of sustainable development as discussed and agreed in different international forums. This chapter includes the discussion on relevant principles of international climate change agreements. This background chapter has been prepared to identify relevant SD principles that will contribute to classify the principles of SDA.

Chapter three is also a background chapter that will examine the approaches for development planning and planning principles that can promote SD. This background discussion will also contribute to refining the SDA principles in the fourth chapter.

The fourth chapter will discuss the SDA approaches as conceived in light of SD approaches and identifies basic principles of SDA to be pursued through planning frameworks. In preparing a list of principles of SDA, this chapter discusses the international approaches of SDA including SDA approach when dealing with climate change impacts. It also reviews the principles of SDA suggested by different institutions and finally proposes a set of SDA principles in light of discussion on SD and climate change principles discussed in chapter two and planning principles discussed in chapter three. These identified SDA principles are

considered guiding principles that will be the evaluative criteria for reviewing the development of planning frameworks.

The identified guiding principles of SDA in chapter four will be evaluated through a review of the Indian planning process in chapter five to examine comparative national practices. Similar to Bangladesh, India as a developing country promotes agricultural development as a part of sustainable development agenda and pursues SDA through development planning frameworks. India has been chosen deliberately to determine whether the experiences in the planning procedures of this developing country are appropriate to the circumstances in Bangladesh.

After the discussion on global approach and country practices, chapter six will review the Bangladesh planning frameworks. This chapter examines relevant plans, policies, strategies, and legislative provisions to explore the extent of adoption of SDA principles in the planning frameworks. This review will identify the gaps in planning frameworks that need to be addressed for promotion of SDA in Bangladesh.

Chapter seven presents recommendations for changes in development planning frameworks of Bangladesh for the promotion of sustainable development of agriculture in light of internationally promoted SDA principles and internalisation potential of these principles in country context. The discussion also adds to the critique and limitations of reform proposals and proposes directions for further research.

Finally, the concluding chapter will summarise the findings about the research theme and briefly present the policy recommendations along with the challenges of implementation of them and possible options to address these challenges.

## *H Conclusion*

The global consensus on sustainable development and particularly sustainable development of agriculture is relevant to Bangladesh as the development of the agriculture sector in Bangladesh is promoted by the government. The state commitment for poverty alleviation is expressed through planned agricultural development of the country. Now, in a sustainable

development context, the development of the agriculture sector as a state responsibility is performed through country driven process. The planning framework is the most relevant mechanism in the hands of the government of Bangladesh to promote this agenda. However, the nature of the agenda requires a transformation in the development planning process. In such a perspective, this study has been designed to explore the gaps in development planning process and to recommend changes to the overall planning frameworks for making it competent in advancing the SDA in Bangladesh. It will recommend reform proposals in light of standard SDA principles, their ability to be replicated at national level and the challenges and opportunities in the promotion of sustainable development of agriculture at country level through the planning process.

## CHAPTER II

### GLOBAL APPROACHES TO SUSTAINABLE DEVELOPMENT AND ITS PRINCIPLES

#### *A Introduction*

The research goal of this study is to examine the competence of development planning frameworks of Bangladesh in promoting sustainable development of agriculture (SDA) and to propose changes therein. The evaluative criteria for determining the competency of development planning approach in Bangladesh are some guiding SDA principles identified through this research. Before the discussion on these SDA principles, this chapter will address the first question of the sub-set of questions of this study – ‘What is the global approach of sustainable development (SD)? What guiding principles of SD are universally relevant?’ This chapter intends to prepare the foundation for identifying the SDA principles by introducing the global approach of SD and internationally accepted SD principles that guide SD in the agriculture sector. Given the critical impact of climate change to sustainable development, as well as development of agriculture, this chapter also reviews the relevance of SD principles with the principles applied in international climate change treaties. The next chapter is also an introductory chapter that examines the relevance of planning approaches and principles for promotion of SD. These two introductory chapters prepare the background for identifying the principles for SDA in the fourth chapter.

The whole discussion includes decisions, agreements, consensus, treaties and other international and regional level agreements as well as approach of international institutions, such as International Union for Conservation of Nature (IUCN) and International Law Association (ILA) in different dimensions of SD and its principles. The regional agreements are discussed along with international level consensus to exhibit the implementation of international agreements at regional level. Even though the reports from these international institutions do not have implications at international law, they may be influential in shaping the international consensus to promote SD, which justify the review of their approaches to comprehensively present the SD approach and its principles.

This chapter presents a synthesis of the sustainable development approach, the evolution of SD and its dimensions as well as the influence of global approaches of economic, social and environmental development to sustainable development. After a discussion about the global approach on sustainable development, this chapter will discuss sustainable development principles and their relevance in the context of climate change. Finally, this chapter will identify a set of principles based on the global approach and the principles for applying it in the following chapters to identify principles for SDA.

### *B Approaches of Sustainable Development (SD)*

SD has become ‘the jargon of development planners, the slogan of developmental and environmental activists and the priority of development agencies.’<sup>1</sup> SD is considered the first integration in global approaches of development in the history of civilization that promotes the transformation in relationships between humans and nature.<sup>2</sup> The SD paradigm shifts the framework of discussion about global development to ‘what should and can be done’ instead of ‘what should not be done.’<sup>3</sup> SD is considered as a dynamic state of development. Instead of achieving it, societies can promote it where promotion is explained as an ongoing process.<sup>4</sup> The challenge to planners during this transition is to shape the development process as planning frameworks through holistic and integrative role can provide a context where other disciplines can come together and begin to make unified sense.<sup>5</sup>

The common perspective found in different definitions of sustainable development is primarily maintaining and improving ecological integrity, appropriate management of economy and social improvement that addresses distributive concerns over the generations.<sup>6</sup> Achieving progress towards sustainable development is clearly a matter of social choice, choice on the part of individuals and families, of communities, of the many organisations of civil society, and of the government.<sup>7</sup> The commitment to SD from the national governments,

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<sup>1</sup> Sharachchandram M. Lele, ‘Sustainable Development: A Critical Review’ (1991) 19(6) *World Development* 607.

<sup>2</sup> Susan Baker, *Sustainable Development* (Routledge, 2<sup>nd</sup> ed, 2014)18; W. E. Rees, ‘Achieving Sustainability: Reform or Transformation?’ (1995) 9(4) *Journal of Planning Literature* 355.

<sup>3</sup> Carl Mitcham, ‘The Concept of Sustainable Development: Its Origins and Ambivalence’ (1995) 17(3) *Technology In Society* 315.

<sup>4</sup> Baker, above n 2, 9.

<sup>5</sup> Rees, above n 2, 355-356.

<sup>6</sup> Giles Atkinson, Simon Dietz and Eric Neumayer, ‘Introduction to Sustainable Development’ in Giles Atkinson, Simon Dietz and Eric Neumayer (eds), *Handbook of Sustainable Development* (Edward Elgar, 2007) 2-3.

<sup>7</sup> Peter Hardi and Terrence Zdan (eds), *Assesing Sustainable Development: Principles in Practice* (The International Institute for Sustainable Development, 1997)3.

civil society, academic and research institutes as well as international and regional institutions such as United Nations Environment Programme (UNEP), European Union (EU) and the World Bank has been expressed through integrating environmental, economic and social considerations into their development programmes.<sup>8</sup>

This integrated development approach however was discussed in part in different decades in and around the 1970s and 1980s, the formal launching of the approach was done through the 1987 report *Our Common Future* (commonly referred as Brundtland Report).<sup>9</sup> This section presents a brief overview of the emergence and evolution of SD approach.

### 1 *Evolution of Sustainable Development (SD)*

The development interventions in the post-Second World War situation in different countries were amplified by the development aspirations of newly liberated former colonial states.<sup>10</sup> The rapid economic development efforts were seen globally through industrialization and accelerated agricultural production with the help of high yielding seeds, chemical fertiliser, pesticides and massive utilization of irrigation. While these efforts increased industrial output and food production in different countries, they also produced some by products in the form of environmental degradation and inequity in distribution.<sup>11</sup>

The unsustainable and inequitable use of resources and distribution of benefits and costs became a concern to the world community in the post-war situation as unemployment rose, poverty and inequality widened and ecological integrity was threatened. The threats were explained by different scholars in different perspectives, such as *The Limits to Growth* that explained the impact of development methods on the natural environment and argued for changing the nature and pace of growth to ensure inter-generational equity.<sup>12</sup> The explanation about environmental degradation due to use of chemicals,<sup>13</sup> application of the polluter pays

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<sup>8</sup>Baker, above n 2, 5-6.

<sup>9</sup>United Nations World Commission on Environment and Development, *Report of the World Commission on Environment and Development: Our Common Future*, Annex to document A/42/427 - Development and International Co-operation: Environment (1987) ch 2[1].

<sup>10</sup> Sherry B Ortner, Nicholas B. Dirks and Geoff Eley (eds), *Encountering Development: The Making and Unmaking of the Third World* (Princeton University Press, 1995)5.

<sup>11</sup> United Nations World Commission on Environment and Development, *Report of the World Commission on Environment and Development: Our Common Future*, Annex to document A/42/427 - Development and International Co-operation: Environment (1987) ch 5[3].

<sup>12</sup> Katie Willis, *Theories and Practices of Development* (Routledge, 2<sup>nd</sup> ed, 2011)175-176.

<sup>13</sup> Rachel Carson, *Silent Spring* (Penguin, 1962)6-8.

principle in the case of environmental degradation,<sup>14</sup> and population explosion and environmental disaster,<sup>15</sup> created an atmosphere for searching for an alternative development path in the 1970s.

The consensus reached at the United Nations General Assembly in 1960s also expressed the urgency for environmental protection along with economic development. The resolution approved in the General Assembly of the UN in 1962 for integration of natural resource protection measures with economic plans<sup>16</sup> was followed by the *International Covenant on Economic, Social and Cultural Rights*. This covenant suggested taking necessary measures to improve methods of production, conservation and distribution of food to achieve the most efficient development and utilization of natural resources.<sup>17</sup>

The initiatives in searching for a solution to integrate the environmental improvement agenda along with economic and social development expressed through *Declaration of the United Nations Conference on the Human Environment (Stockholm Declaration)* basically laid the groundwork for subsequent acceptance of the concept of sustainable development.<sup>18</sup> The *Stockholm Declaration* explicitly promoted a state led approach and a national planning process for achieving the integrated development combining economic and social improvement aspects while maintaining environmental standards.<sup>19</sup> The *Stockholm Declaration* also recognized states sovereignty over exploitation of their resources in an environmentally friendly manner and assigned responsibility to states for environmental protection for intra and inter-generational benefits.<sup>20</sup>

Although the foundation for sustainable development as an integrated development approach had been made in 1972, this approach took about two decades to gain momentum worldwide. In between this period, there were some initiatives for promotion of ecological integrity along

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<sup>14</sup> Garrett Hardin, 'The Tragedy of the Commons' (1968) 162(3859) *Science* 1245.

<sup>15</sup> Paul R. Ehrlich, *The Population Bomb* (Ballantine Books, 1975).

<sup>16</sup> *Economic Development and the Conservation of Nature*, United Nations GA Res. 1831(XVII), UN GAOR, 17th Session, Supp No 17, U.N. Doc. A/RES/1831 (XVII) (1962).

<sup>17</sup> *International Covenant on Economic, Social and Cultural Rights*, opened for signature 19 December 1966, 993 UNTS 3 (entered into force 3 January 1976) art 11.

<sup>18</sup> David Hunter, James Salzman and Durwood Zaelke (eds) *International Environmental Law and Policy* (Foundation Press, 4<sup>th</sup> ed, 2011)144-145; *Declaration of the United Nations Conference on the Human Environment*, UN Doc A/Conf.48/14/Rev.1(1973) principles 5, 13.

<sup>19</sup> *Declaration of the United Nations Conference on the Human Environment*, UN Doc A/Conf.48/14/Rev.1(1973) principles 14-15, 17; David Hunter, James Salzman and Durwood Zaelke (eds) *International Environmental Law and Policy* (Foundation Press, 4<sup>th</sup> ed, 2011)144.

<sup>20</sup> *Declaration of the United Nations Conference on the Human Environment*, UN Doc A/Conf.48/14/Rev.1(1973) principle 21.

with economic development, such as the Cocoyoc declaration which brought together the basic needs approach and the environmentalist approach to development.<sup>21</sup> The IUCN initiated the *World Conservation Strategy* in the early 1980s and emphasised the conservation of living resources,<sup>22</sup> followed by the *World Charter for Nature* in 1982. This charter outlined some general principles for conservation and special protection to vulnerable areas, management and safeguarding ecosystems and organisms for optimum sustainable productivity.<sup>23</sup>

The SD approach received formal shape with the acceptance of report *Our Common Future* prepared by the UN appointed Brundtland Commission. The essence of the SD approach lies in the sustainability of development that ‘meets the needs of the present without compromising the ability of future generations to meet their own needs.’<sup>24</sup> It tried to ‘integrate social and economic dimensions as essential aspects of ecosystem conservation by emphasising poverty alleviation, community participation, social justice and equity.’<sup>25</sup> It was also expected that SD would be facilitated by political systems that secure effective citizen participation in decision making.<sup>26</sup>

Other objectives for sustainable development included conservation of natural resources, maintaining genetic diversity and efficient use of energy, water and raw materials.<sup>27</sup> There was emphasis on reorientation of technology for improved management of environmental resources. The sustainable level of population is also critical to advance economic and social

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<sup>21</sup> Keith Pezzoli, ‘Sustainable Development: A Trans disciplinary Overview of the Literature’ (1997) 40(5) *Journal of Environmental Planning and Management* 550-553.

<sup>22</sup> International Union for Conservation of Nature(IUCN), *World Conservation Strategy* (1980).

<sup>23</sup> *World Charter for Nature*, GA Res 37/7, UN GAOR, 48<sup>th</sup> plen mtg, UN Doc A/Res/37/7(28 October 1982) principle 4.

<sup>24</sup> United Nations World Commission on Environment and Development, *Report of the World Commission on Environment and Development: Our Common Future*, Annex to document A/42/427 - Development and International Co-operation: Environment (1987)[27].

<sup>25</sup> Baker, above n 2, 5.

<sup>26</sup> United Nations World Commission on Environment and Development, *Report of the World Commission on Environment and Development: Our Common Future*, Annex to document A/42/427 - Development and International Co-operation: Environment (1987)[28]; Stephen M Wheeler, *Planning for Sustainability: Creating Liveable, Equitable and Ecological Communities* (Routledge, 2<sup>nd</sup> ed, 2013)25.

<sup>27</sup> United Nations World Commission on Environment and Development, *Report of the World Commission on Environment and Development: Our Common Future*, Annex to document A/42/427 - Development and International Co-operation: Environment (1987) ch2[55]-[64].



development programmes.<sup>28</sup> The objectives of SD included reform in international economic relations and cooperation for improved market access, technology transfer, and international finance for developing countries to help them address resource degradation and eradicate rising poverty.<sup>29</sup>

The UN has played a particularly prominent role in stimulating engagement with the model of sustainable development. The United Nations Conference on Environment and Development (UNCED) held in 1992 and the World Summit on Sustainable Development (WSSD) held in 2002 advanced the approach.<sup>30</sup> The *Rio Declaration on Environment and Development (Rio Declaration)* agreed in the UNCED through the debate of North and South about the global development approach,<sup>31</sup> outlined the SD approach through different principles. The principles suggested in *Rio Declaration* had a major focus on the following issues:

1. State sovereignty over their own natural resources;<sup>32</sup>
2. People centric development and eradicating poverty;<sup>33</sup>
3. Integration of environmental protection in development process and addressing inequity to meet developmental and environmental needs of present and future generations;<sup>34</sup>
4. Addressing unsustainable patterns of production and consumption,<sup>35</sup> and promoting public participation.<sup>36</sup>
5. Use of environmental impact assessment (EIA) as national instrument and precautionary approach according to state capabilities;<sup>37</sup>

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<sup>28</sup>United Nations World Commission on Environment and Development, *Report of the World Commission on Environment and Development: Our Common Future*, Annex to document A/42/427 - Development and International Co-operation: Environment (1987) ch 2[48]-[54],[65]-[71].

<sup>29</sup>United Nations World Commission on Environment and Development, *Report of the World Commission on Environment and Development: Our Common Future*, Annex to document A/42/427 - Development and International Co-operation: Environment (1987) ch 3.

<sup>30</sup>Sustainable Development Knowledge Platform, *The History of Sustainable Development in the United Nations* <<http://www.uncsd2012.org/history.html>>.

<sup>31</sup>Steven Bernstein, *The Compromise of Liberal Environmentalism* (Columbia University Press, 2001)99-100.

<sup>32</sup>*Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 2.

<sup>33</sup>*Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 1, 5.

<sup>34</sup>*Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 3, 4.

<sup>35</sup>*Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 8.

<sup>36</sup>*Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 10, 20, 21, 22.

<sup>37</sup>*Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 15, 17.

6. Application of polluter pays principle without distorting international trade and investment.<sup>38</sup>

The basic notion to create an equitable development scenario expressed in the *Rio Declaration* was amplified for its implementation in the legally non-binding *Agenda 21: Programme of Action for Sustainable Development (Agenda 21)*.<sup>39</sup> The implementation responsibility was given to the states, as the market could not solve the crisis created due to negative externalities of development interventions.<sup>40</sup> A visible hand of government was considered critical to facilitate the integration of agendas and the implementation through national strategies, plans, policies and processes.<sup>41</sup>

The sustainable development paradigm as elaborated in *Agenda 21* through its three dimensional perspectives contains some basic criteria for development. Kahn identified the basic criteria in the following manner:

Element	Criteria
Economic Sustainability	Growth, Development, Productivity, Trickle Down
Social Sustainability	Equity, Empowerment, Accessibility, Participation Sharing Cultural Identity, Institutional Stability
Environmental Sustainability	Eco-System Integrity, Carrying Capacity, Biodiversity

*Table 1 Properties of three dimensions of sustainable development*  
Source: M. Khan, Concepts, definitions and key issues in sustainable Development.<sup>42</sup>

<sup>38</sup>*Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 13, 16.

<sup>39</sup>*Agenda 21: Programme of Action for Sustainable Development*, UN GAOR, 46<sup>th</sup> sess, Agenda Item 21, UN Doc A/Conf.151/26 (14 June 1992)[2.1].

<sup>40</sup>*Agenda 21: Programme of Action for Sustainable Development*, UN GAOR, 46<sup>th</sup> sess, Agenda Item 21, UN Doc A/Conf.151/26 (14 June 1992) para [1.3].

<sup>41</sup>*Agenda 21: Programme of Action for Sustainable Development*, UN GAOR, 46<sup>th</sup> sess, Agenda Item 21, UN Doc A/Conf.151/26 (14 June 1992)[1.6].

<sup>42</sup>M. Kahn, 'Concepts, definitions, and key issues in sustainable development: the outlook for the future' (Proceedings of the 1995 International Sustainable Development Research Conference, Manchester, England, March 1995) 2-13 quoted in A. D. Basiago, 'Economic, social, and environmental sustainability in development theory and urban planning practice' (1999) 19 *The Environmentalist* 149.

*Agenda 21* recommended major adjustments in agricultural and macroeconomic policy irrespective of development level and countries.<sup>43</sup> *Agenda 21* also prescribed the integration of sustainable development considerations into agricultural policy analysis and planning. It also suggested that agricultural planning agencies should be established at national and local levels to decide priorities, channel resources and implement programmes.<sup>44</sup>

The international community, including international institutions and NGOs, in a follow up attempt of *Agenda 21* further expressed their commitment in 1997 to promote the goals of three components of SD by the national governments with the support of international cooperation.<sup>45</sup> The time bound and targeted Millennium Development Goals (MDGs), agreed in 2000 at the UN, also promoted sustainable development. The MDGs included poverty alleviation along with equity and environmental sustainability.<sup>46</sup> The governments were to integrate the sustainable development principles including biodiversity protection into country policies and programmes.<sup>47</sup>

The *Rio Declaration* approach was firmly rooted in the *Johannesburg Declaration* adopted in the World Summit on Sustainable Development 2002. The *Johannesburg Declaration* reiterated the global consensus on the adoption of sustainable development as the expected policy goals for natural resources management.<sup>48</sup> *Johannesburg Declaration* negotiators focused on five priority areas: water and sanitation, energy, health, agriculture and biodiversity (WEHAB).<sup>49</sup> State parties collectively took the responsibility to advance sustainable development,<sup>50</sup> with a long-term perspective and broad based participation in policy planning and implementation.<sup>51</sup>

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<sup>43</sup> *Agenda 21: Programme of Action for Sustainable Development*, UN GAOR, 46<sup>th</sup> sess, Agenda Item 21, UN Doc A/Conf.151/26 (14 June 1992) Pt 14.

<sup>44</sup> *Agenda 21: Programme of Action for Sustainable Development*, UN GAOR, 46<sup>th</sup> sess, Agenda Item 21, UN Doc A/Conf.151/26 (14 June 1992) ch 14[14.5], [14.35].

<sup>45</sup> *Programme for the Further Implementation of Agenda 21*, UN GAOR, 19<sup>th</sup> special sess, Agenda Item 8, UN Doc A/RES/S-19/2 (28 June 1997)[1], [3], [22].

<sup>46</sup> *United Nations Millennium Declaration*, GA Res 55/2, UN GAOR, 8<sup>th</sup> plen mtg, UN Doc A/RES/55/2 (8 September 2000)[11]-[23].

<sup>47</sup> *United Nations Millennium Declaration*, GA Res 55/2, UN GAOR, 8<sup>th</sup> plen mtg, UN Doc A/RES/55/2 (8 September 2000)goal 7 A, B.

<sup>48</sup> *Johannesburg Declaration on Sustainable Development*, A/CONF. 1999/20 (4 September, 2002).

<sup>49</sup> Hunter, above n 18,181.

<sup>50</sup> *Johannesburg Declaration on Sustainable Development*, A/CONF. 1999/20 (4 September, 2002) art 5.

<sup>51</sup> *Johannesburg Declaration on Sustainable Development*, A/CONF. 1999/20 (4 September, 2002) art 26.

*The Future We Want*, an agreed common vision of member states of the United Nations in 2012, reiterated a common commitment to advance the goals of sustainable development.<sup>52</sup> The member states agreed to promote inclusive and equitable economic growth, social development and ecosystems conservation, regeneration, restoration and resilience,<sup>53</sup> good governance, the rule of law and enabled institutions.<sup>54</sup>

The progress towards promoting sustainable development universally has recently received the most significant shape with the acceptance of some integrated goals at the UN in light of SD approach to achieve some forms of sustainable future by 2030.<sup>55</sup> The agreement reached by 193 member states included 17 new sustainable development goals (SDGs) reaffirmed all principles of the *Rio Declaration*, however with particular emphasis on common but differentiated responsibilities.<sup>56</sup>

The SDGs, as an extended form of MDGs, emphasise the freedom of people from poverty and ensure their rights to development and environment. The SDGs also aim for protection of nature from degradation through sustainable management of natural resources and sustainable consumption and production patterns and addressing climate change on an urgent basis.<sup>57</sup> There is a high priority in promoting sustainable development of agriculture (SDA) in this global consensus where these SDA goals followed the prime goal of SD - poverty alleviation.<sup>58</sup> The SDA goals about increasing agricultural productivity through implementing resilient agricultural practices are as follows:

2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment

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<sup>52</sup> *The Future We Want*, GA Res 66/288, UN GAOR, 66<sup>th</sup> sess, 123<sup>rd</sup> plen mtg, Agenda Item 19, UN Doc A/RES/66/288(11 September 2012)[4].

<sup>53</sup> *The Future We Want*, GA Res 66/288, UN GAOR, 66<sup>th</sup> sess, 123<sup>rd</sup> plen mtg, Agenda Item 19, UN Doc A/RES/66/288(11 September 2012)art[4].

<sup>54</sup> *The Future We Want*, GA Res 66/288, UN GAOR, 66<sup>th</sup> sess, 123<sup>rd</sup> plen mtg, Agenda Item 19, UN Doc A/RES/66/288(11 September 2012)art[10].

<sup>55</sup> Sustainable Development Knowledge Platform, *Sustainable Development Goals* <<https://sustainabledevelopment.un.org/topics/sustainabledevelopmentgoals>>.

<sup>56</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/RES/70/1 (25 September 2015)[12].

<sup>57</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/RES/70/1 (25 September 2015)[7]-[9].

<sup>58</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/RES/70/1 (25 September 2015) (18 September 2015)Goal 2.

2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.<sup>59</sup>

The SDA goals emphasised promoting access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge.<sup>60</sup> There are also priorities to increase investment in rural infrastructure, agricultural research, extension services and technology development, particularly in developing countries apart from correcting and preventing trade restrictions and distortions in world agricultural markets.<sup>61</sup>

The agreement reached in *Transforming our World: The 2030 Agenda for Sustainable Development* reiterated the integration among different goals and aims to address the key systemic barriers to sustainable development. The climate change agenda is incorporated in these SDGs as a goal to achieve under a binding climate change treaty,<sup>62</sup> and *The Paris Agreement*<sup>63</sup> has finally carried forward this goal. This agreement was negotiated under the premise of sustainable development principles for limiting greenhouse gas emissions.<sup>64</sup> The *Paris Agreement* made a compromise in agricultural perspective when it was agreed to ‘foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production.’<sup>65</sup>

The integrated goals and targets identified in the SDGs are the guidelines for the next decades that need to be translated into action by national governments. Each government will also have to decide the ways to incorporate these aspirational global targets in national planning processes, policies and strategies,<sup>66</sup> as well as strengthen the state planning process for implementation of these goals.<sup>67</sup> The procedural aspects for implementing the nationally

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<sup>59</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/RES/70/1 (25 September 2015) Goal 2.3-2.4.

<sup>60</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/RES/70/1 (25 September 2015) Goal 2.5.

<sup>61</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/RES/70/1 (25 September 2015) Goal 2a-2b.

<sup>62</sup> United Nations News Centre, *Ban hails UN Member States' agreement on 'people's agenda' to end poverty, promote sustainability* <<http://www.un.org/apps/news/story.asp?NewsID=51546#.VcASBPmqpBe>>.

<sup>63</sup> *The Paris Agreement*, opened for signature 22 April 2016 [2016] FCCC/CP/2015/10/Add.1 (not yet in force).

<sup>64</sup> *The Paris Agreement*, opened for signature 22 April 2016 [2016] FCCC/CP/2015/10/Add.1 (not yet in force) art 2a.

<sup>65</sup> *The Paris Agreement*, opened for signature 22 April 2016 [2016] FCCC/CP/2015/10/Add.1 (not yet in force) art 2b.

<sup>66</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/RES/70/1 (25 September 2015)[55].

<sup>67</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/RES/70/1 (25 September 2015) Goal 17.9.

implementable goals include developing effective, accountable and transparent institutions at all levels of government.<sup>68</sup> SDGs also call for ensuring responsive, inclusive, participatory and representative decision-making at all levels along with the right to public participation.<sup>69</sup> SDGs are consistent with *Agenda 21* that has specifically identified the state planning process as the mechanism to advance the sustainable development agenda in developing countries. This notion is strengthened through the target for promotion of effective climate change planning and management in developing countries.<sup>70</sup>

The evolution of SD has received a definite shape with the acceptance of SDGs at the UN, however these goals have been proposed in the context of variable capacity of different countries and in the absence of any threshold for environmental degradation. The institutional structure, including rules and regulations and collaboration among state and non-state actors to promote different goals and domestic orientation, is therefore important for effective persuasion of these agendas. This has invoked the basic questions of how to operationalise SD in each country. However, operationalising SD needs to be passed through the existing approaches of three dimensions of development that SD has embraced for integration. The following subsection reviews the extent of relevance of SD with three dominant perspectives of development (economic, social and environmental) followed by a discussion on operationalisation process of SD at country level.

## 2 *Relevance of Global Approaches of Development to SD*

Sustainable development as a visionary development approach challenges the dominant approaches of economic, social and environmental development. This section has been included to discuss the development issue in light of these three different perspectives to review their relevance against SD approaches that currently operate.

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<sup>68</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/RES/70/1 (25 September 2015) Goal 16.6.

<sup>69</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/RES/70/1 (25 September 2015) Goals 16.7, 16.10.

<sup>70</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/RES/70/1 (25 September 2015) Goal 13.

(a) *Relevance of Economic Perspectives of Development to SD*

The legacy of sustainable development in respect to its economic goals was found in a neo-liberalism context that ideology emerged as a counterrevolution of Keynesianism and its allied theories in the 1970s and 1980s.<sup>71</sup> In the context of the economic crisis in the 1970s and 1980s, when the world observed persistent high inflation combined with high unemployment, imbalance in the balance of payments and budget deficits, neoliberal ideas became standard economic ideology.<sup>72</sup> The ideology of neoliberalism expressed through a price and market system that was very similar to the ideology of early twentieth century expressed through classical and neo-classical economics. It also emphasised the least state intervention in the economy.<sup>73</sup>

The neoliberal ideological paradigm was dominated by an adjustment process for development in the 1980s in the context of an inability of developing countries to pay off foreign debt and manage budget deficits.<sup>74</sup> In the late 1980s, a system of recommendations – the ‘Washington Consensus’ – became the guiding principles to follow for development, especially for developing countries. The consensus included reducing public expenditure, market determined interest rates, competitive exchange rates, trade liberalization, privatization, deregulation, foreign direct investment and securing property rights. These policies were treated as a neoliberalism development policy package and became the Western model for development.<sup>75</sup> The most well-known aspect of neoliberal development theory in practice since the late 1970s has been the implementation of structural adjustment programs (SAPs). SAPs were aimed at reducing the role of state in the running of the national economy that also included similar approaches of Washington Consensus. The SAPs were reshaped with a goal toward poverty reduction, led by international financial institutions in the late 1990s.<sup>76</sup>

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<sup>71</sup> Katie Willis, *Theories and Practices of Development* (Routledge, 2<sup>nd</sup> ed, 2011)52 quoting Deepak Lal, 'The Misconceptions of 'Development Economics'' (1985) (June) *Finance and Development* 10-13.

<sup>72</sup> Richard Peet and Elaine Hartwick, *Theories of Development: Contentious, Arguments, Alternatives* (The Guildford Press, 1990)84.

<sup>73</sup> *Ibid* 45, 80; Willis, above n 12, 202

<sup>74</sup> Erik Thorbecke, 'The Evolution of the Development Doctrine, 1950-2005' (Research Paper No 2006/155, United Nations University, 2006)15.

<sup>75</sup> Peet and Hartwick, above n 72, 92.

<sup>76</sup> Willis, above n 12, 58.

The mainstream economic ideologies emphasised economic growth through separately explaining the development paradigm and they do not explain the relationship with the environment. However, when sustainable development started emerging in 1970s, it embraced the dominant economic ideologies of this time with some adjustment in approach. The two basic economic policies SD embraces are reviving growth and changing the quality of growth.<sup>77</sup> The mainstream growth theories' basic notion of development, economic growth was merged in the SD approach as a goal.<sup>78</sup> However, the major adjustment was proposed for reorientation of the international economic system, trade and finance to favour the developing countries.<sup>79</sup> There was an urge to change the growth pattern through a complete review of effect of development activities on the economy, society and environment and to consider income distribution aspect of economic growth.<sup>80</sup> This is additional to the neoliberalism approach and is explained as 'redistribution with growth' approach in the social development approach.

The SD approach, as evolved from the 1980s until the adoption of SDGs in 2015, has reflected an effort to promote the dominant economic ideology along with some more elements. It did not change the major neoliberal approach, structural adjustment programme (SAP). Rather it found the programme necessary in the context of debt crisis in developing countries along with careful designing of the programme to avoid maladjustment.<sup>81</sup> The implementation plan of SD recommended that the lending institutions consider long-term development objectives of developing countries,<sup>82</sup> along with increased volume of resources.<sup>83</sup> In the case of trade, the SD approach encouraged the ideology of neoliberalism, open and liberal market and trading system, yet urged the world community to support the developing countries to help those reaping benefits from increased trade through market

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<sup>77</sup> United Nations World Commission on Environment and Development, *Report of the World Commission on Environment and Development: Our Common Future*, Annex to document A/42/427 - Development and International Co-operation: Environment (1987)[28].

<sup>78</sup> United Nations World Commission on Environment and Development, *Report of the World Commission on Environment and Development: Our Common Future*, Annex to document A/42/427 - Development and International Co-operation: Environment (1987)[32].

<sup>79</sup> United Nations World Commission on Environment and Development, *Report of the World Commission on Environment and Development: Our Common Future*, Annex to document A/42/427 - Development and International Co-operation: Environment (1987)[34].

<sup>80</sup> United Nations World Commission on Environment and Development, *Report of the World Commission on Environment and Development: Our Common Future*, Annex to document A/42/427 - Development and International Co-operation: Environment (1987)[36],ch2[40].

<sup>81</sup> *Agenda 21: Programme of Action for Sustainable Development*, UN GAOR, 46<sup>th</sup> sess, Agenda Item 21, UN Doc A/Conf.151/26 (14 June 1992) ch 2 [2.33].

<sup>82</sup> *Agenda 21: Programme of Action for Sustainable Development*, UN GAOR, 46<sup>th</sup> sess, Agenda Item 21, UN Doc A/Conf.151/26 (14 June 1992) ch 3[36]-[38].

<sup>83</sup> 'The Future We Want', GA Res 66/288, UN GAOR, 66<sup>th</sup> sess, 123<sup>rd</sup> plen mtg, Agenda Item 19, UN Doc A/RES/66/288(11 September 2012) cha 3[29], [32].



efficiency.<sup>84</sup> The SD approach also incorporated the institutional strengthening and promotion of governance agendas that are related to governance agenda of neoliberalism and recent approaches on neo-institutionalism.<sup>85</sup>

SD did not offer to change the countries' economic policies,<sup>86</sup> this approach emphasised good management and administration, efficient planning and sound economic policies.<sup>87</sup> It had given the responsibility to the states to coordinate and integrate the different dimensions of development, which however, did not completely match with pure neoliberalism that suggested the least state intervention and market supremacy for coordination. This has relevance to Keynesianism and its allied theories that were promoted after the 1940s and suggested an increased government role for equilibrium beside any market mechanisms.<sup>88</sup>

The foregoing discussion reveals that SD has embraced the basic ideology of neoliberalism that suggested economic growth, liberalising market and trade for development as well as good governance and institutional strengthening for implementation of development interventions. However, an adjustment is made by promoting a state role in coordination and integration of three different dimensions of SD. This seems plausible in the context that almost all of the countries around the world embraced the liberalisation of trade policies under the World Trade Organisation (WTO) and pursued development along with governance. The basic issue here is the efficiency of state mechanisms in the integration of development aspirations and exploring benefits from the international trade and the resource transfer from developed countries to developing countries. This is necessary when developing countries often fall short of funds and technological resources to pursue environmental improvement and social development. The next sub-sections will examine how these two aspects of development are merged with SD.

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<sup>84</sup> *Agenda 21: Programme of Action for Sustainable Development*, UN GAOR, 46<sup>th</sup> sess, Agenda Item 21, UN Doc A/Conf.151/26 (14 June 1992) cha 2, [2.5], [2.10], [2.14]; *The Future We Want*, GA Res 66/288, UN GAOR, 66<sup>th</sup> sess, 123<sup>rd</sup> plen mtg, Agenda Item 19, UN Doc A/RES/66/288(11 September 2012) ch 3 [44]-[51], [281]-[282].

<sup>85</sup> *The Future We Want*, GA Res 66/288, UN GAOR, 66<sup>th</sup> sess, 123<sup>rd</sup> plen mtg, Agenda Item 19, UN Doc A/RES/66/288(11 September 2012) ch 3[75].

<sup>86</sup> *The Future We Want*, GA Res 66/288, UN GAOR, 66<sup>th</sup> sess, 123<sup>rd</sup> plen mtg, Agenda Item 19, UN Doc A/RES/66/288(11 September 2012)[252]-[257].

<sup>87</sup> *Agenda 21: Programme of Action for Sustainable Development*, UN GAOR, 46<sup>th</sup> sess, Agenda Item 21, UN Doc A/Conf.151/26 (14 June 1992) ch 2[2.34].

<sup>88</sup> Willis, above n 12, 39-40.

*(b) Relevance of Social Development Approach to SD*

Social development as a part of overall development process is identified as a ‘process of planned social change designed to promote the wellbeing of the population as a whole within the context of a dynamic multifaceted development process.’<sup>89</sup> The traditional social development approach based on self-determination and self-help ideologies<sup>90</sup> applied in early post-war period changed in the 1960s and ‘statist perspective’ dominated the social development discourse in 1960s and afterwards. This ‘statist perspective’ emphasised government interventions for social development that has direct relevance to the sustainable development approach. The state responsibility for sustainable development in different SD agreements reflected this statist perspective.<sup>91</sup> The recognition of the interests of citizens and a democratic response to their needs through planning and administration as described in the ‘collectivist principle’ is also embedded in the SD paradigm where government is conceived as an entity owned by its citizens and is accountable to them.<sup>92</sup>

The social development approach of ‘redistribution with growth’, which dominated in the 1970s, pursued the ideology that redistribution could and should be achieved by changing the structure and nature of growth in favour of the poor.<sup>93</sup> The shift from ‘only growth’ to ‘growth with equity’ was explained by the Basic Needs Approach (BNA),<sup>94</sup> which had been influential in development discourse in developing countries during the late 1970s and early 1980s. Although this approach lost emphasis in the context of debt crisis and dominance of neoliberal economic approaches in the 1980s,<sup>95</sup> this approach has major influence on the emergence of SD. The dominant social development approach in the early 1970s and in the late 1990s, the community participatory perspective had emphasised a combination of government and community participatory measures. This had influenced SD approaches to incorporate government roles in development activities and community participation in development activities.<sup>96</sup> The UN promoted the Human Development Approach (HDA) as a

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<sup>89</sup> James Midgley, *Social Development: Theory and Practice* (SAGE Publications, 2014)13.

<sup>90</sup> Murlu Desai ‘Social Policy Approaches, Human Rights, and Social Development in Asia’ (2013) 35(2) *Social Development Issues* 1.

<sup>91</sup> James Midgley, *Social Development: The Developmental Perspective in Social Welfare* (SAGE Publications, 1995)150.

<sup>92</sup> Midgley, above n 89, 60.

<sup>93</sup> Rachel Sabates-Wheeler and Gabriele Koehler, ‘Re-distribution and Growth: What is the role of Social Protection?’ (2011) 42(6) *IDS Bulletin* 87.

<sup>94</sup> Mohammad Omar Farooq, ‘Basic Needs Approach, Appropriate Technology, and Institutionalism’ (1988) 22(2) *Journal of Economic Issues* 364-365.

<sup>95</sup> Soran Reader, ‘Does a Basic Needs Approach Need Capabilities’ (2006) 14(3) *The Journal of Political Philosophy* 338.

<sup>96</sup> Midgley, above n 91, 60.

complete social development paradigm in the early 1990s that had relevance to redistribution with growth, and basic needs approach.<sup>97</sup> This approach also influenced shaping the global paradigm of SD.<sup>98</sup>

In the twenty first century, the shifts in definition of social development include equality and poverty reduction through a pattern of poor-focused sensitive growth. This approach emerged as a part of the Millennium Development Goals (MDGs) and guided the development criteria for human welfare.<sup>99</sup> It also shaped the approach of SD and its salient features expressed through SDGs. The recent approach of social development, ‘enterprise perspective’ emphasises the market and people’s participation in market mechanisms as an effective means for achieving social development reflecting neoliberal assumptions. This approach accords high priority to micro-enterprise and micro-finance to promote market participation in development activities. It is linked with equity in access to resources,<sup>100</sup> also a major agenda in sustainable development.

The SD approach has relevance to World Bank’s suggested three operational principles - inclusion for people centric development, accountability for facilitating citizen participation and cohesion for strengthening social capital for social development.<sup>101</sup> The SD approach is also relevant to gender perspectives of social development promoted by Esther Boserup as an issue of equity.<sup>102</sup>

The brief review of the social development approach reveals that the sustainable development has included the basic social development paradigm that reflects the state’s responsibility for people centric development, basic need fulfilment of citizens, equity in resources and inclusive planned development. The political element of the SD approach, citizen participation in the decision making process is also a reflection of the community and enterprise perspectives of social development. The SD approach is therefore not a new invention; rather it embraced the dominant paradigm of social development and placed it on

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<sup>97</sup> United Nations Development Program, *About Human Development* (UNDP, 2012) <<http://hdr.undp.org/en/humandev>>.

<sup>98</sup> The World Bank, *Putting Social Development to Work for the Poor* (2005)30.

<sup>99</sup> The World Bank, *Putting Social Development to Work for the Poor* (2005)31.

<sup>100</sup>Midgley, above n 89, 58.

The enterprise perspective focuses social development practice on the market, contending that market participation is an effective means for achieving social development.

<sup>101</sup> ‘Putting Social Development to Work for the Poor’ above n 98, 2; World Bank, *Social Dimensions of Development Effectiveness* <<http://live.worldbank.org/social-dimensions-development-effectiveness>>.

<sup>102</sup>Peet and Hartwick, above n 72, 254-55.

equal footing with other dimensions of development. However, there is a lack of critique of the influence of neo-liberalism in understanding the synergies and potential conflicts in the role of governments and markets in undertaking these goals.

*(c)Relevance of the Environmentalist Approach to SD*

Sustainable development promotes progressive changes in economic and social perspectives of development without damaging the ecological integrity. Before the emergence of the sustainable development approach, as an integrated paradigm by including environmental improvement issues in development perspective, the impact of the development on the environment and vice versa was discussed in isolation by the scholars. Nevertheless, the environmentalist approach has had a major influence in promoting sustainable development.

The early theories on relationship between the natural environment and society were explained primarily by environmental determinism that stressed the ways in which human behaviour was conditioned or determined by the physical environment.<sup>103</sup> This approach did not discuss development-environment relationship. During the era of the modernization approach to development in the 1950s and 1960s, natural resources were considered as inputs into the growth process. The approach favoured economic growth over environmental degradation, similar to the ‘grow now, clean up later’ approach.<sup>104</sup>

The environmentalist perspective of development was first seen in the late 1960s and early 1970s. These perspectives had a major influence in integrating environmentalism with mainstream development processes. The pro-environmentalists scholars challenged the modernisation theories of development of the 1960s that focused on technological solutions to increasing environmental problems. In contrast, Schumacher introduced the ‘intermediate technology’ approach in the middle of 1960s in favour of people centred environmentally less damaging development strategies.<sup>105</sup>

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<sup>103</sup> Willis, above n 12, 155-156.

<sup>104</sup> Ibid 166-168.

<sup>105</sup> Ibid 177.

Rachel Carson in her book *Silent Spring* attracted attention to the environmental degradation as well as danger to nature, including human beings, due to use of chemicals for development purpose. This is the first time there was discussion about regulating industry to protect the environment.<sup>106</sup> Garrett Hardin identified environmental pollution as ‘tragedy of commons’ where every individual tries to exploit the greatest benefit from a limited resource without considering the consequences. He contended that the solution for avoiding this tragedy is to resort to coercive laws or taxing devices that can make treatment of discharge cheaper than to pay taxes.<sup>107</sup> Another writer, Paul Ehrlich, in his *The Population Bomb*, explained the association between population explosion and environmental disaster.<sup>108</sup> His explanation led others to think about the consequences of population increase and damages created in the environment by the increased number of people.<sup>109</sup>

The legacy of ideology of environmental destruction due to uncontrolled growth and capacity of the earth were further advanced by the report of *The Limits to Growth* and *Blueprint for Survival* in the early 1970s.<sup>110</sup> *The Limits to Growth* ignited the debate about the relationships between economic growth and natural environment by focusing on the impact of development methods and argued for the changing nature and pace of growth, especially in developed countries to ensure inter-generational equity.<sup>111</sup> Goldsmith and Allen also warned about the potential for ecological disaster due to unsustainable production patterns that created pressure on finite natural resources. They argued for an integrated plan for pursuing economic growth as well as ecological protection.<sup>112</sup>

While the early environmentalists emphasised state intervention for protecting the environment and conservation of resources,<sup>113</sup> there are also innovative ideologies in the ages of neoliberalism. The ‘neoliberalising nature’ approach promoted by James McCarthy and Scott Prudham suggested that the market signals alone are not sufficient in resource allocation when nature in its various forms is not a commodity.<sup>114</sup> The protection of the environment should include a price for the services that nature provides and could be a means

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<sup>106</sup> Carson, above n 13, 6-8.

<sup>107</sup> Hardin, above n 14, 1245

<sup>108</sup> Ehrlich, above n 15, 39.

<sup>109</sup> Ehrlich, above n 15.

<sup>110</sup> Donella H. Meadows, Dennis L. Meadows, Jorgen Randers and William W. Behrens III, *The Limits to Growth* (Earth Island, 1972); Edward Goldsmith and Robert Allen (eds) *A Blueprint for Survival* (Penguin Books, 1972).

<sup>111</sup> Willis, above n 12, 175-176.

<sup>112</sup> Edward Goldsmith and Robert Allen (eds) *A Blueprint for Survival* (Penguin Books, 1972)pt 110-166.

<sup>113</sup> Lorraine Elliott, *Environmentalism* (Encyclopaedia Britannica)

<<http://www.britannica.com/topic/environmentalism#ref750479>>.

<sup>114</sup> McCarthy and Scott Prudham, ‘Neoliberal nature and the nature of neoliberalism’(2004)35 *Geoforum* 281.

of promoting environmental protection.<sup>115</sup> This approach is relevant to approaches followed in pricing the GHG emissions in addressing the climate change threats to development.

Sustainable development, as an integrated approach, has prescribed economic growth along with redistribution as well as adopted ecological approaches. It becomes an ‘approach to planning and decision-making that aims at achieving a real and lasting reduction of social and economic disparities, as well as protecting the environment.’<sup>116</sup> The neoliberalisation of the environmental paradigm through pricing of pollution, particularly in the case of climate change is prominent. However, this pricing mechanism is not applied in isolation; it complements governments’ intervention through rules, regulations and development activities for maintenance and improvement of ecological integrity.

The foregoing discussion on three broad areas of sustainable development has revealed that the dominant ideologies of economic, social and environmental development have been embedded in the SD approach. It is an integrated paradigm that is prescribed to be pursued as a single development approach. While the basic proposition of three ideologies was internalised in the approach, there was a compromise in adding them together. While the neoliberal ideology is embraced from an economic growth perspective, the role of the state is not curtailed in addressing market failures. The social development approaches are also internalised with recent developments such as neoliberalisation of social approaches through enterprise perspectives. Finally, the environmental development perspectives were embedded with the prescription of conservation and maintenance of ecological integrity. The neoliberalisation or pricing the pollution is also adjusted to make it compatible for development seekers. This has extended the options for both the developing and developed countries to grow. The balancing mechanism used here is the common but differentiated responsibilities.<sup>117</sup> Moreover, the real resource transfer from developed to developing countries may also be critical to the success of SD globally.

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<sup>115</sup> Willis, above n 12, 187-188.

<sup>116</sup> The EEA Financial Mechanism & The Norwegian Financial Mechanism, *Sustainable Development Policy and Guide* < [www.fss.org.pl/sites/fss.org.pl/files/page/pl/2012/04/341\\_1\\_pdf\\_29275.pdf](http://www.fss.org.pl/sites/fss.org.pl/files/page/pl/2012/04/341_1_pdf_29275.pdf)> 2.

<sup>117</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 7; Centre for International Sustainable Development Law ‘The Principle of Common But Differentiated Responsibilities: Origins and Scope’ (Legal Brief, Prepared for the World Summit on Sustainable Development 2002)1.

The principle of ‘common but differentiated responsibility’ evolved from the notion of the ‘common heritage of mankind’ and is a manifestation of general principles of equity in international law. The principle recognises historical differences in the contributions of developed and developing States to global environmental problems, and differences in their respective economic and technical capacity to tackle these problems. Despite their common responsibilities, important differences exist between the stated responsibilities of developed and developing countries.

Given that most countries follow neoliberalism, which opens their markets for liberalisation of trade and they also sit together to promote the SD under the shadow of the UN, the operationalisation of SD through SDGs is also critical for successful implementation of global goals for SD. This research with the goal of preparing recommendations for SDA planning has therefore found it justified to review the basic issues in operationalisation of SD for promoting the sustainable development of agriculture through state mechanisms. The next sub-section will therefore examine the issues relevant to the operationalisation of SD.

### 3 *The Operationalisation of SD and its Legal Basis*

Despite the vagueness and ambiguity in the definition of sustainable development in *Our Common Future* (Brundtland Report), it is considered highly instrumental in promoting a global approach to development in the context of limited planetary resource capacity.<sup>118</sup> *Our Common Future* has opened the political door for discussion on sustainable development and let others take up the challenge of operationalising the SD approach. Apart from *Agenda 21* different scholars explained different aspects of operationalisation of this approach that are discussed below along with the limitations and legal dimension of the SD approach. The limitations and legal basis of SD are critical for efficient implementation of global agreements in country systems.

#### *(a) Operationalisation of SD*

Hunter identifies three operational challenges of SD that include - keeping economic activity progressing within the limits of ecological capacity, the fair distribution of benefits of economic systems and efficient allocation of the scarce resources in different sectors for societal development.<sup>119</sup> Rogers and his colleagues have however identified consumption, production, and distribution as the three determinants of sustainable development for operationalisation of SD.<sup>120</sup> They suggested examining the amount and the patterns of consumption,<sup>121</sup> developing a pro-poor production pattern,<sup>122</sup> as well as improved ways for distribution of resources.<sup>123</sup>

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<sup>118</sup> Desta Mebratu, 'Sustainability and Sustainable Development: Historical and Conceptual Review' (1998)18(6) *Environmental Impact Assessment Review* 494.

<sup>119</sup> Hunter, et al, above n 18, 151-152.

<sup>120</sup> Peter P. Rogers, Kazi F. Jalal and John A. Boyd, *An Introduction to Sustainable Development* (Earthscan, 2008)65.

<sup>121</sup> *Ibid* 66-67.

<sup>122</sup> *Ibid* 72.

<sup>123</sup> *Ibid* 77.

Holden and his colleagues have emphasised the need to manage four non-negotiable primary properties of SD approach that include: safeguarding ecological sustainability, meeting basic human needs, and promotion of intra-generational and intergenerational equity.<sup>124</sup> Some secondary dimensions, such as maintaining the nature's fundamental value, public participation, and improved standards of living are also important aspects that need to be properly addressed.<sup>125</sup>

In respect to managing ecological sustainability, renewable resources need to be used at a rate that is less than or equal to the rate of natural replenishment,<sup>126</sup> as well as use of non-renewable resources at declining rate.<sup>127</sup> The social consensus in using resources, such as water, soil, forest and air in a sustainable manner is necessary<sup>128</sup> along with decreasing inequality and increasing social capital for achieving sustainable development.<sup>129</sup>

The promotion of basic human needs is a primary dimension of SD<sup>130</sup> that needs to be promoted with another two primary dimensions – inter and intra-generational equity for facilitating physical sustainability of the earth's ecosystem for maintaining the ability of humans over the generations. Haughton however added geographical equity in interventions, procedural equity through fairness in recognition of people's rights as well as inter-species equity through maintenance of biodiversity.<sup>131</sup>

While local level action is considered necessary to deliver SD, there is an urgency to improve the capacity at a local level to induce behavioural change in addition to national frameworks.<sup>132</sup> Given the argument that sustainable development is a political act,<sup>133</sup> analysis

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<sup>124</sup> Erling Holden, Kristin Linnerud and David Banister, 'Sustainable Development: Our Common Future Revisited' (2014)16 *Global Environmental Change* 131-132.

<sup>125</sup> Karl G. Hoyer, *Sustainable Mobility- the Concepts and its Implications* (PhD Thesis, Department of Environmental Research, Western Norway Research Institute, 1999) quoted in Erling Holden, Kristin Linnerud and David Banister, 'Sustainable Development: Our Common Future Revisited' (2014)16 *Global Environmental Change* 131-132.

<sup>126</sup> Richard Heinberg and Daniel Lerch (eds), *The Post Carbon Reader: Managing the 21st Century's Sustainability Crises* (Watershed Media, 2010)16-19; Herman E. Daly, 'Toward some operational principles of sustainable development'(1990)2(1) *Ecological Economics* 2.

<sup>127</sup> Heinberg and Lerch, above n 126, 16-19; D.W Pearce and G. D. Atkinson, 'Capital theory and the measurement of sustainable development: an indicator of 'weak' sustainability' (1993)8(2) *Ecological Economics* 103-106.

<sup>128</sup> R Huetting, and P. Bosch, 'Note on the correction of national income for environmental losses' in O. Kuik and H. Verbruggen (eds) *In Search of Indicators of Sustainable Development*.(Kluwer, 1991)29-38.

<sup>129</sup> Kyle W. Knight and Eugene A. Rosa, 'The environmental efficiency of well-being: A cross-national analysis' (2011) 40 *Social Science Research* 945.

<sup>130</sup> Nancy L. Spalding, 'The Relevance of Basic Needs for Political and Economic Development'(1990) 25(3) *Studies in Comparative International Development* 91.

<sup>131</sup> G. Haughton, 'Environmental Justice and the Sustainable City' (1999) 18(3) *Journal of Planning Education and Research* 235-236.

<sup>132</sup> Yvonne Rydin, 'Sustainable Cities and Local Sustainability ' in Giles Atkinson, Simon Dietz and Eric Neumayer (eds), *Handbook of Sustainable Development* (Edward Elgar, 2007) 348-349.



of cost-effectiveness is necessary for taking decisions by the politicians.<sup>134</sup> Resolving environmental problems also requires community participation that enables public access to relevant information and resources and listening to their experience and opinion during the planning phases.<sup>135</sup>

Given the limited technological and financial capacity in efficient management and exploitation of resources, real resource transfer and promotion of favourable trade for developing countries are also a global challenge. While these global challenges are to be addressed by global governance, the operationalisation of other SD challenges at the country level needs to examine the limitations of this approach and goals identified for achievement in next decades. The following discussion on limitations of this approach and SDGs will however be limited to relevant areas of sustainable development of agriculture.

#### *(b) Limitations of SD Approach*

Given the context of conflicting goals between developed and developing countries in pursuing development, bringing the delicate balance between rapid development aspirations of developing countries and environmental improvement agenda of developed countries is somewhat complex.<sup>136</sup> Promotion of them together is a dilemma for developing nations.<sup>137</sup>

The assurance of addressing inter-generational equity in the present decision-making context and politicians' short-sighted goals seems complex and somewhat ambitious.<sup>138</sup> The highly bureaucratic and technical nature of this approach also helps the states and non-governmental organisations to shape the agenda by sidelining target communities' interests and

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<sup>133</sup> John Robinson, 'Squaring the circle? Some thoughts on the idea of sustainable development' (2004)48(4) *Ecological Economics* 382.

<sup>134</sup> Klaus Rennings and Hubert Wiggering, 'Steps towards indicators of sustainable development: Linking economic and ecological concepts' (1997) 20(1) *Ecological Economics* 35.

<sup>135</sup> Donna Craig and M Jeffery, 'Non-Lawyers and Legal Regimes: Public Participation for Ecologically Sustainable Development' in David Leary and Balakrishna Pisupati (eds), *Future of International Environmental Law* (United Nations University Press, 2010)103.

<sup>136</sup> Alhaji B M Marong, 'From Rio to Johannesburg: Reflections on the Role of International Legal Norms in Sustainable Development' (2004) 16(21) *The Georgetown International Environmental Law Review* 26.

<sup>137</sup> Daniel C. Esty, 'A Term's Limits' (Faculty Scholarship Series Paper 434, Yale Law School, 2001) 74-75.

<sup>138</sup> Michael Redclift, *Sustainable Development: Exploring the Contradictions* (Routledge, 1987).

knowledge.<sup>139</sup> Everett, however, argued that the vagueness of the approach widens the opportunity for the locals to promote their interests and views over elite perspectives.<sup>140</sup>

The SDGs are intended to operationalise sustainable development universally; however the goals concentrate more on directing the development pattern in developing countries as well as assisting them financially and technologically by the developed countries.<sup>141</sup> Nevertheless, many of the goals, such as doubling the agricultural productivity by 2030 and incomes of small-scale food producers and ensuring sustainable food production systems do not reflect the scenario of developing countries.<sup>142</sup> Moreover, the projections of the likely impacts of climate change on food production presents a gloomy picture for developing countries, the productivity improvement in the face of climate change therefore seems quite ambitious. The goals for productivity improvement and profitability are also quite challenging as they are to be pursued in conjunction with nature protection, biodiversity conservation and environmental improvement as well as adaptation and mitigation to climate change.<sup>143</sup>

This large pool of goals in SDGs may complicate the integration goal of the approach. Operationalising SD and its goals faces problems in governance in absence of standards of SD and weak global level organisations for promoting international environmental governance.<sup>144</sup> However, there are few alternatives to promote an integrated approach for pursuing development at this moment.

There are differences in economic, social and political structures in different countries, all with different ecosystems. The universal goals as suggested in SDGs, although setting development direction, have to pass through these differences and need to be accepted based on each country's situation. Transposing this approach and goals into countries' systems will need structural changes in each country's rules and regulations to incorporate necessary

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<sup>139</sup> Luke Smyth, 'Anthropological Critiques of Sustainable Development' (2011) VII *Cross-sections* 79.

<sup>140</sup> Margaret Everett, 'The ghost in the Machine: Agency and "Poststructural" Critiques of Development' (1997) 70 *Anthropological Quarterly* 137.

<sup>141</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/RES/70/1 (25 September 2015)

See the paragraphs 43-44 and goal number 1, 2, 4, 5, 6, 7, 8, 9, 10, 15, 16, 17 that have more concentration on potential development pattern of poor countries.

<sup>142</sup> Deepak K. Ray, Nathaniel D. Mueller, Paul C. West, Jonathan A. Foley, 'Yield Trends Are Insufficient to Double Global Crop Production by 2050' (2013) 8(6) *Plos One* 4-6.

<sup>143</sup> Food and Agriculture Organization of the United Nations, *Climate Change and Food Security: Risks and Responses* (2016) 7-10.

<sup>144</sup> Laura Horn, 'Sustainable Development' - Mere Rhetoric or Realistic Objective?' (2011) 30(1) *University of Tasmania Law Review* 119.

interventions for addressing new challenges. The states will therefore explore domestic legal frameworks to implement this approach. This positioning needs to be explored from the legal dimension of SD and its associated principles. The next subsection will briefly discuss this aspect.

### *(c) Legal Dimension of SD*

#### *(i) Status of SD*

The intergovernmental sustainable development discussion at the international level has explored the relevance of international law in achieving sustainable development. However, the negotiations at the international level have not yet been able to shape this approach in a legal form.<sup>145</sup> It is argued that ‘the international law does not legally promote development for becoming sustainable, however law requires development decisions to be the outcome of a process which promotes sustainable development.’<sup>146</sup> Despite the differences in the goals of environmental law and the sustainable development, different declarations on environmental issues are ‘aiming at sustainable development’ and pursue further development of international law in the field of sustainable development.<sup>147</sup>

Barral referred to two preconditions - legal scope and penetration of the object into one of the recognised sources of international law for receiving legal status of any object and opined that the SD is an object that was legal in scope.<sup>148</sup> It creates some relative obligations, which she identified as ‘obligations of means or of best efforts’ for the state as legal subject to promote.<sup>149</sup> However, this explanation does not comply with the preconditions for being an object of international law as the relative obligations may not promote SD at national level as a part of international commitment. SD is also identified as a political approach, rather than a legal principle, however the political features of SD hold the power to influence the

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<sup>145</sup> International Law Association, ‘International Law on Sustainable Development’ (First Report, Berlin Conference, 2005)4.

<sup>146</sup> A. Boyle and D. Freestone (eds.), *International Law and Sustainable Development* (Oxford University Press, 1999) 17.

<sup>147</sup> Patricia Birnie, Alan Boyle and Catherine Redgwell, *International Law and the Environment* (Oxford University Press, 3<sup>rd</sup> ed, 2009)124[2]; *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992)Principle 27; *Agenda 21: Programme of Action for Sustainable Development*, UN GAOR, 46<sup>th</sup> sess, Agenda Item 21, UN Doc A/Conf.151/26 (14 June 1992)cha 39; *Nairobi Declaration on the Role and Mandate of the United Nations Environment Programmes* (adopted by UNEP Governing Council decision 19/1, 1997).

<sup>148</sup> Virginie Barral, ‘Sustainable Development in International Law: Nature and Operation of an Evolutive Legal Norm’(2012) 23(2) *The European Journal of International Law* 377.

<sup>149</sup> *Ibid.*

international law making process.<sup>150</sup> SD has been presented in such a way that it provides political guidance for all players acting in the field on international environmental protection and development.<sup>151</sup>

Despite the scepticism about the legal status of sustainable development, many scholars term it as ‘soft law’,<sup>152</sup> and an umbrella principle that is distinguishable from rights in a technical sense.<sup>153</sup> Sands qualified some sustainable development principles as part of international customary law.<sup>154</sup> Marong contends that the SD has become a principle of international law with some degree of normative status.<sup>155</sup> Hunter also identified the SD as a principle of modern international law as well as a widely accepted concept that has received considerable endorsement through different international and regional consensuses, the practices of international financial institutions, and planning documents of state parties.<sup>156</sup> Birnie, Boyle and Redgwell have also explained the status of SD in similar perspectives. They argued that the SD, irrespective of its legal obligation, ‘represents a policy which can influence the outcome of cases, the interpretation of treaties, and the practice of states and international organisations, and may lead to significant changes and developments in the existing law.’<sup>157</sup> However, it also has the features for being customary international law since many of the principles of SD are practiced by the UN and other international organisations and their member countries.<sup>158</sup> The inclusion of SD as national goals of many civilised nations including developed and developing countries also suggests assigning the status as a general principle of international law to this approach.

SD also has the feature of being a part of international legal object according to the Statute of ICJ that considers the ‘teachings of the most highly qualified publicists of the various nations’ as ‘subsidiary means for the determination of rules of law’.<sup>159</sup> The views of international

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<sup>150</sup> Ulrich Beyerlin, ‘Different Type of Norms in International Environmental Law’ in Daniel Bodansky, Jutta Brunnee and Ellen Hey (eds), *The Oxford Handbook of International Environmental Law* (Oxford University Press, 2007)444-445.

<sup>151</sup> *Ibid* 443.

<sup>152</sup> Christopher P.M. Waters, ‘Who Should Regulate the Baku-Tbilisi-Ceyhan Pipeline?’ (2004) *Georgetown International Environmental Law Review* 409.

<sup>153</sup> P. Alston, ‘Core Labour Standards’ (2004) *June European Journal of International Law* 479.

<sup>154</sup> Philippe Sands, *Principles of International Environmental Law* (Cambridge University Press, 2<sup>nd</sup> ed., 2003) 254.

<sup>155</sup> Marong, above n 136, 57.

<sup>156</sup> Hunter et al, above n 18, 340, 337.

<sup>157</sup> Birnie et al, above n 147, 127[2].

<sup>158</sup> *Ibid* 23.

<sup>159</sup> *Statute of the International Court of Justice* art 38.

bodies where renowned writers gather and the proposals of international organisations, such as the Institute of International law and the IUCN can be considered the basis for making SD part of international law.<sup>160</sup>

When scholars debate about the legal status of SD, the dissenting views on the legal status of SD have also been found in international case law where the majority Judges of the International Court of Justice (ICJ) in *Gabčíkovo-Nagymaros Project (Hungary/Slovakia) case*<sup>161</sup> referred it as an important concept. However, the Vice-President of the ICJ at that time, Judge Christopher Gregory Weeramantry dissented with the majority opinion and identified sustainable development as ‘a principle with normative value’ and ‘a principle of customary international law’.<sup>162</sup>

In the context of diversified opinion about the legal status of SD, some scholars tried to find relevance of the SD with regional<sup>163</sup> and international conventions,<sup>164</sup> which can extend the status of international law to this approach. Sands traced back the legal root of the concept of sustainable development in the Behring Sea fur seals fisheries case decided in international arbitration about 100 years ago where the protection of Pacific fur seals faced opposition on development grounds.<sup>165</sup> However, these scholars’ justifications do not necessarily promote the status of SD as a part of international law as the reference of SD in an agreement does not provide the legal status of this approach.

Sustainable development, although is not a binding approach on any countries, emerges as an integrated approach that includes the approach of international trading mechanism under the WTO as well as the Agriculture Agreement of the WTO.<sup>166</sup> There are other socio-economic

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<sup>160</sup> Birnie et al, above n 147 28-29.

<sup>161</sup> *Gabčíkovo-Nagymaros Project (Hungary v. Slovakia)* [1997] ICJ Rep 7.

<sup>162</sup> *Gabčíkovo-Nagymaros Project (Hungary v. Slovakia)* [1997] ICJ Rep 7; *Gabčíkovo-Nagymaros Project (Hungary v. Slovakia)* [1997] ICJ Rep 7. Separate opinion of Judge Weeramantry A(c).

<sup>163</sup> Philippe Sands, *Principles of International Environment Law* (Cambridge University Press, 2<sup>nd</sup> ed, 2003) 307 quoted in Peter Rogers, Kazi F. Jalal and John A. Boyd, *Introduction to Sustainable Development* (Routledge, 2012)211  
Sands finds the first formal treaty to refer to sustainable development is the *ASEAN Agreement on the Conservation of Nature and Natural Resources*.

<sup>164</sup> Peter Rogers, Kazi F. Jalal and John A. Boyd, *Introduction to Sustainable Development* (Routledge, 2012)215; *United Nations Framework Convention on Climate Change*, opened for signature 9 May 1992, 1771 UNTS 107 (entered into force 21 March 1994) art 3(4)

The noted writers correlated one of the strongest international law foundations for sustainable development in the *UN Framework Convention on Climate Change* that incorporates the phrase ‘sustainable development’.

<sup>165</sup> Sands, above n 163.

<sup>166</sup> *Marrakesh Agreement Establishing the World Trade Organisation*, opened for signature 15 April 1994, 1867 UNTS 410 (entered into force 1 January 1995) annex 1A(‘Agriculture Agreement’)annex 2, art 2.

agreements at international level that also promote SD, such as the *Monterrey Consensus*,<sup>167</sup> the *2005 World Summit Outcome*,<sup>168</sup> *Agenda for Development*<sup>169</sup> as well as in the outcome of the third United Nations Conference on the Least Developed Countries (LDCs).<sup>170</sup> While *The Future We Want* underscored the farmers' role in sustainable development through environmentally sound production activities,<sup>171</sup> the latest *Paris Agreement* has emerged as a vehicle to pursue sustainable development in changing climatic conditions taking into account ecological systems and the sustainable management of natural resources.<sup>172</sup>

Given the differences among the scholars about the legal status of the SD, the researcher has taken the overall position that the SD is a global approach with a soft law nature that has been expressed through different principles in different international consensuses. Some of these principles, such as the polluter pays principle and the precautionary principle have attained hard law status or customary law or may be binding in the context of specific treaties. The researcher also finds the SD terminology is similar to 'concept' terminology, as referred by the majority judges in the ICJ, but it is also more than a concept. This research has therefore used the SD term as a global approach, as the SD has adopted different aspirations of global approaches of three development paradigm – economic, social and environmental against separated development paradigm. This is identified as a global approach as it has universal application potential including national, regional and local perspectives.<sup>173</sup> SD has integrated the globally dominant approaches of economic development, such as neoliberalism and free trade, the dominant approaches of social development such as statist perspective and enterprise perspective and finally, dominant approaches of environmental development such as the promotion of ecological integrity and protection of environment under one umbrella. There are contradictions among the dominant ideologies concerning economic, social and environmental development; however, the SD encourages negotiation where alongside the dominating role of market mechanism for trade, states have been given the responsibility to

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<sup>167</sup> *Report of the International Conference on Financing for Development*, UN Doc A/CONF.198/11(2002)art 2, 12, 42, 45,71.

<sup>168</sup> *World Summit Outcome*, GA Res 60/1, UN GAOR, 60<sup>th</sup> sess, 8<sup>th</sup> plen mtg, Agenda Items 46 and 120, Supp No 49, UN Doc A/RES/60/1(24 October 2005)paras 10, 17, 19, 22, 46.

<sup>169</sup> *Agenda for Development*, GA Res 51/240, UN GAOR, 51<sup>st</sup> sess, Agenda Item 96(b) UN Doc A/RES/A/RES/51/2405(15 October 1997)para 44.

<sup>170</sup> *Brussels Declaration, Programme of Action*, GA Res 191/12, UN GAOR, UN Doc A/CONF.191/12 (2 July 2001) art 6, 7, 21.

<sup>171</sup> *The Future We Want*, GA Res 66/288 UN GAOR, 66<sup>th</sup> sess, 123<sup>rd</sup> plen mtg, UN Doc A/RES/66/288 (11 September 2012) art 25, 31, 52.

<sup>172</sup> *The Paris Agreement*, opened for signature 22 April 2016 [2016] FCCC/CP/2015/10/Add.1 (not yet in force) arts 2,7.5, 7.9.

<sup>173</sup> *Johannesburg Declaration on Sustainable Development*, A/CONF. 1999/20 (4 September, 2002)art 5.

promote social development and protection of environment in association with the international community. SD has therefore emerged as a representative term for an integrated development approach that can guide the direction of development at global, regional, national and local levels. Therefore, it is more than a concept that can express a single idea and the researcher finds it justified to term it as an ‘approach’ that is guiding in nature. Moreover, SD is pursued as a process of development with the collaboration among states and international organisations as part of the development process that has made this approach global.<sup>174</sup>

Given the disagreements among the scholars, the researcher also finds it justified to label this approach as soft law because it has become a guiding approach for the governments around the world through declarations of different representative bodies, such as the General Assembly of the UN. Although SD is not mandatory for governments, the SDGs as agreed at the UN have set guidelines for the government to follow in next 15 years. SDGs have no definite legal implications, however, in the context of global aid and finance perspectives it has relevance to governments in developing countries. The latest climate change agreement, *Paris Agreement* has categorically included SD as a goal to be achieved through promotion of low emission targets. SD is now a directing approach of the countries irrespective of their economic status. The SD as a soft law through its principles can also lay down requirements for states to take measures for all practicable matters<sup>175</sup>

The SD, as accepted in different international declarations, resolutions and consensus may not fit neatly into the categories of sources referred to in Article 38(1) of the ICJ Statute. However, SD does not lack all authority. These SD declarations are carefully negotiated and drafted statements of the state parties and international institutions. In many cases, these agreements have some normative significance despite their non-binding form. There is at least an element of good faith commitment, an expectation that they will be adhered to if possible and, in many cases, a desire to influence the development of state practice.<sup>176</sup>

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<sup>174</sup> *Programme for the Further Implementation of Agenda 21*, UN GAOR, 19<sup>th</sup> special sess, Agenda Item 8, UN Doc A/RES/S-19/2 (28 June 1997)[22].

<sup>175</sup> Birnie et al, above n 147, 17[1], 35[1].

<sup>176</sup> *Ibid* 34[2].

While it is one of the roles of international environmental law to give the sustainable development more concrete content, chiefly through multilateral environmental treaties, this process is still very far from complete.<sup>177</sup> Moreover, the set of principles that express the practicality of this approach has also not yet been acknowledged as a part of international law although many of these principles received legal foundation through some treaties and customary law in a particular context at international or regional level. Nevertheless, the legal foundation of these principles is context and treaty specific and is not used to promote a legally binding agreement on sustainable development. This issue is discussed in the following section that examines the legal status of principles of sustainable development.

(ii) *Status of SD Principles*

Although the status of SD as a part of international law is not yet recognized, the consensus reached in different global and regional forums have advanced the agenda. The principles of SD can be identified as ‘statement of formulation of a norm’.<sup>178</sup> Principles are identified as imperfect norms that can help explain unclear rules and become the foundation of new rules.<sup>179</sup> While principles state ‘a reason that argues in one direction, but does not necessitate a particular decision’,<sup>180</sup> they can be norms that are ‘designed to give guidance to their addressees for future conduct in rule-making processes as well as to shape the interpretation and application of rules already in existence.’<sup>181</sup>

Despite the diversified role of principles visible in different international consensus, such as reconciling the different approaches of development, structuring the environmental regime, as well as guiding decision making as a primary norm,<sup>182</sup> the status of principle is debatable. The principles in general are still struggling to settle their position in international law, for example the precautionary principle is identified in different declarations as a principle, however, the International Court of Justice considered precaution simply as an approach.<sup>183</sup> There are also opinions that the precautionary principle is a part of customary international law or a general principle of law within the meaning of Article 38(1)(c) of statute of ICJ.<sup>184</sup>

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<sup>177</sup> Ibid 57[3].

<sup>178</sup> Pierre-Marie Dupuy and Jorge E. Viñuales, *International Environmental Law* (Cambridge University Press, 2015)51.

<sup>179</sup> Beyerlin, above n 150, 437.

<sup>180</sup> R Dworkin, *Taking Rights Seriously* (Duckworth, 1977)26.

<sup>181</sup> Beyerlin, above n 150, 437.

<sup>182</sup> Dupuy and Viñuales, above n 178, 52-53.

<sup>183</sup> Ibid 61.

<sup>184</sup> Ibid.



The application of the SD principles in different agreements is mostly context and issue specific. The legal dimension of principles also includes debates about their application.<sup>185</sup> For example, the *Convention on Environmental Impact Assessment in a Transboundary Context* (ESPOO Convention) made environmental impact assessment binding in a transboundary context.<sup>186</sup> The precautionary principle was applied in the *Convention for the Protection of the Ozone Layer (Vienna Convention)*<sup>187</sup> and the *Montreal Protocol on Substances that Deplete the Ozone Layer*<sup>188</sup> to prevent ozone depleting substances damaging the ozone layer. The ecological protection principle and the principle of equity were also applied in a specific *Convention on the Law of the Non-Navigational Uses of International Watercourses*.<sup>189</sup> The conservation and sustainable use of natural resources as well as fair and equitable sharing of benefits of genetic resources are reflected in the *Convention on Biological Diversity* of 1992 that has universal application, however for very specific biodiversity protection.<sup>190</sup>

The SD principles such as equity and the principle of common but differentiated responsibilities are incorporated in the *United Nations Framework Convention on Climate Change (UNFCCC)*, *Kyoto Protocol to the United Nations Framework Convention on Climate Change (Kyoto Protocol)*<sup>191</sup> and *The Paris Agreement*.<sup>192</sup> Given the different national capacities, the recently concluded *Paris Agreement* adopted equity and the principle of common but differentiated responsibilities and respective capabilities (CBDR) for the implementation of GHG emissions reduction commitments,<sup>193</sup> however, the voluntary commitment by different states may not be adequate to achieve the goals of equity and CBDR.

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<sup>185</sup> Ibid 69-70.

<sup>186</sup> *Convention on Environmental Impact Assessment in a Transboundary Context*, opened for signature 25 February 1991, 1989 UNTS 309 (entered into force 10 September 1997).

<sup>187</sup> *Vienna Convention for the Protection of the Ozone Layer*, concluded 22 March 1985 TIAS No. 11,097; 1513 UNTS 323; 26 ILM 1529 (1987) (entered into force 22 September 1988).

<sup>188</sup> *Montreal Protocol on Substances that Deplete the Ozone Layer*, concluded 16 September 1987, 1522 UNTS 3; 26 ILM 1550 (1987) (entered into force 1 January 1989).

<sup>189</sup> *Convention on the Law of the Non-navigational Uses of International Watercourses*, G.A. Res. 51/229, U.N. GAOR, 51<sup>st</sup> sess., 99<sup>th</sup> plen mtg., UN Doc A/RES/51/229 (21 May 1997) art 5.

<sup>190</sup> *Convention on Biological Diversity*, opened for signature 5 June 1992, 1760 UNTS 79 (entered into force 29 December 1993).

<sup>191</sup> *The Kyoto Protocol to the United Nations Framework Convention on Climate Change*, opened for signature 11 December 1997, 37 ILM 22 (1998) (entered into force 16 February 2005) arts 2, 10.

<sup>192</sup> Raimund Beleichwitz, Betina Bahn-Walkowiak, Stefan Bringezu, Rainar Lucas, Soren Steger, Henning Wilts, Mathias Onischka and Oliver Roder, 'Outline of a resource policy and its economic dimension' in Stefan Bringezu and Raimund Beleichwitz (eds), *Sustainable Resource Management Global Trends, Visions and Policies* (Greenleaf publishing, 2009) 295.

<sup>193</sup> *The Paris Agreement*, opened for signature 22 April 2016 [2016] FCCC/CP/2015/10/Add.1 (not yet in force) art 2.2.

Apart from international agreements, there also examples that SD principles included in different international declarations received legal status at regional<sup>194</sup> and country level.<sup>195</sup> For example, in Europe, the citizens' right to participate in the decision making process on environmental matters has been included in the *Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus convention)*.<sup>196</sup> In India, the Supreme Court of India while judging public interest litigation declared the polluter pays principle and the precautionary principle as the law of the country.<sup>197</sup>

The examples cited above about the incorporation of SD principles in different international agreements, declarations, regional agreements and domestic law have explained that the legal character of SD principles depends on the context and issue.<sup>198</sup> The principles applied in different agreements have specific perspectives and have relevance to implementation for specific purposes. The principles having normative effect in one agreement may not be universally applicable and cannot be made a part of international law. However, the incorporation of different SD principles in different agreements may influence the countries around the world to incorporate them in their regional and domestic legislation and that may at some point of time provide a legal basis to SD principles for becoming a part of universally applicable international law. The role of international financial and development institutions such as the World Bank, the International Monetary Fund and the Food and Agriculture Organization of the United Nations are also significant in this perspective, because they can influence their beneficiary states in adopting the SD principles as soft law instruments.<sup>199</sup>

The SD approach and principles, as discussed above, have sufficient normative strength for national governments to internalise them in their development process. However, they require some adjustment to consider the priorities of respective countries in the light of their

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<sup>194</sup> *North American Agreement on Environmental Cooperation*, signed 24 September 1993, 32.I.L.M.1480 (entered into force 1 January 1994); *African Charter on the Values and Principles of Decentralization, Local Governance and Local Development*, adopted 27 June 2014 (not yet in force).

<sup>195</sup> *Vellore Citizens' Welfare Forum v Union of India & Ors* AIR (1996) SC 2715.

<sup>196</sup> *Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters* opened for signature 25 June 1998 [1998] (entered into force 30 October 2001); Dupuy and Viñuales, above n 170, 76.

<sup>197</sup> *Vellore Citizens' Welfare Forum v Union of India & Ors* AIR (1996) SC 2715.

In the judgment of this case the Supreme Court vied that 'The Precautionary Principle' and 'The Polluter Pays' principle are essential features of 'Sustainable Development'. The Court further elaborated the "Precautionary Principle" and opined that the responsibility to address the environmental degradation is responsibility of the Government and the statutory Authorities.

<sup>198</sup> Dupuy and Viñuales, above n 178, 51-52.

<sup>199</sup> *Ibid* 36.

capabilities and responsibilities. This adjustment process can be guided by some principles for compatibility between state and global aspirations for development. This notion deepens consideration of the principles suggested for SD, which is discussed in next section. This discussion will provide background to a proposal for identifying the principles of sustainable development of agriculture in the fourth chapter.

### C *Principles of Sustainable Development*

The universal promotion of sustainable development through a set of integrated sustainable development goals (SDGs) aims to achieve some form of sustainable future by 2030. The agreed goals for sustainable development (including agricultural improvement) have been proposed for universal application and are aspirational. They will need to be refined and incorporated in national planning processes, policies and strategies to reflect each country's situation.<sup>200</sup> This refinement process requires evaluation of the basic SD principles based on which the SDGs are prepared for universal application.

Given the SD principles play a major role in adopting the SDGs, the researcher finds it justified to examine these principles in detail to find their relevance to sustainable development of agriculture. These principles in association with some principles relevant to planning and climate change will guide the identification of a set of principles for sustainable development of agriculture. This set of SDA principles will be useful as standard guiding principles for the government of Bangladesh in customising the sustainable development approach in the agriculture sector.

The sustainable development principles will be discussed in general, however they will be presented through two dimensions: substantive and procedural as SD contains both substantive and procedural elements.<sup>201</sup> This division also resembles the division of substantive and procedural planning principles as suggested by McDonald where substantive principles express the agendas and issues and procedural principles identify the process to implement these agendas.<sup>202</sup> The two dimensions, substantive principles and procedural principles are classified for the benefit of discussion in reviewing the planning frameworks.

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<sup>200</sup>*Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/RES/70/1 (25 September 2015)[55].

<sup>201</sup>Birnie et al, above n 147, 116[3]; Dupuy and Viñuales, above n 178, 54.

<sup>202</sup>Geoffrey T. McDonald, 'Planning as Sustainable Development' (1996) 15 *Journal of planning Education and Research*.

However, this division of principles is not based on hard rules as some of the principles overlap, such as the integration of different dimensions of development in plans and through interventions, which can fall in both the substantive and procedural categories.

### 1 Suggested SD principles in International Forums

The SD principles were formally universally recognized in the *Rio Declaration* adopted in UNCED in 1992, however the previous international consensus stipulated in *Our Common Future* also included some principles. Although *Our Common Future* did not have any obligatory force, it created some forms of normative standards for sustainable development. The WCED expert group on environmental law prepared this set of draft principles that could guide implementation at a national level.<sup>203</sup> Some of them were the extension of ideas of the Stockholm Declaration. The principles included the right to a hospitable environment, that states are responsible for maintaining inter-generational equity in environmental and resource conservation, environmental assessment in activities that require natural resource use and inclusion of conservation concern in the state planning process.<sup>204</sup>

The draft principles suggested in *Our Common Future* were later promoted by another set of principles proposed in a report jointly prepared by the IUCN, UNEP and the Worldwide Fund for Nature (WWF) in 1991. The interrelated and mutually supported principles suggested in the report *Caring for the Earth: A Strategy for Sustainable Living* include some very basic principles for building a sustainable society.<sup>205</sup> These principles include improving the quality of human life and empowering community, conservation of life-support systems, biodiversity and sustainable use of renewable resources.<sup>206</sup> The other two principles are about minimising the depletion of non-renewable resources and limiting developmental activities based on the Earth's capacity.<sup>207</sup> These principles also focused on national frameworks for integrating development and conservation.<sup>208</sup>

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<sup>203</sup> United Nations World Commission on Environment and Development, *Report of the World Commission on Environment and Development: Our Common Future*, Annex to document A/42/427 - Development and International Co-operation: Environment (1987) Annexe 1: Summary of Proposed Legal Principles for Environmental Protection and Sustainable Development Adopted by the WCED Experts Group on Environmental Law.

<sup>204</sup> United Nations World Commission on Environment and Development, *Report of the World Commission on Environment and Development: Our Common Future*, Annex to document A/42/427 - Development and International Co-operation: Environment (1987) Annexe 1, principles 1-4, 7, 9,10.

<sup>205</sup> The World Conservation Union, United Nations Environment Programme and World Wide Fund for Nature, *Caring for the Earth: A Strategy for Sustainable Living* (1991).

<sup>206</sup> Ibid 9-10.

<sup>207</sup> Ibid 10.

<sup>208</sup> Ibid 11.

The draft principles suggested in *Our Common Future* and *Caring for the Earth: A Strategy for Sustainable Living* provided a basic foundation for preparing legally binding principles or an internationally binding agreement. However, instead of extending their legal status, the principles were further elaborated in the *Rio Declaration* agreed in the United Nations Conference on Environment and Development (UNCED).

The *Rio Declaration* reiterated the centrality of people in sustainable development interventions as agreed in previous international conferences.<sup>209</sup> It promoted the sovereign rights of states to exploit their resources, yet added put a boundaries to it so that the resources exploitation could not harm the environment of other jurisdictions.<sup>210</sup> The right to development was expressed through equitably benefiting future generations. The principles also emphasised assigning responsibilities based on common but differentiated responsibilities.<sup>211</sup> While the principles emphasised the eradication of poverty there was also a focus on controlling unsustainable patterns of production and consumption.<sup>212</sup>

The principles proposed for protection of the environment were state level promotion of the precautionary approach and the polluter pays principle to internalise the environmental costs and non-distortion of international trade and investment.<sup>213</sup> There was also emphasis on promotion of the right to public participation for better management of environmental issues.<sup>214</sup>

The close review of the *Rio Declaration* suggests addressing the poverty and inequity issues though an approach of development where states' sovereignty in choosing their economic policies were granted, subject to environmental protection. It is a compromise between developed and developing countries' aspirations. It is argued by scholars that when the right to development declaration was passed in the UN in 1986 to advance the rights of developing

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<sup>209</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 1.

<sup>210</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 2.

<sup>211</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 6, 7.

<sup>212</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 8, 12,

<sup>213</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principles 15, 16.

<sup>214</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 10.

countries extended cooperation was sought from developed countries, and the environmental protection issue was attached to perhaps dilute the agenda of the poor countries.<sup>215</sup> However, the compromise was made through the polluter pays principle and common but differentiated responsibilities approach without concluding a legally binding international agreement.<sup>216</sup>

## 2 Suggested SD Principles by International Organisations

After the *Rio Declaration* there were simultaneous initiatives to prepare a set of binding principles and one of the results of such initiative was the *Earth Charter 2000* proposed by the Earth Charter Commission.<sup>217</sup> They proposed it as a people's charter with an inclusive and integrated ethical framework to guide promotion of sustainable human development.<sup>218</sup> The *Charter* proposed some principles in the context of unsustainable production and consumption patterns, degraded environmental situations and inequitable social conditions. It suggested that fundamental changes were needed in our values, institutions and ways of living.<sup>219</sup>

The major ideologies expressed in the *Earth Charter* were similar to those the *Rio Declaration*. The ideologies include the freedom of natural resource use subject to duty to prevent environmental harm and to protect the rights of people,<sup>220</sup> intergenerational equity, transferring values, traditions and institutions that support the long-term flourishing of the Earth's human and ecological communities.<sup>221</sup> The biodiversity protection issue was extended in the *Charter* with specific inclusion of animals' rights to be free from cruelty and extinction.<sup>222</sup> In regard to implementation, the *Charter* proposed to transpose the proposed principles into a legal form and to trade-off short-term objectives with long-term goals.<sup>223</sup>

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<sup>215</sup> Jorge E. Vinuales, *The Rio Declaration on Environment and Development: A Commentary* (Oxford University press, 2015)141-143.

<sup>216</sup> Steven E Bernstein, *The Compromise of Liberal Environmentalism* (Columbia University Press, 2001) 99-100.

<sup>217</sup> The Earth Charter Commission, *The Earth Charter* (2000).

< [http://www.earthcharterinaction.org/invent/images/uploads/echarter\\_english.pdf](http://www.earthcharterinaction.org/invent/images/uploads/echarter_english.pdf)>.

<sup>218</sup> Earth Charter International, *What is the Earth Charter* < <http://www.earthcharterinaction.org/content/pages/What-is-the-Earth-Charter%3F.html>>.

<sup>219</sup> The Earth Charter Commission, *The Earth Charter*(2000)

< [http://www.earthcharterinaction.org/invent/images/uploads/echarter\\_english.pdf](http://www.earthcharterinaction.org/invent/images/uploads/echarter_english.pdf)> preamble.

<sup>220</sup> Ibid arts 1-3.

<sup>221</sup> Ibid art 4-8.

<sup>222</sup> Ibid art 15.

<sup>223</sup> Ibid, The Way Forward.

Some benchmark sustainable development principles were also prepared for an Expert Group Meeting on Identification of Principles in International Law for Sustainable Development held in 1995.<sup>224</sup> These principles were also more or less common to the *Rio Declaration* and the categorisation of principles of sustainable development and emerging issues. They are:

- The principles of integration category includes among others, the principle of combating and eradicating poverty, the principle of reducing and eliminating unsustainable consumption and production patterns;<sup>225</sup>
- The principles of development category includes the principle of the right to development, the principle of intergenerational equity, and the principle of the common concern of humankind;<sup>226</sup>
- The principles of governance category includes the principle of sovereignty over natural resources, the principle of equity, the principle of participation, effective access to the judiciary and peaceful settlement of disputes;<sup>227</sup> and
- The environmental protection principles category includes principles of environmental impact assessment (EIA), liability and compensation. This category also includes the precautionary principle, principles of prevention, polluter pays and sustainable use of resources principles.<sup>228</sup>

The initiatives for promoting SD through legal structures were limited to suggesting some principles for the promotion of SD. There are some initiatives by different institutions to guide the process for adopting the principles as a part of international law. Although these

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<sup>224</sup> United Nations Commission on Sustainable Development, 'Report of the Expert Group Meeting on Identification of Principles of International Law for Sustainable Development' (Background Paper, Commission on Sustainable Development, 1996).

<sup>225</sup> United Nations Commission on Sustainable Development, 'Report of the Expert Group Meeting on Identification of Principles of International Law for Sustainable Development' (Background Paper, Commission on Sustainable Development, 1996) arts 15-18.32-37.

<sup>226</sup> United Nations Commission on Sustainable Development, 'Report of the Expert Group Meeting on Identification of Principles of International Law for Sustainable Development' (Background Paper, Commission on Sustainable Development, 1996) arts 19-31.

<sup>227</sup> United Nations Commission on Sustainable Development, 'Report of the Expert Group Meeting on Identification of Principles of International Law for Sustainable Development' (Background Paper, Commission on Sustainable Development, 1996) arts 32-50.

<sup>228</sup> United Nations Commission on Sustainable Development, 'Report of the Expert Group Meeting on Identification of Principles of International Law for Sustainable Development' (Background Paper, Commission on Sustainable Development, 1996) arts 51-74.

institutions' proposals are not binding, they have persuasive force that can influence the law making process. The initiatives of the International Law Association (ILA) and IUCN are important in this perspective and these are discussed below to review the relevance of their proposal to advance the SD principles into international law.

Although ILA proposed SD principles <sup>229</sup> are similar to the basic propositions of *Rio Declaration*, they were more elaborate and included almost all the principles agreed on and discussed in previous years. These principles broadly placed under seven categories discussed below, touched agendas significant to local, regional and global levels as well as to government to citizens.

1. States' responsibility to sustainable use of natural resources as well as ensure their intergenerational use through sustainable management and protection of ecosystems.<sup>230</sup>
2. The principle of equity and the eradication of poverty include facilitation of fair common entitlement of present and next generations to natural resources, exercising the right to development subject to intra and intergenerational needs and eradicating poverty in cooperation with other states.<sup>231</sup>
3. The principle of common but differentiated responsibilities is relevant to states and other relevant actors to take necessary measures for promotion of SD based on their previous contribution to the emergence of environmental problems and considering their economic and developmental position and particular needs.<sup>232</sup>
4. The precautionary principle includes internalisation of transparent, participatory and non-discriminatory scientific judgement based on the precautionary approach in decision-making processes as well as assigning accountability and burden of proof for harm caused or to be caused.<sup>233</sup>

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<sup>229</sup> *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002).

<sup>230</sup> *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 1.

<sup>231</sup> *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 2.

<sup>232</sup> *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 3.

<sup>233</sup> *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law



5. The principle of public participation and access to information and justice include facilitation of responsive, transparent and accountable governance process.<sup>234</sup>
6. The principle of good governance includes adoption of transparent and participatory decision-making procedures along with rule of law, addressing corruption and promoting socially responsible investments, ensuring financial accountability and standard public procurement.<sup>235</sup>
7. The principle of integration and interrelationship includes integration of different dimensions of sustainable development in development activities at different levels including national, sub-national and local levels. States have the responsibility to pursue SD principles together and resolve conflicts between competing economic, financial, social and environmental considerations.<sup>236</sup>

The non-binding expert model proposed by IUCN in the form of draft International Covenant on Environment and Development (Draft Covenant) was drafted in 1995 and updated four times. Finally, the fifth draft was released in 2015.<sup>237</sup> This draft covenant was proposed to guide the acceptance of a legal framework to support the integration of the development issues in the environmental context. The latest version released in 2015 has specific relevance to implementation of sustainable development through SDGs agreed at the UN.<sup>238</sup>

The basic principles of the IUCN proposed draft covenant included environmental conservation for maintaining integrity of the Earth's ecological systems and restoration wherever possible.<sup>239</sup> The draft emphasised equity and justice principles in regard to decision making on environmental issues.<sup>240</sup> It also stressed prevention over remedial, precaution as a duty and the polluter pays principle for balanced management of the environment. Moreover, proportionality in terms of giving preference to the alternative least harmful options is also

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Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 4.

<sup>234</sup> *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 5.

<sup>235</sup> *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 6.

<sup>236</sup> *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 7.

<sup>237</sup> International Union for Conservation of Nature and Natural Resources (IUCN), *Draft International Covenant on Environment and Development (Environmental Policy and Law Paper No. 31 Rev. 4, 5<sup>th</sup> ed., 2015)*

<sup>238</sup> *Ibid* xiii.

<sup>239</sup> *Ibid* art 2.

<sup>240</sup> *Ibid* art 5.

included as an important principle.<sup>241</sup> The draft also included the eradication of poverty as a precondition for sustainable development as well as reducing disparities in standards of living.<sup>242</sup> The draft covenant incorporated the common but differentiated responsibilities principle for states to follow for addressing sustainable development based on their respective capabilities.<sup>243</sup>

There are also directions for integration of environmental conservation into planning and implementation at a national level based on evidence. The draft covenant suggested the establishment of a national regulatory framework and the enforcement of relevant legislation through institutional mechanisms.<sup>244</sup> The covenant emphasised the formulation and strengthening of standards for sustainable use of natural resources as well as establishing or strengthening environmental impact assessment procedures for managing potential environmental risks.<sup>245</sup>

The *Bellagio Principles* were proposed in 1996 under an initiative of the International Institute for Sustainable Development (IISD) to guide the assessment of progress towards promoting sustainable development.<sup>246</sup> These principles were updated in 2008 and new *Sustainability Assessment and Measurement Principles* included more specific and clear outlines for assessment.<sup>247</sup> The substantive and procedural principles suggested in these two sets of principles include among others identifying clear goals for sustainable development, protection of ecological integrity, equity and economic improvement as well as ensuring openness, effective communication and broad participation in the assessment process.<sup>248</sup> The procedural principles also included transparency, early participation of the stakeholder and effective communication mechanisms for better assessment of outcomes.<sup>249</sup>

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<sup>241</sup> Ibid arts 6-8.

<sup>242</sup> Ibid art 12.

<sup>243</sup> Ibid art 13.

<sup>244</sup> Ibid art 17.

<sup>245</sup> Ibid art 46-47.

<sup>246</sup> Peter Hardi and Terrence Zdan (eds), *Assessing Sustainable Development: Principles in Practice* (The International Institute for Sustainable Development, 1997) 2-4.

<sup>247</sup> *Sustainability Assessment and Measurement Principles*, International Institute for Sustainable Development (2008) <<https://www.iisd.org/measure/principles/progress/bellagiostamp/principles.asp>>.

<sup>248</sup> Hardi and Zdan, above n 246 principles 1-8.

<sup>249</sup> *Sustainability Assessment and Measurement Principles*, (International Institute for Sustainable Development (2008) principles 6, 8. <<https://www.iisd.org/measure/principles/progress/bellagiostamp/principles.asp>>.

The foregoing discussion prepares a basis for the identifying basic principles of sustainable development that can guide the refinement process of sustainable agricultural development principle. However, the plethora of principles proposed, and in some cases agreed at international level, creates a confusing situation in applying them in an agriculture context. This has prompted the researcher to draw a set of principles that covers major perspectives of sustainable development. However, before proposing a set of principles the researcher finds it justified to review the already discussed principles in a climate change context as climate change is a major threat to agriculture. Therefore, any set of principles needs to be compatible to the principles applied for addressing climate change issues. The following section will serve this purpose and, after this discussion, a set of principles will be identified in light of the foregoing discussion of principles and approaches of SD for promotion of SD in the agriculture sector.

#### *D Relevance of SD Principles in Climate Change Context*

The extent to which the planet can be polluted and natural resources exploited is an issue of debate, with scholars often trying to find a limit to growth or carrying capacity of the earth. Johan Rockström and his colleagues tried to find a line of control and marked that out of nine planetary boundaries that we should not transgress, three of them have already been overstepped. While two of them, biodiversity loss and interference with nutrient cycles directly diminish the production capacity of food, climate change now poses a serious threat to production of food and the livelihood of poor and vulnerable who depend on eco-system services.<sup>250</sup>

Climate change as a challenge to development becomes important as a part of the environmental considerations of the wider agenda of sustainable development.<sup>251</sup> It is suggested that sustainable development needs to become climate-sensitive and efforts to reconcile economic development, equity and environmental protection need to be filtered through the lens of climate science. Climate change needs to be addressed under the purview

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<sup>250</sup> Johan Rockström et al, 'A safe operating space for humanity' (2009)461 *Nature* 473-474.

<sup>251</sup> Natasha Grist, 'Positioning Climate Change in Sustainable Development Discourse' (2009)20 *Journal of International Development* 784; Jonatan Pinkse1 and Ans Kolk, 'Addressing the Climate Change—Sustainable Development Nexus: The Role of Multi stakeholder Partnerships'(2012)51(1) *Business and Society*177.

of sustainable development as it removes the structural conditions that cause climate change and conversely climate change is a consequence of unsustainable development.<sup>252</sup>

While stabilising greenhouse gas concentrations largely depends on larger technological and general socio-economic development of different countries,<sup>253</sup> climate policy responses affect the ability of countries to achieve sustainable development goals. It also affects poverty alleviation efforts and equity relevant promotional measures,<sup>254</sup> especially in developing countries.<sup>255</sup> It is now a challenge to find new ways to address the twin goals of sustaining development and limiting climate change.

Despite wider division between the developed and developing countries about the scale and ways to address climate change *United Nations Framework Convention on Climate Change (UNFCCC)* acknowledges the sovereign right of states in exploiting their own resources. However, it also assigned the responsibility to state parties not to cause damage to the environment of areas beyond the limits of national jurisdiction. The *UNFCCC* also emphasised the necessity of environmental legislation at national level. It also recognized addressing climate change in accordance with the sustainable development manner for sustained growth and the eradication of poverty.<sup>256</sup>

The *UNFCCC* specifically adopted some guiding principles for addressing climate change and most of them are the guiding principles for sustainable development.<sup>257</sup> The adopted principles include:

- Equity: protection of the climate system based on common but differentiated responsibilities and respective capabilities to ensure similar benefits for present and next generations;<sup>258</sup>

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<sup>252</sup> Rob Swart and Frank Raes, 'Making integration of adaptation and mitigation work: mainstreaming into sustainable development policies?' (2007)7(4) *Climate Policy* 300-301.

<sup>253</sup> R. Swart., J. Robinson and S. Cohen, 'Climate change and sustainable development: expanding the options'(2003), 3(supplement 1) *Climate Policy* S19; Climate Change 2007: Working Group III: Mitigation of Climate Change <[https://www.ipcc.ch/publications\\_and\\_data/ar4/wg3/en/ch2s2-1-3.html](https://www.ipcc.ch/publications_and_data/ar4/wg3/en/ch2s2-1-3.html)>.

<sup>254</sup> Mohan Munasinghe, 'Climate change and sustainable development linkages: points of departure from the IPCC TAR' (2003) *Munasinghe Institute for Development* 91.

<sup>255</sup> William D. Dar, 'A Hypothesis of Hope for the Developing World' (2009) 46 (3/4) *UN Chronicle* 17.

<sup>256</sup> *United Nations Framework Convention on Climate Change*, concluded 9 May 1992 1771 UNTS 107; S. Treaty Doc No. 102-38; U.N. Doc. A/AC.237/18 (Part II)/Add.1; 31 ILM 849 (1992) (entered into force 21 March 1994)preamble.

<sup>257</sup> *United Nations Framework Convention on Climate Change*, concluded 9 May 1992 1771 UNTS 107; S. Treaty Doc No. 102-38; U.N. Doc. A/AC.237/18 (Part II)/Add.1; 31 ILM 849 (1992) (entered into force 21 March 1994) art 3.

- Precautionary approach ‘to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects.’<sup>259</sup>
- Promotion of sustainable development, synchronisation of climate change policy and programmes with country need and integration of CC policies with national development programmes.<sup>260</sup>

After the *UNFCCC*, the *Kyoto Protocol* also noted common but differentiated responsibilities of states for the mitigation of greenhouse gases with a view to promoting sustainable development.<sup>261</sup> This agreement also emphasised sustainable development of agriculture in a climate change perspective.<sup>262</sup> In furtherance to *Kyoto Protocol*, the parties of the *UNFCCC* agreed to negotiate *The Paris Agreement* and limit emissions to relatively safe levels, by ‘Holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 °C above pre-industrial levels.....’<sup>263</sup> However, the ‘nationally determined contributions’ are voluntary commitments made by states which agree to ratify this agreement and are not legally binding commitments.

*The Paris Agreement* has been agreed based on some sustainable development principles, such as equity and the principle of common but differentiated responsibilities and respective capabilities,<sup>264</sup> however absence of any binding emission reduction targets makes the application of this agreement weaker. The *Paris Agreement* has emphasised the promotion of sustainable development,<sup>265</sup> and recommended a holistic and integrated approach for mitigation, adaptation, finance, technology transfer and capacity-building.<sup>266</sup> The *Paris Agreement* also promoted a country-driven, gender-responsive, participatory, transparent and precautionary approach as well as integration of adaptation related local and indigenous

<sup>258</sup> *United Nations Framework Convention on Climate Change*, concluded 9 May 1992 1771 UNTS 107; S. Treaty Doc No. 102-38; U.N. Doc. A/AC.237/18 (Part II)/Add.1; 31 ILM 849 (1992) (entered into force 21 March 1994).art 3[1].

<sup>259</sup> *United Nations Framework Convention on Climate Change*, concluded 9 May 1992 1771 UNTS 107; S. Treaty Doc No. 102-38; U.N. Doc. A/AC.237/18 (Part II)/Add.1; 31 ILM 849 (1992) (entered into force 21 March 1994) art 3(3).

<sup>260</sup> *United Nations Framework Convention on Climate Change*, concluded 9 May 1992 1771 UNTS 107; S. Treaty Doc No. 102-38; U.N. Doc. A/AC.237/18 (Part II)/Add.1; 31 ILM 849 (1992) (entered into force 21 March 1994) art 3(4).

<sup>261</sup> *Kyoto Protocol to the United Nations Framework Convention on Climate Change*, concluded 11 December 1997 UN Doc FCCC/CP/1997/7/Add.1, Dec. 10, 1997; 37 ILM 22 (1998) (entered into force 16 February 2005) art 10.

<sup>262</sup> *Kyoto Protocol to the United Nations Framework Convention on Climate Change*, concluded 11 December 1997 UN Doc FCCC/CP/1997/7/Add.1, Dec. 10, 1997; 37 ILM 22 (1998) (entered into force 16 February 2005) art 2 (a)(iii).

<sup>263</sup> *The Paris Agreement* (opened for signature 22 April 2016) art 2(a).

<sup>264</sup> *The Paris Agreement* (opened for signature 22 April 2016) art 2.2.

<sup>265</sup> *The Paris Agreement* (opened for signature 22 April 2016) art 6.1, 6.2.

<sup>266</sup> *The Paris Agreement* (opened for signature 22 April 2016) art 6.8.

knowledge systems into relevant policies.<sup>267</sup> There is also a commitment from the parties to the agreement to undertake adaptation planning processes in light of their ecological systems and sustainable use of natural resources.<sup>268</sup>

The agreement reached in Paris is not an ideal one and the weakest point in this agreement is the very loose conditionality about emission reductions.<sup>269</sup> The voluntary measures in this agreement for reducing the GHG emissions may not promote the common but differentiated responsibilities and equity principles. Given the provision for voluntary commitment of parties for emission reduction may encourage developed countries to declare relatively lower targets, which may impede achieve the goal of emission reduction to hold the temperature at safer level.<sup>270</sup> However, the most significant development for agriculture is that this agreement emphasises ‘climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production.’<sup>271</sup> This can be considered critical consensus among the parties of the agreement to keep agriculture safe for continued food production. However, the *Paris Agreement* lacks sufficient focus on agriculture and loses the opportunity to promote the climate smart agriculture.

The basic principles promoted through the *UNFCCC*, the *Kyoto Protocol* and the subsequent *Paris Agreement* – equity and common but differentiated responsibilities in addressing climate change are aligned with the principle of sustainable development. This study therefore finds the major sustainable development principles discussed in previous section are similar to those applied in international agreements concerning climate change.

Given the perspective that promoting SD through transposing its principles into development planning frameworks simultaneously addresses the climate change threats, the discussion for proposing a set of SD principles becomes easier. The following section will thus present the set of principles that can be used for identifying sustainable agricultural development principles under the auspices of a sustainable development approach.

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<sup>267</sup> *The Paris Agreement* (opened for signature 22 April 2016) art 7.5.

<sup>268</sup> *The Paris Agreement* (opened for signature 22 April 2016) art 7.9.

<sup>269</sup> Fiona Harvey, ‘Paris climate change agreement: the world’s greatest diplomatic success’ *The guardian* (online), 14 December 2015.

<sup>270</sup> *The Paris Agreement* (opened for signature 22 April 2016) art 4[2-4].

<sup>271</sup> *The Paris Agreement* (opened for signature 22 April 2016) art 2.1(b).

## *E Proposal for a Set of Universally Applicable Major Principles of SD*

The following set of sustainable development principles are presented as a simple and short list; it is not an exhaustive one. It is prepared based on the discussion about the principles presented in the previous section. The set of principles is divided into two categories: substantive principles and procedural principles. While substantive principles will include the basic premises that need to be considered when preparing each individual country's goals, the procedural principles will explain what needs to be done to achieve the sustainable development goals prepared in light of substantive principles. This division does not have clear dividing lines; some of the principles overlap, for example, the principle of integration is a substantive and procedural principle. However, principles are presented in two categories for the benefit of discussion as development planning frameworks will be evaluated under the same categories based on the theoretical division of planning that will be presented in next chapter.

### *1 Substantive Principles:*

#### *(a) The Principle of Conservation and Sustainable Management of Natural Resources*

While national sovereignty for exploiting resources in accordance with integrated national environmental and development policies is important, it is also limited to non-harmful activities that do not create trans-boundary impacts.<sup>272</sup> It is necessary to conserve and manage national natural resources and biological diversity in a rational, sustainable and safe way for maintaining the integrity of the Earth's ecological systems and restoration wherever possible. States have the responsibility to ensure the conservation and sustainable management of natural resources,<sup>273</sup> and synchronise the developmental activities with the Earth's capacity.<sup>274</sup>

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<sup>272</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 2.

<sup>273</sup> International Union for Conservation of Nature and Natural Resources (IUCN), *Draft International Covenant on Environment and Development* (5<sup>th</sup> ed, Environmental Policy and Law Paper No. 31 Rev. 4, 2015) arts 2-3; *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 2.

<sup>274</sup> IUCN, UNEP, WWF, above n 205, 7-28.

It is also important to promote sustainable consumption and production patterns,<sup>275</sup> and the integration of environmental conservation into the evidence based planning and implementation at a country level.<sup>276</sup> There is a need to establish a regulatory framework and enforcement mechanism for relevant legislation in respect to conservation and management of natural resources.<sup>277</sup>

*(b) The Principle of Right to Development and Equity*

Development needs to be pursued to benefit the people first. States need to take effective measures for the alleviation of poverty and to enhance the quality of life and reducing disparities in standards of living.<sup>278</sup> The duty to cooperate should be promoted for cooperation among states to close the gap among poor and rich. The right to development is thus needed to aim at freeing people from poverty first.<sup>279</sup> The principle of equity is to be followed as it diminishes the inequality in terms of scale of time and wellbeing. While equity is linked to entitlement of different groups of the current generation in the case of use of resources, it is also important to transfer the entitlement to next generation.<sup>280</sup>

While intra-generational equity needs to facilitate the equity of fair share within the present generation, intergenerational equity will have to address three different dimensions – availability, access and quality of resources over the generations.<sup>281</sup> Intergenerational equity may also consider transferring values, traditions and institutions that support the long-term improvement of human and ecological communities.<sup>282</sup>

*(c) The Principle of Common but Differentiated Responsibilities*

The responsibility to take action for environmental improvement needs to be determined according to the contribution to the emergence of environmental problems.<sup>283</sup> It also needs to be considered in the context of economic and developmental situation of countries, the

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<sup>275</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 8.

<sup>276</sup> IUCN, above n 237, art 17(2).

<sup>277</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 11.

<sup>278</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 1, 5; IUCN, above n 237, art 12.

<sup>279</sup> IUCN, above n 237, art 11.

<sup>280</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 3.

<sup>281</sup> Ilona Millar, *The Environmental Law Framework for Sustainable Development – Principles of Sustainable Development in International, National and Local Laws* (Baker and McKenzie, 2009)6.

<sup>282</sup> *The Earth Charter*, The Earth Charter Commission (2000)

<[http://www.earthcharterinaction.org/invent/images/uploads/echarter\\_english.pdf](http://www.earthcharterinaction.org/invent/images/uploads/echarter_english.pdf)>principle 4.

<sup>283</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 7.



special needs of the poor and countries in special and emergency situations and socio-economic and environmentally vulnerable countries.<sup>284</sup> The common but differentiated responsibilities principle also needs to be based on the respective capabilities of states. It also needs to be applied based on the capabilities of different groups of people within a state.<sup>285</sup> The developed countries should lead the reduction and elimination of unsustainable patterns of production and consumption as well as assist developing countries to gain capacity to address unsustainable production and consumption patterns and demographic pressure.<sup>286</sup>

*(d) The Precautionary Principle*

Protection of the environment is best achieved by preventing environmental harm rather than by attempting to remedy or compensate for such harm.<sup>287</sup> A precautionary approach promotes sustainable development through guiding human activity to avoid harmful activities that cause or may cause damage to natural ecosystems.<sup>288</sup> Decision making processes must include a precautionary approach to risk management based on the latest independent scientific judgment, however 'where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.'<sup>289</sup> At the regional and international level, information sharing on potential environmental damage also needs to be followed as a precautionary measure.<sup>290</sup>

It is also important to follow proportionality when certain human activities definitely produce some environmental impacts and in such cases, preference must be given to the alternative option that is least harmful to the environment.<sup>291</sup> In such contexts, environmental legislation is necessary, along with fixing the standard for environmental conditions. Plans need to be

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<sup>284</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 6.

<sup>285</sup> IUCN, above n 237, art 13.

<sup>286</sup> *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 3; *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 8.

<sup>287</sup> *The Earth Charter*, The Earth Charter Commission (2000)

<[http://www.earthcharterinaction.org/invent/images/uploads/echarter\\_english.pdf](http://www.earthcharterinaction.org/invent/images/uploads/echarter_english.pdf)> principle 6.

<sup>288</sup> *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 4.

<sup>289</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 15.

<sup>290</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 15; *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 4.

<sup>291</sup> IUCN, above n 237, art 8.

evidence based along with clear criteria and well-defined goals. Environmental impact assessments need to be embedded in the state planning process to avoid harm.<sup>292</sup>

There is a need to establish an appropriate burden of proof on the person or persons carrying out (or intending to carry out) the activity that may cause serious long-term or irreversible harm.<sup>293</sup> The precautionary principle should not be used as an economic protection mechanism and the execution of this approach needs participation of state and non-state actors and an appropriate review mechanism is necessary to address the grievances.<sup>294</sup>

*(e) The Polluter Pays Principle*

The polluter pays principle involves the internalisation of environmental costs into decision making for economic and other development plans, programmes and projects that are likely to effect the environment.<sup>295</sup> There should be a fair approach for liability assignment and compensation for the victims of pollution and environmental damage. The polluters have to pay for internalisation of cost in the production process and to correct the market distortion rather than spreading the cost to other people.<sup>296</sup> This principle also needs to be implemented in conjunction with common but differentiated responsibilities to achieve justice for the responsibility of historical pollution and make it equitable to all concerned.<sup>297</sup>

In addition to the abovementioned substantive principles, there are some other principles such as duty to cooperate, notify others about any harm or environmental damage and maintaining global peace for development. These principles need to be embedded in the sustainable development goals of global, national, sub-national and local levels, considering their compatibility. However, the most important issue is the process that we need to follow for

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<sup>292</sup> United Nations World Commission on Environment and Development, *Report of the World Commission on Environment and Development: Our Common Future*, Annex-1 to document A/42/427 - Development and International Co-operation: Environment (1987) principle 16; *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 4; *Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 17.

<sup>293</sup> *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 4.

<sup>294</sup> See, eg, *Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters* opened for signature 25 June 1998 [1998] (entered into force 30 October 2001).

<sup>295</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 16; *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 3; Millar, above n 281, 1-4.

<sup>296</sup> Millar, above n 281, 1-4.

<sup>297</sup> *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 3.

transposing these principles to our goals and their implementation. These are identified below as procedural principles and unless these principles are effectively followed, the transposition will not happen and sustainable development may not be achievable.

## 2 Procedural Principles

### (a) *The Principle of Integration*

Sustainable development requires integration among activities and management of interdependence of social, economic, and environmental aspects of development in the decision making process.<sup>298</sup> Conflict resolution among competing development aspirations and sectoral demands can be carried out by the existing institutions or by establishing appropriate new institutions.<sup>299</sup> A national framework is quite important for integrating development and economic policies and conserving biological diversity and ecosystems to extract increased benefits from these systems.<sup>300</sup> There is a need for integration of environmental conservation into the planning and implementation at the national level based on evidence.<sup>301</sup> The governments of developed and developing countries need to promote reducing and eliminating unsustainable consumption and production patterns and make trade and the environment mutually supportive.<sup>302</sup> There is also a need for the effective integration of long and short-term economic, environmental, social and equity considerations.<sup>303</sup> The states can transpose the integration principles into a legal framework for effective implementation.<sup>304</sup> There is a need to implement all the principles of sustainable development in an integrated manner.<sup>305</sup>

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<sup>298</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 4; *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 7.

<sup>299</sup> *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 7.

<sup>300</sup> IUCN, above n 237, art 17; IUCN, UNEP, WWF, above n 205, principle 8.

<sup>301</sup> IUCN, above n 237, art 17[2].

<sup>302</sup> IUCN, above n 237, art 36, 38.

<sup>303</sup> Australian Government, Department of Environment, *National Strategy for Ecologically Sustainable Development - Part 1 Introduction* (1992) <<https://www.environment.gov.au/about-us/esd/publications/national-esd-strategy-part1>>.

<sup>304</sup> IUCN, above n 237, art 17.

<sup>305</sup> *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 7.

(b) *The Principle of Good Governance*

Sustainable development needs good governance mechanisms that adopt democratic and transparent decision making procedures, promote responsive and accountable government, and combat corruption. SD should follow the principle of due process, rule of law and human rights and implement a standard public procurement approach.<sup>306</sup> There is a need to integrate corporate social responsibility and socially responsible investments.<sup>307</sup> An open, transparent and effective communication mechanism should be applied in monitoring and evaluation of sustainable development outcomes.<sup>308</sup>

(c) *The Principle of Public Participation and Access to Information and Justice*

Public participation is essential to advance the agenda of sustainable development as any effort to facilitate the sustainable development process depends on the acceptance that the public and citizens have some responsibilities to use natural resources in efficient and socially acceptable ways.<sup>309</sup> Their voice therefore needs to be heard and accommodated for the management of a state's development goals. Building the resilience of people is also dependent on their right to participate in the development process.<sup>310</sup> Ensuring public participation is also necessary to facilitate responsive, transparent and accountable governance process.<sup>311</sup>

Public participation needs to be facilitated through citizens' fair, timely and comprehensive access to information on economic and social policies regarding the sustainable use of natural resources and the protection of the environment.<sup>312</sup> This has also to be facilitated through ensuring the right to freedom of expression and receiving information at a very reasonable

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<sup>306</sup> *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 6; *Monterrey Consensus of the International Conference on Financing for Development*, United Nations Department of Economic and Social Affairs (adopted on 22 March 2002)[11].

<sup>307</sup> *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 6.3.

<sup>308</sup> Hardi and Terrence Zdan (eds), *Assessing Sustainable Development: Principles in Practice* (The International Institute for Sustainable Development, 1997) principle 6-8.

<sup>309</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 10.

<sup>310</sup> IUCN, above n 237, art 15.

<sup>311</sup> *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 5.

<sup>312</sup> *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 5; *Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters* opened for signature 25 June 1998 [1998] (entered into force 30 October 2001).

cost and in consideration of the privacy and adequate protection of business confidentiality. There is a need to promote the broad based and early participation of stakeholders in monitoring and evaluation of sustainable development outcomes.<sup>313</sup> In addition to the citizens' right to participation, there may be some obligations on the citizens' part to participation in the decision making process. Access to effective judicial or administrative procedures to challenge decisions of the government and other actors and to claim compensation in case of damages also needs to be included as a principle.<sup>314</sup>

The above noted principles are basic and an expressed form of different human rights agreed globally for the wellbeing of people. While substantive principles demand adoption through reflecting them in country goals, the procedural principles presented the ways and means necessary for adoption. In this respect, laws can guide the process of sustainable development as human society regulates its relationships through different laws.<sup>315</sup> Sustainable development 'requires changes in policy formulation and underlying institutional setting in order to redirect the governance mechanism from strict regulatory measures to shared responsibility.'<sup>316</sup> Regulatory and institutional changes are essential in achieving SD goals and strategies.<sup>317</sup>

The above discussion has presented the direction on the principles suggested in different forums for progressing towards sustainable development. These principles have not yet received a comprehensive legal binding status and enforceability but they have created the policy environment where states feel obligations to internalise the SD in their respective development agendas. Although some principles were reflected in Millennium Development Goals (MDGs), from an environmental perspective the goals were limited and the progress towards them has also been mixed.<sup>318</sup> Now, at the commencement of the SDGs the principles

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<sup>313</sup> International Institute for Sustainable Development, *Sustainability Assessment and Measurement Principles* (2008) principles 6,8. <<https://www.iisd.org/measure/principles/progress/bellagiostamp/principles.asp>>; Peter Hardi and Terrence Zdan (eds), *Assessing Sustainable Development: Principles in Practice* (The International Institute for Sustainable Development, 1997) principle 9,10.

<sup>314</sup> IUCN, above n 237, art 15; United Nations Commission on Sustainable Development, 'Report of the Expert Group Meeting on Identification of Principles of International Law for Sustainable Development' (Background Paper, Commission on Sustainable Development, 1996) arts 32-50.

<sup>315</sup> Nicholas A. Robinson, 'Evolving Legal Principles for Sustainable Development' in Steven C. Rockefeller, *Principles of Environmental Conservation and Sustainable Development: Summary and Survey* (Earth Charter International, 1996) 16 <<http://www.earthcharterinaction.org/invent/images/uploads/Principles%20of%20Environmental%20Conservation%20and%20Sust.%20Dev.pdf>>.

<sup>316</sup> Stephen Dovers and Robin Connor, 'Institutional Policy Change for Sustainability' in Benjamin J Richardson and Stepan Wood (eds), *Environmental Law for Sustainability: A Reader* (Hart Publishing, 2006) 21.

<sup>317</sup> Emmanuel Mutamba, 'Community Participation in Natural Resources Management: Reality or Rhetoric?' (2004) 99 *Environmental Monitoring and Assessment* 105.

<sup>318</sup> United Nations, *The Millennium Development Goals Report 2015* (Department of Economic and Social Affairs, 2015) 61.

need to be refined in the context of internalisation of SDGs in specific countries. The SD principles discussed in this chapter and the discussion on planning approaches and principles for SD and SDA approaches in next chapters will centre on the refinement of these principles for developing principles for SDA.

## *F Conclusion*

The sustainable development approach has received a specific shape with the introduction of sustainable development goals at the UN after almost thirty years since its formal launch in 1987. The debates over this approach involving the integration of the three dimensions of development may also continue even after the adoption of SDGs. The debate may also be intense when many of the goals do not have any threshold to justify them and in the absence of minimum limits, the interpretation will be different in the context of different countries. However, the critical issue will be to operationalise the approach and goals into reality. This research has therefore identified the basic principles of sustainable development, which have been utilised to express different facets of this approach and to identify SD goals. Apart from these principles, the international collaboration issue is important, yet has not been included as a separate principle as it is embedded in different principles. While the implementation of sustainable development is a state and civil society responsibility, this research concentrates on a state perspective and emphasises state planning frameworks in the internalisation of the SD approach and goals and pursuing them in an integrated manner.

## CHAPTER III

### APPROACHES TO PLANNING AND ITS PRINCIPLES FOR SUSTAINABLE DEVELOPMENT

#### *A Introduction*

This chapter proposes to answer question number two of this study, ‘What are the major approaches of planning for development? What principles of planning are relevant to sustainable development?’ This question explores major scholarly approaches to planning for development and principles of planning suggested by scholars for promoting sustainable development.

This chapter will focus on the relevance of planning to development through examining the approaches of planning that influence development efforts. It will primarily present the major planning theories at a global level that have guided development efforts in different decades over the last century and continue to be relevant. It will then examine the requirements of planning for the promotion of sustainable development. The chapter will also identify the planning principles that are applicable to sustainable development. This discussion on planning principles, and the consideration of sustainable development principles in the previous chapter, will contribute to identifying and refining the applicable principles of sustainable development of agriculture in the next chapter.

#### *B Approaches of Planning for Development*

While there is international recognition for the right to development<sup>1</sup> and integration of the environment with development,<sup>2</sup> states have been given the responsibility to facilitate development through the planning process.<sup>3</sup> The omnipresence of planning in managing development of different societies through targeted activities and development of strategies

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<sup>1</sup> *Declaration on the Right to Development*, GA Res A/RES/41/128, Annex, UN GAOR, 97<sup>th</sup> Plen mtg(4 December 1986).

<sup>2</sup> *Declaration of the United Nations Conference on the Human Environment*, UN Doc A/Conf.48/14/Rev.1(1973)[1-2].

<sup>3</sup> *Declaration of the United Nations Conference on the Human Environment*, UN Doc A/Conf.48/14/Rev.1(1973) principle 13.

for physical and social activities were seen in different periods during the history of civilisation.<sup>4</sup> This process is identified by different terms at the national level: it could be a five year planning process or a long-term development plan or a national strategy for sustainable development.<sup>5</sup>

The planning process is considered one option for pursuing development of a country as well as addressing the new development agendas – sustainable development and climate change. These two development agendas have further justified this state interventionist approach in addition to market mechanisms for achieving the goals for advancement of developing countries.<sup>6</sup> This perspective is considered a proactive continuous process in the public domain for decision making or designing a desired future, and of effective ways of achieving future goals through using available resources.<sup>7</sup> In its nature, the planning process is expressed through a plan that is an instrument for directing the development of society through a process of achieving agreements.<sup>8</sup> However, planning for development is not only important to direct our actions for future positive progress but also to suggest the design, development, and implementation of plans, programs, and laws to eliminate, or substantially mitigate, very long-term environmental problems while maintaining social goals.<sup>9</sup>

Planning as an approach is similar to SD principles and is categorised under two groups, procedural and substantive. While substantive category clarifies the subject matter or substance of planning, the procedural category explains the process issues of planning.<sup>10</sup> Nevertheless, some subjects or bodies of planning approaches may involve both process and subject matter, so the distinction between them is sometimes arbitrary.<sup>11</sup>

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<sup>4</sup> Diana Conyers and Peter Hills, *An Introduction to Development Planning in the Third World* (John Wiley & Sons) 14-15.

<sup>5</sup> Organisation for Economic Cooperation and Development, *The DAC Guidelines Strategies for Sustainable Development: Guidance for Development Cooperation* (2001) <<http://www.oecd.org/development/environment-development/2669958.pdf>> 16-17.

<sup>6</sup> Stanley R. Euston, 'Rebooting State Planning: Climate Change and Energy Challenge' (2005) 57(11) *Planning & Environmental Law* 8.

<sup>7</sup> Tracy B. Augur, 'Land Planning for States and Regions' (1936) 2(1) *Journal of the American Institute of Planners* 1[2]; Stephanie B. Kelly, *Community Planning* (Rowman & Littlefield Publishers, 2004) xii[2], 486[1]; Conyers and Hills, above n 4, 3.

<sup>8</sup> K. Lass and U. Kase, 'International and local level planning cooperation' in E. Beriatos et al (eds), *Sustainable Planning and Development* (WIT Press, 2003).

<sup>9</sup> Bruce Tonn, '500-Year Planning: A Speculative Provocation' (1986) 52(2) *Journal of the American Planning Association* 185.

<sup>10</sup> Andreas Faludi, *Planning Theory* (Pergamon Press, 1973); Patsy Healy, 'Traditions of Planning Thought' in Susan S. Fainstein and Scott Campbell (eds), *Readings in Planning Theory* (Blackwell Publishing, 2012) 216; Henry C. Hightower, 'Planning Theory in Contemporary Professional Education' (1969) 35(5) *Journal of the American Institute of Planners* 326; Philip Allmendinger, *Planning Theory* (Palgrave Macmillan, 2002).

Allmendinger identified several schools of thought that include systems and rational theories of planning; Marxism and critical theory, new right planning, pragmatism, planners as advocates, postmodern planning, and collaborative planning.

<sup>11</sup> Hightower, above n 10, 326.



Planning practices are divided in three broad groups, based on different economic systems: socialist planning, capitalist planning and mixed-economy planning. In socialist planning, development is consciously directed by the planning authority, however capitalist planning is practiced as an indicative process. In the capitalist economic system, states facilitate the dissemination of information for market correction and the formulation of targets for the whole economy in order to provide guidelines for private economic units to make sensible decisions.<sup>12</sup> In mixed-economy planning, plans are mostly prepared for progress that also includes the growth of the private sector. It is basically a mixture of planning and market intervention.<sup>13</sup>

The discussion about different approaches of planning in this section will present the approaches pursued in different parts of the world in different decades in the last century and up to the present decade. The planning for sustainable development in this discussion is located in the recent global approaches of planning. This section will discuss planning approaches in a sequential order that will present planning theories of different periods and helps understand the evolution of planning for sustainable development.

## 1 *Early Periods of Planning*

The urban planning (synonymous to city planning) is primarily the origin of systematic planning practice which includes land use planning for making cities liveable. Statutory land use planning and development control was introduced in the late 19<sup>th</sup> and early 20<sup>th</sup> centuries in Western Europe and North America.<sup>14</sup> The ideas introduced during this period were based on the belief that improvement in the physical environment could build the entire society.<sup>15</sup> The City Beautiful Movement that emerged in the last decade of the 19<sup>th</sup> century influenced civic planning in the United States (US) and around the world.<sup>16</sup> Three leading scholars in the

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<sup>12</sup> J. Black, 'The Theory of Indicative Planning' (1968) 20(3) *Oxford Economic Papers* 303.

This indicative process is sometimes identified as indicative planning that is defined as 'the attempt to promote more stable, rapid, and efficient growth via the exchange of forecasts, leading to a generally held set of consistent expectations.'

<sup>13</sup> A.N. Agarwal and Kundan Lal, *Economics of Development and Planning* (Vikas Publishing House, 2<sup>nd</sup> ed, 1993) 35.1[1-2], 35.3[2-3].

<sup>14</sup> Conyers and Hills, above n 4, 16-22.

<sup>15</sup> Robert Fishman, 'Urban Utopias in the Twentieth Century: Ebenezer Howard, Frank Lloyd Wright, and Le Corbusier' in Susan S. Fainstein and Scott Campbell (eds) *Readings in planning theory* (Blackwell Publishing, 2012).

<sup>16</sup> Conyers and Hills, above n 4, 22-23.

early era of planning in Britain, Ebenezer Howard, Frank Lloyd Wright and Le Corbuiser tried to shape the form of an ideal city where design was considered an active force that could distribute the benefits of industrialisation to all.<sup>17</sup>

Patrick Geddes, another leading scholar, introduced the idea of comprehensive city and regional planning in 1915 based on systematic analysis of information on the natural and social environment through an axiom 'survey before plan'.<sup>18</sup> Although the natural resource orientation dominated the regional planning until the 1940s, it also embraced social science ideas in the 1940s and 1950s. The regional planning approach was explained by Walter Isard, who synthesized geographic location theories with economic theory and methods. By the end of 1940 the content of regional planning had changed to incorporate more socio-economic concerns, including transportation, the economic rationale for development and environmental resources and quality.<sup>19</sup>

Apart from physical planning in Western countries and economic planning in the former Soviet Union, economic planning in Western societies started in the years that followed the Great Depression in the 1930s when the market failed to bring equilibrium in the economic system. State intervention was advised to ensure the optimal, countercyclical functioning of the economy.<sup>20</sup> In the Indian sub-continent the struggle against colonialism led to the establishment of comprehensive economic programmes. Economic planning ideology became prominent during the 1930s before the independence of the Indian sub-continent.<sup>21</sup> The development planning process before this period tended to be administered in accordance with the colonial rulers' desire and there was no option for the local people to participate in the decision making process.<sup>22</sup> This is characterised as a 'top down' approach.

The domestic economic planning effort in British India that included Bangladesh, India and Pakistan was systematically initiated with the formation of a National Planning Committee in 1938 that considered economic as well as other aspects for development through a planning

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<sup>17</sup> Robert Fishman, 'Urban Utopias in the Twentieth Century' in Susan S. Fainstein and Scott Campbell (eds), *Readings in Planning Theory* (Blackwell Publishers, 2012) 28.

<sup>18</sup> Conyers and Hills, above n 4, 26-27.

<sup>19</sup> Ibid 26-29.

<sup>20</sup> Yannis Veneris, 'Reconsidering the systems approach' (1981)24(1)*Planning Outlook* 6.

<sup>21</sup> M. M. Sury and Vibna Mathur, *India: Sixty Years of Planned Economic Development 1950-2010* (New Century Publications, 2010)38.

<sup>22</sup> Abul Hossain Ahmed Bhuiyan, Aminul Haque Faraizi and Jim McAllister, 'Planning for the deployment of development in Bangladesh' (2008) 8(3) *Progress in Development Studies* 232-233.

process.<sup>23</sup> This process continued with discrete efforts for development until the colony was liberated in 1947. The Indian and Pakistani government also followed development planning process after their independence from colonial rulers in 1947. Both countries set up central planning machinery for development planning.<sup>24</sup> Nevertheless, their efforts at practicing the planning process were influenced by international aid agencies such as the World Bank and the United Nations, which were identified by scholars as neo-colonialism.<sup>25</sup>

## 2 Post-war Planning Approaches

### (a) Planning Approaches until the 1960s

The post-war planning was directed with the reinforcement of previously dominant physical planning approaches and states regulated land and property planning aspects.<sup>26</sup> The necessity of massive physical and social reconstruction in different European countries led to the introduction of the blueprint or master plan approach during the 1950s. This approach had a major emphasis on physical planning based on rational processes, but it lacked strategic direction and social orientation. This approach also failed to address complex economic, social and environmental problems.<sup>27</sup>

Physical planning was introduced into most developing countries towards the end of the colonial era. However, there was an overlap between physical and development planning because of limited scope for physical planning due to less urbanization and the important role of development planning in those countries.<sup>28</sup> In India and Pakistan, the Master Plan approach introduced for urban planning in the 1960s was largely influenced by the British planning system. However, development planning, as conceived in this research, was initiated by central planning agencies in these countries. Economic planning, along with social development programmes, were promoted and implemented based on mixed economy planning by state-directed development processes in some sectors as well as facilitated by private sector development.<sup>29</sup>

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<sup>23</sup> Manjulika Koshal and Rajindar K. Koshal, 'Gandhi's Influence on Indian Economic Planning: A Critical Analysis' (1973) 32(3) *American Journal of Economics and Sociology* 313.

<sup>24</sup> India established Planning Commission in 1950 and Pakistan established a full-fledged Planning Commission in 1958.

<sup>25</sup> Stephen V. Ward, 'Re-examining the International Diffusion of Planning' in Robert Freestone (ed) *Urban Planning in a Changing World: The Twentieth Century Experience* (Routledge, 2000)41.

<sup>26</sup> M. J. Dear, 'Postmodernism and Planning' (1986) 4 *Environment and Planning D: Society and Space* 377.

<sup>27</sup> Ibid; John L Taylor and David G Williams (eds) *Urban Planning Practice in Developing Countries* (Pergamon Press, 1982) 27.

<sup>28</sup> Conyers and Hills, above n 4, 46-58.

<sup>29</sup> See, eg, Government of India, Planning Commission, *First Five Year Plan (1951-1956)*; Government of Pakistan, Ministry of Finance, *First Five Year Plan (1955-1960)*.

## *(b) Planning Approaches in the 1960s*

### *(i) Systems Approach*

The major theoretical surge in planning theories occurred in the late 1960s when the system approach of planning was promoted in contrast to the traditional ideology of physical planning that perceived planning as a design practice.<sup>30</sup> This ideology of planning arose in the United Kingdom (UK) from the contribution of Brian McLoughlin and George Chadwick to overcome the ideological deficiencies of physical planning.<sup>31</sup> They incorporated the essence of social and economic life of cities, complex inter-relationships of cities as systems in planning and focussed on strategic and flexible plans.<sup>32</sup> Despite the domination of this ideology in urban planning literature and practice, in developed countries it faced opposition on the ground of not considering the planning procedures in its construction, which is a major part of planning. The system approach tried to be more rationalistic and ignored the political nature of planning.<sup>33</sup>

### *(ii) Rational Comprehensive Approach*

A rational comprehensive approach (or synoptic planning ideology) also dominated the intellectual domain of planning in the 1960s and 1970s along with systems theory.<sup>34</sup> The rational comprehensive approach, as a procedural theory, emphasised rationality as the central feature of the planning process that analyses all rational alternatives for choosing the best means to attain a given end.<sup>35</sup> This approach also refers to the idea of giving equal importance to all elements of the area of concern and the examination of these elements that result in a better plan.<sup>36</sup> Hudson, Galloway and Kaufman identified this rational comprehensive, or synoptic planning approach, as the dominant one and other approaches emerged either to amplify it or to present different opposing views. The rational

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<sup>30</sup> Glen McDougall, 'The System Approach to Planning: A Critique'(1973)7*Socio-Econ. Plan. Science* 79-90.

<sup>31</sup> Nigel Taylor, *Urban Planning Theory Since 1945* (SAGE Publications, 1998)61-63.

<sup>32</sup> Ibid 64.

<sup>33</sup> Glen McDougall, 'The System Approach to Planning: A Critique'(1973)7*Socio-Econ. Plan. Science* 89.

<sup>34</sup> Taylor, above n 31, 69.

<sup>35</sup>Barclay M. Hudson , Thomas D. Galloway and Jerome L. Kaufman, 'Comparison of Current Planning Theories: Counterparts and Contradictions'(1979)45(4) *Journal of the American Planning Association* 388; Ernest R. Alexander, *Approaches to Planning: Introducing Current Planning Theories, Concepts and Issues* (Gordon and Breach Science Publishers, 1992)39-46.

<sup>36</sup>Marios Camhis, 'Planning Theory and Philosophy ' (1978) 10(2) *Antipode* 44.

comprehensive approach has roughly four classical elements: (1) goal-setting, (2) identification of policy alternatives, (3) evaluation of means against ends, and (4) implementation of decisions.<sup>37</sup> Lane finds that public participation started emerging in the planning process in ‘tokenistic’ form through this planning approach.<sup>38</sup> He also finds this approach a sharp departure from blueprint planning as it considers alternative goals and policy agendas in planning decision making.<sup>39</sup> In support of this approach, Faludi suggested that planning as a decision making process should be rational for promoting growth by evaluating comprehensively all possible actions in the light of their consequences.<sup>40</sup> However, Naess found the synoptic planning approach ‘neither as particularly suited nor unsuited for changing the societal frame conditions for a sustainable development.’<sup>41</sup>

The rational planning approach was heavily influenced by Keynesian economics and policy studies in political science and incorporated social issues in pursuing development. It also emphasised correcting market failures, creation of public goods and reducing inequity and included different social agendas and protection of resources, creating business friendly environments and improvement of environmental quality. This approach also borrowed different tools from other disciplines for cost-benefit analysis and decision making.<sup>42</sup> However, this approach falls short of the substantive notion of planning with goals and evaluative criteria remaining obscure.<sup>43</sup> It failed to explain the adequacy of planning process in implementing development interventions.<sup>44</sup> This approach lost its prominence due to a lack of political interest and commitment in applying rationality in planning.<sup>45</sup>

### *(iii) Incremental Planning Approach*

In contrast to rational comprehensive ideology, the incremental planning approach emerged in the 1960s based on the notion of a decentralized bargaining process that was best suited to a free market and a democratic political economy.<sup>46</sup> Charles Lindblom, the prominent scholar

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<sup>37</sup> Hudson et al, above n 35,388.

<sup>38</sup> Marcus B. Lane, ‘Public participation in planning: an intellectual history’ (2005) 36(3) *Australian Geographer* 289.

<sup>39</sup> *Ibid* 290.

<sup>40</sup> Andreas Faludi, *Planning theory* (Pergamon Press, 1973)25.

<sup>41</sup> Petter Næss, ‘Normative planning theory and sustainable development’ (1994) 11(3) *Scandinavian Housing and Planning Research* 163.

<sup>42</sup> Bruce Stiftel, *Planning Theory* (The National AICP Examination Preparation Course Guidebook, 2000) 6.

<sup>43</sup> Taylor, above n 31,71.

<sup>44</sup> *Ibid* 96.

<sup>45</sup> Charles E. Lindblom, ‘The Science of “Muddling Through”’(1959) 19(2) *Public Administration Review* 85.

<sup>46</sup> Hudson et al, above n 35, 389.

of this approach, emphasised the necessity of bargaining and mutual decision-making between various interest groups and the critical role of politics in planning.

The incrementalists suggest that new decisions should differ only slightly from existing policy.<sup>47</sup> Lindblom suggested that planning works as an instrument of making decisions on a day-to-day basis, while focusing on incremental improvements over the status quo with flexibility in goals. Incremental approach considers few alternatives and conducts limited comparisons. Agreement among decision makers is the basis for planning instead of elaborate scientific analysis. It endeavours to simultaneously select goals rather than focussing on a fixed goal.<sup>48</sup> This approach faced criticism on the grounds of lack of long term vision, potential bias to powerful interest groups and the absence of rationality in decision making.<sup>49</sup> Incremental planning did not seem to be compatible to stimulating social development and new forms of development, which are important components of sustainable development.<sup>50</sup>

In an effort to find a balance between the rational comprehensive and incrementalist approaches Amitai Etzioni promoted a third approach, 'mixed scanning', to guide the planning decision-making process. This approach explained that the decision making at lower order supports higher order decision making through the search, collection, processing, and evaluation of information as well as the drawing of conclusions.<sup>51</sup>

#### *(iv) Advocacy Planning Approach*

Advocacy planning theories were also initiated in the late 1960s in the context of social disruption with the aim of bridging responsibilities between social justice and urban development. This planning approach emphasised the interests of the clients involved in the planning.<sup>52</sup> Paul Davidoff, the leading scholar who promoted this theory, suggested that planners should play an advocacy role in this debate to protect the interests of the government and other groups.<sup>53</sup> Davidoff emphasised inclusivity in the planning process and educating

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<sup>47</sup> Patrick T. Whitehead, 'The development of decision making techniques for planning' (1979) 22(1) *Planning Outlook* 33.

<sup>48</sup> Lindblom, above n 45,84.

<sup>49</sup> Hudson, above n 35, 389.

<sup>50</sup> Næss, above n 41, 163.

<sup>51</sup> Amitai Etzioni, 'Mixed Scanning' (1986) 46(1) *Public Administration Review* 8[2].

<sup>52</sup> David J. Connell, 'Schools of Planning Thought: Exploring Differences through Similarities' (2010)15(4) *International Planning Studies*269.

<sup>53</sup> Paul Davidoff, 'Advocacy and Pluralism in Planning' (1965)31(4) *Journal of the American Institute of Planners* 332.

planners to skilfully do their advocacy job.<sup>54</sup> Although this approach talked about inclusiveness, it lacked the orientation of politics and the transparency of the planner's own role as formulator and generator of issues. Lisa Peattie challenged this criticism on the grounds that it is not an issue only for planning, but is rather a central, unresolved, and probably unresolvable issue for our whole polity.<sup>55</sup> Advocacy planning promotes the social development aspect in relation to civil and political rights of citizens that is a significant contribution to sustainable development planning.<sup>56</sup>

#### *(v) Social Planning Approach*

In addition to advocacy planning, social planning as an ideology evolved in the 1960s and intervenes directly in social interactions.<sup>57</sup> Lomas argues that social planning is a political activity, or 'a process of change and development taking place within a community, enveloping physical, economic, political and cultural components'.<sup>58</sup> The main proponent of social planning, John Friedman proposes 'transactive planning' to shift the discourses of planning theory away from planning as an instrument of control to one of innovation and action. He argued more specifically for a relation of dialogue as a basis for mutual learning between planners and client groups.<sup>59</sup> Transactive planning incorporates social development issues including citizen participation that are important for promotion of sustainable development, however it lacks any scope for promotion of some types of control that is necessary to reach instrumental targets for global environmental protection, or a more just distribution.<sup>60</sup> Arguably, social planning aligns with modern governance approaches to SD as they aim for transformation, transparency of values and objectives and participatory accountable processes. Obviously, these theories need further and continuous development to implement SD in countries.

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<sup>54</sup> Ibid 332-33.

<sup>55</sup> Lisa R. Peattie, (1994) 'Communities and Interests in Advocacy Planning' (1994)60(2) *Journal of the American Planning Association* 152.

<sup>56</sup> Næss, above n 41, 163-164.

<sup>57</sup> Alexander, above n 35, 98-105.

<sup>58</sup> Richard Williams, 'The Idea of Social Planning' (1976) 29(1-2) *Planning Outlook* 11; M. J. Bruton, *The spirit and purpose of planning* (Hutchinson, 1971).

<sup>59</sup> John Friedman, 'Why Do Planning Theory?' (2003)2(1)*Planning Theory* 8.

<sup>60</sup> Næss, above n 41, 163-164.

### *(c) Crisis in Development Planning during the 1960s*

From the second half of the 1960s, development planning started facing complexities. Traditional development planning was concerned with economic objectives and was mostly preoccupied with economic considerations as well as writing plans or vetting projects. The plans often incorporated unrealistic objectives and failed to reach goals. The planning faces difficulties because of rigidity and differences in perspectives among politicians, planners and administrators. There was also a lack of communication among them. The planning became somewhat incapable of achieving its objectives and by the end of the 1960s, planning faced a crisis about its relevance.<sup>61</sup> By 1970, the limitations of a purely physical approach were being revealed and planning became more society-oriented and more concerned with the quality of life. Planning decisions became subject to closer political scrutiny because of the urgency attached to making the right choices.<sup>62</sup>

### *(d) Planning Approaches in the 1970s*

The debate emerged in the 1960s through different scholarly approaches about planning agendas and process and their role in development became more intense in the early 1970s. The debate surfaced as many scholars argued that one cannot study process without an understanding of substance, and vice versa. It also happened in the context of a tendency of the procedural emphasis to separate planning theory from design approaches to planning. Faludi tried to refine the directions and separated the theories under two typologies, procedural and substantive planning theories.<sup>63</sup>

The decade experienced the promotion of some radical theories that argued for changes in the goals and structure of planning. It focused on the facilitation of changes through rational action and spontaneity.<sup>64</sup> Radical planning theory criticised planning as a part and parcel of capitalism that imperfectly integrated economic and social systems of capitalism.<sup>65</sup> Friedman found this approach to be a tradition of planning that is rooted in civil society rather than the state. Citizen participation in planning and decentralising planning institutions are more

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<sup>61</sup> Conyers and Hills, above n 4, 45-47.

<sup>62</sup> Roger D. Scott, 'Political science, planning and participation' (1972) 12(1-2) *Planning Outlook* 17, 20-21.

<sup>63</sup> Bruce Stiftel, *Planning Theory* (The National AICP Examination Preparation Course Guidebook, 2000)8.

<sup>64</sup> Stephen Grabow and Allan Heskin, 'Foundations for a Radical Concept of Planning' (1973) 39(2) *Journal of the American Institute of Planners* 106.

<sup>65</sup> Taylor, above n 31, 105.



important in this paradigm. Although this theory extended the options for addressing global environmental concerns, it lacked options for the promotion of securing other rights of citizens.<sup>66</sup>

The crisis in planning led the changes in the scope of development planning, by widening the focus from economic development to social, political and physical environmental considerations. The broadening of scope also changed the techniques of planning and included social and environmental factors into the process of decision making such as cost benefit analysis and other forms of project appraisal procedures. It also included the interrelationship and integration between different dimensions of development and distribution and equity.<sup>67</sup> The changes also occurred in the development policies, planning techniques and political aspects of planning through involving greater participation. The debate in efficacy of planning promoted changes in the planning process and it included the improvement of plan implementation. The planning in this decade was conceived as an integrated approach including preparation of plans to implementation.<sup>68</sup> Planning at a macro-level moved to detailed planning at sectoral, regional and project level. The emphasis was given more on translating plans into guidelines for implementation through linking planning with budgeting. Monitoring processes became part of planning process.<sup>69</sup>

#### *(e) Planning Approaches in the 1980s*

During the 1980s, the planning approaches moved in conjunction with the neoliberalism ideologies and approaches for economic development. The role of the state changed from direct employer and producer to regulator and facilitator.<sup>70</sup> Given the regulatory reforms in the economic principles of states, planning processes embraced citizen participation, became open to the private sector and NGOs for participation and sustainable development.<sup>71</sup>

The global movement, around the 1970s, debating the limits to growth in the context of environmental degradation promoted integration perspectives in development discourse. This has also emphasised the state's responsibility in addressing the challenges in an integrated

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<sup>66</sup> Næss, above n 41, 164.

<sup>67</sup> Conyers and Hills, above n 4, 48-49.

<sup>68</sup> Ibid 50-51.

<sup>69</sup> Ibid 52.

<sup>70</sup> O Ozcevic, C. A. Brebbia, S. M. Sener, *Sustainable Development and Planning* (WIT Press, 2015)5.

<sup>71</sup> Ibid 6.

manner, and planning was identified as a tool for integration. Whatmore and Boucher identified three different competing environmental explanations in planning ideologies in the 1980s that explained how planning had to pursue development.<sup>72</sup> While conservationists argued for zoning as planning policy, neoliberals argued for bargaining as the mechanisms for planning and ecologists found integration as the process for pursuing planning for development.<sup>73</sup> The support to environmentalism in this decade lent new legitimacy to establish planning for development as a process for creating greener environments.<sup>74</sup>

The reform in economic principles induced changes in planning where strategic planning emerged as practice by focusing on goals and priorities, efficiency and effectiveness. The role of planning changed from technical and control to facilitation to arrive at a consensus. The planning framework in this decade embraced monitoring and evaluations systems by using them as an instrument to guide implementation and further development efforts.<sup>75</sup>

#### *(f) Planning Approaches in the 1990s and afterwards*

##### *(i) Communicative Planning Theories*

The theoretical orientation of planning started changing from the late 1980s when the scholars tried to integrate planning with the political decision-making process. Communicative planning theory has been dominant in planning literature since the late 1980s. It has different versions postulated by different scholars such as ‘planning through debate’, ‘communicative planning’, ‘argumentative planning’, ‘collaborative planning’ and ‘deliberative planning’. These theories are based on the supremacy of communication between planners and citizens. Among them, the latest ideologies that dominated the intellectual domain are ‘collaborative planning’ in UK literature and ‘deliberative planning’ in the US literature.<sup>76</sup>

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<sup>72</sup> Sarah Whatmore and Susan Boucher, ‘Bargaining with Nature: The Discourse and Practice of ‘Environmental Planning Gain’ ’ (1993)18(2) *Transactions of the Institute of British Geographers* 166-170.

<sup>73</sup> Ibid 169.

<sup>74</sup> Ibid 176.

<sup>75</sup> Ozcevic et al, above n 70, 6.

<sup>76</sup> Taylor, above n 31, 206-7.

The deliberative planning ideology is presented in *Critical Theory* by John Forester that is basically founded on communicative rationality ideology of Jurgen Habermas.<sup>77</sup> This theory explains that the planners through communicative action shape the expectations of interest groups. Planners also shape ‘citizens’ access to information, their understanding and interpretation of such information, and their ability to participate effectively in political processes affecting their lives.’<sup>78</sup> Forester focussed on normatively rule-structured communicative action in planning practice to reveal true alternatives in association with stakeholders. This communicative action helps counter cynicism and spread political responsibility.<sup>79</sup> Fairstein identified this theory as a collaborative model of planning that emphasizes the planner’s role in mediating among ‘stakeholders’ within the planning situation.<sup>80</sup>

Collaborative Planning Theory as proposed by Patsy Healey describes the planning process where participants arrive at an agreement on action that expresses their mutual interests. The notion this ideology embraces is that planning as a governance activity is shaped by wider economic, social and environmental forces that structure, but do not determine, specific interactions. The structuralist approach contends that people do not have fixed interests, Healy stressed justice in both material and policy processes.<sup>81</sup> Healy argued that an inclusionary collaborative process does not necessarily guarantee the justice of either process of material outcomes. However, the planner or policy analyst should assess the range and distribution of impacts of interventions on people and places.<sup>82</sup> She also suggested that the planning practice is structured by a framework of rules and patterns of resource allocation and depends on the ways in which opportunities and constraints are perceived, debated, and confronted in daily practice. Planners face choices daily that can contribute to changing the framework. Ethical conduct and skilful execution of these choices are key qualities of the planning expert in the service of democratic environmental management.<sup>83</sup>

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<sup>77</sup> John Forester, ‘Critical Theory and Planning Practice’ (1980)46(3) *Journal of the American Planning Association* 275[3].

<sup>78</sup> *Ibid* 275[1].

<sup>79</sup> *Ibid* 283[4].

<sup>80</sup> Susan S. Fairstein, ‘New Directions in Planning Theory’ (2000)35 *Urban Affairs Review* 452[2].

<sup>81</sup> Patsy Healy, ‘Collaborative Planning in Perspective’ (2003)2(2) *Planning Theory*104.

<sup>82</sup> *Ibid* 115.

<sup>83</sup> Patsy Healey, ‘A Planner’s Day: Knowledge and Action in Communicative Practice’ (1992)58(1) *Journal of the American Planning Association* 19.

The difference between the two approaches of communicative planning ideology is that, while Forester's emphasis is on the US with its fragmented federal planning framework reliant on more informal negotiation, Healey's experience is of more formal institutional arenas for mediation typical of the UK system. Consequently, Healey's collaborative planning is more concerned with the transformative influence upon existing structures (in the institutional sense), while Forester's communicative planning focuses more on agency and the mechanisms and direct outcomes of interpersonal relations.<sup>84</sup>

*(ii) Resurgence of Development Planning in the 21<sup>st</sup> century*

Development planning again resurged in developing countries after almost two decades of being in a weaker position with the prescription of the developed world and its allies. The poverty reduction strategies were examples in many developing countries of a new planning vehicle to organize the development efforts under participative process. The planning attempts to face new challenges and address old problems through different goals to be achieved within the context of limited resources and multifaceted problems.<sup>85</sup> The present dimension of planning focuses more on deliberation, or collaboration, to construct the future policy and plans for interventions in line with the interests of the stakeholders. The participation of citizens in the planning process and facilitation of rights of people in decision making is considered critical to advance the governance agenda and to successfully implement plans. Although this approach emerged in the 1990s, it has become more dominant since the 2000s to date.

Now, planning approaches emphasise building relationships with the public, private and social actors in the context of the state-market relationship to produce desirable outcomes through public choices. The planning approach now moves from vertical planning to governance where transparency, openness, participation and collaboration become prominent.<sup>86</sup> Planning practices now need to explore plurality in inequality that goes beyond inequality among individuals (vertical inequality) to inequality among groups (horizontal inequality).<sup>87</sup> It also needs to address policies toward redistribution and resistance to redistribution from elite groups.<sup>88</sup> In order to address the intra-country inequality national

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<sup>84</sup>Taylor, above n 31, 209-10.

<sup>85</sup>Alexander, above n 35, 30-31.

<sup>86</sup> Ozcevic et al, above n 70, 6.

<sup>87</sup> Frances Stewart, 'Changing Perspectives on Inequality and Development' (2016) 51(1) *Studies in Comparative International Development* 60.

<sup>88</sup> Ibid 73.

cohesion requires attention to national distribution.<sup>89</sup> The planning process needs to consider the power relations among actors that significantly influence the selection of ideas and implementation of activities.<sup>90</sup> The application of economic planning is significantly affected by the ruling ideological, doctrinal views and political party interests at national and local level.<sup>91</sup> Moreover, the donors' concerns around aid effectiveness and their parallel mechanisms of planning and implementation also affect the planning process.<sup>92</sup>

Planning now practices communicative rationality to create objective goals based on mutual understanding between interest groups. It is participatory and favours 'bottom up' processes to foster partnerships in problem solving through communicative actions. The planners' role becomes that of mediation to facilitate reaching agreement on objective goals.<sup>93</sup>

In regard to promotion of sustainable development, Beatley has also kept the deliberation proposition as suggested by Habermas in planning theory and argued that planning should develop moral positions towards the environment through this deliberation and dialogic process.<sup>94</sup> When planning profession is changing to accommodate interdependency between the planner and politician and to respond to structural adjustments in the political scene,<sup>95</sup> in both developed and developing countries, this reflects a shift toward political equity that leaves politicians to face the political 'tri-lemma' to address trade-offs among economic, social and environmental issues that are integrated under the SD paradigm.<sup>96</sup> The new social project of 'planning for sustainable development' focuses governance debates,<sup>97</sup> and SD requires deliberate persuasion by the government in the form of public planning must be involved in the process of attaining SD.<sup>98</sup> Planning in this context is considered a very important organising force for political, social and economic response, and its influence will

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<sup>89</sup> Ibid 75.

<sup>90</sup> Emily C. Schaeffer, 'The political economy of urban reconstruction, development, and planning' (2009) 2(1) *Erasmus Journal for Philosophy and Economics* 150.

<sup>91</sup> M. Mesaric, 'Neoliberalism VS. Planning as a institute of socio-economic development' (2012) 8(3) *Montenegrin Journal of Economics*, 8(3) 25; Clayton Mendonga Cunha Filho and Rodrigo Santaella Qongalves, 'Latin American Perspectives' (2010) 37(4) 178.

<sup>92</sup> Khurshid Alam, Md Shamsuddoha, Thomas Tanner, Moshahida Sultana, Muhammad Jahedul Huq and Sumaiya S. Kabir, 'The Political Economy of Climate Resilient Development Planning in Bangladesh' (2011)42(3) *IDS Bulletin* 52.

<sup>93</sup> Ibid.

<sup>94</sup> Timothy Beatly and Kristy Manning, *The Ecology of Place: Planning for Environment, Economy and Community* (Island Press, 1997) 203-215.

<sup>95</sup> The United Nations, *The Symbiosis of Politics and Planning* <<http://www.un.org/ga/Istanbul+5/94.pdf>>94.

<sup>96</sup> The United Nations, *Participatory Planning: An Indicator of Democratization* <<http://www.un.org/ga/Istanbul+5/94.pdf>>95.

<sup>97</sup> James Meadowcroft, 'Planning for sustainable development: Insights from the literatures of political science' (1997)31 *European Journal of Political Research* 427.

<sup>98</sup> Ibid 430.

be shaped by political and economic processes.<sup>99</sup> The recently introduced ‘smart growth’ approach of planning promotes the protection of community and the environment under the banner of balance among social, economic and environmental goals.<sup>100</sup> Against the Marxist ideologies about planning,<sup>101</sup> the neo developmentalism or twenty-first-century-socialism paradigm finds planning as a new form of state intervention in the economy that prioritises national revenue increase and to guarantee social welfare while maintaining certain aspects of the preceding neoliberal model such as monetary stability and fiscal equilibrium.<sup>102</sup>

*(g) Post-war Planning Practices in Developing Countries*

While the scholars in developed countries debated about theoretical approaches for promotion of physical and economic development in the post-war era, it has been found that apart from physical planning, economic development planning became a major focus in developing countries. The origins and rapid growth of economic development planning in developing countries was mostly attributed to an understanding that planning was a means of accelerating the process of economic development. It was also accelerated with the experience of the growth of economic planning in the socialist world and developing countries’ ideology was similar to the socialist countries’ ideologies that emphasised state control as desirable to a minimum extent for bringing the required development.<sup>103</sup> They followed a state planning mechanism for economic and social development in association with maintaining market mechanisms, despite the Marxists scholars’ negative approach to these planning mechanisms. The Marxist scholars viewed planning institutions as either partially responsible for creating social and economic problems or ineffective in dealing with the problems created in the post-war period in consumerism and market values.<sup>104</sup> They also expressed concern that planners assisted capital accumulation and the elimination of barriers to the market functioning through providing the conditions necessary for capitalism.<sup>105</sup>

The experience of planning gained in Europe and the United States during the Second World War also influenced developing countries that saw it as a possible means for a government to

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<sup>99</sup> Tim O’Riordan and Heather Voisey, ‘The political economy of sustainable development’ (1997) 6(1)*Environmental Politics* 13.

<sup>100</sup> Amalia Lorentz and Kirsten Shaw, ‘Are you ready to be met on smart growth?’ (2000) 66(1) *Planning* 9.

<sup>101</sup> Linda Fox-Rogers, Enda Murphy and Berna Grist, ‘Legislative change in Ireland: a Marxist political economy critique of planning law’ (2011) 82(6) *Town Planning Review* 639-640.

<sup>102</sup> Clayton Mendonga, Cunha Filho and Rodrigo Santaella Qongalves, ‘The National Development Plan as a Political Economic Strategy in Evo Morales’s Bolivia: Accomplishments and Limitations’ (2010) 37(4) *Latin American Perspectives* 178.

<sup>103</sup> Bela Balassa, ‘Indicative Planning in Developing Countries’ (Working Paper 439, The World Bank, 1990)2.

<sup>104</sup> Conyers and Hills, above n 4, 43-44.

<sup>105</sup> *Ibid* 42-44; Dear, above n 26, 377.

influence the rate and growth of a mixed economy rather than relying entirely on market forces.<sup>106</sup> The countries of South and South-East Asia, who became independent immediately after the Second World War, took the lead. While India started five-year planning in 1951, the Philippines started it much earlier with the assistance of the United States.<sup>107</sup> In Africa, planning moved rather slowly under the control of formal colonial powers, but most African countries resorted to planning by the 1960s. In Latin America, development planning also experienced slow development because it was not promoted by the independent countries or their formal colonial masters. However, these countries also embraced the planning system by the early 1960s and the major factor behind the changes was usually to get access to foreign aid. This adoption of planning in developing countries with some exceptions has been described by Conyers as the historical circumstances of individual countries or regions.<sup>108</sup>

The planning practices were centralized in different countries during the 1960s and were used for project development in accordance with the advice of the funding agencies. The planning process purported to follow scientific methods to select the best proposal that cost the least to fulfil the same objectives. While the decision-making process in the planning framework was centralized, there was virtually no provision for citizen participation. Planning was basically an expert driven technical job where economists, architects, planners and administrators dominated. The state, through its linear mechanism, played the role of manager and planner based on its planning visions.<sup>109</sup>

After independence, India and Pakistan<sup>110</sup> maintained the urban planning process left by colonial rulers and adopted the master planning approach during the 1960s, largely influenced by the British planning system. However, the dominant aspect of planning for economic and social and other forms of development was carried out by the newly created development planning institutions. The formation of planning commissions and planning boards in these countries attempted to integrate the development process.<sup>111</sup>

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<sup>106</sup>Conyers and Hills, above n 4, 43.

<sup>107</sup>Ibid.

<sup>108</sup>Ibid 44.

<sup>109</sup>Ozcevic et al, above n 70, 5.

<sup>110</sup> Before independence in 1971, Bangladesh was a part of Pakistan and practiced development planning as practiced in other part of Pakistan. The pre-independence planning in Bangladesh is discussed in the sixth chapter of this thesis.

<sup>111</sup>Government of India, *Resolution* No.1-P(C)/50 (1950)

< <http://planningcommission.gov.in/aboutus/history/PCresolution1950.pdf>>; Government of Pakistan, Ministry of Planning, Development and Reform, *Development Board* <[http://www.pc.gov.pk/?page\\_id=147](http://www.pc.gov.pk/?page_id=147)>.

In India, Planning Commission was established in 1951. In Pakistan, the central planning board was established in 1948.

These countries followed medium term planning since their adoption of economic planning approaches.<sup>112</sup> However, the centrally regulated production oriented planning model practiced in the socialist countries was not exclusively practiced in these countries. In the beginning, these countries had dominance of public sector and government directed production of different sectors, such as industry. The government supported the agriculture sector through infrastructure creation and other direct and indirect input support for enhanced production,<sup>113</sup> as well as facilitated land rights to farmers, redistribute lands to poor and landless farmers and break the intermediary in land rights. This is closer to the indicative planning approach practiced in France.<sup>114</sup> The indicative planning approach that was practiced relied on incentives and policy measures to facilitate production and regulate markets through persuasion rather than compulsion or deliberate enforcement of orders.<sup>115</sup>

India and Pakistan had control in industrial production during 1960s and 1970s, and to some extent in 1980s. The planning approach in these countries started changing in 1980s when the governments relied more on policy planning as a part of indicative planning approach.<sup>116</sup> In Bangladesh, after its independence in 1971, the government adopted a mixed economy planning model that was a synthesis of Indian and Pakistani model.<sup>117</sup> There was dominance of public sector investment in industrial production, but agricultural production was largely controlled by the private sector. The government of Bangladesh has tried to facilitate production through infrastructure creation, technological development and direct incentives.<sup>118</sup> These attempts were taken through the development planning process as directed in the *Constitution of Bangladesh*.<sup>119</sup> The development planning approach in Bangladesh has also been influenced by

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<sup>112</sup> Government of India, Planning Commission, *Five Year Plans* < <http://planningcommission.nic.in/plans/planrel/fiveyr/index1.html>>; Government of the People's Republic of Bangladesh, Planning Commission, *Five Year Plan* < <http://www.plancomm.gov.bd/#>>.

The government of India has prepared 12 five year plans in last 65 years. The government of Bangladesh also has prepared 7 five year plans in last 45 years.

<sup>113</sup>See, eg, Government of India, Planning Commission, *First Five Year Plan (1951-1956)*ch 2[15-18] ; Government of India, Planning Commission, *Twelfth Five Year Plan (2012-2017)*vol 2, 1-2; Government of the People's Republic of Bangladesh, Planning Commission, *First Five Year Plan (1973)*13, 32-33; Government of the People's Republic of Bangladesh, Planning Commission, *Seventh Five Year Plan (2016-2020)*257..

<sup>114</sup>Balassa, above n 90, 1.

Indicative planning involves the establishment of sectoral targets which are not compulsory for the private sector and are imbedded in macro-economic projections that pertain to a period of several years.

See, eg, *The State Acquisition and Tenancy Act 1950* (Bangladesh) East Bengal Act No. XXVIII of 1951; *The Land Reform Ordinance 1984* (Bangladesh) Ordinance No X of 1984.

<sup>115</sup>Hemanta Saikia, 'Indicative Planning and Plan Economic Development of India' (2010)5(4) *Romanian Economic and Business Review* 18.

<sup>116</sup>Balassa, above n 90, 7.

<sup>117</sup> Nurul Islam, *Making a Nation* (University Publishers, 2003)23, 61, 69-70 84-85.

<sup>118</sup> Government of the People's Republic of Bangladesh, Planning Commission, *First Five Year Plan (1973)*32-33; Government of Bangladesh, Planning Commission, *Seventh Five Year Plan (2016-2020)*.

<sup>119</sup> *Constitution of the People's Republic of Bangladesh* art 15.



donors' prescriptions and approaches in different decades.<sup>120</sup> The indicative approach continued even when the development planning approach had a declining trend in developing countries in the 1980s. Moreover, the indicative approach received support from the UN agencies and the international financial institutions by promoting the development planning process in developing countries in the era of neoliberal economy to promote the infrastructural investments.<sup>121</sup>

The government's dominance of production in Bangladesh has changed over the periods,<sup>122</sup> but the role of the government to facilitate production, especially agricultural production has become more prominent.<sup>123</sup> The government follows policy planning as a part of indicative planning and provides incentives and creates public goods to promote development in Bangladesh. This continues today, along with the inclusive planning approach<sup>124</sup> that has been practiced in India since the first decade of the 21<sup>st</sup> century.<sup>125</sup>

### *3 Interim Conclusion about Planning Approaches*

The planning approaches started with the physical planning or urban planning in developed countries in the late 19<sup>th</sup> century to early 20<sup>th</sup> century. However, planning approaches only started embracing economic and social dimensions after the 1930s. The dominance of physical or urban planning continued even during post-war periods in developed countries. However, developing countries embraced economic planning approaches, along with limited urban planning, since the 1960s. In developing countries, economic planning and social planning dominated against physical planning as most of these countries strived for rapid economic development during this period and they were facilitated by international funding agencies. Social planning also emerged in developing countries in the late 1960s and early 1970s and added to economic planning exercises. States played a prominent role in planning in these decades as both manager and planner. Planning was more technical and there were few options for citizens to participate in the planning process.

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<sup>120</sup> See, eg, Government of the People's Republic of Bangladesh, Planning Commission, *Fourth Five Year Plan* (1990-1995); Government of the People's Republic of Bangladesh, Planning Commission, *Steps Towards Change, National Strategy for Accelerated Poverty Reduction (Revised)* (2009-2011); Government of the People's Republic of Bangladesh, Planning Commission, *Unlocking the Potential: National Strategy for Accelerated Poverty Reduction* (2005)xxi.

<sup>121</sup>Balassa, above n 103, 19.

<sup>122</sup> Government of the People's Republic of Bangladesh, Planning Commission, *First Five Year Plan* (1973)13; Government of the People's Republic of Bangladesh, Planning Commission, *Seventh Five Year Plan* (2016-2020) Foreword.

<sup>123</sup> See, eg, Government of the People's Republic of Bangladesh, Ministry of Agriculture, *Statement of Fertiliser Subsidies* (2015).

<sup>124</sup>Government of the People's Republic of Bangladesh, Planning Commission, *Seventh Five Year Plan* (2016-2020)Foreword.

<sup>125</sup>Government of India, Planning Commission, *Eleventh Five Year Plan* (2007-2012)5.

The planning approaches started changing during the 1970s and there was less priority in planning in the 1980s during the dominance of neoliberal economic ideologies and the economic crisis in both developed and developing countries. However, planning became an important tool for advancing the environmental improvement agenda with a more rational management of resources since the Stockholm Conference.<sup>126</sup> Environmental and resource planning emerged as a major arena of planning activity in the 1970s, when the natural environment became a focus for social concern.<sup>127</sup> The planning approaches passed through internal feuds during the 1960s about its nature, whether it should concentrate on substance or on process. The debate continues afterwards, however planning as an approach embraced massive changes during 1970s and it was broadened in its scope and procedure. While the scope included the interrelationships and integration of social, economic and environmental aspects and participation as political component, the procedure was widened with the inclusion of a different appraisal procedure, participation, and monitoring and evaluation techniques.

The most dominant theme in planning was inclusion of a communicative ideology that gained momentum in the 1990s to recent times. The citizen orientation has now been dominating the planning approach where planners play the role of mediator in identifying and achieving the goals through participation of the private sector as well as non-state actors. However, the substantive issues are also important and there is no reason to discard them from planning discussions. This has necessitated an interaction between the substantive and process centred planning theories. The interaction is necessary to pursue development as well as sustainable development with a set of theories against theories in isolation. Given the context that plans often suffer from weak integration and fail to generate perceived benefits, the suggestion of Hudson to pursue different planning ideologies together is plausible.<sup>128</sup> However, the researcher finds it justified not to be limited to five specific theories as suggested by Hudson in the title of 'SITAR'<sup>129</sup> that combines the five dominant approaches of planning – synoptic, incremental, transactive, advocacy and radical planning. The researcher rather favours a critique of the positives, negatives and replicability of different theories in a context or issue. This is because some of the planning approaches may not be completely appropriate for

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<sup>126</sup> *Declaration of the United Nations Conference on the Human Environment*, UN Doc A/Conf.48/14/Rev.1(1973) principle 13.

<sup>127</sup> Alexander, above n 35, 94-98.

<sup>128</sup> Barclay M. Hudson, Thomas D. Galloway and Jerome L. Kaufman, 'Comparison of Current Planning Theories: Counterparts and Contradictions'(1979)45(4) *Journal of the American Planning Association* 387.

<sup>129</sup> *Ibid.*

replication in the present context. For example the radical planning approach that promotes citizen dominated planning may not be fully compatible with the development planning process promoted by the government because of its civil society centric approach. Therefore, a set of planning approaches can be applied in development planning process to integrate both the substantive and procedural aspects of development agendas guided by the principles of SD.

The application of a set of planning approaches to promote sustainable development is considered promising by this researcher. While integration and participation will have to be pursued for sustainable development, rationality along with communicative planning may accrue better results. Sustainable development also requires incremental planning to pursue short term goals along with long term development targets.

Planners now have to play an advocacy role as well as maintain objectivity in many cases and frame the political aspirations in the planning frameworks. They will also have to play a coordinating role among agencies at home as well as with global institutions. Promoting sustainable development as a state responsibility has extended this advocacy responsibility to the planners and the adoption of SDGs as a global goal for development has made this advocacy role of planners more urgent. The following section now presents a brief discussion about the promotion of SD through the planning framework and roles of planners in this endeavour.

### *C Promotion of Sustainable Development through Planning*

Wheeler suggested that ‘moving towards a better, more sustainable future is above all a planning challenge.’<sup>130</sup> Both planning and sustainable development can be mutually reinforcing. Both are concerned with the future, seeking integration among different dimensions of development, stakeholders and institutions and for effective implementation through an integrated framework.<sup>131</sup> Sustainable development planning processes link the

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<sup>130</sup> Stephen M Wheeler, *Planning for Sustainability: creating liveable, equitable and ecological communities* (Routledge, 2<sup>nd</sup> ed. 2013)13.

<sup>131</sup> Elaine Stratford, Julie Davidson, Michael Lockwood, Rod Griffith and Allan Curtis, ‘Sustainable Development and Good Governance: The ‘Big Ideas’ Influencing Australian NRM’ (Report No. 3, Project Pathways to Good Practice in Regional NRM governance, 2007)iv.

historically separated planning specialities (such as economic, social and environmental improvement planning) into an integrated shape and integrate the scales of planning.<sup>132</sup>

Sustainable development as an agenda for planning started receiving attention in 1990s although the integration of the environment with development through planning was agreed at the UN in the early 1970s.<sup>133</sup> The political agenda of sustainable development, citizen participation in planning became popular ideology in planning in the late 1990s with the communicative planning paradigm.<sup>134</sup> The substantive agendas of sustainable development were also discussed in scholarly writing during this period. The SD view of planning stems from communicative planning that helps to develop public understanding, advocacy planning to achieve goals and providing incentives and mandates between different levels of government.<sup>135</sup>

Planning for sustainable development as a holistic, long term planning process engages people in problem solving. It also passes through the ideologies of limits to growth and emphasises location.<sup>136</sup> Jones and Brennan suggested that effective, long-term sustainable development requires that planners adopt procedures that allow them to minimise all adverse environmental impacts of a development, whilst maximising its positive impacts.<sup>137</sup> Maxwell argues for principles centred planning as it extends flexibility, creativeness and the power to act.<sup>138</sup>

Planning for sustainable development centres around six basic questions. They are who, what, where, when, why and how.<sup>139</sup> The questions, 'where' and 'when' come first, as the spatial system and the time-frame of reference influence all other considerations and the scope of the planning problem. The questions 'who' and 'what' focus on the stakeholders and the subjects of planning. 'Who' precedes 'what', as the subjects of planning determine the objects of the

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<sup>132</sup> Wheeler, above n 117, 44.

<sup>133</sup> *Declaration of the United Nations Conference on the Human Environment*, UN Doc A/Conf.48/14/Rev.1(1973) principle 13.

<sup>134</sup> Patsy Healey, A Planner's Day: Knowledge and Action in Communicative Practice (1992)58(1) *Journal of the American Planning Association*19; John Forester, Critical Theory and Planning Practice (1980)46(3)*Journal of the American Planning Association*275[1]; Tonny Meppem and Simon Bourke, 'Different ways of knowing: a communicative turn toward sustainability' (1999)30(3) *Ecological Economics* 389.

<sup>135</sup> Wheeler, above n 117, 37.

<sup>136</sup> *Ibid* 41-51.

<sup>137</sup> Malcolm Jones and Michael Brennan, Planning for Sustainable Development (1997) 34(3) *Australian Planner* 150.

<sup>138</sup> John C. Maxwell, 'Seven Principles of Planning'

<[http://www.teamexpansion.org/brigguy/articles/Seven\\_Principles\\_of\\_Planning.pdf](http://www.teamexpansion.org/brigguy/articles/Seven_Principles_of_Planning.pdf)>.

<sup>139</sup> Helen Briassoulis, 'Sustainable Development and its Indicators: Through a (Planner's) Glass Darkly' (2001) 44(3) *Journal of Environmental Planning and Management* 414.

planning endeavour. There is much significance on the question ‘why’ as it explains the unsustainable conditions and particular courses of action. Finally, the question ‘how’ describes the process or courses of action, means and implementation to transform towards sustainable development.<sup>140</sup>

Attaining the goals of sustainable development depends upon the integration of sustainable development norms into existing planning structures and modalities. There is a need for intensive debate about development alternatives, coordination among disjointed and partially contradictory efforts of multiple agencies. SD also requires mutual adjustment in central and local government initiatives.<sup>141</sup>

Planning leadership and frameworks at the national level are urgently required for sustainable development, as the lower tier of government lacks perspectives, resources and jurisdiction or political will to effectively bring about change. Against the limited capacity of local governments, their discrete and small scale programmes, as well as concentration on local issues, the gaps in addressing national and global issues are met by national level efforts. Planning requires a national mandate to address integrated and large scale issues of sustainable development such as land use, environmental policies, and transportation systems.<sup>142</sup>

When the policy and plans are made at a national level the principles for sustainable development (SD) can also be the guiding principles.<sup>143</sup> Planning also needs to make plans happen.<sup>144</sup> Planners need to assist communities to create more holistic plans to advance towards SD. Planners facilitate dialogue about SD and adopting explicit policy solutions to promote sustainability.<sup>145</sup>

Sustainable development planning goes beyond simply preparing plans; it includes visions for implementing plans and monitoring and evaluation procedures. Planning also needs to consider alternative courses of action and best practices available for envisioning the future

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<sup>140</sup> Ibid 412-413.

<sup>141</sup> James Medowcroft, ‘Planning for Sustainable Development’ (1997) 31 *European Journal of Political Research* 427.

<sup>142</sup> Wheeler, above n 117, 251.

<sup>143</sup> David Hunter, James Salzman, Durwood Zaelke, *International Environmental Law and Policy* (Federation Press, 4<sup>th</sup> ed, 2011)477-78.

<sup>144</sup> Kelly, above n 7, 16.

<sup>145</sup> Philip R. Berke and Maria Manta Conroy, ‘Are We Planning for Sustainable Development?’(2000)66(1) *Journal of the American Planning Association* 31.

and development of indicators for monitoring the progress.<sup>146</sup> It is suggested that planning institutions such as planning commissions and planning rules can facilitate shaping sustainable development outcomes despite the threats that they can also work as obstacles if they are not properly utilized or are captured by interest groups. This has underscored the importance of improving these institutions for enabling them to address sustainable development agendas.<sup>147</sup> Sustainable development objectives also need to be incorporated in the terms of reference of those cabinet and legislative committees dealing with national economic policies and planning as well as those dealing with key sectoral and international policies. The decision making pattern of individual households also needs to be considered during the design of policy interventions as the households may often be more interested in short-term economic gain instead of sustainable growth.<sup>148</sup>

Apart from influence of individual decision making, sustainable development becomes practically operational with the endorsement of local communities who have been managing the environment from time immemorial.<sup>149</sup> It is important as the poor and vulnerable people understand the effects of environmental degradation and its cost-benefits. Their risk and uncertainty also matter as trading present losses against future expected benefits need to be factored for the implementation of any policy. The local community's interest in intra and intergenerational equity and security of the poor also needs to be considered. The mandates and procedures of institutions in addressing sustainable development programmes need to be changed for cross-sectoral intervention.<sup>150</sup>

The planning may require alternative sources of power in integrating the different dimensions of development interests. The sources of power can be political and business leaders if they are motivated by the planning authority. However, planning institutions may need to develop alliances with civil societies, advocacy groups and core political parties for changing the dimensions of development.<sup>151</sup>

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<sup>146</sup> Wheeler, above n 117, 86-93.

<sup>147</sup> Ibid 100.

<sup>148</sup> Michael R Redclift, 'A Framework for Improving Environmental Management: Beyond the Market Mechanism' 20(2) *World Development* 258.

<sup>149</sup> Ibid 257.

<sup>150</sup> Ibid 258.

<sup>151</sup> Wheeler, above n 117, 103-104.

Sustainable development requires a substantial shift from prevailing planning practices for transformative planning and a new generation of planning methods will define the future goals and identify activities to reach those goals.<sup>152</sup> This brings stakeholders as well as the planners into the process of envisioning a desired sustainable future and how to implement it.<sup>153</sup> For example, new methods are rapidly evolving in the realm of climate change adaptation.<sup>154</sup>

A crucial role for planners to promote sustainable development is to set the policy and planning goals that provide social context and public purpose for new regulatory regimes and technical fixes alike.<sup>155</sup> Planning for sustainable development may require experience from different planning theories. Planning may need to embrace a range of ideological perspectives such as rational planning and communicative planning processes. The application of planning ideologies depends on the structure and relationship between institutions, society and politics.<sup>156</sup> A strategic approach is needed to promote coherence between responses to different challenges as well as move from sectoral towards integrated planning.<sup>157</sup> Promoting sustainable development through planning requires integrated mechanisms, shared visions and motivated open and accountable institutions.<sup>158</sup> It requires planning and policy making to be ‘more participatory, prudent and transparent, as well as more long-term-oriented, so as to respect the interests of future generations’.<sup>159</sup> Sustainable development planning needs to address the implementation deficit where the promotion of sustainable development goals faces obstacles because of non-flexible social values, institutions and self-interested political and business entities.<sup>160</sup>

The operationalisation of sustainable development, when considered at country level, emphasises planning frameworks and the recent agreement on sustainable development goals, as an extension of SD approach, also have to be promoted by these development planning

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<sup>152</sup>Ali Bagheri and Peter Hjorth, ‘Planning for Sustainable Development: A paradigm shift towards a process based approach’ (2007)15 *Sustainable Development* 86.

<sup>153</sup>Ibid 94.

<sup>154</sup> See, eg, W. Neil Adger, Tara Quinn, Irene Lorenzoni, Conor Murphy and John Sweeney, ‘Changing social contracts in climate change adaptation’ (2013)3 *Nature Climate Change* 333.

<sup>155</sup> W. E. Rees, ‘Achieving Sustainability: Reform or Transformation?’ (1995) 9(4) *Journal of Planning Literature* 356-357.

<sup>156</sup> Wheeler, above n 117, 60.

<sup>157</sup> Organisation for Economic Cooperation and Development (OECD), *The DAC Guidelines Strategies for Sustainable Development: Guidance for Development Co-operation* (2001)24.

<sup>158</sup> Ibid 23.

<sup>159</sup> Ibid.

<sup>160</sup> Wheeler, above n 117, 133.

frameworks.<sup>161</sup> The sustainable development goals, while they need country customization, also challenge the planners to promote an integrated framework that addresses its internalisation as well implementation and necessary adjustments thereafter. This process of transposition however needs an understanding of international consensus that supports the planning process for sustainable development. The following section will serve that purpose and present the consensus in different forums in different periods.

#### *D International Consensus about Planning for Development*

The foregoing discussion in previous two sections about different ideologies of planning and the approaches of promotion of sustainable development through the planning process reveals that the planning framework in different countries has been shaped based on their own experiences and economic principles. Given the consensus about promotion of SD through states' mechanisms considering their country perspectives, the planning process as a state mechanism has also received recognition in different forums at international level. This section will discuss how the planning approach, and the latest dominant approaches to planning, are promoted in different international forums for pursuing development and finally sustainable development. The international consensus reveals an increasing importance of planning approaches for promotion of sustainable development at country level.

##### *1 International Recognition of Development Planning in Post-war Period*

The post-war development efforts at global level were promoted, more particularly in underdeveloped countries through the United Nations (UN). While the USA President Truman in 1949 proposed planning for reconstruction and development of poor countries through the UN,<sup>162</sup> the development agenda received momentum in the 1960s with the proposal of John F. Kennedy. His proposal for initiating a development decade in 1961 for economic emancipation of developing countries was turned into an action plan for 'growth plus change'.<sup>163</sup>

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<sup>161</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/70/1 (25 September 2015)[55].

<sup>162</sup> Gilbert Rist, *The History of Development: from Western Origins to Global Faith* (ZED Books, 1997)70-76.

<sup>163</sup> Richard Jolly, 'United Nations Intellectual History' (Project Briefing Note Number 7, Ralph Bunche Institute for International Studies, The CUNY Graduate Centre, 2010)<[www.UNhistory.org](http://www.UNhistory.org)>.



While development in developing countries was identified as the primary responsibility of these countries in the *Algiers Charter* in 1967,<sup>164</sup> the member states of the UN also reached a consensus for pursuing inclusive planning by the governments for promotion of social progress and development in 1969.<sup>165</sup> The major theme of communicative planning, inclusivity or citizens' right to participate received formal recognition in the *International Covenant on Civil and Political Rights* adopted in 1966.<sup>166</sup> This consensus about planning also extended through the Second United Nations Development Decade commencing in 1971. There was agreement on establishing or strengthening planning mechanisms in developing countries for formulating and implementing national development plans.<sup>167</sup> The *Stockholm Declaration* categorically promoted the development planning process for rational management of resources, improvement of environment as well as benefiting the citizens at country level.<sup>168</sup> This declaration also emphasised the rational planning process as a reconciliation mechanism for resolving conflict between development and improvement of the environment.<sup>169</sup>

The state responsibility for planning was further addressed in the *Peasant Charter* in 1979 that focussed on the planning and management of national resources for rural development.<sup>170</sup> This Charter, through its Programme of Action, also emphasised the participation agenda of communicative planning and stressed the interaction between development personnel and citizens for the success of rural development strategy.<sup>171</sup>

## 2 International Recognition of Development Planning in the 1980s and 1990s

During these two decades the development planning received further recognition at international level. The *International Development Strategy (IDS)* in 1980 focused on the

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<sup>164</sup> *Charter of Algiers* adopted in the First Meeting of the Group 77 on 25 October 1967, Part II and III.

<sup>165</sup> *Declaration on Social Progress and Development*, G.A. Res. 2542 (XXIV), UN GAOR 24<sup>th</sup> sess, 1829<sup>th</sup> plen mtg, UN Doc A/7630 (11 December 1969) arts 8, 14(a).

<sup>166</sup> See the article 25 of the *International Covenant on Civil and Political Rights*. Adopted and opened for signature, ratification and accession by General Assembly Resolution 2200 A (XXI) 06 16 December 1966, entry into force 23 March 1976.

<sup>167</sup> *International Development Strategy for the Second United Nations Development Decade*, GA Res 25/2626, UN GAOR, 25<sup>th</sup> sess, 1883<sup>rd</sup> plen mtg, Agenda Item 42, UN Doc A/RES/25/2626(24 October 1970)art 78.

<sup>168</sup> *Declaration of the United Nations Conference on the Human Environment*, UN Doc A/Conf.48/14/Rev.1(1973)principle13.

<sup>169</sup> *Declaration of the United Nations Conference on the Human Environment*, UN Doc A/Conf.48/14/Rev.1(1973)principle 14.

<sup>170</sup> *The Declaration of Principles and Programme of Action of the World Conference on Agrarian and Rural Development* adopted in the World Conference on Agrarian Reform and Rural Development 1979 (Food and Agriculture Organization of the United Nations, 1981).

<sup>171</sup> *The Declaration of Principles and Programme of Action of the World Conference on Agrarian and Rural Development* adopted in the World Conference on Agrarian Reform and Rural Development 1979 (Food and Agriculture Organization of the United Nations, 1981) art iv, xi, xii.

reliance on national plans and adoption of a unified approach to economic and social development in developing countries to facilitate resource transfer to these countries from developed countries.<sup>172</sup>

Planning also received global recognition when it was incorporated in the *World Charter for Nature*<sup>173</sup> and in the *Declaration on the Right to Development*.<sup>174</sup> In 1982, the *World Charter for Nature* recognized the planning process for social and development activities along with conservation of nature.<sup>175</sup> This charter also emphasised planning for the allocation of earth areas for different purposes and considering the future capacity of natural systems when states formulate long-term plans for economic development.<sup>176</sup> The *Declaration on the Right to Development* categorically reiterated the responsibility of states to formulate, adopt and implement appropriate development policies plans, laws and other measures for progressive enhancement of right to development.<sup>177</sup> *Our Common Future* emphasised discouraging unsustainable farm practices and encouraging farmers to maintain and improve natural resources that are used for agriculture through the agricultural development planning of the government.<sup>178</sup> *Our Common Future* also emphasised the widespread support and participation of stakeholders in development planning, decision-making, and project implementation.<sup>179</sup> The *Convention concerning Indigenous and Tribal Peoples in Independent Countries*<sup>180</sup> adopted in 1989 particularly incorporated the right of participation of tribal people in the formulation, implementation and evaluation of plans and programmes.<sup>181</sup> This Convention was followed by the *Declaration on the Rights of*

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<sup>172</sup> *International Development Strategy for the Third United Nations Development Decade*, GA Res 35/56, UN GAOR, 35<sup>th</sup> sess, 83<sup>rd</sup> plen mtg, Agenda Item 61 a, UN Doc A/RES/35/56(5 December 1980)arts 19, 41, 42.

<sup>173</sup> *World Charter for Nature*, GA Res 37/7, UN GAOR, 48<sup>th</sup> plen mtg, UN Doc A/Res/37/7(28 October 1982).

<sup>174</sup> *Declaration on the Right to Development*, GA Res 41/128, GAOR, 41<sup>st</sup> sess, 97<sup>th</sup> plen mtg, UN Doc A/RES/41/128(4 December 1986).

<sup>175</sup> *World Charter for Nature*, GA Res 37/7, GAOR, 37<sup>th</sup> sess, 48<sup>th</sup> plen mtg, UN Doc A/RES/37/7(28 October 1982) arts 7, 16.

<sup>176</sup> *World Charter for Nature*, GA Res 37/7, GAOR, 37<sup>th</sup> sess, 48<sup>th</sup> plen mtg, UN Doc A/RES/37/7(28 October 1982) art 8, 9.

<sup>177</sup> *Declaration on the Right to Development*, GA Res 41/128, GAOR, 41<sup>st</sup> sess, 97<sup>th</sup> plen mtg, UN Doc A/RES/41/128(4 December 1986)arts.8, 10.

<sup>178</sup> United Nations World Commission on Environment and Development, *Report of the World Commission on Environment and Development: Our Common Future*, Annex to document A/42/427 - Development and International Co-operation: Environment (1987) chapter 5 IV[47].

<sup>179</sup> United Nations World Commission on Environment and Development, *Report of the World Commission on Environment and Development: Our Common Future*, Annex to document A/42/427 - Development and International Co-operation: Environment (1987) Our Common Future, 4.4[96].

<sup>180</sup> *Convention concerning Indigenous and Tribal Peoples in Independent Countries*, adoption 27 Jun 1989, C169 (entry into force 05 Sep 1991).

<sup>181</sup> *Convention concerning Indigenous and Tribal Peoples in Independent Countries*, adoption 27 Jun 1989, C169 (entry into force 05 Sep 1991) art 33.

*Indigenous Peoples*<sup>182</sup> adopted in 2007 that emphasised indigenous peoples' rights to development planning.<sup>183</sup>

In the 1990s, with the resurgence of planning ideologies consensus were also found among member states of the UN. The inherent ideology of the communicative planning approach (citizen participation agenda) received further momentum in the 1990s when it was incorporated in the *Rio Declaration* for addressing the sustainable development issue.<sup>184</sup> *The Convention on Biological Diversity* recognized the role of women in managing biodiversity and facilitation of participation of women at all levels of policy-making and implementation for biological diversity conservation.<sup>185</sup>

*Agenda 21* prescribed economic policy reforms for promotion of efficient planning with a view to advancing the sustainable development agenda.<sup>186</sup> This operational plan emphasised laws and regulations as the most important instruments for operationalising sustainable development and a 'normative framework for economic planning and market instruments.'<sup>187</sup> It also suggested the integration of sustainable development considerations into agricultural planning.<sup>188</sup> *Agenda 21* also suggested the state parties establish operational mechanisms for inter-sectoral and intergovernmental cooperation in development planning,<sup>189</sup> and agricultural planning bodies at national and local levels to decide priorities, channel resources and implement programmes.<sup>190</sup> *Agenda 21* recommended the integration of sustainable development considerations and people's participation in agricultural policy analysis and planning and noted the government's role in ensuring farmers' involvement in the formulation of policy.<sup>191</sup> The governments were urged to review the status of the planning

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<sup>182</sup> *United Nations Declaration on the Rights of Indigenous Peoples*. GA Res 61/295, GAOR, 107<sup>th</sup> plen mtg, UN Doc A/61/L.61 and Add. 1 (13 September 2007).

<sup>183</sup> *United Nations Declaration on the Rights of Indigenous Peoples*. GA Res 61/295, GAOR, 107<sup>th</sup> plen mtg, UN Doc A/61/L.61 and Add. 1 (13 September 2007) arts 23, 32.

<sup>184</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 10, 20, 22

<sup>185</sup> *Convention on Biological Diversity*, opened for signature 5 June 1992, 1760 UNTS 79(entered into force 29 December 1993).

<sup>186</sup> *Agenda 21: Programme of Action for Sustainable Development*, UN GAOR, 46<sup>th</sup> sess, Agenda Item 21, UN Doc A/Conf.151/26 (14 June 1992)[2.34]

<sup>187</sup> *Agenda 21: Programme of Action for Sustainable Development*, UN GAOR, 46<sup>th</sup> sess, Agenda Item 21, UN Doc A/Conf.151/26 (14 June 1992)[8.13].

<sup>188</sup> *Agenda 21: Programme of Action for Sustainable Development*, UN GAOR, 46<sup>th</sup> sess, Agenda Item 21, UN Doc A/Conf.151/26 (14 June 1992)para 14.5.

<sup>189</sup> *Agenda 21: Programme of Action for Sustainable Development*, UN GAOR, 46<sup>th</sup> sess, Agenda Item 21, UN Doc A/Conf.151/26 (14 June 1992)[6.46].

<sup>190</sup> *Agenda 21: Programme of Action for Sustainable Development*, UN GAOR, 46<sup>th</sup> sess, Agenda Item 21, UN Doc A/Conf.151/26 (14 June 1992)para 14.35.

<sup>191</sup> *Agenda 21: Programme of Action for Sustainable Development*, UN GAOR, 46<sup>th</sup> sess, Agenda Item 21, UN Doc A/Conf.151/26 (14 June 1992)[2.6, 8.5, 14, 32].

as well as modify and strengthen procedures to promote sustainable development. Agenda 21 also proposed the extension of the planning mandate to the lowest tier of public authority.<sup>192</sup>

In the context of social and economic planning the governments were also urged to enable people to participate through the *Copenhagen Declaration* adopted in the World Summit for Social Development held in March 1995.<sup>193</sup> The *International Convention to Combat Desertification*, the only legally binding international agreement in the area of sustainable land management, emphasised planning process and facilitation of participation of local communities and other stakeholders in this process.<sup>194</sup> This was followed by another Resolution, *Agenda for Development* adopted in 1997 that acknowledged participation as an essential component that promotes equity by involving people in planning and implementation.<sup>195</sup>

### 3 *International Recognition of Development Planning in the 21<sup>st</sup> century*

The recognition of development planning has continued since the early 2000s. The second United Nations Conference on Human Settlements (Habitat II) emphasised planning and urged the governments to encourage public participation as an integrated action of the planning and design process.<sup>196</sup> The *Johannesburg Declaration* also emphasised planning and recognized the participation of stakeholders in policy formulation and implementation.<sup>197</sup>

In recent times, the *Accra Agenda for Action*, adopted in 2008, stressed the strengthening of country ownership of plans and policies in developing countries to achieve their own economic, social and environmental goals.<sup>198</sup> This Agenda also stressed on open and inclusive dialogue involving parliaments, civil societies and local authorities in preparing,

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<sup>192</sup> *Agenda 21: Programme of Action for Sustainable Development*, UN GAOR, 46<sup>th</sup> sess, Agenda Item 21, UN Doc A/Conf.151/26 (14 June 1992)[8.5]

<sup>193</sup> *Copenhagen Declaration on Social Development*, United Nations, Department of Economic and Social Affairs, A/CONF.166/9 (19 April 1995) 7(1a),29(1e).

<sup>194</sup> *United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa*, opened for signature 14 October 1994, 1954UNTS 3(entered into force 26 December 1996) art 3, 5.

<sup>195</sup> *Agenda for Development*, GA Res 51/240, UN GAOR, 51<sup>st</sup> sess, 103<sup>rd</sup> plen mtg, Agenda item 96(b), UN Doc A/Res/51/240 (15 October 1997) art 176.

<sup>196</sup> *Declaration on Cities and Other Human Settlements in the New Millennium*, GA Res S-25/2, UN GAOR, 25<sup>th</sup> special sess, 6<sup>th</sup> plen mtg, Agenda Items 8, 9 and 10, UN Doc A/RES/S-25/2(16 August 2001) art 7, 90.

<sup>197</sup> *Johannesburg Declaration on Sustainable Development*, A/CONF. 1999/20 (4 September, 2002)art 26.

<sup>198</sup> Organisation for Economic Cooperation and Development (OECD), *Accra Agenda for Action, 2008*(2 March 2005)<<http://www.oecd.org/dac/effectiveness/34428351.pdf>>[12].

implementing and monitoring national development policies and plans.<sup>199</sup> There are also references to planning processes for promotion of development and participation aspects of the latest dominant planning theories in the *Future We Want*,<sup>200</sup> the *Brisbane Declaration*,<sup>201</sup> and the *Paris Declaration on Aid Effectiveness*.<sup>202</sup> The *Declaration of the World Summit on Food Security*, held in 2009, also reaffirmed the national responsibility to ensure food security and invest in country-owned plans.<sup>203</sup>

The *Draft International Covenant on Environment and Development* prepared by IUCN highlighted the responsibilities of the states to integrate environmental conservation into planning and implementation. Although this covenant was a draft and did not have legal force it expressed the consensus on planning process among the scholars gathered under an international forum.<sup>204</sup> The *Programme of Action for the Least Developed Countries for the Decade 2011-2020* emphasised medium and long-term development planning in the least developed countries for promoting coherence between disaster risk reduction and climate change adaptation policies and programmes.<sup>205</sup> The *Sendai Framework for Disaster Risk Reduction 2015-2030* stressed the strengthening and implementation of relevant policies, plans, practices and mechanisms in a coherent manner.<sup>206</sup>

The recently agreed sustainable development goals have categorically promoted the planning approach for government interventions to promote aspirational and integrated sustainable development goals at country level.<sup>207</sup> The governments are encouraged to develop national responses for implementation of SDGs through existing planning instruments.<sup>208</sup> The SDGs

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<sup>199</sup> Organisation for Economic Cooperation and Development (OECD), *Accra Agenda for Action, 2008*(2005) <<http://www.oecd.org/dac/effectiveness/34428351.pdf>>13.

<sup>200</sup> *The future we want*, GA Res 66/288, UN GAOR, 66<sup>th</sup> sess, 123<sup>rd</sup> plen mtg, Agenda Item 19, UN Doc A/RES/66/288(11 September 2012).

<sup>201</sup> *The United Nations Brisbane Declaration on Community Engagement* (August 2005)

<[http://www.qld.gov.au/web/community-engagement/guides-factsheets/documents/brisbane\\_declaration.pdf](http://www.qld.gov.au/web/community-engagement/guides-factsheets/documents/brisbane_declaration.pdf)>.

<sup>202</sup> *Paris Declaration on Aid Effectiveness*, Organisation for Economic Cooperation and Development (OECD), 2005, <<http://www.oecd.org/dac/effectiveness/34428351.pdf>>44.

<sup>203</sup> *Declaration of the World Summit on Food Security*, WSFS 2009/2 (November 2009).

<sup>204</sup> *Draft International Covenant on Environment and Development*, International Union for Conservation of Nature and Natural Resources (IUCN)(5<sup>th</sup> ed, Environmental Policy and Law Paper No. 31 Rev. 4, 2015)art 17.

<sup>205</sup> *Programme of Action for the Least Developed Countries for the Decade 2011-2020*, Fourth United Nations Conference on the Least Developed Countries Agenda item 8, 23 May 2011, A/CONF.219/3/Rev.1[108/1(a)].

<sup>206</sup> *Sendai Framework for Disaster Risk Reduction 2015-2030*, Third United Nations World Conference on Disaster Risk Reduction Sendai, Japan, 14-18 March 2015, Agenda item 11, Adoption of the final outcomes of the Conference III(h)IV(27).

<sup>207</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/RES/70/1 (25 September 2015) [55].

<sup>208</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/RES/70/1 (25 September 2015) [78].

reiterated the integration of climate change interventions into planning frameworks.<sup>209</sup> The SDGs also emphasise the ‘integration of ecosystem and biodiversity values into national and local planning.’<sup>210</sup> The dominant perspective of latest ideologies of planning is reflected in the SDGs through incorporation of the communicative agenda under citizen participation in decision making process.<sup>211</sup> In respect to climate change planning, *Paris Agreement* promotes planning processes and emphasises the development or enhancement of relevant plans, policies and/or contributions for addressing climate change.<sup>212</sup>

The foregoing discussion has argued that development planning has been considered to be instrumental in promoting development since the 1950s. It has been primarily a country driven process. The international community, while emphasising promotion of SD as the primary responsibility of state, has also emphasised the implementation of SD through the development planning process, along with other measures. The dominant approaches of planning such as rational planning and communicative planning have also been acknowledged by the international community.

The international and regional consensus that promoted planning for development, as well as sustainable development, facilitates develop future approaches to SD. Many different declarations and resolutions may not be binding on member states but they are supported by country practices, especially in developing countries, for the promotion of SD. The consensus reflected in these declarations of developed and developing countries support planning mechanisms along with market mechanisms. The recently agreed SDGs have further provided a state mandate to facilitate the SD promotion endeavour. The goals identified to be achieved within the next fifteen years basically extended the responsibility to member states of the UN to pursue them through their national frameworks.

For a country like Bangladesh, which strives for development through development planning mechanisms, this responsibility primarily goes to the government. However, promotion of a people centric development approach and agreed SD goals, such as sustainable agricultural

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<sup>209</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/RES/70/1 (25 September 2015)Goal 13.2

<sup>210</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/RES/70/1 (25 September 2015)Goal 15.9.

<sup>211</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/RES/70/1 (25 September 2015)Goals 5.5, 6.b, 16.7, 16.10.

<sup>212</sup> *The Paris Agreement*, opened for signature 22 April 2016, art 7[9].

development require individual country customization. The following section will therefore discuss some principles suggested by different scholars for the promotion of planning for sustainable development to facilitate preparation of SDA principles in the next chapter. It is expected that these identified SD and planning principles will provide sound background for preparing SDA principles to be used to develop norms and evaluative criteria for examining the development planning approach in the context of Bangladesh.

### *E Planning Principles for Sustainable Development (SD)*

Planning is one of the essential tools to achieve sustainable development through reflecting the sustainable development goals in its objectives, and through methods of preparing the goals and their implementation through regulations, incentives, and other programmes. These two aspects of planning are inseparable in the context of sustainable development. It is contended that ends or goals of the sustainable development ‘will depend almost entirely on the planning process used, the institutional structures, and the decision-making process adopted.’<sup>213</sup> Moreover, promotion of sustainable development requires a transformation of governance, a degree of pluralism and spaces for negotiation for reaching agreements on the ways and means to address this integrated challenge.<sup>214</sup> Considering the significance of these aspects of planning, this section highlights the principles proposed by different scholars as well as institutions for promotion of SD through development planning.

One of the prominent scholars in sustainable planning discourse, McDonald has proposed a set of substantive and process principles for a planning system that can respond to sustainable development.<sup>215</sup> The principles include a desirable end-state condition for inclusion in the plans as well as properties of decision-making processes to advance the agenda.<sup>216</sup> McDonald summarises the basic conditions for achieving SD.<sup>217</sup>

McDonald proposed substantive principles for SD promotion include ecological and socio-economic issues while the process principles include political and methodological aspects of sustainable development. The substantive principles facilitate planning decision making

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<sup>213</sup> Geoffrey T. McDonald, ‘Planning as Sustainable Development’ (1996) 15(3) *Journal of planning Education and Research* 230.

<sup>214</sup> Organisation for Economic Cooperation and Development (OECD), *The DAC Guidelines: Strategies for Sustainable Development* (OECD, 2001) 22.

<sup>215</sup> McDonald, above n 200.

<sup>216</sup> *Ibid* 228

<sup>217</sup> *Ibid* 227.

though judicious use of renewable and non-renewable resources. Planning needs to pursue this balanced use of resources so that renewable resources are not used above their regenerative capacity and non-renewable resources are not used above the rate of substitution by renewable alternatives as a result of the development.<sup>218</sup> McDonald also includes waste assimilation goals as a substantive issue so that wastes generated directly or indirectly by planning decisions do not exceed the absorption capacity of natural bodies.<sup>219</sup> Substantive principles also include principles for maintaining biodiversity so that the approved development activities do not cause the loss of biodiversity. In socio-economic areas the principles suggested by McDonald are meeting basic human needs of all citizens in the plan area as well as equitable distribution of the benefits and costs of planning decisions and maintaining environmental standards in development activities.<sup>220</sup>

The process principles proposed by McDonald include recognising political agendas in the decision-making processes through facilitating participation in planning decision-making mechanisms.<sup>221</sup> Process principles also emphasise integration for comprehensively pursuing the substantive principles in planning decision-making systems. Planning requires the integration of substantive principles in goals of the plans, option-generating procedures, evaluation methods, and monitoring of the plans. Planning decision-making systems need to be adaptive to face the uncertainty in goals and implementation methods,<sup>222</sup> highlighted by the reality of climate change impacts.

The most critical issue for planners is to successfully balance the tensions among the diversified goals of SD.<sup>223</sup> The climate change agenda has made this tension more urgent, however it could be considered a game changer that has forced planning and other disciplines to rework the long-term goals of sustainability. Although balancing the tensions is a great challenge, planning can relieve this tension with its experience, expertise, and inclusive approaches to policy choice.<sup>224</sup>

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<sup>218</sup> Ibid 229.

<sup>219</sup> Ibid 226.

<sup>220</sup> Ibid 235.

<sup>221</sup> Nigel J. Martin, John L. Rice and Sumit K. Lodhia, 'Sustainable Development Planning: A Case of Public Participation using Online Forums' (2014)22 *Sustainable Development* 265.

<sup>222</sup> McDonald, above n 229-230.

<sup>223</sup> Scott D. Campbell, 'Sustainable Development and Social Justice: Conflicting Urgencies and the Search for Common Ground in Urban and Regional Planning'(2013)1 *Michigan Journal of Sustainability*;

Patsy Healey and Tim Shaw, 'Planners, Plans and Sustainable Development' (1993)27(8) *Regional Studies*772.

<sup>224</sup> Campbell, above n 215, 90.



Campbell has suggested a planner's triangle to show the tensions and positioning planning in the integration process.

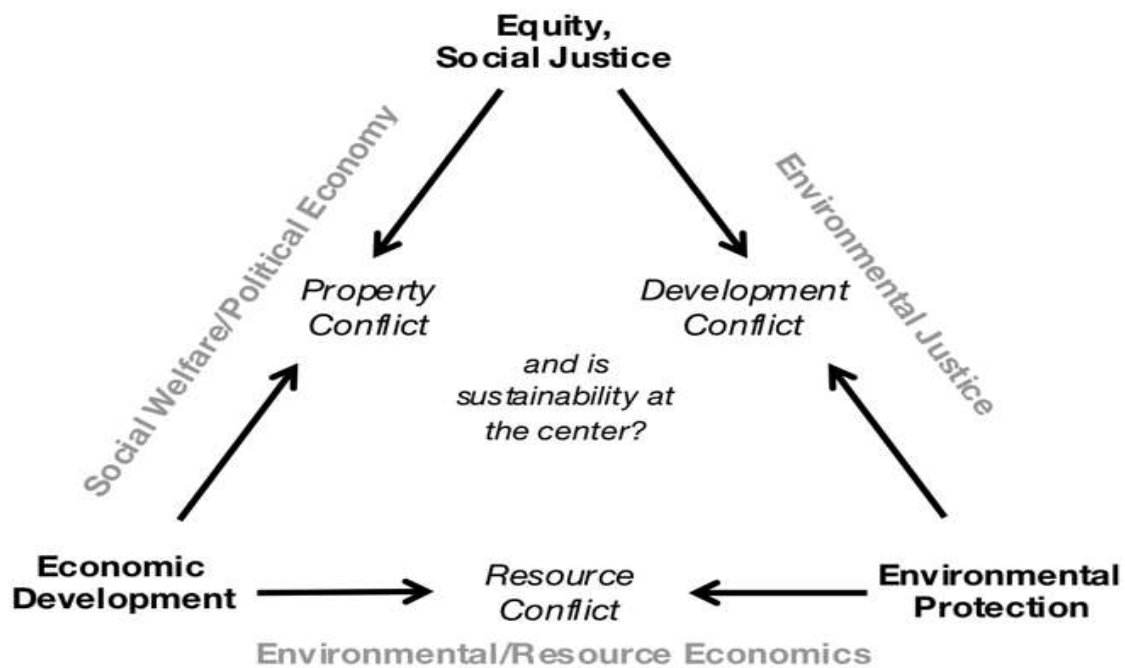


Figure 1: 'The Planner's Triangle'<sup>225</sup>

Adopted from Scott D. Campbell, 'Sustainable Development and Social Justice: Conflicting Urgencies and the Search for Common Ground in Urban and Regional Planning' (2013) *Michigan Journal of Sustainability*

The triangle explains three fundamental priorities of planning: environmental protection in the context of resource use at appropriate scale for economic development while maximizing the social benefits and equity in distribution. The social welfare in the context of environmental economics and justice creates tension in addressing this in a comprehensive and coherent manner. Campbell however suggested that the planning process can advance the sustainable development agenda through its ongoing productive efforts of recombining and reconciling environment and social justice agendas.<sup>226</sup>

The benefits of sustainable development efforts have global dimensions against the opportunity costs at the local and national level. It is also evident that the benefits in many cases are for the future at the expense of immediate cost to present generations.<sup>227</sup> In such a situation decision making becomes difficult with the geographical scale. This scale problem

<sup>225</sup>Campbell, above n 210, 83.

<sup>226</sup> Ibid 90[3].

<sup>227</sup> McDonald, above n 200, 231.

can be overcome by creating rules and regulations that define powers and responsibilities for planning agencies at different tiers of the government engaged in addressing SD.<sup>228</sup>

Sustainable development demands a mixture of ‘top down’ and ‘bottom up’ processes at a national level, however local level planning demands empowerment, participation, and ownership.<sup>229</sup> In respect of horizontal and sectoral integration the planning requires the simultaneous consideration of ecological, social and economic factors irrespective of level. While mainstream planning emphasises economic development, infrastructure, land use planning and other physical sectors, there is a need for reconciliation between mainstream planning and environmental planning that includes, among other elements, environmental impact assessment, pollution control, environmental quality standards and natural resource management.<sup>230</sup>

Berke and Conroy proposed six discrete, but interrelated, principles for evaluating SD at local level planning. These interrelated principles include work in association with harmony with nature where land use and development activities need to be harmonious to support the essential cycles and life support functions of ecosystems.<sup>231</sup> They also include principles for community cohesion by fostering access among land users and the local economy to operate within natural system limits. Equity in land use patterns and access to social and economic resources are also important principles, while the polluter pays principle becomes quite significant because of public interest in the protection of the environment. Berke and Conroy also emphasised the need to promote responsible regionalism for not harming others through development activities.<sup>232</sup>

Based on the study of 30 comprehensive plans, Berke and Conroy also suggested that state planning mandates have a strong influence on a local planning process, a plan’s context and plan compliance with state goals.<sup>233</sup> It is also argued that state mandates can overcome local political opposition to planning, and promote implementable and achievable sustainable development principles at a local level. Planners in this case need to review the linkage

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<sup>228</sup> Ibid 231.

<sup>229</sup> Ibid 232.

<sup>230</sup> Ibid 232-233.

<sup>231</sup> Berke and Conroy, above n 132, 23.

<sup>232</sup> Ibid 22-23.

<sup>233</sup> Ibid 31.

between plans, implementation of plans as well as evaluation of outcomes.<sup>234</sup> There is a critical finding in their study that the sustainable development, as a concept, may not be politically acceptable in many communities, but the principles, being less well known, would be accepted as common sense.<sup>235</sup>

In contrast to McDonald proposed substantive and process principles for SD planning, the prestigious American Planning Association (APA) outlined some planning principles for promotion of SD under three different categories: process, practices and outcomes. However, the suggested division of principles were similar to principles suggested by other scholars under the term of substantive and procedural principles.<sup>236</sup>

The APA's proposed process principles include decision making in a holistic and participatory manner including awareness building of stakeholders about the consequences of planning decisions. The practice principles for planning for SD include futurity and recognition of environmental considerations in a human development approach. Planning practices need to emphasise efficiency and equity concerns in the distribution of resources, re-using and recycling waste and protecting natural ecosystems. Sustainable development planning also needs to follow the polluter pays principle subject to a balance between human needs and nature, including public goods. Planning practitioners need to take leadership in the drafting and implementation of sustainable development policies at different levels.<sup>237</sup> The outcome principles include development results for expanding choice and opportunity for all, including the disadvantaged. These principles also include promotion of strong, diverse, and self-supporting local economies that is compatible to local demand. The final outcome principles include building sustainable communities that extend opportunities to people to lead a productive life in a harmonious natural ecosystem.<sup>238</sup>

In comparison to American Planning Association's proposed three dimensional planning principles, the USA President's Council for Sustainable Development suggested five basic principles for addressing the agenda. They include long-term perspectives in planning instead

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<sup>234</sup> Philip Berke and Maria Manta, 'Planning for Sustainable Development: Measuring Progress in Plans' Working Paper (1999) *Lincoln Institute of Land Policy* 12-13.

<sup>235</sup> *Ibid* 8-9.

<sup>236</sup> American Planning Association, 'Policy Guide Adopted by American Planning Association Chapter Delegate Assembly' (APA, 2000) <<https://www.planning.org/policy/guides/pdf/sustainability.pdf>>.

<sup>237</sup> *Ibid*.

<sup>238</sup> *Ibid*.

of short-term reactive responses for generational improvement or maintaining the status quo. The five principles include the integration of economic, environmental, and social development and making integration among these three agendas non-tradable to each other. Other principles are ensuring public participation in planning decision-making processes, promotion of inter and intra generational equity and reducing disparities in access to resources. Planning for sustainable development should be anticipatory, to prevent problems.<sup>239</sup>

The discussion on sustainable development principles in the previous chapter gives a broad framework for planning to pursue, however from the foregoing discussion those principles also demonstrate relevance as it discusses SD from a planning perspective. The principles suggested by scholars and different institutions discussed above have extended the opportunity to identify a set of basic principles for sustainable development planning. The following sub-section presents a set of planning principles that are compatible with sustainable development planning and can be used to refine SDA principles for evaluating development planning frameworks. The proposed set of principles is divided into substantive and procedural, although there are some overlapping principles in the categories.

## 1 *Substantive Principles of Planning for Sustainable Development*

### *(a) Maintenance and Improvement of Ecological Integrity and Biological Diversity*

Plans need to attach priority in efficient use of renewable and non-renewable resources. Planning decisions need to be taken based on the regenerative capacity of renewable resources. Considering the impact of resource use, there is a need to place a limit on renewable resource use, and for non-renewable resources the limit should be the rate of substitution.<sup>240</sup> The planning for SD includes futurity and recognition of environmental considerations in a human development approach, along with efficiency and equity concerns in the distribution of resources and the management of resources, including the polluter pays principle.<sup>241</sup>

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<sup>239</sup> Faez Saad Al-Shihri, 'Principles of sustainable development and their application in urban planning in Saudi Arabia' (2013) 41(3) *Journal of Engineering Sciences* 4-5.

<sup>240</sup> McDonald, above n 200, 229.

<sup>241</sup> American Planning Association, above n 223.

Plans need to consider the capacity of the ecosystem in terms of its production and waste absorption capacity. Plans also have to ensure that the waste assimilation capacity of nature is not broken by the wastes generated from planning decisions.<sup>242</sup> There is a need to have explicit direction for the protection and maintenance of biodiversity,<sup>243</sup> especially at spatial and temporal scales for long term benefits.<sup>244</sup> Ecosystems need to be fair and equitably managed to benefit society without damaging other systems.<sup>245</sup> There is a need to foster greater responsibility, ownership, accountability and participation at a local level for effective management of the ecosystem.<sup>246</sup> There is also a need to promote responsible regionalism and a polluter pays principle for not harming others with one's activities.<sup>247</sup>

*(b) Addressing Basic Human Needs*

The basic necessities of human beings, such as food, housing, health and social security need to be facilitated by sustainable development planning. Sustainable planning requires addressing the problem of the large number of poor people whose demands for basic needs are critical for sustainable resource use.<sup>248</sup> It will also have the responsibility to address unemployment.

*(c) Ensuring Equity*

The plans need to -

promote providing the opportunity of a better life for all citizens in the plan area by creating an equitable distribution of the benefits and costs of the decision. This will include environmental quality (noise, pollution, amenity), employment, and social (safety, access) and cultural (heritage conservation, religious opportunity) aspects.<sup>249</sup>

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<sup>242</sup> McDonald, above n 200, 229.

<sup>243</sup> *Convention of Biological Diversity*, opened for signature 5 June 1992, 1760 UNTS 79; 31 ILM 818 (entered into force 29 December 1993) art 6.

<sup>244</sup> *Implementation Principles of the Convention of Biological Diversity* <<https://www.cbd.int/ecosystem/principles.shtml>> principle 8.

<sup>245</sup> *Implementation Principles of the Convention of Biological Diversity* <<https://www.cbd.int/ecosystem/principles.shtml>> principles 1, 3.

<sup>246</sup> *Implementation Principles of the Convention of Biological Diversity* <<https://www.cbd.int/ecosystem/principles.shtml>> principle 2.

<sup>247</sup> Berke and Conroy, above n 132, 22-23.

<sup>248</sup> United Nations World Commission on Environment and Development, *Report of the World Commission on Environment and Development: Our Common Future*, Annex to document A/42/427 - Development and International Co-operation: Environment (1987) ch 2 art 29.

<sup>249</sup> McDonald, above n 200, 229.

The plans also need to emphasise the promotion of inter and intra generational equity and reduce disparities in access to resources.<sup>250</sup>

The equity in land use and access to social and economic resources is also an important principle.<sup>251</sup> The planning needs to expand options and opportunity for all, including disadvantaged people to lead a productive life in a harmonious natural ecosystem. The SD planning should also promote resilient, diverse local economies compatible to local community needs.<sup>252</sup>

## 2 *Procedural Principles of Planning for Sustainable Development*

### (a) *The Principle of Integration*

The principle of integration is needed to foster facilitation of addressing social, economic, financial and environmental aspects of development in a coordinated fashion based on equity principles.<sup>253</sup> Planning needs to integrate the scale dimension of development agendas such as national and local level issues along with sectoral and class interests. Integration of national and local level political, institutional and bureaucratic agendas is also important in developing a country perspective. Additionally, integration of knowledge from global to local level on plan preparation to implementation, monitoring and evaluation is also necessary to advance the sustainable development agenda through the planning process.<sup>254</sup>

There is also a need to integrate different planning theories into planning practice such as incremental planning for addressing the volume of change, communicative planning for incorporating the citizen's concerns and rational planning where decision making needs rationality (such as scientific input) as well as political and social interest. Sustainable development planning requires integration of substantive principles in goals of the plans and recombining and reconciling environmental and social justice agendas.<sup>255</sup>

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<sup>250</sup> Al-Shihri, above n 226, 4-5.

<sup>251</sup> Berke and Conroy, above n 132, 22-23.

<sup>252</sup> American Planning Association, above n 223.

<sup>253</sup> Organisation for Economic Cooperation and Development, above n 5, 21-22.

<sup>254</sup> McDonald, above n 200, 229-230.

<sup>255</sup> Campbell, above n 210.

There is a need for integration of mainstream and environmental planning. The bridging point would be among others, environmental impact assessments, pollution control, environmental quality standards and natural resource management.<sup>256</sup> The planning process needs to pursue a mixture of ‘top down’ and ‘bottom up’ approach at national and local level planning. It also has to consider ecological and socioeconomic factors for horizontal and sectoral integration.<sup>257</sup>

*(b) The Principle of Good Governance*

The principle of good governance is an essential prerequisite to institutionally advance the sustainable development agendas. It includes a democratic and transparent decision-making procedure that specifically addresses financial and fiduciary issues. This decision making process also needs institutional backup through legislation for planning processes including procurement. The decision making process has to follow evidence based planning and accountability at different levels of decision making. The government at different levels has also to be responsive to people’s need and flexible in option selection for the greater interest of the country and the world. The principles of good governance also include practising the rule of law, transparent and accountable government, participatory and consensus oriented decision-making process. It also includes equity among group representation and brings efficiency and effectiveness in resource use.<sup>258</sup>

*(c) The Principle of Public Participation, Access to Information and Justice*

The planning process needs to ensure public participation for facilitating good governance and incorporate the people’s voice and choice in decision making based on a transparent and open process. While participation is to be ensured, it is also important to consider the costs and benefits of any collaborative approaches. Since citizen trust and future capacity to solve collective issues depends, in part, on congruence between expectations and reality, planners should clearly articulate the degree to which authority will be shared with citizens.<sup>259</sup>

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<sup>256</sup>McDonald, above n 200, 232-233.

<sup>257</sup>Ibid.

<sup>258</sup>Laura Horn, ‘Sustainable Development’ – Mere Rhetoric or Realistic Objective?’(2011) 30(1) *University of Tasmania Law Review*119.

<sup>259</sup> Tomas M. Koontz, ‘Collaboration for sustainability? A framework for analysing government impacts in collaborative-environmental management Sustainability’ (2006)2(1) *Science, Practice & Policy* 22.

The rights of the citizens to appropriate, comprehensive, timely and low-cost access to information about government policies and programmes need to be ensured. The policies of the industrial concerns regarding the use of natural resources and the protection of the environment need to be shared with adequate protection of business confidentiality. The empowerment of citizens in the context of sustainable development requires access to effective judicial or administrative procedures in the state to challenge government decisions and to claim compensation.

*(d) Principle of Planning Mandates and Adaptation*

Sustainable development planning needs state mandates at national level along with local level orientation. The planning process requires options to review the linkage between plans, implementation efforts, and evaluate the sustainability of outcomes.<sup>260</sup> The legislative branch of the state also needs to be involved in decision making for identifying broad development goals and strategies and oversee the implementation progress.<sup>261</sup> Planning is supposed to lead the drafting and implementation of sustainable development policies at different levels.<sup>262</sup> In designing the strategy sustainable development planning has to embrace long-range and anticipatory perspectives in planning instead of any short-term reactive responses for the promotion of generational improvement.<sup>263</sup> There is also a need to have institutional structures and responsibilities for planning agencies at different tiers of the government.<sup>264</sup>

Given the context of uncertainty about the potential threats to implementation of development efforts, there is a need to have flexible decision making systems. The technical support function also needs to be adjustable with the uncertainty and lack of knowledge about the ecological conditions. These shortcomings in the planning process will require more adaptive decision making based on monitoring and evaluation systems.<sup>265</sup>

The principles stated above have been prepared based on the principles proposed by scholars and different institutions and in different conventions and agreements. These principles are

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<sup>260</sup> Berke and Manta, above n 221, 12-13.

<sup>261</sup> *Draft Istanbul Declaration, Renewed and strengthened global partnership for the development of least developed countries* United Nations, Agenda item 8, UN Doc A/CONF.219/L.1 (12 May 2011) art16.

<sup>262</sup> American Planning Association, above n 228.

<sup>263</sup> Al-Shihri, above n 226, 4-5.

<sup>264</sup> McDonald, above n 200, 231.

<sup>265</sup> *Ibid* 230.



not exhaustive and represent the major principles that can assist articulating the principles of sustainable development of agriculture. These principles do not have a comprehensive legal basis under international law, but many of these principles are adopted in different international soft law declarations, included in treaties and have some limited customary law recognition. Soft law and hard law perspective can both be motivating factor for countries to internalise them in country planning perspectives.

The planning principles proposed have however not included some SD principles, such as the principle of common but differentiated responsibilities, the precautionary principle, and the polluter pays principles under separate headings as the planning process concentrates more on development activities at country level and usually does not perform administrative tasks such as compliance. However, these principles merge with other planning principles. For example, the precautionary approach is included under the principle of maintenance and improvement of ecological integrity and biological diversity as well as principle of integration both as a substantive issue for inclusion in plans as well as the application of this principle as an integrated approach with other procedural interventions.

The basic principles to be used for evaluating sustainable development of agriculture would correspond with these principles. However, they are not completely similar as agriculture is a specialized sector and it may require special attention from the planning perspective.

### *F Conclusion*

Planning is instrumental for the promotion of past concepts of development as well as sustainable development. Despite the differences in global planning practices between developing and developed countries, planning has always been used in different forms for development purposes in developing countries. The developed countries and their allies, international institutions such as the World Bank and the United Nations Development Programme (UNDP), have supported the planning processes of developing countries. Given the diversity in planning agendas and processes, the question of its integration faced challenges in different decades in the last century. Scholars have proposed a number of theories for planning practices. The wide variation reflects intense debate, although it was

also recognized as an opportunity and different theories can be considered together for better results. However, applying different approaches of planning also depends on each country's perspective, context and issues to be addressed.

Sustainable development as an integrated approach of development is also a planning challenge. The mandate given to states, with the introduction of SD approach, and its related principles, also becomes relevant to planning frameworks as the principles of sustainable development need to be the guidelines for planning processes and its substantive and procedural issues. However, SD and the planning principles may not be completely adjusted in relation to the sustainable development of agriculture because of uniqueness of agricultural development agendas that are supported by most of countries around the world. This issue will be discussed in the next chapter where a set of SDA principles will be identified as guiding principles for the government that can be promoted through development planning frameworks.

## CHAPTER IV

### THE PRINCIPLES AND POLICIES FOR GLOBAL APPROACHES TO SUSTAINABLE DEVELOPMENT OF AGRICULTURE

#### *A Introduction*

This chapter aims to identify the principles of sustainable development of agriculture (SDA) to utilize them to development planning frameworks in Bangladesh. This chapter will answer the question number three of the sub-set of research questions - ‘What are the major international approaches and principles of SDA? What SDA principles are relevant for promotion through development planning frameworks?’ It will present the international approaches to SDA as well as some examples of policies adopted for promoting sustainable agricultural practices in different countries. It will also discuss SDA approaches in the context of climate change and principles proposed by different organisations for the SDA. These internationally discussed SDA principles will be refined in the light of SD principles identified in the second chapter and SD planning principles identified in the third chapter of this thesis. The research aim is to test these modified SDA principles to determine whether they are appropriately promoted for agricultural development in Bangladesh.

#### *B Global Approaches and Evolution of Sustainable Development of Agriculture (SDA)*

##### *1 The Approach of SDA*

The sustainable development of agriculture becomes the agenda in the development domain primarily in two contexts. Firstly, agriculture directly contributes to facilitating food security, providing livelihoods of millions of farmers and alleviating poverty. The economic and social development of millions of poor farmers is not only dependent on this sector; it also contributes towards supporting the total economy to grow.<sup>1</sup> Secondly, while the agriculture sector promotes increased food production and productivity in a finite natural resource context, this sector directly results natural resource degradation when it follows unsustainable production practices. Unsustainable production practices diminish the ability of natural

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<sup>1</sup> Jingzhu Zhao, Qishan Luo, Hongbing Deng and Yan Yan, ‘Opportunities and Challenges of Sustainable Agricultural Development in China’ (2008) 363(1492) *Philosophical Transactions: Biological Sciences* 893.

resources to constantly produce food for future generations and reduce the profitability of farmers and thereby threaten their development efforts.<sup>2</sup>

Some literature identified sustainable agriculture as eco-agriculture,<sup>3</sup> alternative agriculture or regenerative agriculture,<sup>4</sup> community based,<sup>5</sup> organic or low input or wise use agriculture.<sup>6</sup> However, the relevance of these terms for expressing SDA is debatable.<sup>7</sup> These identifications are more relevant for specific agricultural practices that are not the area of this research. The concentration of this research is on planning for development of the agriculture sector that embraces the approach of sustainable development as suggested in the Brundtland Report and the subsequent amplification of the approach. Sustainable development of agriculture 'includes considerations of productivity goals, environmental stewardship, farm profitability and rural welfare objectives as well as consumer health.'<sup>8</sup> The abovementioned specific agricultural practices can be considered as options for practicing agriculture only after proper adjustment with the SD principles for this sector.

When agriculture is conceived under the concept of sustainability, it describes farming systems that are resource-conserving, socially supportive, commercially competitive, and environmentally sound and have the ability to maintain their productivity and usefulness indefinitely.<sup>9</sup> Sustainable development of agriculture (SDA) consists of agricultural processes that do not exhaust any irreplaceable resources which are essential to agriculture.<sup>10</sup> SDA also considers conserving the regenerative capacity of natural resources,<sup>11</sup> and adaptive capacity

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<sup>2</sup> Luong Van Pham and Carl Smith, 'Drivers of agricultural sustainability in developing countries: a review' (2014)34 *Environment Systems and Decisions* 326.

<sup>3</sup> Charles Walters first used the term in 1970 to refer to agriculture that is ecological as well as economical.

<sup>4</sup> J. P. Madden, 'What is alternative agriculture?' (1989)4(1) *American Journal of Alternative Agriculture* 32.

<sup>5</sup> Jules Pretty, 'Sustainability in Agriculture: Recent Progress and Emergent Challenges' in R E Hester and R M Harrison (eds), *Sustainability in Agriculture* (The Royal Society of Chemistry, 2005)2.

<sup>6</sup> The term "wise use" was coined in 1910 by U.S. Forest Service leader and political Progressive Gifford Pinchot to describe his concept of sustainable harvest of natural resources.

<sup>7</sup> Jules Pretty, 'Agricultural sustainability: concepts, principles and evidence' (2008)363 *Phil. Trans. R. Soc. B* 451.

<sup>8</sup> Biodiversity International, 'Sustainable Agriculture and Sustainable Use of Agricultural Biodiversity: Concepts, Trends and Challenges'(An information note on items 3.1.6 and 4.1.1 of the provisional agenda of the Fourteenth Meeting of the Subsidiary Body on Scientific, Technical and Technological Advice of the Convention on Biological Diversity, Nairobi, Kenya, 10-21 May 2010)4.

<sup>9</sup> John Ikerd, 'Sustainability's Promise' (1990) 45(1) *Journal of Soil and water Conservation* 4.

<sup>10</sup> Hugh Lehman, E. Ann Clark and Stephan F. Weise, 'Clarifying the Definition of Sustainable Agriculture' (1993) 6(2) *Journal of Agricultural and Environmental Ethics*139[1].

<sup>11</sup> Frédéric Zahm, Philippe Viaux, Philippe Girardin, Lionel Vilain, Christian Mouchet, 'Farm Sustainability Assessment using the IDEA Method in Sustainable Agriculture – From Common Principles to Common Practice' in Fritz J. Häni, László Pintér and Hans R. Herren, 'Sustainable Agriculture From Common Principles to Common Practice' (Proceedings and outputs of the first Symposium of the International Forum on Assessing Sustainability in Agriculture, 2006)80.

of agriculture to adapt to future changes.<sup>12</sup> There is a need to maintain a balance between protection of agro-ecosystems and growing food and livelihood needs of people.<sup>13</sup>

The Food and Agriculture Organization of the United Nations (FAO) adopts a holistic view to explain agricultural development in light of sustainable development approach. It has suggested that SDA requires conserving land, water, and plant and animal genetic resources. It is environmentally non-degrading, technically appropriate, economically viable and socially acceptable.<sup>14</sup> Pretty suggested that sustainable agricultural systems lean towards a positive effect on different forms of capital such as natural, social and human capital. On the other hand, unsustainable patterns tend to deplete these assets and create an imbalance in sharing of capital between generations.<sup>15</sup> Corwin and his colleagues emphasised the delicate balance of maximizing crop productivity and maintaining economic stability, while minimising the utilisation of finite natural resources and detrimental environmental impacts.<sup>16</sup>

Zaharia provides a holistic definition of SDA that identifies it as a new approach that:

allows the agriculture to ensure the economic and social benefits for the actual generation without compromising the capacity of the future generation to fulfil the proper agricultural demands and without injuring the fundamental ecological process.<sup>17</sup>

Zaharia argues that three distinct criteria have to be met for the achievement of SDA that include:

the protection of eco-capacity, the efficient use of natural, human, material and energy resources and the guarantee of an equitable distribution between populations, both of the goods supplied by the agricultural development, and of the loads produced by the environment degradation.<sup>18</sup>

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<sup>12</sup> Eric Lichtfouse, *Sustainable Agriculture* (Springer, 2009)3, quoting Mohamed Gafsi et al, 'Towards sustainable farming systems: Effectiveness and deficiency of the French procedure of sustainable agriculture' (2006) 90(1) *Agricultural Systems* 226.

<sup>13</sup> Food and Agriculture Organization of the United Nations (FAO), *Building a Common Vision for Sustainable Food and Agriculture* (2014)12.

<sup>14</sup> J. Brian Hardaker, *Guidelines for the integration of sustainable agriculture and rural development into agricultural policies*. (Food and Agriculture Organization of the United Nations (FAO), 1997) [2.1]

<sup>15</sup> Jules Pretty, 'Agricultural sustainability: concepts, principles and evidence' (2008)363 *Phil. Trans. R. Soc. B* 452.

<sup>16</sup> A. Chel and G. Kaushik, 'Renewable energy for sustainable agriculture' (2011)31 *Agron. Sustain. Dev.* 92, quoting D.L Corwin, K Loague, T.R Ellsworth, 'Assessing non-point source pollution in the vadose zone with advanced information technologies' in Corwin D.L., Loague K., Ellsworth T.R. (eds.), *Assessment of Non-point Source Pollution in the Vadose Zone* (American Geophysical Union, 1999).

<sup>17</sup> Carmen Zaharia, 'Sustainable Agricultural Development-Concepts, Principles, Eco-efficiency, Eco-equity, Eco-conditioning' (2010) XLIII 3 (143) *Cercetări Agronomice în Moldova* 92.

<sup>18</sup> Carmen Zaharia, 'Sustainable Agricultural Development-Concepts, Principles, Eco-efficiency, Eco-equity, Eco-conditioning' (2010) XLIII 3 (143) *Cercetări Agronomice în Moldova* 93.

The unequivocal integration of natural resource management concerns within the economic policy framework for agriculture is necessary for success of SDA.<sup>19</sup> Pretty identifies SDA as a process for facilitating profitable and efficient food production through the integration of biological and ecological processes into food production processes.<sup>20</sup> The process includes minimisation of the use of external and non-renewable inputs, participation of stakeholders and use of local knowledge and practices and enhancement of public goods.<sup>21</sup> Pretty also suggested to substitute human capital for costly external inputs and making productive use of people's collective capacities to work together to solve common agricultural and natural resource problems.<sup>22</sup>

Francis and Youngberg considered SDA as a –

philosophy that guides our application of prior experience and the latest scientific advances to create integrated, resource-conserving, equitable farming systems. These systems reduce environmental degradation, maintain agricultural productivity, promote economic viability in both the short and long term, and maintain stable rural communities and quality of life.<sup>23</sup>

Christen gave priority to the economic viability of agriculture, preserving the agricultural resource base, enhancing job opportunities in farming and ensuring inter-generational equity in producing sufficient quality food for society.<sup>24</sup> Mason in this perspective emphasised empowering the farmer to work with natural processes to conserve resources and minimise environmental impact.<sup>25</sup>

The FAO also added a social dimension in the SDA approach and suggested that -

We must recognize and support the hundreds of millions of people managing food and agricultural systems – including the very poorest – who constitute the largest group of natural

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<sup>19</sup>Edward B. Barbier, 'Cash Crops, Food Crops, and Sustainability: The Case of Indonesia'(1989)17(6)*World Development* 892.

<sup>20</sup> Jules N. Pretty, 'Toward More Conducive Policies for Sustainable Agriculture, Agriculture' quoted in Jules N. Pretty, *Regenerating Agriculture: Policies and Practice for Sustainability and Self-Reliance* (Eartchscan, 1995)37.

<sup>21</sup> Ibid.

<sup>22</sup> Jules Pretty, 'Agricultural sustainability: concepts, principles and evidence' (2008)363 *Phil. Trans. R. Soc. B* 451.

<sup>23</sup> Charles A Francis and Garth A Youngberg, *Sustainable Agriculture – An Overview* in Charles A Francis, Cornelia Butler Flora and Larry D. King (eds) *Sustainable Agriculture in Temperate Zones* (John Wiley and Sons, 1990)8.

<sup>24</sup> O. Christen, 'Sustainable Agriculture-history, concept and consequences for research, education and extension' (1996) 74(1) *Berichte Uber Landwirtschaft* 66.

<sup>25</sup> John Mason, *Sustainable agriculture* (Landlinks Press, 2003)3[2].

resource managers on earth. There can be no sustainable development while hunger, malnutrition and poverty persist.<sup>26</sup>

Reddy added another dimension with people-centric agricultural development and suggested that sustainable agriculture goes beyond promoting livelihoods; it needs to consider changing the citizens' awareness, attitudes and perceptions towards the environment in the context of diversified agricultural problems in different regions.<sup>27</sup> In addition to community perceptions and knowledge, laws, rules regulations and institutions are also necessary for promotion of SDA.<sup>28</sup>

For SDA, there is a basic question about the depth of sustainability that is relevant to sustainable use of capital for agricultural production. There is a need to examine the potential for keeping constant stock of different forms of capital, substitution of different forms of capital, transformation for capital from natural capital to human capital into manmade capital. Moreover, critical levels of each type of capital and their total value are also needed to be studied for SDA.<sup>29</sup>

The SDA approach is conceived in this research as an inclusive process to promote eco-friendly, resource-efficient and profitable agricultural improvements over the generations for the benefit of people and ecosystems. The process changes behaviour patterns of people to pursue sustainable production processes, and maintains or enhances the quality of environmental health and conserves the regenerative capacity of natural resources. The SDA facilitates food security<sup>30</sup> through productivity improvement and supports the livelihood of people. It also facilitates the eradication of poverty and promotes equity in resource and income distribution.

The SDA approach needs to seek synergies between development interventions in different sectors beyond trade-offs. However, the complexities in addressing synergies requires extensive knowledge about trade-offs, citizen participation in the decision making process

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<sup>26</sup> Food and Agriculture Organization of the United Nations (FAO), *Targets and Indicators for the Post-2015 Development Agenda and the Sustainable Development Goals* (2014)3.

<sup>27</sup> V. Ratna Reddy, 'Environment and Sustainable Agricultural Development: Conflicts and Contradictions' (1995) 30(12) *Economic and Political Weekly* A-26.

<sup>28</sup> Sukallaya Kasem and Gopal B. Thapa, 'Sustainable Development Policies and Achievements in the Context of the Agriculture Sector in Thailand' (2012)20 *Sustainable Development* 100 quoting D. Norton, *Agricultural Development Policy: Concept and Experience* (Food and Agriculture Organization of the United Nations, 2004) and B. Mitchell, *Resource and Environmental Management*, (Pearson, 2<sup>nd</sup> ed, 2002).

<sup>29</sup> Pater Hazell and Ernst Lutz, Increasing Environmental and Sustainability Concerns into Rural Development Policies, in Ernst Lutz (ed) *Agriculture and the Environment: Perspective on Sustainable Rural Development* (The World Bank, 1998) 10.

<sup>30</sup> Vernon W. Ruttan, 'Sustainability In Not Enough' in Carl K. Eicher and John M. Staatz (eds), *Agricultural Development in the Third World* (The Johns Hopkins University Press, 2<sup>nd</sup> ed, 1990)400.

and political support for redistribution of benefits and costs, along with adoption of appropriate technologies through facilitative institutions and governance mechanisms.<sup>31</sup>

The SDA approach is sometimes misconceived with the technical aspects of agricultural production sustainability. Nevertheless, it is as an extended approach that embraces the three dimensions of sustainable development. The transformation from a focus on production to holistic improvement, including social and economic dimensions along with ecological improvements, is associated with the sustainable development paradigm. The following section presents this evolution to explain how SDA has emerged in the hegemony of SD.

## 2 *The Evolution of SDA*

There is evidence that growth in agricultural productivity is central to development<sup>32</sup> and the growth oriented agricultural policies since the 1960s have become successful in improving production.<sup>33</sup> However, the traditional role of agriculture in stabilizing environmental systems changes with the introduction of modern inputs, such as use of chemical fertiliser and pesticides for productivity improvement from a decreasing land base.<sup>34</sup> While productivity and production improved, environmental degradation also followed because of the lack of integrated policies which could make trade-off between competing objectives of agriculture and environment.<sup>35</sup>

The change in orientation of the development paradigm in the early 1970s from economic growth to equity with growth or redistribution of income also influenced the agriculture sector. The 'green revolution' in some parts of the world, particularly in South Asia, helped increase agricultural production, food availability and rural employment growth, but so did inequity.<sup>36</sup> The social development issue became a part of agricultural development from the 1970s in the background of disappointments with the green revolution,<sup>37</sup> and it was later

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<sup>31</sup>FAO, above n 13,16.

<sup>32</sup> Carlos E Ludena, 'Agricultural Productivity Growth, Efficiency Change and Technical Progress in Latin America and the Caribbean' (IDB Working Paper IDB –WP-186, Inter-American Development Bank, 2010)2.

<sup>33</sup> Food and Agriculture Organization of the United Nations (FAO), *Feeding the World* <<http://www.fao.org/docrep/018/i3107e/i3107e03.pdf>>128.

<sup>34</sup> Peter Nijkamp and Frits Soeteman, 'Land Use, Economy and Ecology: Needs and prospects for co-evolutionary development' (1988) *Futures* 622-623.

<sup>35</sup> M. D. Young, 'Overview: the integration of agricultural and environmental policies' in Michael D. Young (ed) *Towards Sustainable Agricultural Development* (Belhaven Press, 1991)337.

<sup>36</sup> Carl K. Eicher and John M. Saatz, *Agricultural Development in the Third World* (John Hopkins University Press, 2<sup>nd</sup> ed, 1990) 9-14.

<sup>37</sup> *Ibid* 15, 20.



associated with the environmental concerns created due to agricultural practices and concerns about ecological integrity in the 1980s.

Sustainable agriculture issues became central to discussions as production practices were considered unsustainable and that it could lead to a downward spiral in agricultural productivity and an increase in rural poverty.<sup>38</sup> In such a context, agriculture as an economic activity, as a source of food and feed, as a livelihood option and as a contributor to environmental degradation needed to be incorporated into a SD approach. In developing countries that are more dependent on agriculture, SD closely resembles sustainable agricultural development because of their heavy dependence on agriculture for economic development.<sup>39</sup>

The emergence of the SD approach influenced agriculture through promotion of ecologically sustainable practices as well as gradual reduction of environmentally harmful practices. The ground breaking *Brundtland Report* explicitly referred to agriculture as an agenda for sustainable development and suggested conservation of agricultural resources,<sup>40</sup> along with resources transfer for sustainable agricultural interventions.<sup>41</sup> This report, while supporting the traditional role of government for agricultural development, suggested strengthening of policy, planning and systems for the promotion of agriculture in developing countries.<sup>42</sup>

SDA as a unique agenda also received high priority in the post-Brundtland context. *Agenda 21*, agreed in 1992, extensively identified plans for sustainable development of agriculture based upon a global consensus. *Agenda 21* proposed a gradual reduction of protectionism in agricultural trade.<sup>43</sup> It also promoted food security and food self-sufficiency through

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<sup>38</sup> Ibid 23.

<sup>39</sup> Md. Shahidul Islam, *Strategies for the Development of Sustainable Agriculture in Bangladesh* (PhD Thesis, Oregon State University, 1995) 10.

<sup>40</sup> United Nations World Commission on Environment and Development, *Report of the World Commission on Environment and Development: Our Common Future*, Annex to document A/42/427 - Development and International Co-operation: Environment (1987) ch 2[57].

<sup>41</sup> United Nations World Commission on Environment and Development, *Report of the World Commission on Environment and Development: Our Common Future*, Annex to document A/42/427 - Development and International Co-operation: Environment (1987) ch 3[32].

<sup>42</sup> United Nations World Commission on Environment and Development, *Report of the World Commission on Environment and Development: Our Common Future*, Annex to document A/42/427 - Development and International Co-operation: Environment (1987) ch 5[45]-[48].

<sup>43</sup> *Agenda 21: Programme of Action for Sustainable Development*, UN GAOR, 46<sup>th</sup> sess, Agenda Item 21, UN Doc A/Conf.151/26 (14 June 1992) [2.7].

sustainable agriculture.<sup>44</sup> *Agenda 21* included integrated planning, including monitoring of plans, for sustainable agricultural development.<sup>45</sup>

*Agenda 21* specifically emphasised a farmer centred approach and farmers' participation in planning decision making and giving responsibility to national governments to ensure the implementation of the development programmes.<sup>46</sup> The major programmes identified were sustainable livelihoods, agriculture and rural development, managing fragile ecosystems, water use in agriculture, and integrated management of natural resources and women's access to land and other resources.<sup>47</sup> There was also a commitment from the international community, including international institutions and NGOs, in 1997 to further promote the goals of three components of SD by the national governments with the support of international cooperation.<sup>48</sup> This commitment includes integrated development interventions in the areas of agriculture and water.<sup>49</sup> Priority was given to ensuring participation of the community, including women, in water resources management and the promotion of higher-value, less water-intensive modes of agricultural production.<sup>50</sup> The conservation and sustainable use of biodiversity and equitable sharing of benefits of genetic resources were also commitments made by the international community.<sup>51</sup>

The *Plan of Implementation of the World Summit on Sustainable Development*, popularly identified as the Johannesburg Plan of Implementation (JPOI), also placed significant emphasis on SDA for increasing food production and enhancing food security.<sup>52</sup> It

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<sup>44</sup> *Agenda 21: Programme of Action for Sustainable Development*, UN GAOR, 46<sup>th</sup> sess, Agenda Item 21, UN Doc A/Conf.151/26 (14 June 1992) [3.81].

<sup>45</sup> *Agenda 21: Programme of Action for Sustainable Development*, UN GAOR, 46<sup>th</sup> sess, Agenda Item 21, UN Doc A/Conf.151/26 (14 June 1992)[14.4], [14.5].

<sup>46</sup> *Agenda 21: Programme of Action for Sustainable Development*, UN GAOR, 46<sup>th</sup> sess, Agenda Item 21, UN Doc A/Conf.151/26 (14 June 1992)[32.6].

<sup>47</sup> *Agenda 21: Programme of Action for Sustainable Development*, UN GAOR, 46<sup>th</sup> sess, Agenda Item 21, UN Doc A/Conf.151/26 (14 June 1992)[32.6].

<sup>48</sup> *Programme for the Further Implementation of Agenda 21*, UN GAOR, 19<sup>th</sup> special sess, Agenda Item 8, UN Doc A/RES/S-19/2 (28 June 1997)[1],[3],[22].

<sup>49</sup> *Programme for the Further Implementation of Agenda 21*, UN GAOR, 19<sup>th</sup> special sess, Agenda Item 8, UN Doc A/RES/S-19/2 (28 June 1997)[33].

<sup>50</sup> *Programme for the Further Implementation of Agenda 21*, UN GAOR, 19<sup>th</sup> special sess, Agenda Item 8, UN Doc A/RES/S-19/2 (28 June 1997)[34c, g].

<sup>51</sup> *Programme for the Further Implementation of Agenda 21*, UN GAOR, 19<sup>th</sup> special sess, Agenda Item 8, UN Doc A/RES/S-19/2 (28 June 1997)[66].

<sup>52</sup> *Johannesburg Declaration on Sustainable Development, Annex Plan of Implementation of the World Summit on Sustainable Development* A/CONF. 199/20 (4 September, 2002)[40].

recommended increased public and private investment for agricultural improvement<sup>53</sup> and urged the developed countries for technology transfer to developing countries.<sup>54</sup> The JPOI recognised the need for energy efficiency and efficient use of water for agriculture.<sup>55</sup> The JPOI also suggested building basic rural infrastructure, access to markets and financial resources for the rural poor and participation of women in development process to support sustainable agriculture and rural development.<sup>56</sup>

The promotion of SDA through increased public and private investment is also addressed in the Rio+20 Conference.<sup>57</sup> It was promoted with an objective to productive employment creation.<sup>58</sup> The SD agenda received a major boost with the adoption of SDGs in 2015. It is now specifically addressed through the promotion of these universal goals.

The new SDGs will dominate the development agendas of countries around the world in the next fifteen years. However, the SDGs are of greater importance to developing countries.<sup>59</sup> SDGs aim to bring fundamental changes in the way that we produce and consume goods and services. The goals include poverty elimination, achieving food security and the promotion of sustainable agriculture. The SDGs also require urgent action to address the climate change and its impacts.<sup>60</sup> The goals include protection, restoration and promotion of sustainable use of natural resources and halting biodiversity loss and reversing land degradation.<sup>61</sup> The SDGs also promote building inclusive societies and effective, accountable and inclusive institutions and strengthening the means of implementation.<sup>62</sup>

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<sup>53</sup> *Johannesburg Declaration on Sustainable Development, Annex Plan of Implementation of the World Summit on Sustainable Development* A/CONF. 199/20 (4 September, 2002) [40j].

<sup>54</sup> *Johannesburg Declaration on Sustainable Development, Annex Plan of Implementation of the World Summit on Sustainable Development* A/CONF. 199/20 (4 September, 2002)[7j].

<sup>55</sup> *Johannesburg Declaration on Sustainable Development, Annex Plan of Implementation of the World Summit on Sustainable Development* A/CONF. 199/20 (4 September, 2002)[20b], [26c].

<sup>56</sup> *Johannesburg Declaration on Sustainable Development, Annex Plan of Implementation of the World Summit on Sustainable Development* A/CONF. 199/20 (4 September, 2002)[7i], [40f].

<sup>57</sup> *The Future We Want*, GA Res 66/288, UN GAOR, 66<sup>th</sup> sess, 123<sup>rd</sup> plen mtg, Agenda Item 19, UN Doc A/RES/66/288 (11 September 2012)[110], [111].

<sup>58</sup> *The Future We Want*, GA Res 66/288, UN GAOR, 66<sup>th</sup> sess, 123<sup>rd</sup> plen mtg, Agenda Item 19, UN Doc A/RES/66/288 (11 September 2012)[23].

<sup>59</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/70/1 (25 September 2015).

<sup>60</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/70/1 (25 September 2015) goals 1, 2, 13.

<sup>61</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/70/1 (25 September 2015) goals 14, 15.

<sup>62</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/70/1 (25 September 2015) goals 16, 17.

The SDGs have extensively included different dimensions of SD in agriculture sector. The goals include doubling the agricultural productivity and incomes of farming community and assurance of their equal access to resources, markets and opportunity.<sup>63</sup> They also promote sustainable food production systems, implementation of eco-centric agricultural practices and addressing climate change and extreme weather events.<sup>64</sup> Given the obligation to maintain ecosystems and the improvement of land and soil quality, the goal of ensuring sustainable food production systems may add more stress on existing production capacity of the poor, increase the cost of production and reduce profitability. Moreover, the adaptation to climate change goal may also place more stress on the income and livelihoods of poor people as it diverts their economic resources to address climate change.<sup>65</sup>

The equitable sharing of benefits of improved technology and knowledge are suggested along with increased investment in rural infrastructure, research and extension for agricultural development in developing and least developed countries.<sup>66</sup> However, these goals may face critical implementation deficits as technological development and sharing, in many cases, depend on cooperation of large private agricultural research organisations of developed countries as well as technological and financial assistance from these countries. The SDG for correcting the distortion in world agricultural markets for reaping benefits from world trading mechanisms is also important<sup>67</sup> but no guidelines are provided for promoting trade facilitations during food crisis in developing countries.

The SDA goals are integrated with other goals of the SDGs that need promotion at national and local level. However, when the integration occurs in agriculture in a global context it may not be equitable as the responsibilities mainly place burdens on millions of small holders in developing countries. Their livelihoods basically depend on the natural ecosystem services and the protection of ecosystems as well as doubling the food production at the same time, while access to technology, financial and human capital on an equitable basis seems very elusive.

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<sup>63</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/70/1 (25 September 2015) goal 2.3.

<sup>64</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/70/1 (25 September 2015) goal 2.4.

<sup>65</sup> The World Bank, 'Climate Change and Poverty' (Conference Summary, Climate Change and Poverty Conference, The World Bank, 9-10 February 2015)2-9.

<sup>66</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/70/1 (25 September 2015)goals 2.5, 2a.

<sup>67</sup> *Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/70/1 (25 September 2015)goal 2.b.

While the rich and large farm holdings in developed countries enjoy huge subsidies, their counterparts, poor farmers in developing countries receive minimum support and face food export barriers on safety and standard issues, the target to achieve doubling food productivity seems far distant. The issue is that the SDA is necessary for the benefit of poor and developing countries themselves in the context of global food price volatility and trade uncertainty. The issue here is the trade-off between the unsustainable practices and future protection. Therefore, SDA demands prudent planning for long term sustainability, as emphasised in *Agenda 21*.<sup>68</sup>

Given the limitations in the SDGs, these integrated goals and targets are the guidelines for promotion of SD for the next decades as agreed by the member states of the UN. Now, these aspirational goals need to be translated into action by the national governments taking into account their national circumstances.<sup>69</sup> Each government will also have to decide how these aspirational and global targets could be incorporated in national planning processes, policies and strategies.

While many of the SDGs present substantive agendas for SD for persuasion through national processes, in cooperation among countries, there are also some goals in SDGs that can guide the implementation process. The procedural aspects for implementing substantive goals include developing effective, accountable and transparent institutions at all levels of government. SDGs also call for ensuring responsive, inclusive, participatory and representative decision-making at all levels along with the right to public participation. The SDGs also emphasised the promotion and enforcement of non-discriminatory laws and policies for sustainable development.<sup>70</sup> Finally, the goal for implementation of all SDGs is identified as strengthening the national planning process.<sup>71</sup> This approach is consistent with *Agenda 21*, which has specifically identified the national planning process as the mechanism to advance the sustainable development agenda in developing countries.<sup>72</sup> This notion is also

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<sup>68</sup>*Agenda 21: Programme of Action for Sustainable Development*, UN GAOR, 46th sess, Agenda Item 21, UN Doc A/Conf.151/26 (14 June 1992) ch 14[14.5], [14.35].

<sup>69</sup>*Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/70/1 (25 September 2015)[55].

<sup>70</sup>*Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/70/1 (25 September 2015) goals 16.6, 16.7, 16.10, 16.b.

<sup>71</sup>*Transforming our world: the 2030 Agenda for Sustainable Development*, GA Res 70/1, UN GAOR, 70<sup>th</sup> sess, Agenda Items 15 and 116, UN Doc A/70/1 (25 September 2015) goal 17.9.

<sup>72</sup>*Agenda 21: Programme of Action for Sustainable Development*, UN GAOR, 46th sess, Agenda Item 21, UN Doc A/Conf.151/26 (14 June 1992) ch 14[14.5], [14.35].

strengthened through the goal for promotion of effective climate change planning and management in developing countries.

SDA has shaped with some goals in the SDGs but they require appropriate synchronization with the respective country's system. This is particularly applicable to Bangladesh, as this country has also emphasised the SDA approach for agricultural improvement. The Bangladesh perspective will be examined in chapter six, after the review of SDA approaches of another developing country, India. Before the discussion on India's SDA planning approaches, wider example of SDA approaches by international institutions will be summarized below.

### *C Examples of SDA Presented by International Institutions*

The international institutions, while promoting sustainable development for the agriculture sector, also presented some examples of successful development interventions of different countries. Although these examples were not complete in reflecting all aspects of SDA, they present insights into how different interventions of SD have worked in the agriculture sector in different countries.

The United Nations Development Programme (UNDP) provides some examples of SDA that enhance the profitability or return from agriculture in different countries.<sup>73</sup> This organisation examined the utilisation and effectiveness of financial tools, such as loans, subsidies, fees and taxes for the sustainable development of agriculture.<sup>74</sup> These examples indicate that sustainable agriculture programmes usually rely on internal or external financial incentives.<sup>75</sup>

The Moroccan experience revealed that incentives to the growers with a guarantee of a fixed monthly income encouraged the participants to participate in organic practices for agricultural sustainability.<sup>76</sup> This experience suggests the success of promoting ecological integrity through use of organic fertiliser by ensuring farmers get a reliable and steady return.

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<sup>73</sup> United Nations Development Programme (UNDP), *International Guidebook of Environmental Finance Tools: A Sectoral Approach Sustainable Agriculture* (UNDP, 2012)7.

<sup>74</sup> United Nations Development Programme (UNDP), *International Guidebook of Environmental Finance Tools: A Sectoral Approach Sustainable Agriculture* (UNDP, 2012)7.

<sup>75</sup> United Nations Development Programme (UNDP), *International Guidebook of Environmental Finance Tools: A Sectoral Approach Sustainable Agriculture* (UNDP, 2012)8.

<sup>76</sup> United Nations Development Programme (UNDP), *International Guidebook of Environmental Finance Tools: A Sectoral Approach Sustainable Agriculture* (UNDP, 2012)20.

Given the success of the programme, the replication of this programme is subject to a constant learning process and adaptation to the changing circumstances that may not be attractive to conventional farmers.<sup>77</sup>

The experience of the Chinese Jiaohu Township in Jianxi province has provided a success story where government subsidies for organic agriculture along with training and support methods and strict regulation and prohibition of non-organic methods led to higher returns for farmers and a decrease in environmental degradation.<sup>78</sup> The replicability of this experience depends on higher commitment from the local government institutions and pairing subsidies with education and motivation.<sup>79</sup> The Canadian experience demonstrates a similar success story where education, the training of people, farmers' participation, and partnership among various institutions, governments and non-government organisations were fundamental factors for sustainable development of agriculture.<sup>80</sup>

The Ugandan government's 'Organic Agriculture Policy' and regional and domestic standards declared for agricultural products were found to be effective for promotion of SDA. The government interventions helped generate increased revenue and more income for smallholder farmers through selling standard products at a higher price.<sup>81</sup> This initiative also contributed to mitigating climate change. It is estimated that GHG emissions per hectare declined by on average 64 per cent from conventional farms.<sup>82</sup>

An FAO study on agricultural development policies of 20 countries revealed that Cuba and Switzerland succeeded in promoting SDA through adopting SD approaches at the centre of agricultural development policy and integrating it with other policies.<sup>83</sup> While Cuba adopted a national policy for alternative agriculture, Switzerland adopted a three-tier support policy.<sup>84</sup>

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<sup>77</sup> United Nations Development Programme (UNDP), *International Guidebook of Environmental Finance Tools: A Sectoral Approach Sustainable Agriculture* (UNDP, 2012)21.

<sup>78</sup> United Nations Development Programme (UNDP), *International Guidebook of Environmental Finance Tools: A Sectoral Approach Sustainable Agriculture* (UNDP, 2012)43.

<sup>79</sup> United Nations Development Programme (UNDP), *International Guidebook of Environmental Finance Tools: A Sectoral Approach Sustainable Agriculture* (UNDP, 2012)44.

<sup>80</sup> J. Clare. Rennie, Partnerships in Sustainable Agricultural Development: Some Canadian Examples, Canadian International Development Agency (CIDA) 6-7.

<sup>81</sup> United Nations Environment Programme (UNEP), *Green Economy: Developing Countries Success Stories* (UNEP, 2010)7.

<sup>82</sup> United Nations Environment Programme (UNEP), *Green Economy: Developing Countries Success Stories* (UNEP, 2010)7.

<sup>83</sup> Food and Agriculture Organization of United Nations (FAO), *Land and Agriculture: From UNCED, Rio de Janeiro 1992 to WSSD, Johannesburg 2002* (2002) <<http://www.fao.org/3/a-y3951e/y3951e07.htm>>21-22.

<sup>84</sup> Food and Agriculture Organization of United Nations (FAO), *Land and Agriculture: From UNCED, Rio de Janeiro 1992 to WSSD, Johannesburg 2002* (2002) <<http://www.fao.org/3/a-y3951e/y3951e07.htm>>23-24.

Cuba faced severe shortages in all imported goods including inputs of agriculture and food after the collapse of the Soviet Bloc in the 1990s. In such a context, the government responded with resource-conserving and eco-friendly technologies and practices, import substitution for inputs and a diversification of agriculture.<sup>85</sup> The introduction of new practices in science and massive training and cooperation among farmers and between communities were also emphasised. The SD policy increased the production at national level and also helped the country to face the severe nutritional crises in the 1990s.<sup>86</sup>

Switzerland made a massive change in its agricultural development policies in the 1990s. Swiss policy for supporting agricultural development included three stages. The first of which relates to the support for extensive conservation of natural resources subsequently followed by policies for maintenance of higher ecological standards through integrated production and finally organic farming.<sup>87</sup> While the government supported the agriculture sector, it extended the responsibility to farmers' unions and farm advisors, local bodies and nongovernment organisations.<sup>88</sup> Switzerland's experience is a good example in policy performance that establishes it a strong case to follow in reducing environmental pressure from agriculture. However, the policy reform needs a strong political commitment, legal system and monitoring system to follow up the progress in different countries.<sup>89</sup>

Payment from regional schemes to farmers to not damage the environment contributed to extensive grassland management and positive environmental management in Germany<sup>90</sup> and the government's promotional activities in Rajasthan, India for integrated participatory

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<sup>85</sup> Food and Agriculture Organization of United Nations (FAO), *Land and Agriculture: From UNCED, Rio de Janeiro 1992 to WSSD, Johannesburg 2002* (2002) < <http://www.fao.org/3/a-y3951e/y3951e07.htm>>23.

<sup>86</sup> United Nations Environment Programme, *Success Stories: Organic Agriculture in Cuba* <<http://www.unep.org/greeneconomy/SuccessStories/OrganicAgricultureinCuba/tabid/29890/Default.aspx>>; Food and Agriculture Organization of United Nations (FAO), *Land and Agriculture: From UNCED, Rio de Janeiro 1992 to WSSD, Johannesburg 2002* (2002) < <http://www.fao.org/3/a-y3951e/y3951e07.htm>> 23.

In Cuba, the human calorie intake fell to 1000-1500 kilogram calorie per day from 2600 kilogram calorie in 1990 however, after the transition, the calorie intake rose again to 2700 kilogram calorie per day by the end of 1990s.

<sup>87</sup> Food and Agriculture Organization of United Nations (FAO), *Land and Agriculture: From UNCED, Rio de Janeiro 1992 to WSSD, Johannesburg 2002* (2002) < <http://www.fao.org/3/a-y3951e/y3951e07.htm>>24.

<sup>88</sup> Food and Agriculture Organization of United Nations (FAO), *Land and Agriculture: From UNCED, Rio de Janeiro 1992 to WSSD, Johannesburg 2002* (2002) < <http://www.fao.org/3/a-y3951e/y3951e07.htm>>24.

<sup>89</sup> Organisation for Economic Cooperation and Development (OECD), *Environmental Performance of Agriculture in OECD Countries since 1990*(OECD, 2008)498-503.

<sup>90</sup> Food and Agriculture Organization of United Nations (FAO), *Land and Agriculture: From UNCED, Rio de Janeiro 1992 to WSSD, Johannesburg 2002* (2002)< <http://www.fao.org/3/a-y3951e.pdf> >27.



watershed development contributed to reversing the declining water level.<sup>91</sup> The water users' association was promoted by the Philippines government's irrigation department for sustainable operation and maintenance of small-scale irrigation systems.<sup>92</sup> This approach emphasised a group approach and use of social capital and devolution of authority. The programme yielded more returns to the farmers with the help of increased production of rice and empowered the communities in managing their resource-use affairs.<sup>93</sup> National integrated pest management (IPM) programmes in India, Indonesia, Sri Lanka and Vietnam have brought extraordinary results in reduction of pesticide use and improving ecological integrity along with reduction of cost of production and increase in return of farmers.<sup>94</sup>

There are also examples of using economic instruments for SDA. Although it is not common to use environmental taxes for levying agriculture, examples are available where these kinds of taxes were applied in some countries. Pesticide taxes in Denmark, Finland, Sweden and in several states of the United States of America (USA); fertiliser taxes in Austria, Finland, Sweden; and manure charges in Belgium and the Netherlands are some of the examples of the application of taxes for reducing environmental harm from agricultural practices.<sup>95</sup> The tax packages having the greatest impact on externalities are those combined with other policy instruments, such as advice, incentives and regulations.<sup>96</sup>

There are examples from Australia and India about support for farmers' associations and groups who contributed to SD. In Australia, the landcare groups operated since the 1980s encourage groups of farmers to work together with government and rural communities to manage pest problems, conservation farming, soil salinity and farm profitability.<sup>97</sup> The water user associations (WUA) operated in Gujrat, India are also examples of participation of farmers in successful natural resources management where these water user groups managed

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<sup>91</sup> Jules Pretty, *The Living Land: Agriculture, Food Systems and Community Regeneration in Rural Europe* (Earthscan, 1998) quoted in Food and Agriculture Organization of United Nations (FAO), *Land and Agriculture: From UNCED, Rio de Janeiro 1992 to WSSD, Johannesburg 2002* (2002) < <http://www.fao.org/3/a-y3951e/y3951e07.htm>>27.

<sup>92</sup> Food and Agriculture Organization of United Nations (FAO), *Land and Agriculture: From UNCED, Rio de Janeiro 1992 to WSSD, Johannesburg 2002* (2002) < <http://www.fao.org/3/a-y3951e/y3951e07.htm>>27.

<sup>93</sup> Jules N. Pretty, *Regenerating Agriculture* (Joseph Henry Press, 1995)235; Food and Agriculture Organization of United Nations (FAO), *Land and Agriculture: From UNCED, Rio de Janeiro 1992 to WSSD, Johannesburg 2002* (2002) < <http://www.fao.org/3/a-y3951e/y3951e07.htm>>27.

<sup>94</sup> Food and Agriculture Organization of United Nations (FAO), *Land and Agriculture: From UNCED, Rio de Janeiro 1992 to WSSD, Johannesburg 2002* (2002) < <http://www.fao.org/3/a-y3951e/y3951e07.htm>>30-31.

<sup>95</sup> Food and Agriculture Organization of United Nations (FAO), *Land and Agriculture: From UNCED, Rio de Janeiro 1992 to WSSD, Johannesburg 2002* (2002) < <http://www.fao.org/3/a-y3951e/y3951e07.htm>>33.

<sup>96</sup> Food and Agriculture Organization of United Nations (FAO), *Land and Agriculture: From UNCED, Rio de Janeiro 1992 to WSSD, Johannesburg 2002* (2002) < <http://www.fao.org/3/a-y3951e/y3951e07.htm>>33.

<sup>97</sup> Food and Agriculture Organization of United Nations (FAO), *Land and Agriculture: From UNCED, Rio de Janeiro 1992 to WSSD, Johannesburg 2002* (2002) < <http://www.fao.org/3/a-y3951e/y3951e07.htm>>34.

day to day operations and maintenance of irrigation canals, crop planning, water allocation, fixing water rates and administration of user fees. These experiences suggest that with the people's participation the management of natural resources becomes easier.<sup>98</sup>

In European countries a Common Agriculture Policy (CAP) is followed for SDA.<sup>99</sup> An integrated two packages of assistance is offered to farmers that enhance better targeted programmes for equitable opportunity and an enhanced safety net for farmers facilitates sustainable farming and strengthens rural development.<sup>100</sup> This policy has been practiced in European countries under a common legal framework that consists of four pieces of legislation that include rural development,<sup>101</sup> direct payment,<sup>102</sup> market measures,<sup>103</sup> and crosscutting issues such as funding and controls.<sup>104</sup> The CAP has been promoting agriculture through the land based support approach in the context of SD challenges, such as profitability risks of farmers due to high production costs, resource use efficiency, soil and water quality deterioration, threats to biodiversity and demographic and social developments.<sup>105</sup>

The CAP regulations are transposed to country legislation, considering the country's circumstances. For example, in France and England, CAP promotes SDA through both direct payments and rural development programmes. Active farmers receive benefit from income-support schemes and thirty per cent of direct payments are linked to three environmentally-friendly farming practices: crop diversification, maintaining permanent grassland and conserving five per cent of areas of ecological interest.<sup>106</sup>

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<sup>98</sup> Food and Agriculture Organization of United Nations (FAO), *Land and Agriculture: From UNCED, Rio de Janeiro 1992 to WSSD, Johannesburg 2002* (2002) <<http://www.fao.org/3/a-y3951e/y3951e07.htm>>34.

<sup>99</sup> European Commission (EC), 'Overview of CAP Reform 2014-2020' (Agricultural Policy Perspectives Brief, December 2013) 2.

<sup>100</sup> Ibid 1.

<sup>101</sup> *Regulation (EU) No 1305/2013 of the European Parliament and of the Council of 17 December 2013 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) and repealing Council Regulation (EC) No 1698/2005* [2013] OJ L 347 487–548.

<sup>102</sup> *Regulation (EU) No 1307/2013 of the European Parliament and of the Council of 17 December 2013 establishing rules for direct payments to farmers under support schemes within the framework of the common agricultural policy and repealing Council Regulation (EC) No 637/2008 and Council Regulation (EC) No 73/2009* [2013] OJ L 347 608–670 .

<sup>103</sup> *Regulation (EU) No 1308/2013 of the European Parliament and of the Council of 17 December 2013 establishing a common organisation of the markets in agricultural products and repealing Council Regulations (EEC) No 922/72, (EEC) No 234/79, (EC) No 1037/2001 and (EC) No 1234/2007* [2013] OJ L 347 671–854.

<sup>104</sup> *Regulation (EU) No 1306/2013 of the European Parliament and of the Council of 17 December 2013 on the financing, management and monitoring of the common agricultural policy and repealing Council Regulations (EEC) No 352/78, (EC) No 165/94, (EC) No 2799/98, (EC) No 814/2000, (EC) No 1290/2005 and (EC) No 485/2008* [2013] OJ L 347 549–607.

<sup>105</sup> EC, above n 99, 2.

<sup>106</sup> European Union, *France Common Agriculture Policy* (May 2014) <[http://ec.europa.eu/agriculture/cap-in-your-country/index\\_en.htm](http://ec.europa.eu/agriculture/cap-in-your-country/index_en.htm)>; Government of the England, Rural Payment Agency, *Basic Payment Scheme (BPS) in England: rules for 2016* (2015) <<https://www.gov.uk/guidance/the-basic-payment-scheme-bps-rules-for-2016>>.

The rural development programmes are also implemented under the CAP in France and England. The government of France intends to allocate forty five per cent of the national budget for this programme to the protection of the environment and promotion of resource efficiency, and twenty seven per cent to enhance the competitiveness of small and medium-sized enterprises.<sup>107</sup> The English government also aims to invest the funds allocated for this programme in four different schemes,<sup>108</sup> for converting conventional land to organic production and to maintain it, promotion of biodiversity, water quality and natural flood management and climate change adaptation and mitigation.<sup>109</sup> There are also schemes for supporting people and business to enable them to increase farm productivity, create jobs and growth in rural areas and promotion of local rural economy.<sup>110</sup>

These examples of different countries' approaches, and the common policy in European countries, help understand how different interventions promote SDA. These examples were drawn from both developing and developed countries and revealed the promotional role of government in applying sustainable practices by the community through different forms of assistance. The examples also show that the conservation of natural resources was possible when they were supported with policy and programmes of the government. It also improves the livelihood of farming communities through increased income. The examples of community participation and its benefits in natural resources management also justified the political dimension of SD. These examples are not exhaustive in nature as many of them are not presented in the total country context and have some limitations in replication. However, these examples justified the relevance of SDA in different countries context when SDGs have explicit goals for sustainable agriculture. These goals and available examples can contribute to refining SDA principles along with other principles presented in the previous two chapters. The following discussion concerns the relevance of climate change to the sustainable development of agriculture.

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<sup>107</sup> European Union, *France Common Agriculture Policy* (May 2014) <[http://ec.europa.eu/agriculture/cap-in-your-country/index\\_en.htm](http://ec.europa.eu/agriculture/cap-in-your-country/index_en.htm)>.

<sup>108</sup> Government of England, Department for Environment, Food & Rural Affairs, *The New Common Agricultural Policy Schemes in England: February 2015 update* (2015) <[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/406212/CAPLF005v10\\_WEB.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/406212/CAPLF005v10_WEB.pdf)>1.

<sup>109</sup> Government of England, Department for Environment, Food & Rural Affairs, *The New Common Agricultural Policy Schemes in England: February 2015 update* (2015) <[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/406212/CAPLF005v10\\_WEB.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/406212/CAPLF005v10_WEB.pdf)>12.

<sup>110</sup> Government of England, Department for Environment, Food & Rural Affairs, *The New Common Agricultural Policy Schemes in England: February 2015 update* (2015) <[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/406212/CAPLF005v10\\_WEB.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/406212/CAPLF005v10_WEB.pdf)>17-18, 20.

## D SDA Approaches in Climate Change Context

When agricultural production will have to increase by 70 per cent globally to meet projected expanding demand for food and feed<sup>111</sup> and to support the livelihood of about 74 per cent of population of world who depend on this sector,<sup>112</sup> climate change adds significant challenges to food and agriculture systems.<sup>113</sup> It exacerbates the present production systems that are already under stress through degradation of land and water resources and loss of biodiversity and ecosystem services resulting from unsustainable practices.<sup>114</sup> The projected climate change, and its impacts, threatens to diminish the potential of continued production from this sector through different stresses such as salinity, prolonged drought, floods, reduction of cropping area through sea level rise, erratic behaviour in precipitation and high temperature.<sup>115</sup> Agriculture is vulnerable to CC impacts but it is also evident that climate change is also driven by greenhouse gas emissions from this sector. Nevertheless, the agriculture sector also has the ability to support climate change mitigation when it follows sustainable patterns of production.<sup>116</sup>

While adaptation to the impacts of climate change is an urgent priority to cope with the situation and reduce the vulnerability of poor people, it is also argued that mitigation<sup>117</sup> can work in synergy with adaptation<sup>118</sup> if it is supported through appropriate incentive mechanisms.<sup>119</sup> Therefore, it is suggested that climate change must be addressed as an

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<sup>111</sup> Food and Agriculture Organization of the United Nations (FAO), 'Feeding the World, Eradicating Hunger' (Background Paper, World Summit on Food Security, 2009) <[http://www.fao.org/fileadmin/templates/wsfs/Summit/WSFS\\_Issues\\_papers/WSFS\\_Background\\_paper\\_Feeding\\_the\\_world.pdf](http://www.fao.org/fileadmin/templates/wsfs/Summit/WSFS_Issues_papers/WSFS_Background_paper_Feeding_the_world.pdf)>1.

<sup>112</sup> Daniele Giovannucci, Sara Scherr, Danielle Nierenberg, Charlotte Hebebrand, Julie Shapiro, Jeffrey Milder, and Keith Wheeler, 'Food and Agriculture: the future of sustainability' (Study Report, United Nations Department of Economic and Social Affairs, 2012)6.

<sup>113</sup> Gerald C. Nelson et al, 'Climate Change : Impact on Agriculture and Cost of Adaptation' (Food Policy Report, International Food Policy Research Institute, 2009) vii.

<sup>114</sup> Commission on Sustainable Development, *Decision of the Commission of Sustainable Development*, 17th sess, E/CN.17/2009/19 – Agriculture, (2009) art 5.

<sup>115</sup> The World Bank, *Climate Smart Agriculture: A Call to Action* (2013) 1[1].

<sup>116</sup> P. Smith and J. E. Olesen, 'Synergies between the mitigation of, and adaptation to, climate change in agriculture' (2010) 148 *Journal of Agricultural Science* 54; International Food Policy Research Institute, *Food Security, Farming and Climate Change to 2050, Scenarios, Results, Policy options* (2010)xix.

<sup>117</sup> IPCC, WG III AR5 Annex 1, Glossary 1458.

The Intergovernmental Panel on Climate Change defines 'mitigation' as an anthropogenic or human intervention to reduce the anthropogenic forcing of the climate system; it includes strategies to reduce greenhouse gas sources and emissions and enhancing greenhouse gas sinks.

<sup>118</sup> *United Nations Framework Convention on Climate Change* opened for signature 9 May 1992, 1771 UNTS 107 (entered into force 21 March 1994).

In UNFCCC 'adaptation' refers to an adjustment in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts. It refers to changes in processes, practices, and structures to moderate potential damages or to benefit from opportunities associated with climate change.

<sup>119</sup> Food and Agriculture Organization of the United Nations, 'Post 2015 and the Sustainable Development Goals' (Issue Paper, FAO, 2014)< <http://www.fao.org/post-2015-mdg/14-themes/climate-change/en/>>.

integral part of the overall development agenda to produce sustainable beneficial outcomes. Without properly addressing these issues, there will be no success in ensuring world food security, sustainable and equitable development and poverty eradication.<sup>120</sup>

Climate change negatively impacts agricultural livelihoods and it has the potential to displace large volumes of farming people on a permanent basis and take away their traditional livelihood options. Therefore, to support the livelihood of people, agricultural development needs to become climate sensitive if it is to be sustainable. However, it is argued that without an integration of climate change into the agricultural development agenda at an early stage, the effects of the former may paralyse the aspirations of the latter.<sup>121</sup>

It is suggested by the FAO that ‘addressing food security and climate change requires concerted and coordinated involvement and action of all stakeholders on a long term perspective.’<sup>122</sup> It has developed and promoted a unified approach for SDA that has been popularly termed as Climate-Smart Agriculture (CSA).<sup>123</sup> CSA is not a new production system, rather it illustrates some principles for identifying sustainable production systems and necessary institutions for responding to the challenges of climate change.<sup>124</sup>

CSA has been defined as an agriculture that ‘sustainably increases productivity, enhances resilience, reduces/removes greenhouse gas emissions, and enhances achievement of national food security and development goals.’<sup>125</sup> It encompasses three broad areas of sustainable agriculture in view of the threat of climate change:

- sustainably increasing food security by increasing agricultural productivity and incomes;
- building resilience and adapting to climate change;

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<sup>120</sup> Food and Agriculture Organization of the United Nations, ‘Post 2015 and the Sustainable Development Goals’ (Issue Paper, FAO, 2014) < <http://www.fao.org/post-2015-mdg/14-themes/climate-change/en/>>.

<sup>121</sup> Richard a. Matthew and Anne Hammill ‘Sustainable development and climate change’ (2009) 85 (6) *International Affairs* 1127; M. D. Young, ‘Overview: The integration of agriculture and environmental policies’ in M. D. Young (ed) *Towards Sustainable Agricultural Development* (Belhaven Press, 1991)337.

<sup>122</sup> Food and Agriculture Organization of the United Nations (FAO), *Climate Smart Agriculture Sourcebook* (2013)2.

<sup>123</sup> *Ibid* ix.

<sup>124</sup> Food and Agriculture Organization of the United Nations (FAO), ‘“Climate-Smart” Agriculture Policies, Practices and Financing for Food Security, Adaptation and Mitigation’ (Report, FAO, 2010).

<sup>125</sup> Food and Agriculture Organization of the United Nations (FAO) ‘“Climate-Smart” Agriculture: Policies, Practices and Financing for Food Security, Adaptation and Mitigation’ (2010).

- developing opportunities for reducing greenhouse gas emissions compared to expected trends.<sup>126</sup>

The CSA approach requires synergies or integration of abovementioned three defining agendas and accessing climate finance for effectively addressing sustainable development of agriculture in climate change context.<sup>127</sup>

The CSA approach proposes possible options for reorienting existing sustainable agricultural strategies to respond to changing conditions, as well as to provide innovative policy and financing tools to implement them.<sup>128</sup> This approach also strongly focuses on synergies between food security, climate change adaptation and mitigation, as well as estimating costs and trade-offs between mitigation and other objectives to capture mitigation co-benefits and associated financing.<sup>129</sup> For CSA to become a reality, an integrated approach responsive to specific local conditions is required. Integrated landscape approaches and coordination across agricultural sectors is essential to capitalize on potential synergies, reduce trade-offs and optimize the use of natural resources and ecosystem services.<sup>130</sup>

The CSA approach has been reviewed through some studies and the results showed that the adoption of CSA strongly promotes the participation and sustainable use of resources. However, this approach is weak in managing the aspects of compensation and equal distribution of benefits and costs.<sup>131</sup> Meinzen-Dick, Bernier and Haglund emphasised the development of an inclusive institution to support innovations to deliver promised benefits through CSA.<sup>132</sup> They also recommend a norm of deliberate inclusivity when considering institutions and programs designed to facilitate bringing benefits from CSA in an equitable fashion. Moreover, a positive commitment and resources for the goal of inclusivity are

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<sup>126</sup> Food and Agriculture Organization of the United Nations (FAO), *Knowledge on Climate Smart Agriculture* <<http://www.fao.org/3/a-i4226e.pdf>>.

<sup>127</sup> Ibid 3; FAO, above n 122, ix.

<sup>128</sup> Grainger-Jones, 'Climate-smart smallholder agriculture: What's different?' (IFAD Occasional Paper No. 3, International Fund for Agricultural Development, 2011); FAO, above n 126.

<sup>129</sup> FAO, above n 126.

<sup>130</sup> Food and Agriculture Organization of the United Nations (FAO), *Success Stories on Climate Smart Agriculture* (2014) 5[2-3].

<sup>131</sup> Fanen Terdool and Olalekan Adekola, 'Assessing the role of climate-smart agriculture in combating climate change, desertification and improving rural livelihood in Northern Nigeria' (2014) 9(15) *African Journal of Agricultural Research* 1180.

<sup>132</sup> Ruth Meinzen-Dick, Quinn Bernier and Eric Haglund, 'The Six "INS" of Climate Smart Agriculture: Inclusive Institutions for Information, Innovation, Investment, and Insurance' (CAPRI Working Paper No. 114, International Food Policy Research Institute, 2012)2.

required in both decision making and in assessment of the cost and benefits of programs and policies.<sup>133</sup>

In contrast to the CSA approach the Climate and Development Knowledge Network (CDKN) has recently introduced a new approach, Climate Compatible Development (CCD).<sup>134</sup> This approach considers climate change as part of mainstreaming development responses and policy in addition to adaptation and mitigation programmes and policies. In this concept, triple win strategies are also sought like CSA that result in low emissions, build resilience and promote development simultaneously.<sup>135</sup> The CDKN approach outlines some principles that are very close to procedural principles of SD. They include:

- Governance: legislative, institutional architecture, regulatory and accountability measures, that can take advantage of combining efforts to lower emissions or keep emissions low, build resilience, grow and develop;
- Integration of resilience and risk into development and low emissions growth strategies at all scales;
- Ensuring pro-poor approach;
- Planning for the threats and opportunities associated with a new international, climate-related development landscape.<sup>136</sup>

ActionAid also contested the CSA approach on the ground that it would place more burdens on smallholder farmers, especially on poor and women farmers to satisfy the increasing global demands for food supply and carbon storage when they have little access to resources.<sup>137</sup> This NGO has suggested another alternative approach - Climate Resilient Sustainable Agriculture (CRSA) for sustainable agricultural development in climate change context.

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<sup>133</sup> Ibid 3.

<sup>134</sup> Climate and Development Knowledge Network (CDKN), 'Defining climate compatible development' (Policy Brief, Climate and Development Knowledge Network, 2010)1.

<sup>135</sup> Valerie Nelson and Richard Lambol, 'Exploring the links between Climate Change, Agriculture & Development: A briefing paper' (Briefing Paper, Natural Resources Institute, University of Greenwich 2012) 2-7.

<sup>136</sup> CDKN, above n 134 < [http://cdkn.org/wp-content/uploads/2012/10/CDKN-CCD-Planning\\_english.pdf](http://cdkn.org/wp-content/uploads/2012/10/CDKN-CCD-Planning_english.pdf)>5.

<sup>137</sup> Youjin B. Chung and Christina Billingsley, 'Climate resilient sustainable agriculture: a real alternative to false solutions' (Background Paper, ActionAid International, 2012)4, 12.

Action Aid promotes a three-pronged approach to CRSA:

- 1) Conducting participatory appraisals to identify local conditions, potentials and challenges for making the transition to agro-ecological farming systems;
- 2) Identifying, documenting, testing, and disseminating local knowledge and alternative agro-ecological practices and encouraging local innovation;
- 3) Promoting long-term sustainability through appropriate agricultural research and extension services, help farmers adapt to climate change, and build on and reinforce local knowledge.<sup>138</sup>

The CRSA approach emphasises giving priority to gender equity and women's rights in a subsidy regime. The approach also includes the promotion of conservation and sustainable resource management programmes in addition to support of livelihood diversification and strengthening smallholders' access to markets and support for farmers' organisations and collective action. The CSRA approach also involves re-orienting agricultural research and extension services support to smallholder farmers in promoting SDA in the context of climate change.<sup>139</sup>

The CRSA seeks national governments to preparation of national strategies, promotion of sustainable agriculture through incentives and phasing out input subsidy schemes for agrochemicals in cooperation with donors and international institutions.<sup>140</sup> The governments should play a role to increase public spending on extension services and training, particularly for women, to encourage local innovation and to reduce the dependency on external inputs.<sup>141</sup>

The CRSA approach emphasised providing loans to smallholder farmers at low interest rates, support to community level food banks, local facilities creation and farmers access to resources. CRSA approach also suggested that extensive land reforms are needed to ensure rights to tenure for smallholders and particularly for women farmers. There is also need to strengthen social safety net programmes, employment guarantee schemes, and public food

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<sup>138</sup> Ibid 14.

<sup>139</sup> Ibid 18.

<sup>140</sup> Ibid.

<sup>141</sup> Ibid.



distribution systems to support smallholder farmers practicing sustainable agriculture.<sup>142</sup> The CRSA approach also finds recent market based initiatives for climate change mitigation, such as soil carbon markets incompatible with SDA and suggests that this system would be biased against smallholder farmers and leads to significant misallocation of public resources for climate change adaptation and agricultural development.<sup>143</sup>

The review of abovementioned three approaches, suggested by different institutions, reveals that they are not complete in addressing SDA. While the CSA approach suggested principles concentrate more on food security and adaptation, mitigation is seen as a co-benefit and voluntary in terms of activities. CSA does not consider social, institutional and governance issues. On the other hand, the CDKN approach, Climate Compatible Development (CCD) focuses on governance and integration of mitigation, adaptation and development strategies. However, it does not include profitability and productivity issues. CCD also does not suggest any direction for trade-offs between competing interests. The third approach, CRSA has more emphasis on a technological solution and a human rights approach but does not place priority on integration and governance. Although these discrete approaches are not complete for guiding the SDA process in a climate change context, they provide important insights for SDA principles. The final section of this chapter will present the SDA principles recognized through international and comparative consensus and practices.

### *E Discussion on Principles of Sustainable Development of Agriculture*

While the FAO introduced the concept of sustainable agriculture for the first time in 1991 it also discussed some basic propositions of this approach. The suggested propositions include among others, guaranteeing food security and improvement of current living standards and safeguarding the development of future generations through establishing harmonious mechanisms for agriculture and economic development.<sup>144</sup>

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<sup>142</sup> Ibid 18-19.

<sup>143</sup> Ibid 9-11.

<sup>144</sup> Food and Agriculture Organization of the United Nations (FAO), *Building a Common Vision for Sustainable Food and Agriculture* (2014) 6.

The FAO argues that to be sustainable and productive, ‘agriculture will need to adopt a single, systems vision that maximizes synergies, mitigates negative externalities and minimizes harmful competition between its sectors.’<sup>145</sup> In accommodating SD in the agriculture sector the FAO proposed the following five principles for guiding the strategic development of new approaches and the transition to sustainability:

- Principle 1: Improving resource use efficiency

FAO suggested that the productivity improvement needs to be pursued through the balanced use of resources and inputs. The ecosystem has to be exploited for harnessing its potential benefit efficiently so that few resources are exhausted and more benefits can be accrued from the same unit of resources. It helps reduce pressure on ecosystems as well as increase profitability.<sup>146</sup>

- Principle 2: Conservation, protection and enhancement of natural resources

There is a link between degradation of agro-ecosystems and food supply and income of the poor. Degraded ecosystems increase costs of production, reduce profits as more resources produce less benefits. It increases the vulnerability of poor people and ultimately further degrades the ecosystem. Poverty traps also exist as the poor manage fewer resources to fulfil their needs. Direct action is therefore needed to conserve and protect ecosystems and enhance or rehabilitate the degradation. This effort, however, has to be based on site specific resource constraints and improvement targets for a particular region. There is a need to also strengthen the institutions for creating and coordinating an enabling environment and managing incentives for guiding the ecosystem exploitation in the desired direction.<sup>147</sup>

- Principle 3: Protection and improvement of livelihoods and social well-being

SDA must benefit those whose livelihoods depend on access to agro-ecosystems, their participation in input and output markets and the opportunity for livelihood improvement. It is important to provide secure and equitable access to the natural resources poor people need

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<sup>145</sup> Ibid 20.

<sup>146</sup> Ibid.

<sup>147</sup> Ibid 23-24.

to produce food for their consumption and to increase their income. Vulnerable groups, especially women, deserve special attention as they have disproportionately low levels of resource ownership. Institutional and policy transformation are also necessary to facilitate participation, capacity building and to reduce the trade-offs between social and environmental objectives.<sup>148</sup>

- Principle 4: Enhancement of resilience of people, communities and ecosystems, especially to climate change and market volatility

Resilience in the context of sustainable food and agriculture improves the ‘capacity of agro-ecosystems, farming communities, households or individuals to maintain or enhance system productivity by preventing, mitigating or coping with risks, adapting to change and recovering from shocks.’<sup>149</sup>

- Principle 5: Good governance in both the natural and human systems

There is a need to pay adequate attention to social and economic dimensions in the context of domination of abstract environmental concerns for effective implementation. In this case, good governance facilitates ensuring social justice, equity and a long-term perspective on the protection of natural resources. The substantive principles require ‘enabling policy, legal and institutional backup for maintaining balance between private and public sector initiatives, and ensuring accountability, equity, transparency and the rule of law.’<sup>150</sup>

There is a need to ensure the right to own and manage the natural resources people rely on for their livelihoods through appropriate rights recognition legislation and allocation policies.<sup>151</sup> The consensus building process around sustainability goals, trade-offs and their implementation has to be broad based and transparent. This process requires an effective institution along with operational programmes and instruments to ensure enforcement and compliance with requirements and commitments.<sup>152</sup> Sustainable development of agriculture as a process requires development of compatible technical, policy, evidence-based planning, governance and financing frameworks in a dynamic process of innovation.<sup>153</sup>

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<sup>148</sup> Ibid 28.

<sup>149</sup> Ibid.

<sup>150</sup> Ibid 30.

<sup>151</sup> Ibid.

<sup>152</sup> Ibid.

<sup>153</sup> Food and Agriculture Organization of the United Nations (FAO), *The Post-2015 Development Agenda and the Millennium Development Goals* (2015) <<http://www.fao.org/post-2015-mdg/14-themes/sustainable-agriculture/en/>>.

The FAO suggested that these five substantive principles need the support of operational principles to assist their effective implementation.<sup>154</sup> The transition to sustainability needs political commitment and people's participation along with their knowledge and persuasion. The substantive principles also need evidence-based planning, public participation, developing innovative approaches and solutions, and designing incentive tools for supporting changes in food and agricultural systems.<sup>155</sup> In addition to abovementioned substantive principles the FAO has also identified the following four broad principles for procedural management of sustainable agricultural development. These principles are similar to procedural principles of sustainable development with minor exceptions.<sup>156</sup>

- Principle 6: Integration across scales and disciplines

Like SD, the promotion of SDA also requires integration of dimensions of development across different scales. An integrated national approach can facilitate collaboration among sectors and warrants compatibility of sectoral policies and programmes.<sup>157</sup> A local-level shared vision along with a national approach would integrate different sources of knowledge, perception and values. The successful transition to SDA needs integrated knowledge, experience and perspectives of scientists, administrators, jurists, economists, managers and agricultural producers. Integration also requires the cross scale of interactions, paying particular attention to trans-boundary impacts, and interactions between governance systems, at the inter-sectoral level and across jurisdictional scales, from local to global.<sup>158</sup>

- Principle 7: Participative processes and partnership

When development decisions are implemented by the agricultural producers, policy makers need to facilitate the process through legal and institutional frameworks, incentives, as well as infrastructure and support services.<sup>159</sup> Implementation at ground level needs ownership by communities. Participation is needed to empower stakeholders, build consensus and improve the knowledge base. An early and transparent recognition of conflicting interests and views of stakeholders and their effective management help convert the risk into an opportunity. When agriculture needs stakeholders to work together in new ways, partnerships will bring

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<sup>154</sup> FAO, above n 144, 32.

<sup>155</sup> Ibid.

<sup>156</sup> Ibid 34-36.

<sup>157</sup> Ibid 34.

<sup>158</sup> Ibid 34-35.

<sup>159</sup> Ibid 35.

them together. Partnerships should leverage expertise and resources and win support for innovation and investment.<sup>160</sup>

- Principle 8: Transparency

The process for administering SDA needs to be transparent. The complete process needs to be documented and made easily available to stakeholders. It helps stakeholders manage uncertain, complex and competing situation.<sup>161</sup> It is suggested that in conjunction with active participation, ‘transparency and accountability contribute to credibility, legitimacy and trust.’<sup>162</sup>

- Principle 9: Adaptability

The sustainable development approaches to be followed as strategy through different institutions require flexibility to adapt to changing conditions, adjustment for local adaptation and mainstreaming impact, risk and performance assessment.<sup>163</sup>

Apart from FAO proposed SDA principles, other institutions and scholars also propose some SDA principles. In respect to promotion of sustainable use of agricultural biodiversity, some supportive principles were discussed in 2010 in the fourteenth meeting of Subsidiary Body on Scientific, Technical and Technological Advice of the *Convention of Biological Diversity*.<sup>164</sup> These principles include the principle of resource-use efficiency, internalizing negative environmental externalities of agriculture into the value of product and services, incentivising farmers for the provisioning of environmental services, increasing investments in agriculture including agricultural research as well as empowering poor farmers in developing countries through reorganizing extension services, ensuring smallholders’ right to land tenure, providing market access, and empowering women.<sup>165</sup> These principles are aligned with fourteen principles proposed in Addis Ababa Principles for Biodiversity.<sup>166</sup>

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<sup>160</sup> Ibid.

<sup>161</sup> Ibid 36.

<sup>162</sup> Ibid.

<sup>163</sup> Ibid.

<sup>164</sup> *Convention on Biological Diversity*, opened for signature 5 June 1992, 1760 UNTS 79 (entered into force 29 December 1993)art 6; Biodiversity International, above n 8.

<sup>165</sup> Biodiversity International, above n 8, 6.

<sup>166</sup> *Addis Ababa Principles and Guidelines, Convention of Biological Diversity*  
< <https://www.cbd.int/sustainable/addis.shtml>>.

Gerber added land ethics in SDA approach and proposed five principles for SDA.<sup>167</sup> The principles are similar to the FAO proposed principles such as protection of integrity of natural systems, judicious and efficient use of resources, ensuring profitability of farmers and improving the quality of life of individuals and communities. The principle of land ethics requires considering sustainable agricultural development system as a dynamic community of soil, water, air and biotic species. Land ethics manages to keep the soil capacity to produce sustainably for generations.<sup>168</sup>

The primary goal of sustainable agriculture is to supply enough food for present and future generations.<sup>169</sup> However, in supplying or producing food agriculture has to pass through a complex set of factors that include natural ecosystems as well as economic and social systems. The simple paradigm of sustainable agriculture therefore becomes complex as it has to integrate the goals of maintaining environmental health, economic profitability, and social and economic equity. The main priorities therefore extend from optimizing food production to boost the incomes of farmers and maintain vibrant rural economies along with equity both in social and economic terms.<sup>170</sup> Moreover, the following initiatives are needed for promotion of sustainable development of agriculture:

- establishment of a reasonable market and agricultural subsidy mechanisms;
- basic and vocational education for young adults;
- effective agricultural instruction and environmental education agencies; and
- two way communication mechanisms.<sup>171</sup>

The discussion on SD principles and planning for sustainable development illustrated in the previous two chapters and discussion on SDA principles presented above cover the basic SD principles and planning processes needed to achieve the SDGs. The planning for SD needs to address the substantive principles of SD as well as guiding principles to promote

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<sup>167</sup> John M Gerber, 'Farmer participation in research: a model for adaptive research and education' (1992)7(3) *American Journal of Alternative Agriculture* 118.

<sup>168</sup> John M Gerber, 'Farmer participation in research: a model for adaptive research and education' (1992)7(3) *American Journal of Alternative Agriculture* 118-121 quoted in A. Chel and G. Kaushik, 'Renewable energy for sustainable agriculture' (2011) 31 *Agronomy for Sustainable Development* 92.

<sup>169</sup> Jingzhu Zhao, Qishan Luo, Hongbing Deng and Yan Yan, 'Opportunities and Challenges of Sustainable Agricultural Development in China' (2008) 363(1492) *Philosophical Transactions: Biological Sciences* 893.

<sup>170</sup> The United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), *Sustainable Agriculture and Food Security in Asia and the Pacific* (2009)10-12.

<sup>171</sup> Yan Ma, Liding Chen, Xinfeng Zhao, Haifeng Zheng and Yihe Lü, 'What motivates farmers to participate in sustainable agriculture? Evidence and policy implications' (2009)16(6) *International Journal of Sustainable Development & World Ecology* 374.

development agendas. However, the procedural principles that guide the operationalization of these substantive principles are also important in this research as the study is an attempt to propose reform in the development planning framework of Bangladesh government to advance the SDA agenda. Therefore, this study concentrates on the principles so that a holistic approach can be taken to examine the development planning frameworks. With the goals of this research the following section has prepared a set of major principles that are critical to promote SDA through development planning frameworks.

*F Proposal for a Set of SDA Principles Relevant to National Development Planning Frameworks*

The above discussion concludes that SDA follows the three dimensional prime approach of sustainable development. However, the SD approach for the agriculture sector concentrates more on resource use as production is dependent on these resources.<sup>172</sup> In order to identify a set of principles for the SDA, it needs to be considered whether the principles suggest for agricultural development support the economy, people's livelihood and agricultural ecosystem. Given poverty eradication to a great extent depends on improvement of this sector, it also causes degradation of natural resources and creates other social disorders that hinder the progress to achieving sustainable development. The principles suggested by different scholars for the SDA therefore need to be refined in light of the current poverty situation and state of natural resources.

The most striking issue revealed from the suggested principles is that the polluter pays principle has not been suggested by any of the institutions or scholars for SDA promotion. Rather, incentives are prescribed for persuasion for efficient and sustainable use of natural resources for agricultural purposes. This approach seems justified, because the basic necessity is addressed through this sector and the exploitation of natural resources and use of external inputs such as chemical fertiliser is used to supplement the capacity of natural resources to produce. Pesticides are also used to control the harmful insects that diminish the

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<sup>172</sup> Manfred Bötsch and Vinzenz Jung, 'Sustainability: Guiding principle for Swiss agricultural policy in Sustainable Agriculture – From Common Principles to Common Practice' in Fritz J, Häni, László Pintér and Hans R. Herren, 'Sustainable Agriculture from Common Principles to Common Practice' (Proceedings and outputs of the first Symposium of the International Forum on Assessing Sustainability in Agriculture, International Institute for Sustainable Development and Swiss College of Agriculture, 2006) 80.

production volume. It has to be considered in the context of human need for food and nature's capacity to produce that food.

The basic needs of poor people have to be met through productivity improvement by using natural resources however these resources need to be used rationally along with judicious use of external inputs in the context of declining natural resources and their sustainable use. Therefore, the principles identified by different scholars and institutions bear justification. However, there is a need to refine these principles to some extent to make them customized to examine in each specific country's context. The following proposal will do that, based on the principles discussed above and in the previous two chapters. The principles are categorised under two headings, substantive and procedural to make the distinction between contents of plans and process to implement those plans. There are some overlapping principles between these two sets, however the separated sets are proposed to help facilitate the discussion.

## 1 *Substantive Principles*

### *(a) Principle 1: Maintenance and Improvement of Eco-integrity, Biological Diversity and Improving Resource Use Efficiency*

Agriculture needs to conserve, protect and manage the eco-integrity of natural systems in a rational, sustainable and safe way for continual regeneration of natural resources. In this context, the goal needs to be to decrease the rate of natural degradation, reversing and rehabilitation of degraded natural resources of agricultural ecosystems.<sup>173</sup> Agriculture systems need to encourage resource conservation and renewable energy use as well as avoid using harmful non-renewable inputs. The systems also need to encourage judicious use of recyclable resources so that natural processes can complete recharge for further use.<sup>174</sup> For productivity improvement and profitability the ecosystem has to be exploited efficiently so that few resources are exhausted and more benefits can be accrued from same unit of

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<sup>173</sup> FAO, above n 144, 23-24; International Union for Conservation of Nature and Natural Resources (IUCN), Draft International Covenant on Environment and Development (Environmental Policy and Law Paper No. 31 Rev. 4, 5<sup>th</sup> ed, 2010)art 2; *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002).

<sup>174</sup> The World Conservation Union (IUCN), United Nations Environment Programme (UNEP) and World Wide Fund for Nature (WWF), *Caring for the Earth: A Strategy for Sustainable Living* (1991)27-28.



resources.<sup>175</sup> Agricultural activities have to be undertaken in the premise of carrying capacity of the ecosystem,<sup>176</sup> and to improve the capacity of agro-ecosystems through research and other processes to maintain or enhance system productivity by preventing and mitigating risks, adapting to change, and recovering from shocks.<sup>177</sup> Biodiversity also needs to be protected at temporal and spatial scales,<sup>178</sup> and genetic improvement processes need to be cautiously handled so that they do not become harmful to human and eco-systems.<sup>179</sup>

*(b) Principle 2: People centric Development for Addressing Poverty, Employment and Livelihoods*

SDA has to pursue benefits for the whole population and especially the eradication of poverty.<sup>180</sup> When the eradication of poverty is a precondition for sustainable development, there is also a need to emphasise enhancing the quality of life and reducing disparities in standards of living.<sup>181</sup> People will need to be at the centre of development and the goals also should facilitate employment for their livelihoods as well as food security for present and future generations.<sup>182</sup> The agricultural system needs to ensure profitability for improvement of livelihoods and advance sustainable practices.<sup>183</sup> However, the transition to sustainable practices may require incentives to implement this transition if when it does not achieve profit or there is an uncertainty about the likelihood of profit. It is also necessary to change the production and consumption patterns of people.<sup>184</sup>

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<sup>175</sup> FAO, above n 144, 20.

<sup>176</sup> Geoffrey T. McDonald, 'Planning as Sustainable Development' (1996) 15 *Journal of planning Education and Research* 229.

<sup>177</sup> IUCN, UNEP and WWF, above n 174, 27-28.

<sup>178</sup> Convention of Biological Diversity, opened for signature 5 June 1992, 1760 UNTS 79; 31 ILM 818 (entered into force 29 December 1993) art 6; *Implementation Principles of the Convention of Biological Diversity* < <https://www.cbd.int/ecosystem/principles.shtml> > principle 8.

<sup>179</sup> *World Charter for Nature*, GA Res 37/7, UN GAOR, 48<sup>th</sup> plen mtg, UN Doc A/Res/37/7(28 October 1982) principle 4.

<sup>180</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 1, 5; International Union for Conservation of Nature and Natural Resources (IUCN), Draft International Covenant on Environment and Development (Environmental Policy and Law Paper No. 31 Rev. 4, 5<sup>th</sup> ed, 2010) art 12.

<sup>181</sup> IUCN, above n 180.

<sup>182</sup> *Declaration on the Right to Development*, GA Res 41/128, GAOR, 41<sup>st</sup> sess, 97<sup>th</sup> plen mtg, UN Doc A/RES/41/128(4 December 1986); FAO, above n 144, 28.

<sup>183</sup> IUCN, UNEP, WWF, above n 174, principle 8.

<sup>184</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 8.

*(c) Principle 3: The Principle of Equity*

The equity principle is to be applied to ensure the fair entitlement of natural resources between and within the generations.<sup>185</sup> Intra-generational equity is to be maintained to ensure equitable treatment of different sectors, classes, regions or states in use of natural resources. However, intergenerational equity encourages conserving the diversity of resources for its undamaged transfer to future generations.<sup>186</sup> SDA needs to consider livelihood development of poor people and to provide secure and equitable access to the natural resources that poor people need to produce food for their consumption and to increase income. Vulnerable groups, especially women, deserve special attention as they have disproportionately low levels of resource ownership.<sup>187</sup>

Public spending needs to be increased in education and training particularly for disadvantaged groups and women to improve their entitlements and resilience capacity. Providing access to resources, including loans to smallholder farmers and especially to women and marginal groups and support for community based facilities, are also important to build resilience. Extensive land reforms are needed to ensure rights to tenure for smallholders and particularly for women farmers to improve their entitlements and thereby their resilience to withstand shocks.<sup>188</sup>

*(d) Principle 4: The Precautionary Principle*

Preventing environmental harm should be the first policy to adopt wherever possible as protection of environmental degradation is better achieved through prevention rather than by attempting to remedy or compensate for such harm.<sup>189</sup> A precautionary approach is therefore needed to be employed to avoid human activity that causes or may cause damage to natural ecosystems and diminishes their capacity to produce, creates hazards for human health and imbalances the atmosphere.<sup>190</sup>

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<sup>185</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 3, 4; *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002)2.

<sup>186</sup> *The Earth Charter*, The Earth Charter Commission (2000)

<[http://www.earthcharterinaction.org/invent/images/uploads/echarter\\_english.pdf](http://www.earthcharterinaction.org/invent/images/uploads/echarter_english.pdf)> principle 4-8.

<sup>187</sup> FAO, above n 144, 28.

<sup>188</sup> Chung et al, 137, 6-19.

<sup>189</sup> The Earth Charter Commission above n 186.

<[http://www.earthcharterinaction.org/invent/images/uploads/echarter\\_english.pdf](http://www.earthcharterinaction.org/invent/images/uploads/echarter_english.pdf)>principle 6.

<sup>190</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 15, 17.

Decision-making processes need to include a precautionary approach to risk management based on the latest independent scientific judgments, however scientific uncertainty should not be a cause for inaction.<sup>191</sup> It is also important to follow proportionality when certain human activities definitely produce some environmental degradation and in such cases preference must be given to the alternative option that is the least harmful to the environment.<sup>192</sup> Plans need to be based on evidence, clear criteria and well-defined goals. Environmental impact assessment procedures need to be included to avoid crises and to take measures beforehand.<sup>193</sup>

## 2 Procedural Principles:

### (a) Principle 1: Integration across Scales and Disciplines

SDA requires integration among the social, economic and environmental objectives of agricultural development in the decision-making process for harmonious management of trade-offs.<sup>194</sup> Integration is also needed for balancing long and short-term economic, environmental, social and equity conflicts and conflict between sub-sectors of agriculture and among other sectors.<sup>195</sup> Integration of knowledge, experience and perspectives of scientists, administrators, jurists, economists, managers and agricultural producers are also necessary. Integration also needs to be between different scales of geography, between governance systems, at the inter-sectoral level and from local to global jurisdictional scales. The integration needs to consider an approach combining top-down and bottom-up processes at different levels.<sup>196</sup>

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<sup>191</sup> *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 4.

<sup>192</sup> IUCN, above n 180, arts 6-8.

<sup>193</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 15, 17; *Convention on Environmental Impact Assessment in a Transboundary Context*, signed 10 September 1997, 1989 UNTS 309 (entered into force 10 September 1997); United Nations World Commission on Environment and Development, *Report of the World Commission on Environment and Development: Our Common Future*, Annex-1 to document A/42/427 - Development and International Co-operation: Environment (1987) principle 16; *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 4; *Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 17.

<sup>194</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 4; *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 7.

<sup>195</sup> Australian Government, Department of Environment, *National Strategy for Ecologically Sustainable Development - Part 1 Introduction* (1992) < <https://www.environment.gov.au/about-us/esd/publications/national-esd-strategy-part1>>.

<sup>196</sup> FAO, above n 144, 34-35; CDKN, above n 134, 5; FAO, above n 153.

There is a need for the integration of resilience and risk issues including mainstreaming climate change into agricultural development planning and low emissions growth strategies at all scales.<sup>197</sup> Social assistance programmes need to be integrated with other safety net measures for the profitability of farmers. Subsidies and other incentives mechanisms, along with the market system, also need to be integrated for sustainable production assistance.<sup>198</sup>

*(b) Principle 2: The Principle of Good Governance*

Good governance facilitates social justice, equity and a long-term perspective on the protection of natural resources. For effective implementation of substantive principles, the good governance mechanisms include appropriate policy, legal and institutional frameworks that can promote equity, accountability, and the rule of law.<sup>199</sup> There is a need to ensure people's right to own and manage the natural resources they rely on for their livelihoods through appropriate rights recognition legislation and allocation policies.<sup>200</sup> It is necessary to improve the situation for efficient use, conservation and protection of these resources. There is also a need to build consensus around sustainability goals, trade-offs and means to achieve them through broad-based and transparent processes. The processes require effective institutions along with operational programmes and instruments for ensuring enforcement and compliance with requirements and commitments.<sup>201</sup>

The decision-making process needs institutional backup through legislation<sup>202</sup> as well as operational flexibility, autonomy and creativity. Parliament's role in shaping the development goals and strategies and overseeing their implementation is significant,<sup>203</sup> and there is a need to extend state mandate to the local planning process.<sup>204</sup> Citizens' access needs to be extended to effective judicial or administrative procedures to challenge decisions of the government and other actors.<sup>205</sup>

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<sup>197</sup> *United Nations Framework Convention on Climate Change*, concluded 9 May 1992 1771 UNTS 107; S. Treaty Doc No. 102-38; U.N. Doc. A/AC.237/18 (Part II)/Add.1; 31 ILM 849 (1992) (entered into force 21 March 1994).art 3.

<sup>198</sup> United Nations Development Programme (UNDP), *International Guidebook of Environmental Finance Tools: A Sectoral Approach Sustainable Agriculture* (UNDP, 2012)44.

<sup>199</sup> FAO, above n 144, 30.

<sup>200</sup> *Final Declaration*, International Conference on Agrarian Reform and Rural Development(adopted 10 March 2006)art6, 14.

<sup>201</sup> FAO, above n 144, 30.

<sup>202</sup> *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002)principle 6; *Monterrey Consensus of the International Conference on Financing for Development*, United Nations Department of Economic and Social Affairs (adopted on 22 March 2002) para 11.

<sup>203</sup> *Draft Istanbul Declaration, Renewed and strengthened global partnership for the development of least developed countries* United Nations, Agenda item 8, UN Doc A/CONF.219/L.1 (12 May 2011) art16.

SDA also needs good governance mechanisms that adopt democratic and transparent decision-making procedures, financial accountability, combating corruption, respecting the principle of due process, and implementing a standard public procurement approach.<sup>206</sup> Good governance also calls for socially responsible investments. Governance mechanisms need to strengthen evidence based planning and designing incentive tools for supporting changes in food and agricultural systems.<sup>207</sup> The decision making for development efforts needs to include monitoring and evaluation systems.<sup>208</sup> In the case of monitoring and assessment of SDA outcomes, the procedure must to be open and transparent and adopt effective communication mechanisms.<sup>209</sup>

*(c) Principle 3: Right to Participative Processes and Access to Information and Justice*

While the implementation of agricultural decisions needs to be facilitated through legal and institutional frameworks, incentives, rights, and infrastructure and support services, it also needs ownership of communities at grassroots level.<sup>210</sup> Citizen participation is necessary to resolve conflicts, to empower stakeholders, build consensus and improve the knowledge base. The citizens need to be empowered with the rights of participation including access to information despite complexities of issues and involvement of costs.<sup>211</sup> Early and transparent participation process may help convert risk into opportunity. It may create partnership among stakeholders and help find ways to implement decisions.<sup>212</sup>

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<sup>204</sup> Philip Berke and Maria Manta, 'Planning for Sustainable Development: Measuring Progress in Plans' (Working Paper, Lincoln Institute of Land Policy, 1999) 12-13.

<sup>205</sup> United Nations Commission on Sustainable Development, 'Report of the Expert Group Meeting on Identification of Principles of International Law for Sustainable Development' (Background Paper, Commission on Sustainable Development, 1996) arts 32-50.

<sup>206</sup> *Monterrey Consensus of the International Conference on Financing for Development*, United Nations Department of Economic and Social Affairs (adopted on 22 March 2002).

<sup>207</sup> FAO, above n 144, 32.

<sup>208</sup> Geoffrey T. McDonald, 'Planning as Sustainable Development' (1996) 15 *Journal of planning Education and Research* 230.

<sup>209</sup> Hardi and Terrence Zdan (eds), *Assessing Sustainable Development: Principles in Practice* (The International Institute for Sustainable Development, 1997) principle 6-8.

<sup>210</sup> FAO, above n 144, 35.

<sup>211</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF.151/26 vol. 1 (1992) principle 10, 20, 21, 22; *Johannesburg Declaration on Sustainable Development*, A/CONF. 1999/20 (4 September, 2002) art 26; *Agenda 21: Programme of Action for Sustainable Development*, UN GAOR, 46th sess, Agenda Item 21, UN Doc A/Conf.151/26 (14 June 1992) art 2.6, 8.5, 14, 32; *The future we want*, GA Res 66/288, UN GAOR, 66<sup>th</sup> sess, 123<sup>rd</sup> plen mtg, Agenda Item 19, UN Doc A/RES/66/288 (11 September 2012); *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 5.

<sup>212</sup> International Institute for Sustainable Development, *Sustainability Assessment and Measurement Principles* (2008) principle 6, 8. <<https://www.iisd.org/measure/principles/progress/bellagiostamp/principles.asp>>; Hardi and Zdan, above n 209, principle 9, 10.

The success of any state intervention for conservation, protection or rehabilitation of degradation primarily depends on active participation of citizens including women, youth and other vulnerable and minority groups.<sup>213</sup> Their voice needs to be heard and accommodated for productive use of people's collective capacities to work together to solve common agricultural and natural resource problems.<sup>214</sup>

Public participation needs to be facilitated through citizens' timely and comprehensive access to information on economic and social policies regarding the sustainable use of natural resources and the protection of the environment at a reasonable cost.<sup>215</sup> It also needs to be extended to access to effective judicial or administrative procedures to challenge decisions of the government and other actors and to claim compensation in the case of damages.<sup>216</sup>

The substantive and procedural principles illustrated above have been influenced by the SD principles, principles of sustainable development planning and principles for SDA. There are overlaps and synergies but some flexibility is necessary when the SD approach is applied in the context of agriculture in developing countries.

Two important principles of SD and climate change planning, common but differentiated responsibilities (CBDR) and the polluter pays principle have not been added in the proposed set of SDA principles. The justification behind the exclusion is that the proposed set of principles will be the evaluative criteria explicitly for evaluating the transposition of these SDA principles in development planning frameworks for the promotion of agriculture for the benefit of millions of poor farming families. The context behind the application of CBDR and polluter pays principles is basically the volume and extent of pollution generated in different states by their citizens and organisations. Agriculture as a provider of food and livelihoods for poor people in developing countries has, however, not been explicitly included in the intervention areas because the volume of pollution created from this sector is perhaps considered tolerable due to its basic need-providing function.

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<sup>213</sup> *Rio Declaration on Environment and Development*, UN Doc A/CONF151/26 vol. 1 (1992) principle 10.

<sup>214</sup> IUCN, above n 180, 42, art 15.

<sup>215</sup> *New Delhi Declaration of Principles of International Law Relating to Sustainable Development*, International Law Association (ILA), ILA Resolution 3/2002, 6 April 2002, UN Doc. A/CONF.199/8 (9 August 2002) principle 5.

<sup>216</sup> IUCN, above n 180, art 15.5.

In such a situation, employing the CBDR, which has been prescribed basically for assigning responsibility to developed countries for their historical pollution, may not seem suitable in the context of developing countries. Moreover, the developed countries have also been using these inputs and they are also similarly responsible for pollution from agriculture. While this principle assigns responsibility to take action for environmental improvement according to the capacity of people, the poor and vulnerable farmers are perhaps not the right group for this purpose. Rather, the special needs of poor and people in special, vulnerable and emergency situations should be supported to increase their entitlements instead of imposing burdens to rehabilitate the environment. However, the responsibility for observing sustainable production and consumption patterns can be given to all, and poor and vulnerable people can be assisted to implement the objectives.

The polluter pays principle is also not recommended in the context of the low volume of pollution from agriculture as well as to facilitate livelihood security of millions of poor farmers. In this case, development planning can consider motivating people through demonstration and awareness building against the unsustainable use of inputs for food production. Pollution prevention can be supported by use of administrative steps along with these development interventions.

The agriculture sector, especially in a developing country context where it is a source of livelihood for the majority of the population, needs to be considered with some flexibility. It is aligned with the global trading mechanisms and other international rules. The sector has to be supported for the eradication of poverty by using its comparative strength. The development efforts for this sector need to be contextualized considering the dependency of poor people on natural resources that is fundamental to food production and to improving the poverty scenario in these countries. The low resilience and entitlement of poor people, especially farming communities in developing countries is also an issue to consider in proposing principles for sustainable development of agriculture. This is more relevant in the current world situation where the rich and developed countries heavily subsidize their food producing large-scale farms in the name of the protection of ecosystem services. However, when SDA is considered in a climate change context, sustainable development becomes more challenging. The sector then may have to add some responsibilities to farmers to address mitigation and adaptation on top of maintaining improved productivity in a warmer world.

## *G Conclusion*

SDA is a necessity in the context of maintaining natural resources capacity to produce over the generations, support the livelihoods of people, their wellbeing and to keep agriculture profitable and ensure equity over the generations in resources and income distribution. It is more relevant to a country like Bangladesh where natural resources constraints are significant, climate change threats are tremendous, poverty eradication is the priority issue and agriculture is considered one of the most important means to poverty alleviation. It is more relevant as the production process in many cases is unsustainable and profitability of farmers to a greater extent depends on government support.

While governments in different countries support the agriculture sector in different ways, through subsidy to inputs and safety net programmes and development programmes and projects, policy planning is significant to guide government development intervention. The responsibility given to governments for the promotion of SDA through global consensus is found to be justified. The government is the best coordinating agency because many of the issues such as equity and ecological integrity are not addressed by the markets. Moreover, governance, citizen participation and integration issues are also perhaps best facilitated by the government legal frameworks and resources. Checks and balances are necessary through improved governance, as recognised in SD, planning and SDA principles.

Governments are responsible for SDA agendas based on the SDGs. However, the aspirational goals and targets of SDGs are needed to be customised according to each country's circumstances. This customisation process to reach these goals needs to be done based on the principles of SD. This study has therefore provided SDA principles based on SD and planning principles. It is intended to direct and evaluate the government's development planning frameworks.

The seven SDA principles suggested above are not an exhaustive list. They are the major principles that can be used as standard approaches and evaluative criteria for national development planning frameworks. These principles are interrelated and need to be pursued in an integrated manner. Two important principles of SD, common but differentiated responsibilities and the polluter pays principle, although not suggested as principles for SDA can be supported by planning frameworks through adding motivational, education and demonstrative activities.



## CHAPTER V

### EXAMPLES OF APPROACHES FOR SUSTAINABLE AGRICULTURAL DEVELOPMENT PLANNING IN INDIA

#### *A Introduction*

The primary goal for development planning in different countries is economic growth, along with improvement in other sectors, including environment, implemented through different processes using regulatory frameworks,<sup>1</sup> as well as schemes or projects with fiscal incentives.<sup>2</sup> Nevertheless, the interventions for agricultural development are quite similar in that states play a significant role in agricultural development irrespective of their development status or economic policies.<sup>3</sup> Now, the question of state intervention through the planning process becomes more critical in both developed and developing countries when agriculture needs to pursue sustainable development in a post SDG era, and more particularly in a climate change context.<sup>4</sup>

The principles of SDA identified in previous chapter have provided evaluative criteria for reviewing state planning frameworks. This chapter will answer the fourth question of this research, that is – ‘how adequately are SDA principles and approaches applied to national planning frameworks for agriculture in India?’ This chapter aims to explore the attributes of

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<sup>1</sup>See, eg, Department for Communities and Local Government of the UK, *National Planning Policy Framework* (2012); Department for Communities and Local Government of the UK, *National Planning Practice Guidance* (2014); *Planning Act 2008*(UK); *Localism Act 2011*(UK); *Growth and Infrastructure Act 2013*(UK); *Infrastructure Act 2015* (UK); Government of England, Department for Transport, *National Policy Statement for National Networks* (2014).

English planning practices are based on legislative and other regulatory frameworks. The above mentioned law and regulatory documents are some of them.

<sup>2</sup>Albert Waterston, *Development Planning: Lessons of Experience* (John Hopkins Press, 1969)33-36;

See, eg, Department of Environment, Food and Rural Affairs, Natural England, *Catchment Sensitive Farming: reduce agricultural water pollution*(9 September 2014) <<https://www.gov.uk/guidance/catchment-sensitive-farming-reduce-agricultural-water-pollution>>.

Catchment Sensitive Farming (CSF) project is operated by Natural England in partnership with the Environment Agency and the Department for Environment, Food and Rural Affairs, Government of England;

Indian Council of Agricultural Research, National Agricultural Innovation Project< <http://naip.icar.gov.in/about.htm>>.

National Agricultural Innovation Project facilitates an accelerated and sustainable transformation of the Indian agriculture to facilitate poverty alleviation and income generation.

<sup>3</sup>*Common Agricultural Policy Basic Payment and Support Schemes Regulations 2014*(England).

In England, agricultural development is promoted through Common Agriculture Policy that directly supports farmers through cash incentives as well as implementing rural development projects.

United Nations Environment Programme (UNEP), *Success Stories: Organic Agriculture in Cuba*

<<http://www.unep.org/greeneconomy/SuccessStories/OrganicAgricultureinCuba/tabid/29890/Default.aspx>>.

Cuban government supported organic farming through state policy and direct assistance to farmers' groups.

<sup>4</sup> United Nations Department of Economic and Social Affairs, *Addressing climate change in national sustainable development strategies – common practices* (2007) 7.

Indian planning frameworks through identifying the dimension and extent of application of SDA principles in planning frameworks in India. Given the limitations of discrete examples presented in the last chapter about some sustainable agricultural practices in different countries, the example of planning practices of India has been proposed to explore ideas for planning frameworks for the promotion of SDA in Bangladesh. The Indian planning experience, along with other discrete examples, will assist the researcher in articulating the transformation proposal in planning frameworks of Bangladesh for promotion of SDA.

### *B Justification for Reviewing Indian Approaches and Issues*

The experience of India is presented in this chapter to examine how the approaches and principles of SDA are embedded in country practices through the development planning process. Although there are differences in development and governance structures between India and Bangladesh,<sup>5</sup> some common features between these two countries justify a review of the Indian example.

The development planning processes in India and Bangladesh started with the establishment of a centralised planning system that continues to this day and follows similar processes and patterns for development.<sup>6</sup> The development priorities in these two countries include agriculture, right from the beginning and continuing over the decades. Their ultimate development objective is to ensure equitable development and food security is a common concern to these two countries.<sup>7</sup>

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<sup>5</sup> Government of India, *Governance and Administration* (2016) < <https://india.gov.in/topics/governance-administration>>; *Constitution of the People's Republic of Bangladesh* art1.

India is having a parliamentary form of government, which is federal in structure with unitary features. Indian federal government is termed as Union and States under the Union are called Pradesh.

Bangladesh is having a parliamentary form of government which is unitary in characteristics.

The World Bank, *Data* (2014) < <http://data.worldbank.org/indicator/NY.GDP.PCAP.CD>>.

In Bangladesh GDP per capita in 2014 in current US \$ price was 1086.8 against 1581.5 in India. Agriculture value added in terms of GDP in India was 17.8 per cent while in Bangladesh it was 16.1 per cent in 2014;

<sup>6</sup> Government of India, *Resolution No.1-P(C)/50* (1950)

< <http://planningcommission.gov.in/aboutus/history/PCresolution1950.pdf>>;

Government of India, Planning Commission, *Functions of Planning Commission*(2014)

< <http://planningcommission.gov.in/aboutus/history/function.php?about=funcbody.htm>>;

Government of the People's Republic of Bangladesh, Ministry of Cabinet Affairs, *Organisation of the Bangladesh Planning Commission* (1972);

Government of the People's Republic of Bangladesh, *Planning Commission Handbook* (1983)1-2.

<sup>7</sup> See, eg, Government of India, Planning Commission, *First Five Year Plan* (1951)ch 9; Government of India, Planning Commission, *Twelfth Five Year Plan* (vol II, 2013)1;

Government of the People's Republic of Bangladesh, Planning Commission, *First Five Year Plan* (1973)83; Government of the People's Republic of Bangladesh, Planning Commission, *Seventh Five Year Plan* (2015)xlviii.

Agriculture is still the main livelihood of the majority of the population in India and Bangladesh.<sup>8</sup> The agricultural development interventions in these two countries include government assistance for improved seed, irrigation, fertiliser and other infrastructure. These two countries favour food self-sufficiency policies to avoid any crisis of food shortages for their huge populations.<sup>9</sup> Climate sensitivity is similar in both Bangladesh and India. The climate change interventions in these two countries also have common features that mostly concentrate on adaptation.<sup>10</sup> The legal structure of these two countries is similar as they inherited it from English Common Law. These common features have been the background reasons for choosing India as it is also a developing and mixed economy country, like Bangladesh.

The discussion on development planning frameworks in India includes a brief discussion on the evolution of the planning process in India as well as the substantive and procedural aspects of the Indian agricultural planning approach. Since agricultural planning is carried out as a part of the national development planning process, the discussion on agricultural planning will centre on the general planning approach of the country. The discussion will also specifically include agricultural planning approaches in a climate change context as agricultural development in India has been closely linked with sensitivity to climate change. This chapter will conclude with a discussion on Indian approaches in pursuing the SDA principles suggested in last chapter and identifying some examples that could be relevant to Bangladesh planning frameworks.

### *C Planning Framework for Sustainable Development of Agriculture (SDA) in India*

The approach of development planning in the public sector in India includes economic and socio-political exercises to translate the country's goals into reality at the different levels of government. Development Planning frameworks also include the creation of institutions and procedures for the effective implementation of planning, including fiscal planning, such as arranging funds for programme implementation. Planning frameworks include some

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<sup>8</sup> Government of India, Planning Commission, *Twelfth Five Year Plan (2012-2017)* vol II, 1; Government of the People's Republic of Bangladesh, Finance Division, *Bangladesh Economic Review (2015)*28.

<sup>9</sup> Government of India, Planning Commission, *Twelfth Five Year Plan (2012-2017)* vol II; Government of the People's Republic of Bangladesh, Ministry of Agriculture, *Medium Term Strategy and Business Plan (2013)*xvii.

<sup>10</sup> Government of India, Planning Commission, *Twelfth Five Year Plan (2012-2017)* vol II, 1; Government of the People's Republic of Bangladesh, Planning Commission, *Seventh Five Year Plan (2015)*415-419.

environmental planning such as adaptation planning for climate change.<sup>11</sup> Although agriculture is a delegated and State affair in the Indian federal government framework, agricultural planning has been practiced at central (federal), Pradesh (State) and local levels. Given the diversity in agriculture at the State level, the States basically follow the nationally identified goals at federal level. This section will present an overview of agricultural development planning that India has undertaken primarily at the federal level and which has influenced State and local level agricultural development agendas. Additionally, the discussion also includes State and local level planning processes to examine the internalisation process of substantive issues adopted at federal level into practices at State and local level.

### *1 Evolution and Approaches of Development Planning in India*

The Indian development planning process is basically operated for the welfare of the people as stipulated in the *Constitution of India*.<sup>12</sup> In pursuing the citizens' welfare agenda, the planning process, as a part of executive function, started with a central top down planning mechanism.<sup>13</sup> The Planning Commission (PC) was established as a central advisory body in 1950, immediately after independence from colonial rule.<sup>14</sup> This PC has recently been replaced by another institution, the 'National Institution for Transforming India (NITI) Aayog'. However, the government did not change the basic proposition of central decision making as well as the planning process and development priorities of the country.<sup>15</sup>

Although the government of India formally started development planning in the early 1950s, planning had started crystalizing primarily in 1930s, in the pre-independence period with the ideology of welfare of people, decentralization and industrialization for rapid development.<sup>16</sup>

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<sup>11</sup> Viswambhar Nath, *Administration and Development Planning in India* (Concept Publishing, 2011)xix-xx.

<sup>12</sup> *Constitution of India* art 37-48 A.

<sup>13</sup> *The Government of India (Allocation of Business) Rules 1961* (India) 1882(S) 163.

Viswambhar Nath, *Administration and Development Planning in India* (Concept Publishing, 2011)9.

<sup>14</sup> Government of India, *Resolution* No.1-P(C)/50 (1950)

< <http://planningcommission.gov.in/aboutus/history/PCresolution1950.pdf>>.

<sup>15</sup> Government of India, Cabinet Secretariat, *Resolution* No. 511/2/1/2015-Cab (2015)

< [http://niti.gov.in/mgov\\_file/cabinet-resolution\\_EN.pdf](http://niti.gov.in/mgov_file/cabinet-resolution_EN.pdf)>.

The central level committee headed by the Prime Minister will take decision for the development of the country.

<sup>16</sup> P B Desai, *Planning in India 1951-1978* (Vikas Publishing House 1979)16; Bipan Chandra, *The Colonial Legacy in Bimal Jalan* (ed) *The Indian Economy: Problems and Prospects* (Penguin Books, 2004)30; Manjulika Koshal and Rajindar K. Koshal, 'Gandhi's Influence on Indian Economic Planning: A Critical Analysis' (1973) 32(3) *American Journal of Economics and Sociology* 313.

The efforts include preparation of '*A Brief Memorandum Outlining a Plan of Economic Development for India*' popularly known as *Bombay Plan* by a group of industrialists in 1944. At the same time, Shriman Narayan Agarwal proposed a plan

The pre-independence planning was also facilitated by different interim institutions, such as the National Planning Committee constituted in 1938, and a Planning Advisory Board, established in October 1946, by the interim government of India.<sup>17</sup> Following the recommendation of the Planning Advisory Board, the government of India established the PC in 1950 and delegated the responsibilities to undertake resource assessment, formulation of plans, defining priorities, identifying bottlenecks and recommending ways and institutions for the successful implementation of plans.<sup>18</sup>

Although some discrete informal plans were prepared emphasising the role of the state in promoting socio-economic development before the official launching of the five-year plan in 1951,<sup>19</sup> the government of India over the last sixty-five years, have mostly relied on medium term plans of five-years duration. The government also translates them into annual development programmes for implementation through projects along with different incentive mechanisms. The country has so far prepared twelve five-year plans. In between different five-year plans, there have been some plan-holiday years when the government could not prepare plans due to domestic and international crises.

Agriculture has always received top priority in different plan periods, except in the second plan in the early 1960s.<sup>20</sup> This sector has been considered critical for facilitating food security as well as generating employment and supporting other sectors to grow over the decades.<sup>21</sup> Despite the shift in country policy from just ‘development’ to ‘defence and development’, the priority on agriculture continued into the early 1970s and afterwards because of its contribution in assisting other sectors to advance.<sup>22</sup>

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based on Gandhi’s ideology of Sarvodaya. M N Roy drafted the ‘Peoples Plan’ in 1945 that favoured state control on agricultural production and distribution. Jaiprakash Narayan also put forward a development plan in 1950 based on the Gandhian ideology. This plan gave priority on agriculture and small and cotton industries sector, proposed implementation of land reforms, and decentralized participatory planning.

<sup>17</sup> P B Desai, *Planning in India 1951-1978* (Vikas Publishing House, 1979)14.

<sup>18</sup> S. A. Palekar, *Development Administration* (PHI Learning, 2012)71-72; Government of India, *Resolution No.1-P(C)/50 (1950)*[2]-[7].

<sup>19</sup> Bipan Chandra, ‘The Colonial Legacy’ in Bimal Jalan (ed), *The Indian Economy: Problems and Prospects* (Penguin Books, 2004)23-31; A. H. Hanson, *The Process of Planning: A Study of India’s Five Year Plans, 1950-1964* (Oxford University Press, 1966)152-175.

A Plan of Economic Development of India popularly known as Bombay Plan was initiated in 1944-1945, Gandhi ideology based plan was proposed by Shriman Narayan Agarwal in 1944 and the People’s Plan was introduced in 1945 based on Marxist socialism and finally the ‘Sarvodaya Plan’ was initiated in 1950 by Jaiprakash Narayan.

<sup>20</sup> Government of India, Planning Commission, *Second Five Year Plan* (1956)ch 2[6].

<sup>21</sup> Government of India, Planning Commission, *Third Five Year Plan* (1961)ch 4[1-4].

<sup>22</sup> Government of India, Planning Commission, *Fourth Five Year Plan* (1970)preface, [1.17], [1.63], [7.16]-[7.17]; Government of India, Planning Commission, *Fifth Five Year Plan* (1974-1979)[1.10], [2.1]-[2.10],[ 2.36], [ 2.46].

In the 1980s, due to the priority of rapid growth in the economy, poverty alleviation and employment generation were paired with rapid agricultural development for rapid growth in food-grains production.<sup>23</sup> The objectives of planned periods in the 1990s also included rapid economic growth, and high growth of the agriculture and manufacturing sectors. The planned activities were complemented with fiscal and economic reforms.<sup>24</sup>

Given the shift in development in the late 1990s, from ‘only growth’ to ‘growth with social justice and equality’, the major focus was on the facilitation of private sector development. However, the government’s role was dominant in social development and the agriculture and rural development sectors were given the highest priority for their contribution to poverty alleviation, employment generation and equity.<sup>25</sup>

The planning approaches changed in the early 2000s and the government relied on indicative planning that emphasised inducement to private sector through policy planning and incentives rather than a controlled production approaches.<sup>26</sup> The government also focused on agricultural development as the prime mover for the economy and attached importance on governance and decentralised planning for empowering citizens through involving them in the decision making process.<sup>27</sup>

There have been more shifts in planning goals since the middle of the last decade. The government now aims for faster and more inclusive growth through reducing poverty and creating employment opportunities as well as bringing equity and promoting environmental sustainability.<sup>28</sup> The major thrusts are achieving high rates of agricultural growth, reducing poverty and unemployment, increasing investment in rural infrastructure, environmental sustainability and better service delivery.<sup>29</sup>

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<sup>23</sup> Government of India, Planning Commission, *Sixth Five Year Plan* (1980-1985)[3.9-3.10]; Government of India, Planning Commission, *Seventh Five Year Plan* (1985-1990)[3.1].

<sup>24</sup> Government of India, Planning Commission, *Eighth Five Year Plan* (1992-1997)[1.4.1]-[1.4.2], [1.4.25].

<sup>25</sup> Government of India, Planning Commission, *Ninth Five Year Plan* (1997-2002)[1.5]-[1.6], [1.10]-[1.13].

<sup>26</sup> Government of India, Planning Commission, *Tenth Five Year Plan* (2002-2007)vol 1[2.48], vol 2[1.1.11]-[1.1.15]  
Sectoral allocation of public investment is not completely deterministic.

<sup>27</sup> Government of India, Planning Commission, *Tenth Five Year Plan* (2002-2007)vol 1[6.15]

<sup>28</sup> Government of India, Planning Commission, *Twelfth Five Year Plan* (2013) vol I, 3.

<sup>29</sup> *Ibid* 35-36.

This general background of planning efforts since the independence of India reveals that although the government of India started with production-centric plans, it has finally moved to an indicative planning approach.<sup>30</sup> Now, the emphasis is on creating an institutional and regulatory environment for the promotion of private sector development with indicative plans. Nonetheless, private sector promotion is also complemented with the government's direct intervention in different critical sectors, such as education and agriculture.<sup>31</sup>

There are debates about the success of planning in the development of India.<sup>32</sup> In respect to general framework of planning, Kamath found faulty economic analysis and inappropriate policies led to failure of development planning in India.<sup>33</sup> Srinivasan also contended that the five-year plans as a coordinated document failed to formulate a set of coordinated policies.<sup>34</sup> Bhagawati and Desai however found that the inefficiency was inevitable in the early periods of planning when government was learning by doing. They suggested the mix-economy planning that promoted equity and growth together.<sup>35</sup> Chakravarty also similarly contended that a visible hand of planning was needed along with indicative planning in India.<sup>36</sup> He has emphasised integration between regional planning and sectoral planning to attain the goal of economic growth with equitable development.<sup>37</sup> Despite the inefficiencies and gaps in planning process, the government of India still practices development planning in the context of changing priority and areas of intervention. The present five-year plan is not scrapped even after changes in the structure of Planning Commission.<sup>38</sup> Nevertheless, the government's promotional role in agriculture has increased and become diversified. The government's direct intervention in the form of development projects, assistance through subsidies, credits

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<sup>30</sup> Government of India, Planning Commission, *Ninth Five Year Plan (1997-2002)* vol I [1.61].

<sup>31</sup> Government of India, above n 28, xi-xv.

<sup>32</sup> CUTS International Public Policy Centre, *Re-inventing the Planning Commission* (2014)3-5.

<sup>33</sup> Shyam J. Kamath, 'The Failure of Development Planning in India' in Peter J. Boettke, *The Collapse of Development Planning* (New York University Press, 1994)133.

<sup>34</sup> T. N. Srinivasan, 'Development Strategy: The State and Agriculture since Independence' (Working Paper No 363, Stanford Centre for International Development, 2007)5.

<sup>35</sup> Jagdish N. Bhagawati and Padma Desai, *India: Planning for Industrialization* (Oxford University Press, 1970) 500.

<sup>36</sup> Sukhamoy Chakravarty, *Development Planning: The Indian Experience* (Clarendon Press, 1987) 6.

<sup>37</sup> *Ibid* 52.

<sup>38</sup> The high GDP growth rates and declining poverty in recent decades under the indicative planning frameworks may be an issue for justification of development planning to promote sustainable development and sustainable development of the agriculture sector.

at subsidised rates, insurance and other financial and technological assistance have continued and there are no signs of withdrawal from this interventionist approach.<sup>39</sup> The following section will present an overview of the dynamism in agricultural planning agendas to explore the changes in planning agendas for the promotion of this sector. This review intends to explore the issues that received priority in the planning periods for development of this sector.

## 2 Substantive Aspects of Indian Agricultural Development Planning Approach

Despite the declining contribution to national GDP from half to one seventh, agriculture is still the backbone of the Indian economy. It is the major contributor to food security in India as well as providing self-sufficiency in food grains.<sup>40</sup> The sector still employs about 48 per cent of the workforce and almost 70 percent of the rural population.<sup>41</sup>

The government's responsibility to promote the welfare of the people is extended with the constitutional responsibility of the government to organize agriculture.<sup>42</sup> The central government of India strongly promotes an agricultural planning agenda for the overall development of the country.<sup>43</sup> The State governments and local governments undertake agricultural planning as mandated by the constitution as a part of economic and social planning that falls under a concurrent list.<sup>44</sup> This agricultural development process has been pursued through institutional and infrastructural changes along with direct intervention of the government over the last six and half decades.<sup>45</sup>

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<sup>39</sup> *The National Food Security Act 2013* (India) Act No 20 of 2013; *Marrakesh Agreement Establishing the World Trade Organisation*, opened for signature 15 April 1994, 1867 UNTS 410 (entered into force 1 January 1995) annex 2, Domestic Support: The Basis for Exemption From the Reduction Commitments [2-5].

The economic growth in India in recent decades was exemplary. The high growth rate is seen when the government of India combines the market mechanisms and state driven development planning. The government of India appealed to the WTO to receive a waiver in subsidy provisions in agriculture for low income and resource poor farmers. It took advantage of the peace clause in the *Agriculture Agreement* of the WTO on public stockholding and made rights based arrangements to ensure food security for its poor citizens through legislative provisions.

<sup>40</sup> Government of India, Planning Commission, *Tenth Five Year Plan* (2002-2007) vol II, 513.

<sup>41</sup> Government of India, Ministry of Agriculture, *Year-end Review for the Ministry of Agriculture for the Year 2014-15* (2014) < <http://pib.nic.in/newsite/PrintRelease.aspx?relid=113870>>.

<sup>42</sup> *Constitution of India*, art 48.

<sup>43</sup> See, eg, Government of India, Planning Commission, *Twelfth Five Year Plan* (2013) vol II, 1-51; *Constitution of India*, Sch 7.

<sup>44</sup> *Constitution of India*, Sch 7; *Constitution of India*, art 243 G, Sch 11.

<sup>45</sup> T. N. Srinivasan, 'Development Strategy: 'The State and Agriculture since Independence' (Working Paper No 363, Stanford Centre for International Development, 2007)4-5.



Agricultural planning in India has been classified by Tripathi and Prashad in four eras, based on broad policy interventions over the last six and a half decades. In the first phase, from 1947 to the mid-sixties, agricultural policy passed through different reforms including land and institutions, development of infrastructure and strengthening cooperative credit institutions,<sup>46</sup> along with some specific programmes for community and area development.<sup>47</sup>

Although agriculture has always been a matter of the private sector, the government of India took responsibility for providing the basic services for this sector, such as irrigation, power, roads and communications.<sup>48</sup> It also provided finance, marketing support and technical advice through different agencies. Given this promotional role, the government also expected that the farmers would also contribute to the development of the country.<sup>49</sup> During this period, the government planned to achieve self-sufficiency in food grains and an increase in agricultural production to support industry and for exports to grow.<sup>50</sup>

The second phase of agricultural development started from the fourth plan in the late-sixties and continued up to 1980. The government concentrated on the growth rate of agriculture as well as self-sufficiency in food in the context of a food shortage and crisis in agriculture due to natural disasters and other socio-political problems. The new agricultural strategy adopted in this period involved large government support for seed distribution of high-yielding crop varieties, extensive use of fertilisers, major irrigation support and soil conservation.<sup>51</sup> While agrarian reform in this period was of less importance, the policies during this phase focused more on promotion of capitalist agriculture.<sup>52</sup>

The third phase of agricultural planning includes period from 1980 to 1991. During this period there was also emphasis on strengthening power and transport infrastructure as well as absorption of new technology for accelerated food production and raising productivity. The goal of extension of the green revolution to different regions of India for reducing regional

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<sup>46</sup> Amarnath Tripathi and A.R. Prasad, 'Agricultural Development in India since Independence: A Study on Progress, Performance, and Determinants' (2009)1(1) *Journal of Emerging Knowledge on Emerging Markets* 66.

<sup>47</sup> Ibid.

<sup>48</sup> Government of India, Planning Commission, *First Five Year Plan (1951-56)* ch 14[4], [14].

<sup>49</sup> Government of India, above n 42, ch 14[14].

<sup>50</sup> Government of India, above n 21, ch 4[1].

<sup>51</sup> Tripathi and Prasad, above n 46.

<sup>52</sup> V. M. Rao, 'Agricultural Development with a Human face: Experiences and Prospects' (1996)31(26) *Economic and Political Weekly* A-55.

imbalances passed through a confrontation between increased funding demand in social sectors against heavy subsidies and investment in the agriculture sector.<sup>53</sup>

The fourth phase of agricultural development covers the period from 1991 to the present. During this period of economic reform the sector did not involve any major policy changes.<sup>54</sup> During this era of indicative planning, the government has supported the agriculture sector with substantial investments in research and infrastructure, especially irrigation, rural roads and the creation of organised markets.<sup>55</sup> Given the significant role of the agriculture sector in the promotion of the livelihoods of the majority of the population, it pursues rapid and inclusive, SD,<sup>56</sup> along with sustainable use of natural resources, increasing cropping intensity and diversification.<sup>57</sup>

During this fourth phase of planning, the Indian government for the first time initiated an *Agriculture Policy* in July 2000 that emphasised sustainable agricultural development and placed a high level of importance on improving the soil fertility, efficient utilization of water and motivating the farming community to sustainable farming practices.<sup>58</sup>

The government has recently declared the plan for preparation of a new agriculture policy and constituted a task force for recommending the mechanisms for raising agricultural productivity and making farming profitable.<sup>59</sup> The preliminary paper prepared by the task force identified some issues for sustainable growth and the promotion of a second Green Revolution in India. These identified areas are - raising productivity, ensuring remunerative prices for farmers and reforms in the area of land leasing and titles. It has also suggested the promotion of well-tested genetically modified (GM) technologies along with appropriate

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<sup>53</sup>Ibid A-57; Amarnath Tripathi and A R Prasad, 'Agricultural Development in India since Independence: A Study on Progress, Performance, and Determinants' (2009)1(1) *Journal of Emerging Knowledge on Emerging Markets* 66 quoting S. N Mishra. and Ramesh Chand, 'Private and Public Capital Formation in Indian Agriculture: Comments on Complementarity Hypothesis and Others'(1995) 30(24),*Economic and Political Weekly* A-64 – A-79.

<sup>54</sup>Tripathi and Prasad, above n 46.

<sup>55</sup> Government of India, above n 30, [1.11], [4.1.20], [4.1.67].

<sup>56</sup> Government of India, Planning Commission, *Faster, Sustainable and More Inclusive Growth-An Approach to the Twelfth Five Year Plan*(2011)68.

<sup>57</sup> Government of India, above n 26, vol 2, 561-562; Government of India, Planning Commission, *Eleventh Five year Plan* (2007-12) vol 3, 38-40.

<sup>58</sup> V. P. S. Arora, 'Agricultural Policies in India: Retrospect and Prospect' (2013)26(2) *Agricultural Economic Research Review* 137.

<sup>59</sup> Press Trust of India, 'NITI Aayog panel on farm sector to submit report by month-end', *The Economic Times* (online),11 February 2016  
<<http://economictimes.indiatimes.com/news/economy/agriculture/niti-aayog-panel-on-farm-sector-to-submit-report-by-month-end/articleshow/50950317.cms>>.

safeguard measures<sup>60</sup> as well as direct cash support for disaster-affected farmers and the promotion of crop insurance.<sup>61</sup>

Given the government's plan for promotion of agriculture against its declining contribution to GDP and recent low growth, Chand questioned the effectiveness of different government interventions in agricultural development in India.<sup>62</sup> Tripathi and Prashad argued that the policy interventions are made at different levels without any timeline for implementation.<sup>63</sup> The recent policy direction also lacks any integrated agenda for addressing climate change threats in the agriculture sector.

Given this general background of agricultural planning in India, the next section will discuss the development agenda's mainstreaming aspects. The section will concentrate on the process of planning for adoption of substantive issues in plans and the procedure for their implementation, monitoring and evaluation. As agricultural development issues are pursued as a part of the national level frameworks, the next section presents the outline of the mainstreaming process in the national frameworks. Moreover, the State and local level planning processes are also discussed briefly to provide a holistic picture of development planning process in India.

### *3 Procedural Aspects of Indian Agricultural Development Planning Approach*

The Indian planning process is administered by the executive organ of the government at central and State level.<sup>64</sup> Despite the absence of any direct legislative foundation, the role and responsibilities of the planning organisations have been included in the 'Allocation of Business (AOB)' of the government.<sup>65</sup> The local level planning being practiced in different tiers of the local governments has however held the constitutional mandate.<sup>66</sup>

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<sup>60</sup> Government of India, NITI Aayog, 'Raising Agricultural Productivity and Making Farming Remunerative for Farmers' (An Occasional Paper, 2015) 40-44.

<sup>61</sup> Ibid 44.

<sup>62</sup> Ramesh Chand, 'Emerging Trends and Issues in Public and Private Investments in Indian Agriculture: a State wise Analysis' (2001)56(2) *Indian Journal of Agricultural Economics* 182.

<sup>63</sup> Tripathi and Prashad, above n 46.

<sup>64</sup> S. A. Palekar, *Development Administration* (PHI Learning, 2012)72-74.

<sup>65</sup> *The Government of India (Allocation of Business) Rules 1961* (India) 1882(S) 163.

<sup>66</sup> *The Constitution (Seventy-third Amendment) Act 1992*(India); *The Constitution (Seventy-fourth Amendment) Act 1992*(India).

The basic activities of Indian planning process include structuring the broad goals and outlining a framework for development and the necessary supporting policy environment.<sup>67</sup> It includes allocation of resources among sectoral activities and plan implementation through public sector projects and their monitoring and evaluation. The following sub-sections will discuss this process of planning, including plan preparation, implementation, monitoring and evaluation mechanisms.

*(a) Preparation of Plan*

*(i) Central and State Level Plan Preparation*

The preparation of a five-year plan at the federal and State level follows a similar process.<sup>68</sup> At the central or national level, plan preparation is done by the Planning Commission (PC). At the State level, the responsibilities of planning, implementation monitoring and evaluation are vested in the State's planning organisation.<sup>69</sup>

At the national level, the plan preparation process starts with the formulation of an Approach Paper by the PC in consultation with relevant stakeholders. After its approval by the National Development Council (NDC) headed by the Prime Minister, it becomes the vision document for central and State level planning.<sup>70</sup> Background studies are also conducted simultaneously at the central level planning organisation to examine the status of the economy and to find out social, institutional and economic drawbacks.<sup>71</sup>

In preparing the plans, the central ministries and State planning agency follow the parameters of the approved Approach Paper and also consider the reports of the working groups in detailing their plans. The district plans are also integrated with State plans. The PC reviews the plans and programmes of the central government ministries and State plans and prepares a comprehensive plan in consultation with stakeholders, including the Members of Parliament and the private sector. The draft plan is then placed with the NDC after approval by the full PC and the Central Cabinet. It is finally sent to national parliament for its consideration and

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<sup>67</sup> Palekar, above n 64,105.

<sup>68</sup> Ibid 95.

<sup>69</sup> Ibid 95-96.

<sup>70</sup> Ibid 84.

<sup>71</sup> Government of India, Planning Commission, *Reference Material Notes on the Functioning of Various Divisions* (2010)36-37.

approval.<sup>72</sup> The finalisation of a five-year plan at State level is completed after the central plan is approved and the State prepared plan is adjusted in line with national priorities and resource capacity.<sup>73</sup>

The annual plan is prepared for execution of five-year plans. It is a yearlong resource distribution plan of five year plans, although is not exactly one fifth of the five-year plan. Annual allocation varies based on the annual breakdown of project costs. It presents a detailed description of the allocation of resources between the central government and State governments and for different sectoral activities in the government. This annual plan is sanctioned with the approval of the national budget.<sup>74</sup>

#### *(ii) Local Level Plan Preparation*

Local level planning with three tier governments started in the 1990s with the legislative foundation of decentralized planning.<sup>75</sup> Most importantly, the law entrusted development functions to local governments and empowered the rural local governments (titled as Panchayat) to undertake development activities including the preparation of plans and implementation of schemes for economic development and social justice.<sup>76</sup> The constitutional amendments were translated into decentralized planning guidelines in the eleventh five-year plan period, when the plan stressed inclusiveness in growth processes.<sup>77</sup>

Similar to central and State level planning, the local governments also prepare five-year and annual action plans for implementation. The preparation of a five-year plan is similar to those of central and State levels. It starts with the preparation of a vision document called a district stock-taking report. Once it is approved by the District Planning Committee (DPC) it works as the basis, along with the governmental funding envelope, to each planning unit of the district for their priority setting.<sup>78</sup> The local government institutions then prepare their plans

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<sup>72</sup> Palekar, above n 64,37-38.

<sup>73</sup> Ibid 101.

<sup>74</sup> Government of India, above n 68, 38.

<sup>75</sup> Abdul Qaiyum, 'Decentralized Planning in India: Issues and Options' (2004)1(2) *ITPI Journal* 2-3.

<sup>76</sup> It is seen that the Eleventh Schedule of the *Constitution of India* has included twenty nine areas for intervention and it includes crop agriculture, livestock, fisheries and its allied activities, such as, minor irrigation, water management, social forestry, land improvement, rural electrification, non-conventional energy sources, poverty alleviation programme, education, small industries, health and sanitation, maintenance of community assets and others.

<sup>77</sup> Government of India, Planning Commission of India, *Manual for Integrated District Planning* (2008) 5.

<sup>78</sup> Ibid 55-56.

through negotiation among different committees and consultation with citizens.<sup>79</sup> The draft plans prepared at different levels in a district are consolidated at district level by the DPC through integrating the sectoral and spatial aspects of urban and rural plans.<sup>80</sup> This plan is then disseminated to the local government institutions to use to start the process of implementation.<sup>81</sup>

There are some complexities and grey areas in the integration of the district plan with the State plan. While State plans reflect long term goals for development, priority at local level varies and their plans usually prioritize their immediate needs. There are also questions about the power and responsibilities of these local government bodies.<sup>82</sup> While the legislative recognition of local level planning extends the opportunity to local people to be integrated with the development process of the government,<sup>83</sup> the devolution of funds and transfer of functions and functionaries to this local government institution vary widely across the States.<sup>84</sup>

#### *(b) Plan Implementation, Monitoring and Evaluation*

The implementation of a plan is the responsibility of the central ministries and the State and local government institutions. The implementation is done through different projects and programmes.<sup>85</sup> At the local level, the local government institutions implement the part of national and State projects following prescribed guidelines of the project.<sup>86</sup> However, the local level programmes follow the guidelines approved by the concerned local government bodies.<sup>87</sup>

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<sup>79</sup> Ibid 81.

<sup>80</sup> Ibid 114.

<sup>81</sup> Ibid 122-126.

<sup>82</sup> United Nations Development Programme, Human Development Resource Centre 'Decentralization in India: Challenges and Opportunities' (Discussion Paper Series 1)15-19.

<sup>83</sup> Government of India, Ministry of Panchayati Raj, *Annual Report 2013-14*

< <http://www.panchayat.gov.in/documents/10198/363038/ANNUL%20REPORT%20ENGLISH%202013-14.pdf>>.

<sup>84</sup> UNDP, above n 82, 2.

<sup>85</sup> Government of India, Planning Commission, *Background Information of Planning Commission* (2014)

< [http://planningcommission.gov.in/background\\_note\\_on\\_New\\_Institution.pdf](http://planningcommission.gov.in/background_note_on_New_Institution.pdf)> 2-3.

<sup>86</sup> See, eg, Government of India, Department of Agriculture, Cooperation and Farmers Welfare, *Sub-Mission on Agricultural Mechanisation: Operational Guidelines* (2014)1.

<sup>87</sup> See, eg, Surjit Singh, A.J. James, V Ratna Reddy, D.K. Marothia and Janet Gardener, 'IWRM and Local Level Planning in Rajasthan' (Special study series, Rajasthan Study 2, European Union State Partnership Programme, 2012)15.

The local irrigation projects are managed in accordance with local guidelines prepared under the *Andhra Pradesh Farmers' Management of Irrigation Act 1997* (India).

Projects are prepared by the administrative ministries or departments and approval is given by different authorities in accordance with the delegation of power issued by the central and State governments.<sup>88</sup> The role of the central planning institution or State planning machineries is limited to approval for inclusion of projects in five-year plans, appraising the project and sending opinions on project proposals before a final appraisal by the nominated authority.<sup>89</sup> In respect of project appraisal and approval, environmental impact assessment plays an important role and this appraisal is done by the Department of Environment in accordance with specified assessment procedures.<sup>90</sup>

The final decision for project approval at the central level is taken either by the Administrative Ministry, by the Ministry of Finance and Administrative Ministry jointly or by the Cabinet/Cabinet Committee on Economic Affairs with a few exceptions for special sector projects such as nuclear energy and defence.<sup>91</sup> At the State level, the approval authority is either the Administrative Ministry or the Ministry of Finance. The power of this approving authority changes from time to time and the delegation of power is revised by the Ministry of Finance.<sup>92</sup>

Project implementing agencies and project authorities are primarily responsible for project monitoring.<sup>93</sup> In addition to project authority and district level agencies, the Programme Implementation Wing of the Ministry of Statistics and Programme Implementation also monitors key priority sector projects. The evaluation of plan implementation is done by the Programme Evaluation Organisation at central level and State level evaluation

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<sup>88</sup> Government of India, Ministry of Finance, *Delegation of Powers for Appraisal and Approval of Public Funded Plan Schemes/Projects*, OM No. 24(35)PF-II/2012( 29 August 2014); See, eg, Government of West Bengal, Finance Department, *Compendium of Important Government Orders of the Finance Department* (2013)3-28.

<sup>89</sup> Government of India, Ministry of Finance, *Delegation of Powers for Appraisal and Approval of Public Funded Plan Schemes/Projects*, OM No. 24(35)PF-II/2012( 29 August 2014); See, eg, Government of West Bengal, Finance Department, *Compendium of Important Government Orders of the Finance Department* (2013)3-28; Government of India, Planning Commission, *Project Appraisal Procedure in the Planning Commission during 12<sup>th</sup> Five Year Plan*, P.C. U.O. No. O-14015/01/2011-PAMD(17 July 2013); Government of India, Planning Commission, *Delegation of Powers for Appraisal and Approval of Public Funded Plan Schemes/Projects-revise guidelines*, P.C. U.O. No. O-14015/02/2014-PAMD (21 October 2014).

<sup>90</sup> Government of India, Ministry of Environment, Forests and Climate Change, *Compendium of Gazette Notifications, Office Memoranda under Environment Impact Assessment Notification, 2006* (2014)1-72.

<sup>91</sup> Government of India, Ministry of Finance, *Delegation of Powers for Appraisal and Approval of Public Funded Plan Schemes/Projects*, OM No. 24(35)PF-II/2012(29 August 2014)1-3.

<sup>92</sup> See, eg, Government of West Bengal, Finance Department, *Compendium of Important Government Orders of the Finance Department* (2013) 3-10.

<sup>93</sup> Government of India, Ministry of Agriculture, *National Food Security Mission Operational Guidelines (12<sup>th</sup> Five Year Plan)* < <http://nfsm.gov.in/Guidelines/XIIPlan/NFSMXII.pdf>>page 9.

For example, National Food Security Mission has a strong mechanism of monitoring and evaluation with the involvement of all implementing agencies and line departments. At the district level, monitoring is undertaken by district committee of the Mission and supported by the Project Management Team.

organisations.<sup>94</sup> There are some instruments such as Social Audit and Community Score Cards that facilitate citizen review for plan implementation monitoring and evaluation.<sup>95</sup>

Despite having different mechanisms, plan implementation in India is mostly poor because of administrative inefficiency, defective and complicated procedures and weak co-ordination at different levels of administration. The lack of detailed planning is also a reason behind the poor performance. Plans have also failed due to defective and half-hearted implementation efforts, due to the slow pace of execution, absence of qualified personnel and, finally, failure to secure widespread support and co-operation from the people.<sup>96</sup>

The lack of capacity of local government institutions is also a reason for poor implementation of projects. These institutions are not included in the designing of the programme. The scope of local governments is wide; however the absence of control over functionaries and a lack of power impede effective implementation. The local government institutions also lack the capacity to monitor programmes.<sup>97</sup>

The process has continued over the decades with modifications in different periods however, the effectiveness of institutions and prescribed mechanisms for development planning at different levels in India is debatable. Now, the newly elected government has changed the

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<sup>94</sup> Ministry of Finance, Plan Finance II Division, *Compendium of Important Orders/Circulars regarding formulation, appraisal and approval of Plan schemes/projects*  
<[http://finmin.nic.in/the\\_ministry/dept\\_expenditure/plan\\_finance2/CompofImpCirc.pdf](http://finmin.nic.in/the_ministry/dept_expenditure/plan_finance2/CompofImpCirc.pdf)>6-7.

<sup>95</sup> Planning Commission of India, *Manual for Integrated District Planning (2008)*

<<http://www.nird.org.in/brgf/doc/District%20Planning%20Report.pdf>>128;

The World Bank, *Participation and Civic Engagement*

<<http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTSOCIALDEVELOPMENT/EXTPCENG/0,,contentMDK:20507680~pagePK:148956~piPK:216618~theSitePK:410306,00.html>>

Community Score Cards are qualitative monitoring tools that are used for local level monitoring and performance evaluation of services, projects and even government administrative units by the communities themselves. The community score card (CSC) process is a hybrid of the techniques of social audit, community monitoring and citizen report cards.

Gahlot Sushmita, 'Social Audits in India'(2013)2(11) *International Research Journal of Social Sciences* 41;

Yamini Aiyar, Soumya Kapoor Mehta and Salimah Samji, 'A Guide to Conducting Social Audits: *Learning from the Experience of Andhra Pradesh* (Centre for Policy Research) <[accountabilityindia.in/sites/default/files/guidelines-le.pdf](http://accountabilityindia.in/sites/default/files/guidelines-le.pdf)>.

Social Audits are now widely accepted as an important mechanism to address corruption and strengthen accountability in government service delivery. Pioneered by the Mazdoor Kisan Shakti Sangathan (MKSS) in Rajasthan in the mid-1990s, a social audit is a process by which citizens review and monitor government actions on the ground and use the findings from the review to place accountability demands on the government through the mechanism of a public hearing. Social audits took root in government nomenclature in 2005 with the passage of the National Rural Employment Guarantee Act.

*Mahatma Gandhi National Rural Employment Guarantee Act 2005* (India)sec 17

According to *Mahatma Gandhi National Rural Employment Guarantee Act*, the social audit performs 'as a means of continuous public vigilance for ensuring public accountability and transparency in the implementation of projects, laws and policies.'

<sup>96</sup> Palekar, above n 64,

<sup>97</sup> Government of India, above n 28, 16.



structure of the central planning organisation to speed up the process, which makes the governance process inclusive, though structures at the State and local level remain unchanged. The new central institution is basically a downsized planning organisation that also has a similar mandate as the PC.

The new institution, NITI Aayog is promoting an inclusive planning process.<sup>98</sup> There is an emphasis on enhanced devolution of planning at the local level through institutional integration of villages at the centre of the development process.<sup>99</sup> The government now focuses on enabling policies against the reduction of the role of government in the development process.<sup>100</sup>

The inclusive planning as promoted through the creation of new institutions has been the agenda for development at least in the latest two plans. The government has changed the structure of the central PC, however, the government has not initiated any reforms for reorganizing the State and local level planning organisations and processes. The central government also plans to follow the existing plan documents without any revisions. This reorganisation is basically downsizing the PC, however, it lacks any significant effect in the planning process. Moreover, the volume of State interventions has increased such that it becomes the State's intention to directly promote the privately managed agriculture sector.

Despite the promotional role of the government, the question lies with the implementation challenges and the new institution will also have to address implementation challenges. The promotion of SDA in a climate change context is a challenge for the government although the NITI Aayog constituted Task Force has missed the climate change issue completely.<sup>101</sup>

Despite the absence of a climate change agenda in the draft report of the NITI Aayog constituted Task Force,<sup>102</sup> the government's comprehensive commitment has been visible in addressing this threat to agriculture in a special national level plan (titled as mission) and other mechanisms. Given the Indian SDA is to some extent dependent on appropriate measures for addressing the CC challenge, the approaches of agricultural planning in a

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<sup>98</sup> Government of India, Cabinet Secretariat, *Resolution No. 511/2/1/2015-Cab* art9.

<sup>99</sup> Government of India, Cabinet Secretariat, *Resolution No. 511/2/1/2015-Cab* art 8, 12.

<sup>100</sup> Government of India, Cabinet Secretariat, *Resolution No. 511/2/1/2015-Cab* art 6a.

<sup>101</sup> Government of India, NITI Aayog, 'Raising Agricultural Productivity and Making Farming Remunerative for Farmers' (An Occasional Paper, 16 December 2015).

<sup>102</sup> *Ibid.*

climate change context in India is a critical agenda. The following discussion will present the plans, policies, strategies and relevant legislation available for addressing the challenge of climate change in Indian agriculture.

#### *4 Agricultural Planning in a Climate Change Context in India*

India is more concerned about climate change because a large population depends on climate-sensitive sectors like agriculture and forestry.<sup>103</sup> The impacts of climate change in the form of seasonal water scarcity, sea level rise and rising temperatures would cause substantial yield reductions in both rice and wheat in the near and medium term. The country may need to import more than twice the amount of food-grain than would be required without climate change.<sup>104</sup>

Given the threats of climate change, the government of India favoured the principle of common but differentiated responsibility (CBDR) and preferred an ‘aspirational’ approach against any mandatory or ‘prescriptive’ approach. The Government’s voluntary domestic goal of reducing greenhouse gas emissions intensity of its gross domestic product (GDP) by 20-25 per cent by 2020 in comparison with 2005 level<sup>105</sup> is supplemented with the recent pledge of India to lower the emission intensity of GDP by 33 per cent to 35 per cent by 2030 below 2005 levels.<sup>106</sup>

When GHGs emissions from agriculture in India are the second highest in the world after China,<sup>107</sup> the praiseworthy pledge of Indian government in the intended nationally determined contribution (INDC) under the *Paris Agreement* includes very few commitments for reducing

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<sup>103</sup> Government of India, Ministry of Environment and Forests, *India’s Second National Communication to the United Nations Framework Convention on Climate Change* (2012)ii, v.

<sup>104</sup> Government of India, Ministry of Environment and Forests, *India’s Second National Communication to the United Nations Framework Convention on Climate Change* (2012)vii, xiii-xv; Government of India, *Economic Survey 2012-2013* (2013)257 <<http://indiabudget.nic.in/budget2013-2014/es2012-13/echap-12.pdf>>; The World Bank, *India: Climate Change Impacts* (2013) <<http://www.worldbank.org/en/news/feature/2013/06/19/india-climate-change-impacts>>.

It is projected that by the end of present century the annual mean surface air temperature rise in India will range from 3.5 degrees Celsius (C) to 4.3 ° C along with a sea level rise at the rate of about 1.3 millimetres (mm) per year on average.

<sup>105</sup> LOK SABHA Secretariat, *Climate Change – India’s Perspective* (MEMBERS’ Reference Service, Reference No. 25 / RN / Ref. / August, 2013) 14.

<sup>106</sup> Government of India, *India’s Intended Nationally Determined Contribution: Working towards Climate Justice* (2015) <<http://www4.unfccc.int/submissions/INDC/Published%20Documents/India/1/INDIA%20INDC%20TO%20UNFCCC.pdf>>29; *The Paris Agreement*, opened for signature 22 April 2016.

India signed the *Paris Agreement* on 22 April 2016. The targets for GHGs emissions reduction will be normatively mandatory to pursue once the government of India will ratify the *Paris Agreement*.

<sup>107</sup> Government of India, Ministry of Agriculture, *Pocket Book of Agricultural Statistics 2014*(2015)103.

emissions from the agriculture sector. Nevertheless, the government is trying to address the CC issue domestically through different plans prepared over the last few years. The country has introduced a National Action Plan for Climate Change (NAPCC) to address the climate change challenge in a coordinated manner.<sup>108</sup> It pursues different activities through eight different missions and the goals of these missions are also included in the latest development plans.<sup>109</sup>

The long-term and integrated missions of the NAPCC are planned to be pursued until 2017, the last year of the 12<sup>th</sup> five-year plan. Among the eight missions, the three national missions directly and indirectly address agricultural development from a climate change perspective. One of these missions, the National Water Mission, emphasised integrated water management, water use efficiency as well as improved management for groundwater withdrawal and proposed regulation of power tariffs for irrigation. In addition to water resources conservation, the NAPCC also promotes agricultural development through protection of biodiversity and ecosystems and promotion of livelihoods in the country through the National Mission for Sustaining the Himalayan Ecosystem.

In respect of directly addressing the threats of climate change in agriculture, the NAPCC particularly promotes the National Mission for Sustainable Agriculture (NMSA).<sup>110</sup> In addition to technical solutions, incentive mechanisms such as enhanced credit and suitable insurance mechanisms are also included in this mission to facilitate adoption of desired practices. Apart from this national level plan for addressing climate change, the State governments have also prepared their action plans harmonising with the NAPCC.

The NMSA specifically plans for enhancing agricultural productivity and emphasised ‘integrated farming, water use efficiency, soil health management and synergizing resource conservation.’<sup>111</sup> It pursues the SDA through progressively adopting environment friendly technologies, improved and stress-tolerant crop seeds, energy efficient equipment, conservation and the judicious use of natural resources and integrated farming in addition to

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<sup>108</sup> Government of India, above n 28, 139.

<sup>109</sup> Ibid 112.

<sup>110</sup> The Government of India, Prime Minister’s Council on Climate Change, *National Action Plan on Climate Change* (2008) 35-36.

<sup>111</sup> Government of India, Department of Agriculture and Cooperation, *National Mission for Sustainable Agriculture (NMSA) Operational Guidelines* (2014)1.

promoting location specific improved agronomic practices.<sup>112</sup> It also incorporates other measures, such as the promotion of agricultural insurance, credit support and access to information and livelihood diversification.<sup>113</sup>

In implementing four major programme activities of the NMSA, the government adopts a cluster-based approach to encourage local participation and for future replication of the model in larger areas.<sup>114</sup> Private entrepreneurs are also encouraged to set up soil testing laboratories to advance the soil health management agenda as well as single window knowledge provider system to the farming community.<sup>115</sup>

The NAPCC is considered a ground breaking comprehensive step of the government of India that aims to address climate change.<sup>116</sup> However, the NAPCC focuses mostly on mitigation activities in non-agriculture sector. The NAPCC also has only very few integrated and quantitative targets for GHG emission reduction based on a solid baseline.<sup>117</sup> The activities proposed for tariff regulation for irrigation also do not match with the country practices that still promote irrigation at a subsidised rate. The plan fails to accommodate long-term correctives in the context of climate change threats to agricultural productivity, crop yields, and farm-level agricultural revenues.<sup>118</sup> It is contended that the agriculture related mission of the NAPCC fails to address the needs and challenges of marginal and poor farmers and also neglects to explore the urgency of the problems in the agricultural sector.<sup>119</sup>

Given the limitations in different missions, the recent plan of the present government includes redesigning the National Mission for Sustainable Agriculture (NMSA). However, if the pledges of the government in the agriculture sector listed in the recently submitted INDC for meeting voluntary commitments to *Paris Agreement* are considered as baseline, then the priority will remain the same in the revised NMSA. Adaptation will receive priority against very few mitigation activities for GHG emission reduction.<sup>120</sup> The adaptation activities may

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<sup>112</sup> Ibid 1[3].

<sup>113</sup> Ibid 1[2].

<sup>114</sup> Ibid 3.

<sup>115</sup> Ibid 5.

<sup>116</sup> Hem Aitken, *Climate Change and Variability in the Ganga Basin in India: The Role of the Supreme Court in Legal and Institutional Change* (PhD Thesis, University of Western Sydney, 2012)205.

<sup>117</sup> Raghu, 'India's Climate Action Plan: Many Points, No Direction' (2008) 26 *People's Democracy* xxxii.

<sup>118</sup> Rahul Goswami, *Blind Spots in Indian New National Action Plan on Climate Change* (2008)

< <http://infochangeindia.org/environment/analysis/blind-spots-in-indias-new-national-action-plan-on-climate-change.html>>.

<sup>119</sup> Sujatha Byravan and Sudhir Chella Rajan, 'An Evaluation of India's National Action Plan on Climate Change' (Research Report, Indian Institute of Technology, 2012)8-9.

<sup>120</sup> Government of India, above 103, 19,-21, 27, 29, 36.

include launching cards for farmers for enabling them to store soil health information, setting up mobile soil-testing laboratories, the promotion of organic farming practices as well as efficient irrigation practices and watershed developments. The new NMSA may also include activities for biogeographic classification for conservation planning as well as enhancing comprehensive risk management and insurance mechanisms.<sup>121</sup>

The promotional activities for agricultural development, more particularly in a climate change context, illustrated above, reveal that the government of India has been promoting the private sector activities of agriculture from the beginning of the planned period. Planned development as practiced in former socialist countries is not the model the Indian government follows; rather, the government directly and through policy interventions supports the farming activities undertaken by private individuals.<sup>122</sup> The assistance to farmers for achieving food security as well as SDA also continues in the era of climate change.<sup>123</sup>

The nature and volume of the interventionist approach differs over the different periods, however the government has applied a planned development approach with a view to attaining a country wide goal for the sustainable development of agriculture. The goals for rapid poverty alleviation, employment generation as well as achieving equity in society have been promoted in addition to resource conservation and efficiency through inclusive development planning processes. These efforts are reflected in different plans, policies, strategies and legislative provisions and judicial decisions. The following section presents these initiatives under the seven principles identified in the last chapter to discover the Indian approaches in promoting the sustainable development of agriculture.

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India communicated its Intended Nationally Determined Contribution (INDC) in response to COP decisions 1/CP.19 and 1/CP.20 for the period 2021 to 2030. It was prepared aligning with India's development agenda and its commitment to following the low carbon path to progress.

<sup>121</sup> Ibid 20,24, 35-36.

<sup>122</sup> Allan Mustard, 'India: Government Fiscal Support of Agriculture' (GAIN Report IN 4044, USDA Foreign Agricultural Service, 6 October 2014)1-12.

World Bank, *Data Agricultural land (% of land area)*< <http://data.worldbank.org/indicator/AG.LND.AGRIZS>>;

Government of India, *Agriculture Census* (2011) 13[Table 1 (a)], 52-53[Table 14 ]

While 60.6 per cent of total land is agricultural land in India, almost most of them are owned by private individuals.

<sup>123</sup> Government of India, above n 103, 7,19,-21, 27, 29, 36; Government of India, above n 28, [4.19].

## *D Principles followed for Promotion of Sustainable Development of Agriculture (SDA) in India*

The government's policy for improving production with intensive use of agricultural inputs,<sup>124</sup> started changing from the middle of the 1990s, when the government emphasised conservation of natural resources and technological innovation.<sup>125</sup> The government this time plans to examine the imbalance between subsidies and other development expenditure, however subsidies continue at a larger scale along with initiatives for investment in conservation and for addressing the threats of climate change.<sup>126</sup>

Apart from different plans, policies and legislation, the efforts of the government in pursuing the SD approach have also been facilitated by the judiciary. The Supreme Court of India accepted 'sustainable development' as a viable concept for development,<sup>127</sup> and declared the precautionary principle and polluter pays principle as part of the national law in India.<sup>128</sup>

The promotional role of the government for agricultural development is however not always consistent and there are contradictory approaches in development interventions and its associated activities as well as in judicial decisions. The following discussion will briefly present the approaches of Indian planning frameworks under seven SDA principles identified in the last chapter. Although the approaches in India are not pursued exactly under these categories, the approaches are classified under these principles to comprehensively examine the Indian initiatives as well as finding good examples for replication in Bangladesh circumstances.

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<sup>124</sup> P. C. Kesavan and M. S. Swaminathan, 'Strategies and models for agricultural sustainability in developing Asian countries' (2008)363 *Phil. Trans. R. Soc. B* 878-879.

<sup>125</sup> Ashok Sengupta and Devika Sonwani, 'Sustainable Development in India with Reference to Agricultural Sector' (2012) *International Journal of Emerging Research in Management & Technology* 27.

<sup>126</sup> Government of India, Planning Commission, *Twelfth Five year Plan* (vol 3, 2013)13.

<sup>127</sup> *S. Jagannath v Union of India* (1997) 2 SCC 87: AIR 1997 SC 811.

<sup>128</sup> *Vellore Citizens' Welfare Forum v Union of India* AIR (1996) SC 2715.

In the judgment of the case, the Court vied that 'The Precautionary Principle' and 'The Polluter Pays' principle are essential features of 'Sustainable Development'. The Court further elaborated the 'Precautionary Principle' and opined that the responsibility to address the environmental degradation is responsibility of the Government and the statutory Authorities.

## 1 Substantive Principles

### (a) Principle 1: Maintenance and Improvement of Eco-integrity, Biological Diversity and Improving Resource Use Efficiency

Given the limited per capita natural resources and deficiencies in natural resources management,<sup>129</sup> the Indian government's intention is that the acceleration to agricultural growth should not be at the cost of the sustainability of the natural resource base.<sup>130</sup> The constitutional provisions in India include principles of environmental protection and obligate the government to protect and improve the environment as well as make the citizens responsible for undertaking some responsibilities for environmental protection.<sup>131</sup> Apart from the government's facilitative role for natural resources management through a planned approach, the judiciary also facilitated natural resource protection by declaring the public trust doctrine a part of the law of the country in the judgement of the case of *M. C. Mehta v Kamal Nath & Ors.*<sup>132</sup> The court in its judgement quashed the lease of public land to private parties granted by the government and directed the government to take over the area and restore it to its original natural conditions.<sup>133</sup>

In respect of land resource management, the Indian government now focused on strengthening implementation of tenancy and land leasing laws and modernisation of land records on top of conservation of prime farmland for agriculture,<sup>134</sup> against the traditional policy of land reform,<sup>135</sup> and planned use of land.<sup>136</sup> The government has perhaps accepted

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<sup>129</sup> Government of India, above n 28, 20.

<sup>130</sup> Government of India, *Eleventh Five Year Plan* (2007-2012) vol 3 [1.13].

<sup>131</sup> *Constitution of India* art 48A and 51A(g).

<sup>132</sup> *M.C. Mehta v Kamal Nath* (1997) 1 SCC 388.

The Court opined that that -

Our legal system - based on English Common Law - includes the public trust doctrine as part of its jurisprudence. The State is the trustee of all natural resources which are by nature meant for public use and enjoyment. Public at large is the beneficiary of the sea- shore, running waters, airs, forests and ecologically fragile lands. The State as a trustee is under a legal duty to protect the natural resources. These resources meant for public use cannot be converted into private ownership.

<sup>133</sup> *M.C. Mehta v Kamal Nath* (1997) 1 SCC 388.

<sup>134</sup> Arun Jaitley, 'Budget 2016-2017'(Union's Budget Speech of India, National Parliament of India, 29 February 2016) <<http://indiabudget.nic.in/ub2016-17/bs/bs.pdf>>4,9.

<sup>135</sup> Government of India, *Second Five Year Plan* (1956-61)ch 9, 1.

K. Venkatasubramanian, *Land reforms remain an unfinished business* (Planning Commission of India, 2013)

< <http://planningcommission.nic.in/reports/articles/venka/index.php?repts=m-land.htm#>>.

The important objectives of land reform measures in India were: (1) to enhance the productivity of land by improving the economic conditions of farmers and tenants so that they may have the interest to invest in and improve agriculture, (2) to ensure distributive justice and to create an egalitarian society by eliminating all forms of exploitation, (3) to create a system of peasant proprietorship with the motto of land to the tiller and (4) to transfer the incomes of the few to many so that the demand for consumer goods would be created.

the diversion of agricultural land to other purposes when food security is planned through productivity improvement of land for offsetting the diversion.<sup>137</sup>

The government focused on soil and moisture conservation,<sup>138</sup> with the help of institutional credit support for complete water-shed management activities.<sup>139</sup> Soil mapping has also been pursued for effective resource conservation and developing location specific in-situ and ex-situ moisture conservation practices.<sup>140</sup> In order to protect soil erosion, maintain and improve soil fertility the government has adopted a nutrient-based fertiliser subsidy (NBS) system,<sup>141</sup> along with promotion of enhanced use of bio-fertilisers and organic manures. The government also plans to expand the network of soil testing laboratories and issue soil health cards to every farmer to accustom them to managing soil health.<sup>142</sup> Moreover, agro-forestry is also being encouraged to implement efficient nutrient recycling and improve drainage.<sup>143</sup>

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R.S. Deshpande, 'Current land policy issues in India' in P. Groppo (ed) *Land Reform Land Settlement and Cooperatives* (FAO, 2003) 155, 174.

Land policy in India has undergone broadly four phases since Independence.1. The first and longest phase (1950 - 72) consisted of land reforms that included three major efforts: abolition of the intermediaries, tenancy reform, and the redistribution of land using land ceilings. The abolition of intermediaries was relatively successful, but tenancy reform and land ceilings met with less success.

2. The second phase (1972 - 85) shifted attention to bringing uncultivated land under cultivation.

3. The third phase (1985 - 95) increased attention towards water and soil conservation through the Watershed Development, Drought-Prone Area Development (DPAP) and Desert-Area Development Programmes (DADP). A central government Waste land Development Agency was established to focus on wasteland and degraded land. Some of the land policy from this phase continued beyond its final year.

4. The fourth and current phase of policy (1995 onwards) centres on debates about the necessity to continue with land legislation and efforts to improve land revenue administration and, in particular, clarity in land records.

Available studies indicate that land-reform measures have had a significant impact on equity and poverty. The measures dealing with the quality of land have a partial to significant impact on environmental parameters. In addition to these, other land-policy instruments were used for the purpose of transforming development policy effectively.

<sup>136</sup> Government of India, above n 28, 21;

Government of India, Ministry of Agriculture, *National Policy for Farmers* (2007) 4.

Government of India, Ministry of Environment and Forests, *The National Environment Policy* (2006)18, 22.

<sup>137</sup> Government of India, above n 28, 21.

<sup>138</sup> Government of India, above n 21, 21-22.

Government of India, above n 22, *Fourth Five Year Plan*[7.65].

<sup>139</sup> Government of India, *Fifth Five Year Plan*, above n 22, [5.1 5].

<sup>140</sup> Government of India, Ministry of Agriculture, *Brief on Programmes of Natural Resource Management (NRM) Division* <[http://www.agricoop.nic.in/imagedefault/Nrm/BRIEF\\_WDP.pdf](http://www.agricoop.nic.in/imagedefault/Nrm/BRIEF_WDP.pdf)> 4-5.

<sup>141</sup> Government of India, above n 28, 21;

Government of India, above n 26, vol 2[5.1.71]; Government of India, *National Policy for Farmers*, above n 133,12.

<sup>142</sup> Arun Jaitley, 'Budget 2014-2015'(Union's Budget Speech of India, National Parliament of India, 10 July 2014

< <http://www.livemint.com/Politics/n2CKOUxRPwNprqgu2StUILL/Union-Budget-2014-Finance-minister-Arun-Jaitley-full-speech.html> 5 >; Government of India, *Eleventh Five Year Plan* (2007-2012) vol 1[1.42].

<sup>143</sup> Government of India, *National Policy for Farmers*, above n 133,12; Jaitley, above n 131, 4-5.



Model retail outlets are now used as soil and seed testing centre. Given the context of serious land degradation in nearly 81 million hectares, the government is working on a ‘stop and reverse’ the ‘serious threat’ policy and plans to make India land degradation neutral by 2030.<sup>144</sup>

The government initiatives from the beginning of its planning process include economic and efficient use of available irrigation supplies, extended institutional credit support for water conservation as well as the creation of additional storage and groundwater retention.<sup>145</sup> Given the free or low-priced electricity influences over the withdrawal of ground water,<sup>146</sup> the government also planned to separate the electricity feeders and introduce stricter scheduling.<sup>147</sup> The groundwater recharge programme is pursued through watershed development and restoration of water bodies.

Micro level and sub-surface water harvesting structures (SSWHS) in coastal waterlogged areas are constructed along with modern water saving irrigation technology and natural irrigation systems in different regions.<sup>148</sup> The government has also established a long-term irrigation fund for sustainable management of ground water resources.<sup>149</sup> Water quality is also monitored at different levels of the country under a standard criterion.

Biodiversity protection has been promoted through legislative provisions as well as preparation of a People’s Biodiversity Register (PBR) in a participatory manner and integration of values of biodiversity in the national and state planning processes.<sup>150</sup> However, the activities of different committees at central, State and local levels for biodiversity protection are yet to receive momentum.<sup>151</sup> Although the National Gene Fund was established

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<sup>144</sup> Jaitley, above n 134, 5, Economic Times Bureau, ‘Government working to make India land degradation neutral by 2023’, *The Economic Times* (online), 18 June 2014 <[http://articles.economictimes.indiatimes.com/2014-06-18/news/50679168\\_1\\_land-degradation-fertile-land-dry-land](http://articles.economictimes.indiatimes.com/2014-06-18/news/50679168_1_land-degradation-fertile-land-dry-land)>.

<sup>145</sup> Government of India, *First Five Year Plan* (1951)ch 26, 74-75; Government of India, *Fifth Five Year Plan*, above n 22, 5.15, Government of India, above n 28, 23.

<sup>146</sup> Ashwini Swain, Olivier Charnoz, ‘In Pursuit of Energy Efficiency in India’s Agriculture: Fighting ‘Free Power’ or Working with it?’ (Agence Française de Développement, Working Paper 126, 2012) 28.

<sup>147</sup> Government of India, above n 28, 23; Government of India, *Twelfth Five Year Plan* (2013) vol II, 33

<sup>148</sup> Government of India, above n 140.

<sup>149</sup> Jaitley, above n 134, 5.

<sup>150</sup> Darren Swanson, ‘India Case Study Analysis of National Strategies for Sustainable Development’ (Unedited Working Paper, Environmental Policy Research Centre, 2004) <[https://www.iisd.org/pdf/2004/measure\\_sdsip\\_india.pdf](https://www.iisd.org/pdf/2004/measure_sdsip_india.pdf)> 12.

While the concept of sustainable development has been included first in 2002 in the *Biological Diversity Act, 2002*(India) that integrates the conservation, promotion and sustainable use of biological diversity, the *Biological Diversity Rules 2004* (India) also promote sharing benefits from utilization of biological resources.

<sup>151</sup> Biodiversity Finance Initiative India, *Mobilizing Resources for Biodiversity and Sustainable Development* <[http://www.in.undp.org/content/dam/india/docs/EnE/BIOFIN\\_Brochure\\_20May2015\\_8.pdf](http://www.in.undp.org/content/dam/india/docs/EnE/BIOFIN_Brochure_20May2015_8.pdf)>.

to build capacity at panchayat level for in-situ conservation of genetic diversity of indigenous crop varieties, it falls short of incentives in accessing benefit sharing mechanisms.<sup>152</sup>

The ecological integrity and efficiency in resources use are also supported by legislation and judicial intervention. While forest and wildlife protection is legally enforced through three different laws,<sup>153</sup> the environmental pollution issue is also addressed by different legislation along with control of degradation of wetlands.<sup>154</sup> There are many examples of judicial decisions for ecological protection<sup>155</sup> however the court was not always been consistent when making decisions in dealing with the environment. The court sometimes also emphasised development as well as the livelihood security of citizens.<sup>156</sup> Against the positive role of the judiciary, it is also seen that ordinary pollution cases usually do not reach a conclusion because of low significance to the environmental issues among the prosecutors or heavy workloads in the courts that ultimately disables the effectiveness of executive authorities' order.<sup>157</sup>

Although the Indian government intended to use the polluter pays principle in the case of ecosystem degradation, the government finds the polluter pays principle hard to implement in the existing social structure. Instead, the government has taken up programmes for regeneration and restoration of ecosystems.<sup>158</sup> Nevertheless, there is a gap between principle and practice and despite having almost all types of environmental protection acts and rules,

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<sup>152</sup> Asish Ghosh, *Environment: Issues and Concerns* (A.P.H Publishing Corporation, 2007)22, 24,27; Government of India, above n 28, 115.

<sup>153</sup> *The Wildlife (Protection) Amendment Act 2002* (India); *The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forests Rights) Act 2006* (India) Act No 2 of 2007; *The Panchayats Extension to Scheduled Areas Act, 1996*(India).

<sup>154</sup>*The Wildlife (Protection) Amendment Act 2002* (India); *The Water (Prevention and Control of Pollution) Act 1974*(India) Act No 6 of 1974; *The Water (Prevention and Control of Pollution) Cess Act 1977*(India) Act No 36 of 1977; *The Forest Conservation Act 1980* (India) Act No 6 of 1980; *The Air (Prevention and Control of Pollution) Act 1981* (India); *The Wetlands (Conservation and Management) Rules 2010* (India).

<sup>155</sup> *M C Mehta v Union of India*, AIR 1988 SC 1037; *Somprakash Rekhi v Union of India & Anr* AIR 1981 SC 212; *Tamil Nadu v M/S Hind Store* AIR 1981 SC 711..

<sup>156</sup> *Tehri Bandh Virodhi Sangarsh Samity and others v The State of Uttar Pradesh and others* 1985 WP No 12829/1985 SC of India.

In this case, the petitioners had requested the Court to issue a restraint order to the government of India preventing it from constructing a huge hydro-electric power project and a dam on a river. They appealed because of potential serious threat to life, ecology and the environment in earthquake prone areas. However, the court did not issue any direction against the government that would have stopped the government from implementing the project.

*M C Mehta v Union of India* AIR 1987 SC 965

In this case, the Court laid down the conditions for the operation and reopening of a Chlorine plant that was affecting a large number of people, however did not give any permanent closure order on livelihood concerns of around 4000 families.

<sup>157</sup> V.K. Agarwal, 'Environmental Laws in India: Challenges for Enforcement' (National Institute of Ecology, Bulletin 15, 2005)236.

<sup>158</sup> Government of India, *Eighth Five Year Plan* (1992-1997)vol 2[4.3.5], [4.4.1]-[4.4.2].

the environmental degradation continues.<sup>159</sup> The recently engaged government task force also finds that, against the set of legislation and plethora of commitments in different plans, environmental degradation continues because of inappropriateness of legislation, ineffective implementation by the executive as well as institutional weaknesses.<sup>160</sup>

*(b) Principle 2: People centric Development for Addressing Poverty, Employment and Livelihoods*

While the state policy in India has explicitly promoted the welfare of the people,<sup>161</sup> employment and poverty alleviation has been given top priority since the beginning of development planning.<sup>162</sup> Agricultural development is considered one of the best methods for poverty eradication,<sup>163</sup> as well as generating adequate productive employment.<sup>164</sup> While India focuses on rural employment and infrastructure, it moves beyond food security and now focuses on income security of farmers and government targets to double the farmers' income by 2022.<sup>165</sup>

The government undertook agricultural development programmes for the reconstruction of the rural economy, generating employment and direct poverty alleviation.<sup>166</sup> The government has taken initiatives for providing infrastructure amenities and market access for the farmers.<sup>167</sup> Agricultural activities occupy a major share of the National Rural Employment

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<sup>159</sup> Government of India, *Tenth Five Year Plan (2002-2007)* vol 2[9.87].

<sup>160</sup> Government of India, 'Report of the High Level Committee to review various Acts administered by Ministry of Environment and Forests' (2014) 6-9.

<sup>161</sup> Government of India, *Second Five Year Plan (1956-1961)* ch 2[6].

<sup>162</sup> Sankar Kumar Bhaumik (ed), *Reforming India Agriculture, Towards Employment Generation and Poverty Reduction* (SAGE Publications, India, 2008) xxxi; Government of India, *Eighth Five Year Plan (1992-1997)* vol 2 [2.1.1].

<sup>163</sup> Government of India, above n 156, [1.1.11].

The Tenth Plan is therefore formulated in a manner which explicitly addresses the need to ensure equity and social justice through a sector-specific focus. There are three main dimensions to this strategy: (i) Agricultural development to be viewed as a core element of the Plan since growth in this sector is likely to lead to the widest spread of benefits, especially to the rural poor.

<sup>164</sup> Government of India, above n 28, [1.24], [1.34].

Government of India, *Ninth Five Year Plan (1997-2002)* vol 2, ch 2 [2.1.6].

Government of India, *Third Five Year Plan (1997-2002)* vol 2, ch 2 [2.1.6]

The government has all along in its planned development path strived for economic growth and expansion of employment, where the bulk of the people live so close to the margin of poverty, the claims of social justice, of the right to work, of equal opportunity and of a minimum level of living have great urgency.

<sup>165</sup> Jaitley, above n 134, 4.

<sup>166</sup> Government of India, *Tenth Five Year Plan (2002-2007)* vol 2[1.1.16]. Government of India, *Third Five Year Plan (1961-1966)*[19.1], [23.12]; Government of India, *Seventh Five Year Plan (1985-90)* vol 2[2.45], [5.1]; Government of India, *Eighth Five Year Plan (1990-1995)* vol 2[6.1.1]

The government introduced and implemented over the decades the National Rural Employment Programme as an important component of the anti-poverty strategy. The employment generation potential has always been used in selecting the projects in the public sector. The government also sharply focused on reducing unemployment to negligible by 2000.

<sup>167</sup> Jaitley, above n 134, 4.

Guarantee Programme that ensures 100 days' work in rural areas for unemployed people.<sup>168</sup> There are other livelihood development initiatives for farmers that include the National Horticulture Mission, the Watershed Development and Micro Irrigation Programmes and *Rashtriya Krishi Vikas Yojana*.<sup>169</sup>

While India has declared that 98.97 per cent of its farm holdings are of resource-poor farmers and exempted by the Article 6.2 of World Trade Organisation (WTO) rule for non-product specific support,<sup>170</sup> it provides huge subsidies in agriculture that benefit the farmers through low input prices and support prices for their outputs. This assistance includes irrigation subsidies, power subsidies, fertiliser subsidies, subsidised credit and the outright waiver of loans and the subsidy on the sale of seeds and seed production.<sup>171</sup> The government has also imposed a tax at a rate of 0.5 per cent on all taxable services along with tax credits to create funds exclusively for financing the welfare of farmers.<sup>172</sup>

The irrigation subsidy includes about 68 per cent of power supply costs as well as 50 per cent of irrigation infrastructure set up costs in micro-irrigation.<sup>173</sup> The nutrient based subsidy scheme (NBS) that subsidises fertiliser on the basis of nutrient content<sup>174</sup> becomes 40 to 75 per cent effective for farmers.<sup>175</sup> The government also promotes organic farming, bio-fertilisers, organic manures and bio-pesticides along with micro-irrigation and fertigation techniques in critical areas to increase income of farmers.<sup>176</sup> The government plans to replace 26 million groundwater pumps for irrigation with more efficient solar operated pumps. This replacement needs subsidy ranges from 60 to 90 per cent against the risk of over withdrawal of ground water with the help of these subsidized solar pumps.<sup>177</sup>

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<sup>168</sup> Press Trust of India, '60% MGNREGA outlay for agriculture, allied activities: Govt.', *The Economic Times* (online), 8 February 2016 <[http://articles.economictimes.indiatimes.com/2016-02-08/news/70450311\\_1\\_nda-government-mgnrega-agriculture](http://articles.economictimes.indiatimes.com/2016-02-08/news/70450311_1_nda-government-mgnrega-agriculture)> Government of India, Press Information Bureau, 'Government is committed to strengthen MGNREGA, says Jaitley' (Media Release, 2 February 2016)

The agriculture and allied activities receives more than 64% of total expenditure of this rural employment guarantee programme and the percentage of women beneficiary in the programme reaches to 57% against the statutory requirement of 33 per cent.

<sup>169</sup> Government of India, Ministry of Agriculture, *National Policy for Farmers* (2007) 2-3.

<sup>170</sup> *Ibid* 28.

<sup>171</sup> Anwarul Hoda and Ashok Gulati, 'India's Agricultural Trade Policy and Sustainable Development' (Issue Paper 49, International Centre for Trade and Sustainable Development, 2013)26; Jaitley, above n 134, 7.

<sup>172</sup> Jaitley, above n 134, 28.

<sup>173</sup> Hoda and Gulati, above n 171, 13, 27.

<sup>174</sup> *Ibid* 16-17.

<sup>175</sup> Nick Grossman and Dylan Carlson, 'Agricultural Policy in India: The role of input subsidies' (USITC, Executive Briefings on Trade, 2011)1.

<sup>176</sup> Government of India, above n 169, 20.

<sup>177</sup> International Centre for Integrated Mountain Development, *Solar Powered Pump for Irrigation Purposes* <[www.icimod.org/resource/17183](http://www.icimod.org/resource/17183)>; Katherine Tweed, *India Plans to Install 26 Million Solar-powered Water Pumps* (20 February 2014) <<http://spectrum.ieee.org/energywise/green-tech/solar/india-plans-for-26-million-solar-water-pumps>>.

While the government provided subsidized credit to farmers that have options to provide a discount on timely repayment,<sup>178</sup> there are also instances for waiving agricultural debts once and for all.<sup>179</sup> The whole credit process is facilitated with the introduction of a single window credit operations scheme, the ‘Kisan Credit Card (KCC) scheme’ where women farmers receive special support. The agricultural insurance scheme also provides a subsidy through lowering the premium rates and there is special discount for small and marginal farmers.<sup>180</sup>

The minimum support price (MSP) has been supporting the farmers with a guaranteed higher purchase price for their outputs along with the operation of community food grain banks to protect distress sales.<sup>181</sup> The government now emphasises the web based decentralized food procurement programme to support the farmers in accessing government incentives offered through higher procurement price.<sup>182</sup> Cooperatives and self-help groups are promoted for greater control of farmers over the market channels and with larger capital through changes in the regulatory regime.<sup>183</sup> The Indian government also promotes a unified agricultural marketing system through an electronic platform to facilitate the access to markets for farmers,<sup>184</sup> as well as investing in increasing the storage capacity. The government also planned for providing support services to women agricultural labourers, such as child care centres and training for women empowerment.<sup>185</sup> The national food security law facilitates the livelihood of the poor through supplying food grain at a very low price, despite its poor management and other governance problems.<sup>186</sup>

While agricultural activities are supported with the exemption of income taxes with some exceptions, the comparatively high tariff protection is intended to help domestic agricultural producers.<sup>187</sup> The government has also set up a price stabilisation fund in 2015 to support

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<sup>178</sup> Hoda and Gulati, above n 171, 21.

<sup>179</sup> Ibid 21.

<sup>180</sup> Ibid 24-25.

<sup>181</sup> Ibid 28; Government of India, above n 169, 14-15.

<sup>182</sup> Jaitley, above n 134, 7.

<sup>183</sup> Government of India, above n 169, 14-15.

<sup>184</sup> Jaitley, above n 134, 6.

<sup>185</sup> Government of India, above n 169, 13.

<sup>186</sup> Organisation for Economic Cooperation and Development (OECD), ‘Enhancing Agricultural Productivity and Food Security’ (India Policy Brief, 2014) <<https://www.oecd.org/india/India-Enhancing-Agricultural-Productivity-and-Food-Security>>.

<sup>187</sup> Government of India, above n 169, 16; World Trade Organisation, *Trade Policy Review: India WT/TPR/S/313* (2015) <[https://www.wto.org/english/tratop\\_e/tpr\\_e/s313\\_sum\\_e.pdf](https://www.wto.org/english/tratop_e/tpr_e/s313_sum_e.pdf)>8-10.

The trade policies having 36.4 per cent average tariff protection for agriculture against 9.5 per cent average tariff for non-agricultural products is to help the domestic production.

market interventions for compensating the farmers from any losses.<sup>188</sup> The government, while supporting disaster rehabilitation, also focuses on timely and adequate credit to the farmers as well as interest subvention for distressed farmers.<sup>189</sup> While the lives and livelihood protection of island farmers is facilitated through direct support and a protective infrastructure, the tribal farmers receive easy access to institutional credit and other inputs such as water, fertiliser and seeds at relaxed criteria.<sup>190</sup>

Livelihood support is also found in different judgments of Court. In *N.D. Jayal v. Union of India*, the Court included the right to development as an integral part of human rights covered by Article 21 of the Indian Constitution.<sup>191</sup> The Supreme Court noted the necessity of integration of disaster management with development activities and emphasized the rehabilitation of affected people for their livelihood.

Against the benefit of subsidies in increasing production of crops, there is also concern that it results in overuse of chemical fertiliser and leads to depletion of micro-nutrients with adverse consequences for soil fertility. High subsidies on fertilisers have also led to leakage of benefits.<sup>192</sup> It is contended that the under-pricing of irrigation water and inappropriate irrigation practices have caused overexploitation of groundwater, salinization and waterlogging in irrigated areas.<sup>193</sup>

Despite huge achievements in poverty alleviation and achieving the goal of halving poverty by 2015,<sup>194</sup> over half of all agricultural households are in debt and private traders dominate the MSP programme.<sup>195</sup> While farmers' suicide is a serious problem in India, it is found that one fifth of farmers commit suicide due to indebtedness and about one sixth due to crop failure.<sup>196</sup> Given the larger growth and poverty reduction impact from agricultural research, education and infrastructure development against input subsidies, Fan, Gulati and Thorat

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<sup>188</sup> Government of India, Ministry of Agriculture, 'Price Stabilisation Fund' (Press Release, 27 March 2015).

<sup>189</sup> Jaitley, above n 134, 6.

<sup>190</sup> Government of India, above n 169, 18.

<sup>191</sup> *N.D. Jayal and Anr vs Union of India and Ors* Writ Petition (civil) 295 of 1992; *Constitution of India* art 21.

<sup>192</sup> Hoda and Gulati, above n 171,28; Government of India, above n 169, 20.

<sup>193</sup> Sangeet, Sukhpal Singh, Shruti Bhogal, 'Agriculture for Sustainable Development in India' (2013)6(11) *OIDA International Journal of Sustainable Development* 35.

<sup>194</sup> Government of India, Poverty Estimates for 2011-12 (Press Information Bureau, 22 July 2013)3.

<sup>195</sup> S. Rukmini, 'More than 50% of farm households in debt', *The HINDU* (online), 27 June, 2015

< <http://www.thehindu.com/news/national/more-than-50-of-farm-households-in-debt/article6711414.ece>>.

<sup>196</sup> Charan Singh and C L Dadhich, 'Take Steps to Prevent Farmer Suicides', *The New Indian Express* (online), 11 August 2015<<http://www.newindianexpress.com/columns/Take-Steps-to-Prevent-Farmer-Suicides/2015/08/12/article2969370.ece>>.

have emphasised reallocating public resources as well as reforming institutions to achieve better impacts on future agricultural and rural growth and poverty reduction.<sup>197</sup>

*(c) Principle 3: The Principle of Equity*

While the government of India promotes the welfare of people, it also emphasises managing distributional concerns and is focused on the reduction of inequalities in income.<sup>198</sup> The government promoted agricultural development to facilitate equity as the growth in this sector is likely to lead to the widest spread of benefits, especially to the rural poor.<sup>199</sup> The balance in equity between present and future generations is also given importance along with a continuity of direction for long term orientation and regional balance in investment in agriculture. The central government has made it conditional on States to adopt district level planning and to maintain a baseline share for agriculture.<sup>200</sup>

As a part of inclusiveness, the agricultural strategy focuses on the majority, small and marginal farmers who face difficulties in accessing markets of agricultural input and outputs. The government promoted a group approach for the empowerment of poor people, including women, to increase their bargaining power as well as facilitating gender equity through an equitable share of female workforce in agriculture.<sup>201</sup> The use of General Credit Cards without the insistence on collateral supports the poor segment of the farmers in accessing resources for farming.<sup>202</sup>

Equity is also promoted through the redistribution of lands to landless, small and marginal farmers and disadvantaged groups, though this transfer is conditional upon environmental and ecological improvements through greening of 40 to 50 per cent of allotted lands.<sup>203</sup> The government programmes initiated through the *Mahatma Gandhi National Rural Employment Guarantee Act 2005* are intended in particular to promote social equity through employment

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<sup>197</sup> Shenggen Fan, Ashok Gulati and Sukhadeo Thorat, 'Investment, subsidies, and pro-poor growth in rural India' (Discussion Paper 00716, International Food Policy Research Institute, 2007)v.

<sup>198</sup> Government of India, above n 28, [1.24, 1.34]; Government of India, above n 20, ch 2[6].

<sup>199</sup> Government of India, above n 26, vol 2[1.1.11].

<sup>200</sup> Government of India, *Eleventh Five Year Plan (2007-2012)*vol 3[1.153], [1.63], [1.149].

<sup>201</sup> *Ibid* [1.14], [1.148]; Government of India, *The National Policy for Empowerment of Women* (2001)1.

This policy sought to bring about the advancement, development and empowerment of women.

<sup>202</sup> Government of India, above n 198, [1.134], [8.4.5].

<sup>203</sup> Government of India, above n 21, [19.1], [14.3]; Government of India, above n 26, vol 2 [5.1.48]; Government of India, above n 167,18.

provisions for the poor in rural areas.<sup>204</sup> The assured irrigation for small and marginal farmers under the *Pradhan Mantri Krishi Sinchayee Yojana* is also vital against the risk of excess withdrawal of ground water.<sup>205</sup>

The judiciary in India also promote equity through different judgments and although these judgments are not directly relevant to the agriculture sector, they have contributed to upholding equity in society. The court in the writ petition of the *State of Himachal Pradesh v Ganesh Wood Products*<sup>206</sup> used an intergenerational equity approach in deciding on tree felling,<sup>207</sup> opining that ‘The present generation has no right to impede the safety and well-being of the next generation or the generation to come thereafter’.<sup>208</sup> The Supreme Court of India in the *Rural Litigation and Entitlement Kendra v the State of Uttar Pradesh* case applied the intra-generational equity approach upholding the appeal of rural villagers for stopping the mining activities that had been adversely affecting the ecology.<sup>209</sup> The judgements of these cases set examples in providing remedies for natural resource degradation on intergenerational and intra-generational equity grounds.

Despite efforts to bring equity through different policies and programmes, Indian agriculture has significant regional disparity in regards to the provision of agricultural infrastructure. Although it has been observed that the disparity increased in terms of cropping pattern, the inequality is being reducing in irrigated areas and the consumption of fertiliser. The disparity is also seen in agricultural investment among different states and that weakens the States’ capacity in terms of output. Both public and private investment has been made in favour of advanced States and this inequitable distribution of public and private investment becomes a factor for the lagging States to miss opportunities for further development.<sup>210</sup>

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<sup>204</sup> *Mahatma Gandhi National Rural Employment Guarantee Act 2005* (India) Act No 42 of 2005.

<sup>205</sup> Government of India, Press Information Bureau, ‘Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)’ (Press Release, NW/AKT/SH, 2 July 2015) <<http://pib.nic.in/newsite/PrintRelease.aspx?relid=122935>>.

<sup>206</sup> *State of Himachal Pradesh & ORS. ETC. v Ganesh Wood Products & ORS. ETC.* 1996 AIR 149, 1995 SCC (6) 363.

<sup>207</sup> *State of Himachal Pradesh & ORS. ETC. v Ganesh Wood Products & ORS. ETC.* 1996 AIR 149, 1995 SCC (6) 363.

The court issued status quo on taking further action in setting up Katha industries based on Khair trees as well as withheld taking any decision on pending decisions for setting up new industry until the question of availability of raw materials was resolved. The court also directed the Government of Himachal Pradesh to assess the approximate availability of khair wood through an expert body and to submit the report for fresh judgement by the High Court.

<sup>208</sup> *State of Himachal Pradesh & ORS. ETC. v Ganesh Wood Products & ORS. ETC.* 1996 AIR 149, 1995 SCC (6) 363.

<sup>209</sup> *Rural Litigation and Entitlement Kendra & ORS v. State of U. P. & ORS*, AIR 1988 SC 2187.

<sup>210</sup> Arpita Banarjee and Pravat Kumar Kuri, *Development Disparities in India An Enquiry into Convergence* (E books Corporation, 2015)136-138.



Apart from inequality in investment and progress in different States, the income inequality in India also rises along with consumption expenditure inequality. The gap between rich and poor widens and the overall inequality rose from 30.8 in 1993 to 33.9 in 2009.<sup>211</sup> While the efforts to bring gender parity are diluted by the extremely high level of gender inequality,<sup>212</sup> the gap between per worker earnings in agriculture and non-agriculture has widened over the years along with low female labour participation rates because of unequal access of women to employment. The challenge before India is now to minimize the inequalities and disparities that exist in access to wage employment across regions and social groups as well as to reduce the inequality in investment and progress in different states for the next generations<sup>213</sup>

*(d) Principle 4: The Precautionary Principle*

The Indian government considered that the environmental problems in India arise for two reasons: poverty and under-development and as the negative effects of the development process. The government has therefore been working on unintended side effects of development efforts to achieve rapid economic growth and minimize the risk of distortions imposed on national resources from poorly planned development projects and programmes.<sup>214</sup>

In implementing the precautionary principle, the Indian government undertook programmes for land degradation mapping and the promotion of soil testing facilities. There are programmes for comprehensive inventory preparation for ecological resources and sensitising the farming community for environment friendly agricultural practices.<sup>215</sup> The government also promotes adopting a farming systems approach as well as judicious utilisation of available agro-biodiversity.<sup>216</sup>

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<sup>211</sup> National Sample Survey Office, India, '68th round of the survey' (Report, Credit Suisse, 2011-12) Inequality is reflected in the wealth distribution where 90 per cent of Indian citizens own less than a quarter of the country's wealth.

<sup>212</sup> Jonathan Woetzel et al, *The Power of Parity: Advancing Women's Equality in India* (McKinsey Global Institute, 2015)1-2.

<sup>213</sup> Institute for Human Development, 'India Labour and Employment Report 2014' (Academic Foundation, 2014)3-6; Vibhuti Agarwal, 'India Hits Its U.N. Poverty-Cutting Target, but Misses Others', *The Wall Street Journal* (online), 5 February 2015 <<http://blogs.wsj.com/indiarealtime/2015/02/05/india-hits-its-u-n-poverty-cutting-target-but-misses-others/>>.

<sup>214</sup> Government of India, above n 23, *Sixth Five Year Plan* [20.2].

<sup>215</sup> Government of India, above n 26, [5.1.50]; Government of India, above n 200, [1.130]; Government of India, above n 28, vol 2,45.

<sup>216</sup> Government of India, above n 26, vol 2[5.1.168].

While the constitutional provisions and legislation indirectly facilitate application of the precautionary principle in India,<sup>217</sup> the National Conservation Strategy also incorporated this principle and focused on environmental impact assessments and cost-benefit analyses of all development projects at different stages of planning and implementation.<sup>218</sup> The government has planned to introduce cumulative environmental impact assessments for vulnerable regions, along with Environmental Performance Index (EPI) for variable budgetary allocations to promote this principle. The risk management efforts include employing early warning systems as a precautionary measure.<sup>219</sup>

The government strengthens control and safety evaluation in pesticide use along with the prevention of the sale of substandard pesticides and promotes biological control of pests.<sup>220</sup> The mandatory mechanisms for public disclosure of information on pollution of industries indirectly promote precautionary measures.<sup>221</sup>

The Indian Government also follows the precautionary principle in the application of biotechnology, especially genetically modified organisms (GMO) in crops. It is observed that the government of India stopped the initiative for releasing Bt Brinjal on precautionary grounds. Given the legislation for regulating use of biotechnology has been pending for seven years, the biotechnology strategy introduced in 2015 to some extent has promoted the application of the precautionary principle for sustainable development of agriculture.<sup>222</sup>

The judiciary in India has been promoting the precautionary principle since the early 1990s,<sup>223</sup> and this principle was explicitly used in making the judgement in *Vellore Citizens' Welfare Forum v Union of India* in 1996.<sup>224</sup> Explaining the SD principles, the court also held that 'we have no hesitation in holding that the precautionary principle and the polluter pays

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<sup>217</sup> *Constitution of India*

Support for the precautionary principle was derived from Articles 21, 47, 48A, and 51A (g) of the Indian Constitution.

<sup>218</sup> Government of India, Ministry of Environment and Forest, *National Conservation Strategy and Policy Statement on Environment and Development* (1992) pt 4.4.

<sup>219</sup> Government of India, above n 28, vol 1, 208, 219, 224.

<sup>220</sup> Government of India, above n 169,12; Government of India, above n 24,[4.8.1]-[4.8.4].

<sup>221</sup> Government of India, above n 28, vol 1,114.

<sup>222</sup> Government of India, Department of Biotechnology, *National Biotechnology Development Strategy 2015-2020* (2015) 8-9,22.

<sup>223</sup> *Bittu Sehgal & Another vs Union of India & Ors* (1994) WP(C) No.231

This principle was applied in a judgement delivered by the Supreme Court of India in response to a petition filed by Bittu Sahgal and Nergis Irani, secretaries of the Danahu Taluka Environmental Welfare Association against installation of a power plant. The Court in its judgement directed to change the fuel of the proposed power plant, install gas treatment plant along with establish a special environmental authority comprising scientists and other experts to monitor and protect the area.

<sup>224</sup> *Vellore Citizens' Welfare Forum v Union of India & Ors*, AIR 1996 SC 2715.

principle are part of the environmental law of the country'.<sup>225</sup> The application of this principle for environmental protection is however not always maintained in judicial decisions. There are also examples where the court tried to keep a balance between development and environmental conservation and in some cases the court has upheld the justification of the government for continuation of development activities.<sup>226</sup> Given the absence of this principle in an explicit manner in any environmental laws in India and adoption of this principle as a guiding principle in National Environment Policy, it is still a question whether this should be directly included in legislation in India to require planning authorities to mandatorily follow the precautionary principle in their decision making processes.<sup>227</sup>

## 2 Procedural Principles

### (a) Principle 1: Integration across Scales and Disciplines

The integration issue has been addressed to some extent from the beginning of the planning efforts in India. The community development programmes and irrigation activities were integrated for agricultural development in early periods of planning. The coordinated development activities at district level were facilitated through integration of programmes of agriculture, community development, irrigation and power, communications and social services.<sup>228</sup>

Given the poor implementation of projects in the public sector, the Government focused on the integration of planning, implementation and evaluation processes of projects. There was an effort made for the integration across scale of planning through integrated planning at the grassroots level, leading to the preparation of district level as well as State level plans.<sup>229</sup> The government also emphasised an integrated area development approach including all sectoral agencies concerned at micro-level.<sup>230</sup> The synergies were reflected in flood management and other infrastructure works, including irrigation development with rural development and

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<sup>225</sup> *Vellore Citizens' Welfare Forum v Union of India & Ors*, AIR 1996 SC 2715.

Nupur Chowdhury, Santanu Sabhapandit, 'The legal regime for application of the precautionary principle in India: future directions for the GM regulatory regime' (2007)7(3) *Social Science Research Network* 292-298.

<sup>226</sup> *M.C. Mehta Etc. v Union of India And Others Etc.*, 1991 SCR (1) 866, 1991 SCC (2) 353.

In this case, the Supreme Court directed to close mechanical stone crushing activities in and around Delhi, however directed the government to allot a new site for crushing zone.

<sup>227</sup> K. S. Kavi Kumar, 'Precautionary Principle' (Dissemination Paper 8, Madras School of Economics)12-13.

<sup>228</sup> Government of India, above n 20, ch 7,27; Government of India, above n 21, ch 9, 6.

<sup>229</sup> Government of India, above n 23, *Sixth Five Year Plan*, ch 8[8.2]-[8.39]; Government of India, above n 200, [1.151].

<sup>230</sup> Government of India, above n 23, *Sixth Five Year Plan*, ch 7[7.83]; Government of India, above n 24, vol 2[19.3.3].

agriculture. There were efforts to integrate green cover activities with livelihood activities and the integrated approach was recommended for better project selection, implementation and development.<sup>231</sup>

SDA was promoted through integrated watershed developments through strong partnerships between different departments.<sup>232</sup> There was an emphasis on integrated pest management method for controlling pests and diseases in conjunction with the efficient use of chemical fertilisers and bio-fertilisers.<sup>233</sup> The government incorporated disaster management in agricultural planning as well as combining agriculture and forestry together for natural resource management.<sup>234</sup> The integrated management of coastal areas is supported along with integration of climate change impact assessment with existing environmental impact assessment.<sup>235</sup> The sustainable development agenda was also promoted through the blending of local knowledge as well as using traditional and frontier technologies, particularly in conservation planning and management of resources.<sup>236</sup> The Indian government in recent times has adopted group cultivation as an integrated approach for integrating rural employment programmes and markets with agricultural development initiatives.<sup>237</sup>

Despite different efforts for integration, it is contended that the integration among different stakeholders is rather indirect, without a strong bond or partnership among them, the integration among different systems is weak and the integration of research with clients is mostly indirect.<sup>238</sup> The real problem lies with the integration of economic policies with environmental improvement policies and activities.<sup>239</sup>

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<sup>231</sup> Government of India, above n 200, [2.79],[2.89].

<sup>232</sup> Government of India, *Eleventh Five Year Plan (2007-2012)* vol 1,46; Government of India, above n 28, [1.11.5-6],[5.49],[7.88]-[7.94].

<sup>233</sup> Government of India, above n 25, ch 8[8.99].

<sup>234</sup> Government of India, above n 26, vol 1[7.28], vol 2[5.1.49][5.1.169].

<sup>235</sup> Government of India, above n 28, [7.88]-[7.94].

<sup>236</sup> Government of India, above n 26, vol II[5.1.64, Box 5.1.1].

<sup>237</sup> Government of India, above n 28, [6.26]-[6.27].

The group based farming or cultivation as an integrated approach for farming is found effective for disadvantaged and women farmers who face constraints in accessing to land and other inputs. There are successful examples of this approach in different Indian states.

<sup>238</sup> Dr Baldeo Singh, 'Country Report: India, Integration of Agricultural Research and Extension' (Report of the APO Study Meeting on Integration of Agricultural Research and Extension Philippines, Asian Productivity Organisation, 2002)150 .

<sup>239</sup> Dr Manmohan Singh, 'Green National Accounting for India' (Speech delivered at the International Workshop on Green National Accounting for India, New Delhi, 5 April 2013)

< [http://archivepmo.nic.in/drmanmohansingh/content\\_print.php?nodeid=1301&nodetype=2](http://archivepmo.nic.in/drmanmohansingh/content_print.php?nodeid=1301&nodetype=2)>.

*(b) The Principle of Good Governance*

Given the weak track record in governance in India, the government plans to promote reforms that include the promotion of decentralisation, civil services renewal, open and responsive government, tackling corruption, strengthening the rule of law and ensuring fiscal and environmental sustainability.<sup>240</sup>

While the government of India emphasised the effective formulation of projects for proper and timely implementation of plans along with pre-investment planning,<sup>241</sup> an expenditure restructuring plan has been prepared to ensure that ministries adhere to a spending timetable to avoid a hasty and huge expenditure at the last few months of the fiscal year.<sup>242</sup> More power has been delegated to the States for environmental impact assessments. For effective and speedy land acquisition, the government introduced a new rehabilitation policy that aims to integrate the rehabilitation concerns into the developmental planning.<sup>243</sup>

The shift in focus from input controls to coordination and monitoring of outcomes<sup>244</sup> is supported with indicator based evaluation,<sup>245</sup> and complemented with the use of location specific geographic information system,<sup>246</sup> and information communication technology.<sup>247</sup> The government emphasised establishing a comprehensive mechanism for constant monitoring of critical conditions of natural environment involving people's organisations at the grassroots level.<sup>248</sup> A Delivery Monitoring Unit has been established in the Prime Minister's Office to monitor large scale centrally assisted programmes of the government. The government also plans to set up an independent evaluation office on top of existing evaluation organs in the Ministries and Planning Commission.<sup>249</sup>

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<sup>240</sup> Government of India, above n 26, vol III [5.11]-[5.44].

<sup>241</sup> Government of India, above n 22, *Fourth Five Year Plan*, ch 6[6.14].

<sup>242</sup> The World Bank, *Governance in India* (2013) <<http://go.worldbank.org/JZ4EGDJQ30>>.

<sup>243</sup> Government of India, above n 200, vol 1[10.31]-[10.32].

<sup>244</sup> *Ibid* [10.35].

The horizontal coordination is proposed as the 'interventions in one area, say, rural drinking water and sanitation, affect outcomes in health, which affect outcomes in education.'

<sup>245</sup> *Ibid* [1.28].

Evaluation needs to be based on proper benchmarks and be scientifically designed to generate evidence-based assessment of different aspects of programme design.

<sup>246</sup> *Ibid* [10.62].

<sup>247</sup> *Ibid* [10.59]-[10.61].

<sup>248</sup> Government of India, above n 24, vol 2[4.10.1].

<sup>249</sup> Government of India, above n 200[10.59].

It is expected that community participation in evaluation would promote transparency and accountability as well as address corruption.<sup>250</sup> Transparency in development benefit distribution is facilitated through using unique ID numbers with biometrics of beneficiaries. The government also emphasised using e-governance as a transparent procedure in awarding government contracts in order to control corruption.<sup>251</sup> However, apart from widespread corruption,<sup>252</sup> the low accountability of legislators to the public has also become an impediment to governance along with a time-consuming and costly justice system.<sup>253</sup>

In order to promote transparency in public procurement, the central government of India still relies on its *General Financial Rules 2005* and the *Delegation of Financial Powers Rules* (DFPR), as well as the guidelines issued by the Central Vigilance Commission in absence of any separate procurement law.<sup>254</sup> Most of the States in India also have similar arrangements to central government and they follow State Financial Rules or Codes for public procurement.<sup>255</sup> Although a draft bill for streamlining the public procurement has been pending at a central level for the last five years, some States, such as Tamil Nadu and Karnataka have separate legislation for procurement.<sup>256</sup>

Two major institutions, the Comptroller and Auditor General (CAG) of India and the Central Vigilance Commission (CVC) oversee the integrity of the procurement process.<sup>257</sup> However, the time lag between any irregularities and the CAG report and recommendations of the legislature makes the efforts to improve governance in procurement largely ineffective.<sup>258</sup> The CVC focuses on the integrity of public servants in light of the *Prevention of Corruption Act 1988*.<sup>259</sup> The role of Parliament in facilitating governance is also found through oversight

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<sup>250</sup> Government of India, above n 200[1.26]-[1.29].

<sup>251</sup> Government of India, above n 28, vol 1[10.33],[10.38]-[10.40].

<sup>252</sup> Dr K.C. Tiwari, 'The Challenges of Good Governance in India, in the era of 21<sup>st</sup> Century' (2012)1(3) *Journal of Research in Commerce & Management*124-127.

<sup>253</sup> Julius Court, 'Assessing and Analysing Governance in India: Evidence from a New Survey' (World Governance Assessment Project Background Paper No. 2, United Nations University, 2001)18-19.

<sup>254</sup> *General Financial Rules (GFR), India 2005* ; Government Procurement in India Domestic Regulations & Trade Prospects Project, *Government Procurement – An emerging tool of global integration & good governance in India*( CUTS International, 2012)38-39.

<sup>255</sup> Government Procurement in India Domestic Regulations & Trade Prospects Project, *Government Procurement – An Emerging Tool of Global Integration & Good Governance in India*( CUTS International, 2012)40.

<sup>256</sup> Anubhuti Vishnoi, 'New Public Procurement Bill by Narendra Modi government aims to help 'Make in India' goals work' *The Economic Times* (online), 13 November 2015 <<http://www.loc.gov/law/help/govt-procurement-law/india.php>>.

<sup>257</sup> Government Procurement in India Domestic Regulations & Trade Prospects Project, above n 255, 40.

<sup>258</sup> *Ibid* 37-45.

<sup>259</sup> *The Prevention of Corruption Act 1988* (India) Act No 49 of 1988.

by different Standing Committees<sup>260</sup> however, it is surprising that there is no Standing Committee for Planning in India.

While the Citizen's Charter and Grievance Redressal Bill 2011 have been pending at central government for approval,<sup>261</sup> there are laws at the State level that promote accountability and transparency in the public sector. The laws relevant to citizens' rights for efficient service delivery in different States, such as Madhya Pradesh and Kerala cover a large number of basic services.<sup>262</sup>

There are provisions for social audits to improve the service delivery by the government offices as well as facilitate transparency in the development activities of the government. The social audits, however, only have limited effect.<sup>263</sup> The social audit has not been able to control malpractice, as well as break down the unauthorised benefit extracting and sharing nexus between politicians and bureaucrats at local level.<sup>264</sup> Moreover, the frequent transfer of key civil servants, including project directors, also hinders development activities.<sup>265</sup>

The citizens' rights on common property are promoted through different joint programmes, such as Watershed Development<sup>266</sup> and Joint Forest Management (JFM).<sup>267</sup> Given the large variations across States and benefits, JFM is, however found triggering local inequalities as

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<sup>260</sup>Parliament of India, *Departmentally Related Standing Committees*

< [http://164.100.47.192/Loksabha/Committee/CommitteeInformation.aspx?comm\\_code=5&tab=1](http://164.100.47.192/Loksabha/Committee/CommitteeInformation.aspx?comm_code=5&tab=1)>.

<sup>261</sup> S. K. Agarwal, *Right to Public Service: A Guide* (Transparency International India, 2014)34.

The Bill proposed to make it mandatory for every public authority to publish a Citizen's Charter within six months of the commencement of the Act. The Bill proposed to make incumbent on government officials to address citizens' complaints within a specified time, failing which the official concerned would face action, including a fine of up to Rs. 50,000 from his salary and disciplinary proceedings. It was expected to give people right to compensation if they do not receive their entitlements, promised under the law within a specified time.

<sup>262</sup> Yamini Aiyar and Michael Walton, *Rights, Accountability and Citizenship: Examining India's Emerging Welfare State, Accountability Initiative* (Centre for Policy Research, 2014)23-35; Government of India, Governance Knowledge Centre, 'Right to Public Service in Bihar' (Case Study: Right to Service Act in Bihar, 2011)

For example, in Madhya Pradesh the services ranges from issuing ration cards to income certificates and obligates the state government to ensure their provision within a stipulated time frame. The law also has provisions to penalize the public servants on failure of delivering services without sufficient ground.

<sup>263</sup> Aiyar and Walton, above n 262, 35.

<sup>264</sup> Ibid 36; Farzana Afridi, 'Social audit isn't enough' *The Indian Express* (online), 22 January 2014

< <http://indianexpress.com/article/opinion/columns/social-audit-isnt-enough/>>.

<sup>265</sup> Balmiki Prasad Singh, 'The Challenge of Good Governance in India: Need for Innovative Approaches' (Paper circulated in the second international conference of the Global Network of Global Innovators organized by Ash Institute for Democratic Governance and Innovation and John F. Kennedy School of Government, Harvard University, 31 March – 2 April, 2008)12-13.

<sup>266</sup> Jim Smyle, Crispino Lobo, Grant Miline and Melissa Williams, 'Watershed Development in India' (Agriculture and Environmental Services Discussion Paper 04, The World Bank, 2014) xv-xvi.

<sup>267</sup> Prodyut Bhattacharyaa, Lolita Pradhanb and Ganesh Yadav, 'Joint forest management in India: Experiences of two decades' (2010)54 *Resources, Conservation and Recycling* 469.

well as seriously disrupting traditional livelihoods.<sup>268</sup> The *Protection of Plant Varieties and Farmers' Rights Act 2001* facilitates the intellectual property rights in the agriculture sector for farmers and plant breeders.<sup>269</sup>

There are examples that institutional innovations promote sustainable development of agriculture in India through alternative approaches for cultivation,<sup>270</sup> while the e-Governance plan promotes establishing an institutional framework for service delivery.<sup>271</sup> There are some examples of governance improvement through using information technology, such as *Sulekha* has been designed and used in Kerala State to streamline digital local plan formulation, appraisal, approval and monitoring of planned development efforts.<sup>272</sup> Against the use of a virtual communication system for addressing the governance issue, the slow pace of project completion, resistance from government employees and the bureaucratic system hinder achieving desired results from the governance initiatives.<sup>273</sup>

Despite citizens' equal rights and protection under the law,<sup>274</sup> it is also contended that the 'criminalisation of the political process and the unholy nexus between politicians, civil servants, and business houses are having a baneful influence on public policy formulation and governance.'<sup>275</sup> Against the very low accountability of legislators to the public,<sup>276</sup> the schemes for law makers are also seen as a source of corruption and non-legislative functions at a

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<sup>268</sup> Anuradha Vemuri, 'Joint Forest Management in India: An Unavoidable and Conflicting Common Property Regime in Natural Resource Management' (2008)5 *Journal of Development and Social Transformation* 86.

<sup>269</sup> *The Protection of Plant Varieties and Farmers' Rights Act 2001* (India) Act No 53 of 2001; Amit Kapoor and Sankalp Sharma, 'Intellectual Property Rights in India: Innovation and Competitiveness in the Indian Context' (India's Innovation and IP Policies Working Paper, The National Bureau of Asian Research, 2015)9.

<sup>270</sup> T. Kumara et al, *Ecologically sound, economically viable community managed sustainable agriculture in Andhra Pradesh, India* (The World Bank, 2009) 5.

Community managed sustainable agriculture (CMSA) is being tested and practiced in the state of Andhra Pradesh in India. The CMSA approach replaces the use of chemical pesticides with a combination of physical and biological measures—including eco-friendly bio-pesticides—and complements it by adopting biological and agronomic soil fertility improvement measures leading to reduced use of chemical fertilisers. This has significantly reduced the cost of cultivation, the need for large amounts of credit, and indebtedness that results. These transformational changes have been achieved without any reduction in the productivity and yields for the participating farmers. Initial results from CMSA in Andhra Pradesh show a significant net increase in farmers' incomes in addition to significant health and ecological benefits.

<sup>271</sup> Government of India, *National e-Governance Plan* (2006) < <https://india.gov.in/e-governance/national-e-governance-plan>>.

<sup>272</sup> Government of India, 'E-Governance Sulekha' (Case Study, Governance Knowledge Centre, 2011) 2-3, 31.

<sup>273</sup> Dr Sanjay Kumar Dwivedi and Ajay Kumar Bharti, 'E-Governance in India— Problems and Acceptability' (2010) 17(1) *Journal of Theoretical and Applied Information Technology* 38-39.

<sup>274</sup> *Constitution of India* art 14; Singh, above n 268, 7-10.

<sup>275</sup> Singh, above n 265, 15.

The more insidious threat to India's democratic governance is from criminals and musclemen who are entering into state legislative assemblies and national Parliament in sizeable numbers. A political culture seems to be taking roots in which membership of state legislatures and Parliament are viewed as offices for seeking private gain and for making money.

<sup>276</sup> Court, above n 253, 18-19.



political level.<sup>277</sup> Although the judiciary plays an important role in delivering justice to citizens, there is a concern about delay in judicial process because of nexus between lawyers, court staff and litigants and the courts are ‘notoriously inefficient’.<sup>278</sup>

The legislation enacted in different States for efficient and timely government service delivery emerged as a result of the accountability movement in India.<sup>279</sup> However, its implementation creates ambiguity when the provisions for penalties and efficiency improvement are considered as mechanisms to strengthen internal administrative processes rather than empowering citizens. Moreover, penalising the grassroots level workers can divert attention from the administrative failures.<sup>280</sup>

### *(c) Principle 3: Right to Participative Process and Access to Information and Justice*

Citizen participation in the planning process received momentum in India in the middle of 1990s, even though public participation in implementation of plans was tried in previous plan periods in a weak institutional context.<sup>281</sup> During the early stages of planning, the government emphasised a group-based approach for agricultural development and crop planning,<sup>282</sup> and involved citizens in plan implementation. Given the shortcomings in full involvement of the citizens in the development process, the citizen’s voluntary labour in government’s development activities was considered as an example of citizens’ participation in community development interventions.<sup>283</sup>

The provisions for engaging citizens in the planning process including agricultural development planning in different plans are also complemented through two specific constitutional amendments for empowering citizens in local level decision making processes

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<sup>277</sup> Singh, above n 265, 16..

<sup>278</sup> The World Bank, *Governance in India*(2013) <<http://go.worldbank.org/JZ4EGDJQ30>>.

*Siddhartha Kumar And Others vs Upper Civil Judge* 1998 (1) AWC 593, (1998) 1 UPLBEC 587

The judges of Allahabad High Court also raised concern in this regard and suggested lawyers, litigants and Presiding Officers of the courts to advance the court process speedily.

<sup>279</sup> See, eg, *Punjab Right to Service Act 2011*(India); Express News Service, ‘Right to Service Act comes into force, promises transparency’ *The Indian Express* (online), 11 October 2011

< <http://indianexpress.com/article/cities/chandigarh/right-to-service-act-comes-into-force-promises-transparency/>>

This law ensures consider services to citizens as a matter of right and included time bound delivery of 67 services to citizens.

<sup>280</sup> Aiyar and Walton, above n 262, 29.

<sup>281</sup> Government of India, Planning Commission, *First Five Year Plan* (1951-56) ch 7, 1; Government of India, above n 24, [1.4.25]; Government of India, Planning Commission, *Ninth Five Year Plan*(1997-2002)vol 1, ch 6[6.38][5.33, 6.17].

<sup>282</sup> Government of India, Planning Commission, *First Five Year Plan* (1951-56) ch 14[14].

<sup>283</sup> Government of India, Planning Commission, above n 21, ch18,1.

including development planning.<sup>284</sup> The government of India also planned to empower citizens through their involvement in the selection of development projects' beneficiaries and location of works as well as in social auditing of the development activities.<sup>285</sup> However, provisions for sharing information regarding schemes and the budgets did not succeed due to limited service provisions for information sharing at local level.

The empowerment of local government institutions for inclusive growth and development planning including agricultural planning at local level was promoted through accepting the role of community based organisations as well as broadening the scope for citizen participation including disadvantaged groups.<sup>286</sup> It aims to promote participatory planning and sustainability as well as checking negative tendencies including partisanship and corruption.<sup>287</sup> Given the policy making process in India has been divorced from the people and their interests<sup>288</sup> the government now promotes the institutionalisation of consultative planning for effective participatory planning, including fixing and defining plan strategies.<sup>289</sup>

Despite legislative provisions for community participation in the local level development planning process, the opportunity becomes limited due to inadequate power and functions of the local government institutions as well as their reliance on NGOs for promoting community participation.<sup>290</sup> The local governments also suffer from corruption and clientelism where politics impedes the normative and deliberative process.<sup>291</sup> The participation of women and disadvantaged groups also face constraints due to traditional power structures, lack of access to education, knowledge and prejudice to disadvantaged groups. The participation is more or less captured by the influential beneficiaries of different programmes or contractors.<sup>292</sup>

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<sup>284</sup> *The Constitution (Seventy-Third Amendment) Act 1992* (India) art 243(b), 243A, 243 G;

*The Panchayats (Extension to Scheduled Areas) Act 1996* (India.) sec 4 [b, c, e].

<sup>285</sup> Government of India, above n 25, vol 1, ch 6[6.53].

<sup>286</sup> Government of India, Planning Commission, *Eleventh Five Year Plan (2007-2012)* vol 1 [6.204]-[6.207],[1.20][10.25].

<sup>287</sup> *Ibid* [10.25]-[10.28].

<sup>288</sup> Court, above n 253, 18-19.

<sup>289</sup> Government of India, above n 28, xii-xiii, 288.

<sup>290</sup> Om Prakash, 'International Success Stories of Public Participation: Understanding Best Practice, Pioneers of Participation Case Studies' (Paper presented in Workshop, 2010)  
<<http://www.drc-citizenship.org/system/assets/1052734736/original/1052734736-pioneers.2010-international.pdf?1398409432>>2.

<sup>291</sup> Patrick Heller, 'Democratic Deepening in Brazil, India and South Africa: Towards a Comparative Framework' (Paper presented in Seminar on Metropolis and Inequalities, São Paulo, Brazil, 24 -26 March 2010) 23.

<sup>292</sup> *Ibid* 23-24.

Apart from government plans, there are legislation, policies and strategies where a public participation agenda is promoted. The Environmental Impact Assessment process<sup>293</sup> in the project appraisal procedure includes community participation at the assessment stage, however, non-availability of details about projects,<sup>294</sup> and institutional constraints hinder meaningful hearings and citizen participation in the appraisal process.<sup>295</sup>

Given the scope for community participation in the plan preparation process at a local level, the scope for the participation of the community seems limited in planning at central and State level.<sup>296</sup> The guidelines for formulation, appraisal and approval of government funded projects do not have explicit instructions for involvement of the community during the detailed project proposal preparation stage.<sup>297</sup>

Climate change planning also lacks participatory planning mechanisms. The National Action Plan for Climate Change is also an example of closed-door policymaking process,<sup>298</sup> with non-transparent activities.<sup>299</sup> However, activities under the National Mission for Sustainable Agriculture (NMSA) have, to some extent, incorporated a participation agenda through inclusion of NGOs and local government institutions in implementation and monitoring of programmes of NMSA.<sup>300</sup>

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<sup>293</sup> Government of India, Ministry of Environment, Forests and Climate Change <<http://envfor.nic.in/division/introduction-8>>.

Environmental Impact Assessment (EIA) as an important management tool for ensuring optimal use of natural resources for sustainable development began in India with the impact assessment of river valley projects in 1978-79 and the scope has subsequently been enhanced to cover other developmental sectors such as industries, thermal power projects, mining schemes etc. EIA has now been made mandatory under the Environmental Protection Act 1986 for 29 categories of developmental activities involving investments of Rupees 50 crores and above.

<sup>294</sup> Ruchi Pant, 'From Communities Hands to MNCs' BOOTS' (A Case Study from India on Right to Water submitted to Rights and Humanity, UK, October 2003)24-25.

<sup>295</sup> Himansu Sekhar Patral and Priyabrata Satapathy, 'Legality and Legitimacy of Public Participation in Environmental Decision Making Process: A Review of Scenario from State of Odisha, India'(2014)3(3) *International Research Journal of Environment Sciences* 83.

<sup>296</sup> The World Bank, *India: Strengthening Institutions for Sustainable Growth* (2006) <[http://siteresources.worldbank.org/INDIAEXTN/Resources/events/359987-1162549840551/Final\\_India\\_Envr\\_Report\\_06.pdf](http://siteresources.worldbank.org/INDIAEXTN/Resources/events/359987-1162549840551/Final_India_Envr_Report_06.pdf)> 27.

<sup>297</sup> Government of India, Planning Commission, *Project Appraisal Procedure in the Planning Commission during 12<sup>th</sup> Five Year Plan*, P.C. U.O. No. O-14015/01/2011-PAMD(17 July 2013); Government of India, Planning Commission, *Delegation of Powers for Appraisal and Approval of Public Funded Plan Schemes/Projects-revise guidelines*, P.C. U.O. No. O-14015/02/2014-PAMD (21 October 2014) .

<sup>298</sup> Jagadish Thaker and Anthony Leiserowitz, 'Shifting discourses of climate change in India' (2014)123 *Climate Change* 9-10.

<sup>299</sup> Himanshu Thakkar, *There is little Hope Here* (South Asia Network on Rivers and Dam, 2008)6, 49.

Raghu, 'India's Climate Action Plan: Many Points, No Direction' (2008) XXXII(26) *People's Democracy* .

Ajay K Jha, 'India's National Response to Climate Change and Peoples Participation' (Conference Paper, APRN Biennial Conference, 2014)3-7.

<sup>300</sup> Government of India, Department of Agriculture & Cooperation, *National Mission for Sustainable Agriculture Operational Guidelines* (2014) 18-19.

The rights of citizens for information about the development process are promoted in the *Right to Information Act 2005*, which empowers citizens to seek information on almost all public matters without having any obligation to show any justification. Failure to supply information results in penalties for public officials,<sup>301</sup> except on some issues, which are exempted on public interest protection grounds and are relevant to provisions made in the *Official Secrets Act 1923*.<sup>302</sup> The right to information also falls short of facilitating citizen's access to the non-government sector's information.<sup>303</sup> The implementation of this right also suffered due to low awareness, poor record keeping process by the government and irregular updating of proactively disclosed information and a lack of a monitoring and review mechanism.<sup>304</sup>

Despite different impediments in access to information, there are some examples of using latest information technology by the farmers, such as through E-Choupal (Internet Kiosks) to get free information in the local language about market prices, weather forecasts, farming practices and crop insurance. The launching of MyGov portal is also expected to provide adequate information and extend opportunities to citizens to express their concerns to the government.<sup>305</sup>

There are also examples of partnerships between community, government and NGOs in implementation of plans. The preparation of People's Biodiversity Register (PBR) in partnership with local people as well as use of National Gene Fund for facilitating in situ conservation of genetic diversity of indigenous crop varieties at community level are unique examples of partnership.<sup>306</sup> Moreover, significant progress has been found in participatory irrigation management in different states of India.<sup>307</sup>

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<sup>301</sup> *Right to Information Act 2005* (India); Transparency International India, *Improving Governance* < [http://www.transparencyindia.org/improving\\_governance.php](http://www.transparencyindia.org/improving_governance.php)>.

<sup>302</sup> *The Official Secrets Act 1923*(India) sec 3; *Right to Information Act 2005* (India)sec 8[2-3].

<sup>303</sup> Priyanka Jana, 'Limitations of the Right to Information Act, 2005' (2010) Winter Issue, *Global Media Journal* 1, 11.

<sup>304</sup> PricewaterhouseCoopers, *Key issues and constraints in implementing the RTI Act* <[rti.gov.in/rticorner/studybyppwc/key\\_issues.pdf](http://rti.gov.in/rticorner/studybyppwc/key_issues.pdf)> 38-53.

<sup>305</sup> Government of India, *MyGov - Citizen Participation towards Good Governance* <<https://india.gov.in/spotlight/mygov-citizen-participation-towards-good-governance>>.

<sup>306</sup> Government of India, 'Protection of Plant Varieties and Farmers' Rights Authority' (Brochure No. PPFRA\4, Ministry of Agriculture, Government of India, 2011) < [http://plantauthority.gov.in/pdf/G\\_Brochure\\_English.pdf](http://plantauthority.gov.in/pdf/G_Brochure_English.pdf)>;

Gauchan, Devendra, Bhuwon Sthapit and Abishkar Subedi, 'Community Biodiversity Register: A review of South-Asian experience' in A. Subedi, BR Sthapit, MP Upadhyay and D Gauchan (eds) 'Learnings from Community Biodiversity Register in Nepal' (Proceedings of the National Workshop, Nepal, 2005) 5-6.

<sup>307</sup> Government of India, Planning Commission, *Eighth Five Year Plan* (1992-1997)[4.5.1]-[4.5.2], [4.6.1].

The recent initiatives of the government for partnerships with the private sector through the 'Make in India' programme, which has the potential for the promotion of agriculture, includes only food processing, which could limit the progress of the goal of advancing the sector beyond food security.<sup>308</sup> Moreover, the States in India are generally supportive of participatory practices, though this depends on the degree of support from NGOs and higher-level government.<sup>309</sup>

Despite the limited progress in citizen participation in the planning process, the latest twelfth five year plan further emphasises active participation of minorities in the developmental process.<sup>310</sup> This is promoted further with the reforms in PC that promote inclusiveness, and the village is considered the centre of development. The central government initiated model bill also encourages state governments to legislate participation of citizens in the planning process.<sup>311</sup>

In respect of access and rights to justice, apart from legislation, the judiciary has played a proactive and expanded role in addressing citizens' concerns in different issues including environmental policy, administration as well as particular issues of disputes. This is a robust and important element to support the principles of SDA. Citizen access to justice is also facilitated by the *Human Rights Act 1993* as well as the *Gram Nyayalayas Act 2009*.<sup>312</sup> The National Green Tribunal (NGT) and Central Water Commission play a role in addressing justice to citizens through expeditious disposal of environmental protection related cases and coordinating stakeholder participation in integrated and sustainable management of water resources.<sup>313</sup>

The extended rights of citizens' access to justice were primarily expanded through the remarkable decision of the Supreme Court of India that has liberated the doctrine of standing to approach the courts by any 'public-spirited individual'.<sup>314</sup> This opportunity is also

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<sup>308</sup> Shailini Pandey, *Public Private Partnership in Agriculture in India* < <http://www.slideshare.net/shalinipandey77985/public-private-partnership-in-agriculture-in-india>>; Government of India, *Make in India* < <http://www.makeinindia.com/sector/food-processing>>.

<sup>309</sup>Robertson Work, 'The Role of Participation and Partnership in Decentralised Governance: A Brief Synthesis of Policy Lessons and Recommendations of Nine Country Case Studies on Service Delivery for the Poor' (Brief, United Nations Development Programme, 2002) 6.

<sup>310</sup> Government of India, above n 28, vol 3, 254.

<sup>311</sup> Government of India, Ministry of Urban Development, *Model Nagar Raj Bill* (2006).

<sup>312</sup> Government of India, Ministry of Environment and Forests, *Sustainable Development in India: Stocktaking in the run up to Rio+20*(2011)29.

<sup>313</sup> Ibid 36-37.

<sup>314</sup> *M C Mehta v Union of India* AIR 1987 SC 1086.

supplemented with a waiver for a formal petition submission in public interest litigation in courts.<sup>315</sup> However, the court in this regard also put cautionary notes on misusing the opportunity and guided the High Courts to prepare guidelines for managing the petitions on public interest.<sup>316</sup>

The citizens play an important role in building their rights to decision making concerning development through appealing to the judiciary.<sup>317</sup> However, the judiciary in India has played a mixed role in ensuring community rights when the litigation on government initiated development activities requires a decision. For example, in the case of *Municipal Council, Ratlam v Shri Vardhichand & Ors*, the Supreme Court of India dismissed the plea of Ratlam Municipality and ordered this local government to provide sewage services to the citizens. The Court also held that the paucity of funds shall not be a defence to the fulfilment of basic duties by the local authorities.<sup>318</sup> On the other hand, in *Chalaky Puzha Samrakshna Samithy Chithanya v State of Kerala* case,<sup>319</sup> the Court rejected the appeal of citizens who argued for scrapping a hydro-electric project at Athirampilly on insufficient appraisal grounds. The judges rejected any review to interfere with the decision of the expert board on the question of feasibility of the project.<sup>320</sup> In *Narmada Bachao Andolan v Union of India* case, the Supreme Court gave priority to development over the fundamental rights of citizens and considered rehabilitation of citizens to new locations as a comparatively better option for them against their dislocation.<sup>321</sup>

The above discussion about government initiatives for the promotion of SDA under the classification of different principles briefly illustrates public sector plans, policies and strategies as well as laws and the role of the judiciary. Although the discussion is not

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<sup>315</sup> *Rural Litigation And Entitlement Kendra & ORS. ETC. v State of Uttar Pradesh & Ors. ETC.* 1987 AIR S 359, 1987 SCR (1) 641.

In this case, a letter from the Rural Litigation and Entitlement Kendra Dehradun was treated as a writ petition and notices were issued.

<sup>316</sup> *Divisional Manager, Aravalli Golf Club and Anr v Chander Hass and Anr* Appeal (civil) 5732 of 2007; *State of Uttaranchal v Balwant Singh Chauhal & Others* Civil Appeal Nos 1134-1135 of 2002.

The Court chastised the judiciary for overreach, and advocated judicial self-restraint. The Supreme Court also directed the High Courts to formulate rules to encourage genuine public interest litigations, and discourage those filed for extraneous reasons.

<sup>317</sup> There are many instances where public interest litigations were filed by the spirited individuals, such as M C Mehta. Many local level institutions and groups such as Narmada Bachao Andolan, Chalaky Puzha Samrakshna Samithy also filed cases for environmental protection,

<sup>318</sup> *Municipal Council, Ratlam v Shri Vardhichand & Ors* 1980 AIR 1622, 1981 SCR (1) 97.

<sup>319</sup> *Chalaky Puzha Samrakshna Samithy Chithanya v. State of Kerala* OP 3581/2001.

<sup>320</sup> *Chalaky Puzha Samrakshna Samithy Chithanya v. State of Kerala* OP 3581/2001.

<sup>321</sup> *Narmada Bachao Andolan v Union of India and Ors* AIR 2000 10 SCC 664.

exhaustive, it tries to include discussions on major approaches that contribute to the promotion of SDA. There are many initiatives that have significance and adoptability from other country perspectives considering appropriate customisation in light of the challenges faced in India. However, there are also some initiatives that may not need customisation for adoption. Given the homogeneity between Bangladesh and India in development planning, the approaches of India in many cases may be applicable in Bangladesh after considering the potential challenge of implementation in Bangladesh. The next section presents these potential replicable Indian examples for Bangladesh development planning frameworks. The replicability in Bangladesh will however be discussed in the next chapter after review of the Bangladesh development planning approach.

### *E Lessons Learned from the Indian Experience*

This section presents examples for incorporation in the development planning frameworks of Bangladesh in promoting SDA. The examples are presented below after considering the challenges India faces in pursuing these practices. The circumstances of Bangladesh may also necessitate some modifications before incorporating the examples from India in the planning frameworks of Bangladesh.

#### *1 Evolution of Planning Frameworks*

The inclusive planning ideology adopted in India where villages are now considered the centre for development along with people's participation is a lesson for Bangladesh. The decentralisation of planning is also an example that can be considered for Bangladesh planning frameworks. The limitations of inclusive planning, including people's participation, at different levels of government are also lessons that can help design an appropriate inclusive planning model for Bangladesh.

State mandated agricultural development<sup>322</sup> planning processes through an indicative approach and direct state intervention can be used to pursue sustainable development of agriculture. The facilitation of private sector development needs to be complemented with state intervention as well as effective governance and decentralised planning for empowering citizens through involving them in the decision making process of different stages of planning.

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<sup>322</sup> *Constitution of India* art 48.

## *2 Areas of Planned Intervention*

The facilitative role of the government for promoting agriculture through input and output subsidies along with promotion of sustainable practices through incentives is an example that could be followed in Bangladesh.<sup>323</sup> The government's role in supporting the farming communities in the absorption of new technology as well as conservation and regeneration of natural resources and motivating the farming community to environmentally sustainable farming process could be also a replicable example.<sup>324</sup> Given that the threats of climate change are a serious risk to the agriculture sector, the Indian government's priority given to adaptation activities along with selective mitigation interventions, such as increased adoption of solar irrigation, afforestation and organic farming practices are also good examples to apply in Bangladesh.<sup>325</sup>

The agendas for agricultural development in India are quite consistent with the interventionist approach being practiced in different developed and developing countries around the world. Nevertheless, the nature, volume and agendas vary and support to farmers and agriculture sector is quite extensive in India because the livelihoods of the majority of people still depend on this sector. The self-sufficiency in food grains through domestic production also seems plausible, particularly after the global food price hike and crisis in 2008.

## *3 Major Lessons from Procedural Aspects*

Development planning processes can be facilitated through legislative mandate.<sup>326</sup> The procedural formalities for plan preparation need to be inclusive and flexible while a coordinated approach is needed to integrate plans at different levels. While the plan preparation process needs some form of legal mandate, plans also need to be reviewed by the representative legislature of the country.

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<sup>323</sup>Tripathi and Prasad, above n 46, 66.

<sup>324</sup> Arora, above n 58.

<sup>325</sup> Government of India, above n 103, 36.

<sup>326</sup> Government of India, *Allocation of Business* (1961); *Constitution (Seventy-third Amendment) Act 1992* India; *Constitution (Seventy-fourth Amendment) Act 1992* India.



The community needs to be included in different stages of project preparation, including the feasibility study and detail planning stages. The environmental impact analysis occupies a significant part of appraisal and citizen participation also needs to be ensured in this process through timely and informed deliberation as well as building the capacity of citizens. The projects appraisal process can be separated from the approval authority, particularly from the national planning organisation. The regular monitoring and evaluation of projects can also integrate some instruments such as Social Audit, Community Score Cards and Citizens' Report Cards. These instruments can be used as participatory performance monitoring mechanism for promoting direct involvement of citizens in participatory tracking of service quality, access and performance.<sup>327</sup>

Poor plan implementation experiences in India suggest that the implementers' commitment in delivering projects and programmes, along with efficiency of local governments, is necessary apart from the retention of staff for reasonable periods for better implementation. The participation of local government institutions in national project preparation activities, coordination among different sectors as well as cooperation from citizens, is also significant to better implementation of projects.

Given the above general lessons about substantive and procedural issues of planning frameworks, the next sub-section will specifically focus on citing examples of the Indian development approaches that facilitate SDA in India. These are major examples of interventions that can be considered for incorporation in similar planning frameworks of Bangladesh, after appropriate customisation.

#### *4 Principles of Sustainable Development of Agriculture*

##### *(a) Principle 1: Maintenance and Improvement of Eco-integrity, Biological Diversity and Improving Resource Use Efficiency*

There is a need to prioritise the conservation and efficiency of natural resource use for sustainable agricultural development and the governments in developing countries should follow a public trust doctrine in this respect. There is a need to strengthen laws relating to land reforms including

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<sup>327</sup> Anil B. Deolalikar, Shikha Jha and Pilipinas F. Quising (eds), *Governance in Developing Asia Public Service Delivery and Empowerment* (Edward Elgar, 2015)238-240.

tenancy and land leasing laws.<sup>328</sup> However, land reforms need to be complemented with legal provisions for prohibiting the conversion of prime agricultural lands.

Soil fertility can be promoted through soil and moisture conservation based upon location specific in-situ and ex-situ practices with the help of government incentives. The comprehensive inventory preparation for ecological resources, soil mapping, soil test based fertiliser application, as well as biological control of pests, can be part of resource conservation planning.<sup>329</sup> The fertiliser subsidy should follow a nutrient-based subsidy (NBS) system and promote soil health cards<sup>330</sup> for a balanced use of chemical fertiliser. However, there is also need to promote bio-fertilisers and organic manures as well as agro-forestry through government incentives for improving soil health.<sup>331</sup>

In responding to falling ground water levels and improving water use efficiency, the facilitative measures can include watershed development, restoration and repair of water conveyance systems, the creation of additional storage and the conjunctive use of ground and surface water. There is also a need to separate the electricity feeders and follow stricter scheduling in addressing the over withdrawal of ground water. Apart from adoption of solar irrigation, water saving technology<sup>332</sup> and water quality monitoring systems should be promoted along with legislation for preventing the degradation of wetlands.<sup>333</sup>

Biodiversity protection needs to be promoted through legislation for facilitating sharing of benefits from utilization of biological resources. A People's Biodiversity Register (PBR) can be prepared in a participatory manner for documentation of traditional ecological knowledge and practices about conservation. The in-situ conservation of genetic diversity of indigenous crop varieties needs to be promoted through incentives.

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<sup>328</sup> Timothy Besley and Robin Burgess, 'Land Reform, Poverty Reduction, and Growth: Evidence from India' (2000) 115(2) *The Quarterly Journal of Economics* 424.

there is robust evidence of a link between poverty reduction and two kinds of land reform legislation— tenancy reform and abolition of intermediaries. Another important finding is that land reform can benefit the landless by raising agricultural wages. Although the effects on poverty are likely to have been greater if large-scale redistribution of land had been achieved, our results are nonetheless interesting as they suggest that partial, second-best reforms which mainly affect production relations in agriculture can play a significant role in reducing rural poverty.

<sup>329</sup> Government of India, above n 24, [4.8.1]-[4.8.4]; Government of India, above n 140.

<sup>330</sup> Government of India, above n 28, vol 2, 14.

<sup>331</sup> Government of India, above n 136, *National Policy for Farmers* 12.

<sup>332</sup> Government of India, above n 24, [4.8.1]-[4.8.4]; Government of India, above n 140, 4-5.

<sup>333</sup> Government of India, above n 24, [1.115].

The judiciary can play a significant role through the appropriate explanation and application of different constitutional provisions and legislation. The judiciary can take the opportunity to declare SD as an accepted development approach when determining cases on this issue. It can also facilitate addressing ecological degradation through disposing cases in a speedy manner with the help of speedy investigation of the executive department that has so far failed in Bangladesh.<sup>334</sup>

*(b) Principle 2: People centric Development for Addressing Poverty, Employment and Livelihoods*

Apart from direct poverty alleviation programmes, agricultural development programmes need to be pursued to generate adequate productive employment and livelihood improvements.<sup>335</sup> The programmes can include irrigation, flood management and rural infrastructure development projects for employment generation.<sup>336</sup>

Subsidies in agriculture can be used to ensure profit to farmers through low input prices and support prices for their outputs. Sustainable farming practices and allied businesses should be promoted through subsidies and incentivising low-cost green fertiliser and technologies to ensure farmers' profit.<sup>337</sup>

Community food grains banks, cooperatives and self-help groups may facilitate greater control of farmers over the market channels. The direct purchase of agricultural produce from the farmers institutionalising a price stabilisation fund along with transparent ICT based purchase processes could also generate profits for farmers.<sup>338</sup>

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<sup>334</sup> BSS, Chittagong, '300 Cases in CTG Environment Court Pending', *The Daily Star* (online), 8 March 2015  
The investigation officials of the DoE failed to submit 158 investigation reports before the court even after 12 years of investigation despite repeated reminders from the court to do so.

Anwar Hussain, '60% cases remain pending' *Dhaka Tribune* (online), 26 January 2016  
<<http://www.dhakatribune.com/bangladesh/2016/jan/26/60-cases-remain-pending>>.

<sup>335</sup> Government of India, Planning Commission, above n 25, vol 2[2.1.6].

<sup>336</sup> Government of India, above n 21, [23.12]; Government of India, Planning Commission, *Seventh Five Year Plan* (1985-1990)[2.45],[5.1]; Government of India, Planning Commission, above n 24, [6.1.1]; Government of India, above n 26, [1.1.16].

<sup>337</sup> Government of India, above n 136, *National Policy for Farmers*, 20.

<sup>338</sup> *Ibid* 14-15.

Special support, such as child care centres, nutrition, health and population related training could facilitate the income of poor farmers. There is also a need to provide special assistance to farmers in ecologically isolated areas and tribal farmers through easy access to institutional credit and other inputs.<sup>339</sup>

The credit system for agriculture needs to be facilitated with the introduction of single window credit operations schemes at a subsidised rate along with debt waiver after any serious natural disaster. Women and other disadvantaged farmers also need to be supported through issuance of credit cards with fewer formalities. The farmers can be offered further discounts on subsidised interest rates to ensure regular payments. The weather based crop insurance scheme can be promoted along with a subsidy for marginal and small farmers for premium payment.<sup>340</sup>

*(c) Principle 3: The Principle of Equity*

There is a need to emphasise long-term orientation, regional and local balance as well as continuation of a minimum investment in agriculture. While large farmers are the winners in the subsidy regime, they can be asked to pay a surcharge over their consumption of agricultural inputs to promote equity through using these taxes as incentives to poor and marginal farmers.<sup>341</sup>

The government of a developing country like India should undertake gender-focussed and special programmes for small and marginal farmers as well as tribal and disadvantaged groups.<sup>342</sup> The collateral free General Credit Cards and micro-credit support need to be extended to poor and landless farmers. The public land distribution to genuine landless and marginal farmers can be conditional to improving the environmental and ecological conditions through greening of a portion of allotted lands.

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<sup>339</sup> Ibid 13, 18.

<sup>340</sup> Hoda and Gulati, above n 171, 21-25.

The weather based crop insurance scheme aims to support farmers in risks arises from adverse weather conditions that lead to production losses.

<sup>341</sup> Swain and Charnoz, above n 146, 28-29.

<sup>342</sup> S. Mahendra Dev, 'Policies for Raising Agricultural Growth and Productivity in India' (Proceedings/Projects Series PP-069-SMD1 Policy Options and Investment Priorities for Accelerating Agricultural Growth in India, Indira Gandhi Institute of Development Research, 2012) 7.

The judiciary can play a significant role in safeguarding intergenerational equity through speedy judgement in environmental cases and ordering fines and taxes from polluting industries for ecological improvement to facilitate agricultural production.

*(d) Principle 4: The Precautionary Principle*

As a precautionary measure, there is a need to promote comprehensive inventory preparation for ecological resources along with soil survey, land degradation mapping and soil testing as well as use of soil health card for application of fertiliser and other nutrients.<sup>343</sup> The sale of substandard fertiliser and pesticides also needs to be strictly controlled.<sup>344</sup> The development projects must use minimum areas of land and the government should promote establishment of projects on degraded lands so that fertile agricultural lands are not used for non-agricultural purposes.<sup>345</sup> There must be a mandatory mechanism for public disclosure of information on polluting activities of industries adjacent to agricultural lands.

Environmental impact assessments including CC impact assessments and cost-benefit analyses need to be included at different stages of the development planning.<sup>346</sup> Cumulative environmental impact assessments can be introduced for vulnerable regions along with Environmental Performance Index (EPI) for variable financing to different departments. In the application of bio-technology, especially GMO crops, the precautionary principle needs to be strictly followed for safety reasons.<sup>347</sup> Early warning systems should be institutionalised,<sup>348</sup> and sensitisation of the farming community about the environmental concerns of risk management and adopting ecologically beneficial agricultural practices needs to be promoted.<sup>349</sup> The judiciary can play a strong role in promoting the precautionary principle through declaring it as law in light of the explanation of constitutional provisions and relevant principles agreed in international declarations. The judiciary can also use this principle in addressing potential threats to natural resource degradation in a developing country like India.<sup>350</sup>

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<sup>343</sup> Government of India, Planning Commission, *Tenth Five Year Plan (2002-2007)* vol 2[5.1.168].

<sup>344</sup> Government of India, above n 136, *National Policy for Farmers* 12.

<sup>345</sup> Government of India, Ministry of Agriculture, *Brief on Programmes of Natural Resource Management (NRM) Division* <[http://www.agricoop.nic.in/imagedefault/Nrm/BRIEF\\_WDP.pdf](http://www.agricoop.nic.in/imagedefault/Nrm/BRIEF_WDP.pdf)>4-5.

<sup>346</sup> Government of India, Ministry of Environment and Forests, *National Conservation Strategy and Policy Statement on Environment and Development* (1992) pt 4.4.

<sup>347</sup> Nupur Chowdhury, Santanu Sabhapandit, 'The legal regime for application of the precautionary principle in India: future directions for the GM regulatory regime' (2007)7(3) *Social Science Research Network* 292-298.

<sup>348</sup> Government of India, Planning Commission, above n 28, 224.

<sup>349</sup> *Ibid* 45.

<sup>350</sup> Chowdhury and Sabhapandit, above n 347, 292-298.

*(e) Principle 5: Integration across Scales and Disciplines*

There is a need to integrate the planning, implementation, monitoring and evaluation processes of projects of the government at local, State and national levels in a developing country like India.<sup>351</sup> Environmental issues and disaster management agendas should be incorporated in agricultural planning and decision making at all levels along with the integration of climate change impact assessments and environmental impact assessments.<sup>352</sup>

The integration of programmes of agriculture and other sectors, such as flood management, irrigation and power, rural networks need to be pursued through strong partnerships between different departments. The conjunctive use of surface and ground water is to be promoted along with watershed management principles. Integrated pest management (IPM) practices need to be applied, along with integrated nutrient management, and natural resource management.

Blending local knowledge with national level knowledge, along with traditional and frontier technologies in conservation and planning and management of resources, can assist promotion of sustainable practices. The greening activities need to be integrated with livelihood activities and agricultural development, while farmers need to be supported to integrate with both the domestic and international markets

*(f) Principle 6: The Principle of Good Governance*

Strengthening local institutions and promoting participatory and flexible grassroots planning may assist overcome shortcomings in top down planning. The projects need to be prepared properly and pre-investment planning is needed before initiating large individual projects. An independent evaluation office at the centre may enable better monitoring of projects. Social audits and parliamentary oversights can play important roles in improving the public service delivery as well as facilitate transparency.<sup>353</sup> An expenditure restructuring plan may facilitate

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<sup>351</sup> Government of India, *Eleventh Five Year Plan (2007-2012)* vol 3[1.151]; Darren Swanson, 'India Case Study Analysis of National Strategies for Sustainable Development' (Unedited Working Paper, Environmental Policy Research Centre, 2004) <[https://www.iisd.org/pdf/2004/measure\\_sdsip\\_india.pdf](https://www.iisd.org/pdf/2004/measure_sdsip_india.pdf)> 6.

<sup>352</sup> Government of India, above n 25, ch 8 [8.99]; Government of India, above n 28, vol 1, [7.88]-[7.94]; Swanson, above n 351, 6.

<sup>353</sup> Nick Robinson, 'Right to Public Service Acts in India: The Experience from Bihar and Madhya Pradesh' (AI Policy Briefs, Centre for Policy Research, 2012) 12-13.

avoiding an expenditure glut in the last quarter of the fiscal year.<sup>354</sup> Moreover, the retention of key officials in project management can improve implementation.<sup>355</sup>

The leakage and irregularities can be minimized through use of unique ID numbers with biometrics to establish proof of identity for the beneficiaries of different government programmes and projects. The wider use of e-governance<sup>356</sup> can also facilitate more transparent procedures. The anti-corruption measures can be promoted with the activation of independent vigilance agencies and regular auditing by the independent office of the Auditor General. The e-governance can promote an institutional framework for facilitating speedy decision making and transparency in service delivery.<sup>357</sup>

There is a need for a comprehensive mechanism for constant monitoring of the critical condition of the natural environment by government agencies as well as by people's organisations at the grassroots level.<sup>358</sup> The intellectual property rights in the agriculture sector should be promoted by laws and effective and transparent partnership for the protection of rights of farmers as well as plant breeders and preventing misappropriation of indigenous knowledge of communities.

Institutional innovations such as community-managed sustainable agriculture programmes can promote the SDA. Information technology and systems including GIS can be effective for streamlining local level planning process. These systems can also facilitate successful land reform including property registration as well as public food procurement.<sup>359</sup>

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<sup>354</sup> The World Bank, above n 242,

<sup>355</sup> Singh, above n 265, 12-13.

<sup>356</sup> Nikita Yadav and V. B. Singh, 'E-Governance: Past, Present and Future in India' (2012)53(7) *International Journal of Computer Applications* 40.

Some of the examples of e-governance in rural areas in agriculture sector are as follows:

Gyandoot: In the State of Madhya Pradesh it is an Intranet-based Government to citizen (G2c) service delivery initiative.

BELE: It is a web-based application with 3-tier architecture for capturing and monitoring the major activities and services.

Mustard Procurement Management System: It is started by Haryana government. It conducted the survey of mustard sown by the farmers and feed this data in to the database of the system. This data is then processed and generate coupons having information of dates on which farmer may visit in the mandi to sale his mustard.

<sup>357</sup> Government of India, above n 271; Government of India, above n 272.

<sup>358</sup> Government of India, above n 24, [4.10.1].

<sup>359</sup> Government of India, above n 272, 2-3, 31; Government of India, Department of Administrative Reforms and Public Grievances, *Good Governance Initiatives* (2014)71.

The governments need to ensure citizens' equal rights and protection under the law as well as facilitate the speedy disposal of cases. The legislation enacted in different States of India for promoting timely public service delivery,<sup>360</sup> including the redress mechanism, can also facilitate effective service delivery to citizens and the accountability of public officials in a developing country like India. The penalties and efficiency improvement provisions need to be applied cautiously and to ensure that the penalties are equitably distributed based on responsibilities.<sup>361</sup>

*(g) Principle 7: Right to Participative Processes and Access to Information and Justice*

Consultative planning may facilitate the citizen participation in planning decision-making processes,<sup>362</sup> and participation can be promoted through a group-based approach in assistance with a facilitator. The promotion of deliberation for facilitating participation should include sharing information on schemes and the budgets. The citizens need to be involved in feasibility studies, project design, appraisal, and the implementation of the monitoring and evaluation stages of the plan. The local non-governmental organisations can also help in participatory planning and implementation, however their involvement has to be cautiously handled so that they do not create clientelism.

The right to information law can be used as an instrument to ensure transparency and accountability in the development planning process. The mandatory public disclosure of information of public and private sectoral development projects can facilitate the right to information and environment-friendly project implementation. Citizen participation can also assist social auditing of different programmes. The facilitation of citizen participation in conservation of natural resources and genetic diversity can be promoted by incentives.

The citizens' right to justice can be facilitated through the establishment of a special tribunal for effective and expeditious disposal of cases relating to environmental protection. The right to justice could be extended by widening the scope or relaxing the *locus standi* options by the judiciary and waiving the formal petition submission requirements in public interest litigation.

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<sup>360</sup> See, eg, *Punjab Right to Service Act-2011*(India); Express News Service, 'Right to Service Act comes into force, promises transparency' *The Indian Express* (Online), 11 October 2011

< <http://indianexpress.com/article/cities/chandigarh/right-to-service-act-comes-into-force-promises-transparency/>>  
This law ensures consider services to citizens as a matter of right and included time bound delivery of 67 services to citizens.

<sup>361</sup> Aiyar and Walton , above n 262, 29.

<sup>362</sup> Government of India, above n 28, xii-xiii, 288.



However, this right needs to be applied cautiously so that it is not used to hinder progress. There is also a need to provide government assistance to poor farmers to avail the judicial assistance in ensuring their rights.

The lessons illustrated above from the Indian development planning process and its relevant legislation, executive functions and judicial remedy need to be pursued in an integrated manner. The development planning process is not isolated from other interventions and this process alone may not be effective in promoting SDA in another country. The planning process also has to address the implementation challenges and any deficit in implementation may dilute all integrated agendas. Effective implementation is not a process that the government alone can pursue; it needs cooperation and partnership with different organs of the state, citizens as well as international financial institutions and donors. An effective integration of agendas and their integrated procedural promotion are needed to advance the agenda of SDA.

#### *F Conclusion*

Agricultural development has always been a priority in India and it has been promoted through development planning processes, along with direct and indirect incentives to farming communities. Given the changes in planning ideologies that have shifted from centralised production oriented planning to indicative planning, the core agricultural development process and agendas have not changed.

The promotional role of the government in agricultural development through the interventionist approach and the implementation of development activities, along with other fiscal and regulatory provisions, have been quite significant in addressing SDA. Despite the modest improvement in Indian economy under the age of development planning the debate about the success of planning in the development of India must be taken into account while India is considered as a good example for other countries. The findings of different studies in respect to faulty economic analysis and inappropriate policies in planning stage,<sup>363</sup> lack of coordinated policies,<sup>364</sup> and inefficiency in the early periods of planning are issues to critically analyse in Bangladesh situation. Given the necessity of state intervention through

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<sup>363</sup>Kamath, above n 33.

<sup>364</sup> Srinivasan, above n 34.

planning processes is acknowledged,<sup>365</sup> the promotional role of the government for agricultural development requires consistency and institutionalisation of participatory planning in the context of divorce between policy making process and the people and their interests.<sup>366</sup> The planning process also needs reallocation of public resources as well as reform in institutions to achieve better impacts on future agricultural and rural growth and poverty reduction.<sup>367</sup>

The findings of independent study about inappropriateness of legislation on environmental management, ineffective implementation by the executive as well as institutional weaknesses in India<sup>368</sup> also provides motivation for effective implementation of commitments in different plans. There is a question about incorporation of SD principles in legislation in India to require planning authorities to mandatorily follow them in their decision making processes.<sup>369</sup> This needs to be considered in the context that the real problem lies with the integration of economic policies with environmental improvement policies and activities.<sup>370</sup> There is also need to address the dynamics of political economy of the country to address the political influence on public policy formulation and governance.<sup>371</sup> The concern about delay in judicial process and effective implementation of judgments are issues to consider in the process of development.<sup>372</sup> It is also important that effective implementation is not a process that the government alone can pursue; it needs cooperation and partnership with different organs of the state, citizens as well as international institutions.

The lessons learned from Indian examples need to be cautiously examined as they may not be automatically adoptable situation in Bangladesh context. Rather, the government of Bangladesh may need to customise them in its agricultural planning after careful review of its development planning frameworks. The next chapter will serve this purpose by reviewing the country planning frameworks to find the gaps in light of SDA principles.

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<sup>365</sup> Chakravarty, above n 36.

<sup>366</sup> Court, above n 253.

<sup>367</sup> Fan, Ashok Gulati and Sukhadeo Thorat, above n 197.

<sup>368</sup> Government of India, above n 160.

<sup>369</sup> Kumar, above n 227.

<sup>370</sup> Singh, above n 239.

<sup>371</sup> Singh, above n 275.

<sup>372</sup> The World Bank, above n 242.

## CHAPTER VI

### REVIEW OF BANGLADESH DEVELOPMENT PLANNING FRAMEWORKS FOR SUSTAINABLE DEVELOPMENT OF AGRICULTURE

#### *A Introduction*

Given the research objective of recommending a transformation proposal in the development planning frameworks of Bangladesh, this chapter will answer the fifth question of this research project, ‘To what extent, and how adequately, are SDA principles and approaches applied to planning frameworks for agriculture in Bangladesh? What is the relevance of experiences of India for Bangladesh?’ This chapter proposes to examine the extent of the internalisation of identified principles of sustainable development of agriculture (SDA) in Bangladesh’s planning frameworks. This review is intended to identify the gaps in planning that need to be addressed to pursue SDA in Bangladesh. The relevance and significance of India’s planning experiences and other countries’ sustainable development practices in the agriculture sector will also be reviewed with a view to determining their relevance for application in Bangladesh’s planning frameworks.

This chapter is divided into two parts to facilitate the reading of a comprehensive discussion about Bangladesh development planning frameworks and associated issues. The first part will illustrate the evolution, structure, agenda and process of development planning in Bangladesh, where agricultural planning is practiced. Given the climate change threats SDA in Bangladesh, the discussion also includes the promotion of agricultural development in a climate change context. After this general discussion, the substantive and procedural aspects of the Bangladesh planning frameworks will be reviewed in light of the seven principles of SDA proposed in chapter four. The second part of the discussion will begin with a review of weaknesses and gaps in Bangladesh development planning frameworks to pursue SDA. This review identifies the areas of intervention needed for the promotion of SDA. This part also includes identification of replicable examples of Indian and other countries’ experiences in the context of gaps in Bangladesh planning frameworks.

## PART I

### *B Evolution of Development Planning in Bangladesh*

Bangladesh emerged as an independent country in 1971, inheriting a poor stagnant agrarian economy with 75 million people in a small land base of 147,570 square kilometres.<sup>1</sup> The government of the newly born country adopted a development planning process to enable its citizens to secure the basic necessities of life, including food,<sup>2</sup> and to facilitate the right to guaranteed employment and social security.<sup>3</sup> In order to bring equitable development, the state emphasised transforming the rural areas through agricultural development.<sup>4</sup> The state also adopted environmental protection and improvement agendas, along with the preservation of natural resources and bio-diversity as the state's fundamental principles.<sup>5</sup>

The constitutional mandate for planned development was reflected through the establishment of a central planning agency, the Bangladesh Planning Commission (BPC) within two months of independence.<sup>6</sup> The planned development process in Bangladesh however, has institutional linkages with the struggle for socio-economic development during the British India and Pakistani regime.<sup>7</sup> The planned development process formally started in 1948 under the Pakistani regime and the Bangladesh Planning Commission inherited its identity from the then East Pakistan Planning Department that was established as a planning board in 1956.<sup>8</sup>

During the first and second decades of development planning in the Pakistani regime, development planning was pursued primarily through the preparation of medium term plans and their implementation.<sup>9</sup> This development planning process produced a widespread dissatisfaction on the Bangladeshi's part because of the large disparity and low growth

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<sup>1</sup> Bangladesh became independent on 16 December 1971 after a nine months long battle with West Pakistan.

<sup>2</sup> *The Constitution of the People's Republic of Bangladesh* art 15, 15 (a).

<sup>3</sup> *The Constitution of the People's Republic of Bangladesh* art 15(b), 15(d).

<sup>4</sup> *The Constitution of the People's Republic of Bangladesh* art 16.

<sup>5</sup> *The Constitution of the People's Republic of Bangladesh* art 18 A.

This provision was enacted through the *Constitution (15<sup>th</sup> Amendment) Act 2011* (Bangladesh).

<sup>6</sup> Government of the People's Republic of Bangladesh (GOB), Planning Division, *Planning Commission Handbook* (1983) Annex A.

<sup>7</sup> Abul Hossain Ahmed Bhuyan, Aminul Haque Faraizi and Jim McAllister, 'Planning for the Deployment of Development in Bangladesh' (2008) 8(3) *Progress in Development Studies* 232.

Apart from the initiatives for development planning undertaken in British India that were discussed in the last chapter, the Dufferin Report of 1885 is considered as the beginning of systematic effort for development of Bangladesh.

<sup>8</sup> Government of the People's Republic of Bangladesh, above n 6, 5.

Bangladesh was a part of Pakistan (titled as East Pakistan) before its independence in 1971.

<sup>9</sup> Government of Pakistan, *First Five Year Plan* (1957); Government of Pakistan, *Highlights of Second Five Year Plan* (1960-1965); Government of Pakistan, *Third Five Year Plan, Two Decades of Development* (1950-70).

created due to the inequitable distribution and low investment from the central government of Pakistan.<sup>10</sup> Nevertheless, the significance of the planning process continued in independent Bangladesh to pursue rapid development and it started with the synthesis of Indian and Pakistani processes.<sup>11</sup>

### *C Structure and Issues in Development Planning Frameworks in Bangladesh*

Given the non-socialist and unitary nature of the government in Bangladesh, development planning activities are primarily the activities performed at central level. The planning process is coordinated by a central planning advisory body, the Planning Commission (PC). However, basic responsibilities for development planning are allocated to ministries and their sub-ordinate agencies. The PC ensures consistency of actions by all agencies with regard to the development policies of the government.<sup>12</sup> Apart from these central level activities, the local governments also perform some planning tasks for development activities, although they are not integrated with this central planning process. The local level planning structure is however discussed here to comprehensively review the planning process in Bangladesh in the context that the agriculture is local in nature and sustainable development of agriculture requires local level interventions.

Development planning in Bangladesh is categorised in six separate but inter-related processes. *Policy planning* coordinates the activities of finalizing the development goals, strategies and policy measures for development plans, while *sectoral planning* identifies the role of various sectors<sup>13</sup> to promote the goals identified in plans, policies and strategies. The *programme planning* translates the plans into sectoral programmes for implementation of plans and the *project planning* deals with the preparation aspects of projects for implementation of sectoral programmes. The *project implementation and monitoring* parts of development planning deal with management and supervision aspects of projects. The *evaluation* is also a part of

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<sup>10</sup> Nurul Islam, *Making of a Nation Bangladesh: An Economist's Tale* (The University Press, 2003)4; Government of Pakistan, *Third Five Year Plan, Two Decades of Development (1950-70)*2-4.

<sup>11</sup>Islam, above n 10, 23, 61,69-70, 84-85.

<sup>12</sup>Government of the People's Republic of Bangladesh, above n 6, 4-5.

<sup>13</sup> Government of the People's Republic of Bangladesh, Planning Commission, *Seventh Five Year Plan (2016-2020)*Foreword, xvii.

The Government of the People's Republic of Bangladesh has divided the development activities under 13 sectors (except Defence) and agriculture is the fourth sector that includes crops, livestock, fisheries and forestry sub-sectors.

development planning process in Bangladesh that performs evaluation tasks for identifying the effects of plans, programmes and projects of the government.<sup>14</sup>

The central level development planning is coordinated by the six Divisions<sup>15</sup> of the planning commission.<sup>16</sup> These Divisions are described as part of the Planning Commission; however they lack legal linkages with government functionaries. These Divisions are not included in the government approved *Allocation of Business* (AOB) as organisations of the Planning Commission. Moreover, there is no reference to the Planning Commission in the AOB of the government.<sup>17</sup>

The ministries, divisions and their sub-ordinate agencies also take part in the six areas of development planning activities and these institutions also have management set up for undertaking development planning tasks.<sup>18</sup> The business of development planning in different ministries and their associated agencies are identified as decentralisation of planning. The government does not favour complete decentralisation of planning process at local level.<sup>19</sup> As a part of decentralised development planning, the ministries and agencies prepare plans,<sup>20</sup> policies<sup>21</sup> and strategies<sup>22</sup> and implement them through different projects or programmes.<sup>23</sup>

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<sup>14</sup> Government of the People's Republic of Bangladesh, above n 6, 1-2.

<sup>15</sup> The following two Divisions out of six Divisions of Planning Commission are engaged in general macro issues of development planning:

- General Economics Division: The major tasks of this Division is preparation of national, medium and long term guidelines and plans in accordance with social, economic and political objectives of the government;
- Programming Division: This Division deals with determination of the sizes of the Annual Development Programmes (ADP) and sectoral allocations/ proportions, formulation of ADP and revision of ADP as well as determination of external assistance requirements for ADP financing

Other four Divisions, Socio-economic Infrastructure Division, Physical Infrastructure Division, Industry and Energy Division and Agriculture, Water Resources and Rural Institutions Division deal with planning and policy issues of different sectors of the economy. These Divisions also appraise the projects of different ministries and prepare recommendations for project approving authority. They also assist the ministries for evaluation of project proposals. They are also engaged in field level monitoring and evaluation of development projects.

<sup>16</sup> Government of the People's Republic of Bangladesh, Planning Division, *Planning Commission Handbook* (1983)3-4.

<sup>17</sup> Government of the People's Republic of Bangladesh, Cabinet Division, *Allocation of Business among the Different Ministries and Divisions* (2014) 62-64.

<sup>18</sup> See, eg. Government of the People's Republic of Bangladesh, Ministry of Agriculture, *Organisational Structure* (2016) < <http://www.moa.gov.bd/site/organogram/cadbd730-df8e-4576-86cd-64fc23b40d0b/Organisational-Structure>>;

Government of the People's Republic of Bangladesh, Department of Agriculture Extension, *Organogram of Department of Agricultural Extension* (2016)

< <http://dae.gov.bd/site/organogram/851d6223-6e06-4318-b9a6-71fb34ba3b2d/DAE-Organogram>>.

Ministry of Agriculture has a planning wing to coordinate the development planning activities of crop agriculture.

Department of Agriculture Extension has a planning, project implementation and ICT wing for undertaking development planning activities.

<sup>19</sup> Government of the People's Republic of Bangladesh, above n 6, 12.

<sup>20</sup> See, eg. Government of the People's Republic of Bangladesh, Ministry of Agriculture and Food and Agriculture Organization of the United Nations (FAO), *Master Plan for Agricultural Development in the Southern Region of Bangladesh* (2013).

<sup>21</sup> See, eg. Government of the People's Republic of Bangladesh, Ministry of Agriculture, *National Agriculture Policy* (2013).

<sup>22</sup> See, eg. Government of the People's Republic of Bangladesh, Ministry of Agriculture, *Medium Term Strategy and Business Plan* (2013).

They also take part in programming activities of the Programming Division of the Planning Commission for fixing the allocation of annual development budgets against different projects,<sup>24</sup> implementing and monitoring the projects and evaluating the project outcomes.<sup>25</sup>

The government established the Planning Division to specifically perform the executive tasks of the PC in the middle of the 1970s. The business of six different Divisions of the Planning Commission is reflected under the business of the Planning Division,<sup>26</sup> and remains the same to date.<sup>27</sup> However, it is not clear whether the Divisions of Planning Commission are subordinate agencies of the Planning Division or not. Moreover, in actual operation, the Divisions of Planning Commission continue both advisory and executive functions relevant to development planning.<sup>28</sup>

The Project Implementation Bureau (PIB) was established in the mid of 1970s to streamline the implementation monitoring functions of development planning. The PIB was given the status of a Division of the Ministry of Planning in 1977 and renamed as Implementation Monitoring and Evaluation Division in 1982.<sup>29</sup> This Division has specific functions of monitoring and evaluation of the implementation of development projects included in the annual development programme (ADP). It also reports to policy makers of the government about the progress of development activities as well as advises the ministries and agencies on implementation of projects.<sup>30</sup>

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<sup>23</sup>See, eg. Government of the People's Republic of Bangladesh, Ministry of Agriculture, National Agriculture Technology Project, Phase II(2016).

<sup>24</sup>See, eg. Government of the People's Republic of Bangladesh, Planning Commission, *Guidelines for ADP Preparation for FY 2016-2017* (Issue No. 20.06.0000.614.14.092.16/270, 22 March 2016)1-3.

<sup>25</sup> See, eg. Government of the People's Republic of Bangladesh, Ministry of Agriculture, *Minutes of Project and Programmes Review Meeting of the Ministry of Agriculture* (Issue No. 12.090.0000.60.18.2015-175, Date 2 March 2016); Government of the People's Republic of Bangladesh, Ministry of Agriculture, *Assignment of Monitoring Officers for Bangladesh Climate Change Trust Fund assisted Agricultural Projects under the Ministry of Agriculture* (Issue No. 12.077.01400.00.001.2012/50, 10 March 2014).

<sup>26</sup> Government of the People's Republic of Bangladesh, above n 6, 18.

<sup>27</sup> Government of the People's Republic of Bangladesh, Cabinet Division, *Allocation of Business Among the Different Ministries and Divisions (Schedule 1 of Rules of Business, 1996)*(2014)62.

<sup>28</sup> See, eg. Government of the People's Republic of Bangladesh, Planning Commission, *Functions of Socio-Economic Infrastructure Division* (2016) <<http://www.plancomm.gov.bd/socio-economic-infrastructure-division/>>.

<sup>29</sup>Government of the People's Republic of Bangladesh, Implementation Monitoring and Evaluation Division, *History of IMED* (2016) <<http://imed.gov.bd/site/page/1b04f7ef-aab7-4e88-8108-065c64f24a67/History>>.

<sup>30</sup>Government of the People's Republic of Bangladesh, Cabinet Division, *Allocation of Business among the Different Ministries and Divisions* (2014) 64.

In addition to central level planning, development planning is also practiced by local governments in Bangladesh. Presently, the government of Bangladesh has five types of local government. The grassroots level rural local government is termed as Union Parishad (UP)<sup>31</sup> that has jurisdiction over some villages. Other local government institutions of the country are - Upazila Parishad(UZP) or sub-district council,<sup>32</sup> Zila Parishad(ZP) or district council,<sup>33</sup> Municipalities (pourashavas)<sup>34</sup> and City Corporations.<sup>35</sup> Out of these five types of local government institutions, Municipalities (pourashavas) and City Corporations have no relevance to agricultural development as they are engaged in urban planning that is not the area of this research. However, the remaining three local governments - UP, UZP and ZP have relevance to agricultural development of the country. These three institutions are legally empowered to undertake development planning activities, including plan preparation and plan implementation through projects at local level. Despite the constitutional obligation,<sup>36</sup> the development planning process of local government is, however, not integrated with the central level development planning process of the country, except the programme planning for allocation of funds for these local governments.

The development planning process in Bangladesh starts with plan preparation that falls under policy planning category of development planning frameworks.<sup>37</sup> The development plans prepared for the medium term, usually for five years have been the basic document that illustrates the government's priorities and policies for development. The medium-term plans are broken down into annual plans and translated through annual development programmes (ADP) for allocation of funds against different projects listed under the ADP. The discussion in the next sections illustrates the substantive and procedural issues of policy planning and sectoral planning followed by a brief discussion on programme planning, project planning, implementation, monitoring and evaluation of development planning frameworks.

<sup>31</sup> স্থানীয় সরকার (ইউনিয়ন পরিষদ) আইন ২০০৯ [Local Government(Union Parishad) Act 2009] (Bangladesh)art 2.

<sup>32</sup> উপজেলা পরিষদ আইন ১৯৯৮ [Upazila Parishad Act, 1998](Bangladesh)art 3-5.

<sup>33</sup> জেলা পরিষদ আইন ২০০০ [Zila Parishad Act 2000](Bangladesh) art 3-4.

<sup>34</sup> স্থানীয় সরকার (পৌরসভা) আইন ২০০৯ [Local Government (Pourashava) Act 2009](Bangladesh)art 3-6.

<sup>35</sup> স্থানীয় সরকার (সিটি কর্পোরেশন) আইন ২০০৯ [Local Government (City Corporation) Act 2009 (Bangladesh)art 3-5.

<sup>36</sup> *Constitution of the People's Republic of Bangladesh* art 59(2)(c).

<sup>37</sup> Government of the People's Republic of Bangladesh, above n 6, 6-7.

The government of Bangladesh has so far prepared one long-term plan, seven five-year plans, three strategy papers as well as some rolling plans. During the pre-independence period the government of the then East Pakistan implemented three five-year plans and one long-term plan under Pakistani regime.



## 1The Policy Planning Agendas

### (a) The Pre-independence Period

In the pre-independence period, the first outline of a six-year plan was prepared with the help of the Colombo Plan in 1950.<sup>38</sup> However, the central government controlled everything about development and this plan outline did not have any significance.<sup>39</sup> The planning process formally started from the first five-year plan that lasted from 1955 to 1960.<sup>40</sup> The second five-year plan was initiated from 1960 to 1965, followed by another plan from 1965 to 1970. There was no plan during the wartime in 1971.<sup>41</sup>

The first five-year plan prioritised raising national income, increasing opportunities for employment and providing more social services.<sup>42</sup> The highest priority was given to agricultural production.<sup>43</sup> The second five-year plan also had similar priorities for development<sup>44</sup> however agriculture received more importance than that in the first plan as the government found this sector the key to general economic growth.<sup>45</sup> Given the accelerated growth rate in the second plan period, the third plan aimed for higher growth with the help of high growth in the agriculture sector through providing a large volume of farm incentives and subsidies. Apart from agricultural improvement, the third plan emphasised the reduction of inequality in distribution of income, wealth and economic power.<sup>46</sup>

### (b) The Post-independence Period

Since independence in 1971, the government of Bangladesh has usually depended on medium-term five-year plans.<sup>47</sup> The planned development process in the country initially aimed for socialist transformation of the economy through the state's increased role,<sup>48</sup> and

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<sup>38</sup> Government of Pakistan, Ministry of Planning, Development & Reform < [http://www.pc.gov.pk/?page\\_id=147](http://www.pc.gov.pk/?page_id=147)>.

<sup>39</sup> Mohammad Niaz Asadullah, 'Educational Disparity in East and West Pakistan, 1940-71: Was East Pakistan Discriminated Against?' (Discussion Paper in Economic and Social History No 63, University of Oxford, July 2006)8.

<sup>40</sup> Government of Pakistan, Ministry of Planning, *Development & Reform* < [http://www.pc.gov.pk/?page\\_id=147](http://www.pc.gov.pk/?page_id=147)>.

<sup>41</sup> Government of Pakistan, Ministry of Planning, *Development & Reform* < [http://www.pc.gov.pk/?page\\_id=1296](http://www.pc.gov.pk/?page_id=1296)>.

<sup>42</sup> Government of Pakistan, *First Five Year Plan* (1957)ii.

<sup>43</sup> Ibid 13.

<sup>44</sup> Government of Pakistan, *Highlights of Second Five Year Plan* (1960-1965)2, 6.

<sup>45</sup> Government of Pakistan, *Third Five Year Plan, Two Decades of Development* (1950-70)34.

<sup>46</sup> Ibid 40.

<sup>47</sup> The government of Bangladesh has so far prepared seven five year plans since 1973.

There are also instances of preparing rolling plans for two years in the late 1970s and late 1990s, as well as strategy papers and a long term perspective plan (for the duration of 2010-2021) in the first decade of this millennium.

<sup>48</sup> Government of the People's Republic of Bangladesh, Planning Commission, *First Five Year Plan*(1973)10.

considered development as a process for ensuring intergenerational equity.<sup>49</sup> The target for progressive development toward a socialist economy suffered due to a lack of support from the political leaders and a lack of governance in implementation.<sup>50</sup> This vision changed and the government promoted private sector participation in the development process in the 1980s.<sup>51</sup> The government also changed the dimension of the planned economy and emphasised decentralisation of administration and shifted normative planning of production and investment to policy planning to realize development through socially desirable processes.<sup>52</sup>

Given the weaknesses in the planning process, the government in the early 1990s emphasised efficiency of project implementation, monitoring and evaluation.<sup>53</sup> The government specifically addressed environmental development issues and adopted some measures for addressing environmental challenges.<sup>54</sup> There was a shift from centralised planning to indicative planning in the late 1990s. The government this time emphasised flexible projections of incremental change in development and provided policy packages for efficient functioning of private sector.<sup>55</sup> Increased importance was given to the appropriate role of the government in the development process against de-regulation of some services<sup>56</sup> and structural adjustment encouraging private sector participation in development.<sup>57</sup>

Although the government in the late 1990s emphasised local level participatory planning and integration of the local level development projects with those at the national level,<sup>58</sup> the government's plan had little impact in their implementation in absence of substantive regulatory changes in local level planning processes.

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<sup>49</sup> Ibid preface.

<sup>50</sup> Islam, above n 10, 195-196; Stanley A Kochanek, 'Review of Making of a Nation: Bangladesh: An Economist's Tale' (2004)11(2) *Asia-Pacific Development Journal* 126.

<sup>51</sup> Government of the People's Republic of Bangladesh, Planning Commission, *Second Five Year Plan*(1980-1985)127.

<sup>52</sup> Ibid 2, 119-120.

<sup>53</sup> Government of the People's Republic of Bangladesh, Planning Commission, *Fourth Five Year Plan*(1990-1995)XX II-4-5.

<sup>54</sup> Ibid IX-3.

<sup>55</sup> Government of the People's Republic of Bangladesh, Planning Commission, *Fifth Five Year Plan*(1997-2002)42.

<sup>56</sup> Ibid.

<sup>57</sup> Ibid 10.

<sup>58</sup> Ibid 42.

The approach of policy planning changed in the first decade of this millennium when the government followed the donor's prescription for preparing a poverty reduction strategy instead of a medium term development plan.<sup>59</sup> The initiatives for poverty alleviation along with equity were strengthened, focusing on development of agriculture, connectivity and safety net measures to help poor and vulnerable groups to withstand against shocks.<sup>60</sup> The government emphasised participatory governance and planning and sustainable natural resource management to protect the livelihood requirements of the citizens.<sup>61</sup>

After preparing three strategy papers, the government again returned to the five-year plan process in 2011 through the preparation of a long-term perspective plan with ten years duration. This long term plan is to be implemented in two phases from 2011 to 2015 and 2016 to 2020. This is the first time the government consistently prepared subsequent five-year plans on time with a long term vision.

The goals of the Perspective Plan for broad-based growth and the sustainability of development<sup>62</sup> are translated into two medium term plans – sixth and seventh five year plan. The sixth five year plan focused on accelerating growth and reducing poverty, as well as creating opportunities for employment.<sup>63</sup> The government emphasised facilitating food security through improved productivity, combating climate change threats and land constraints.<sup>64</sup> The latest seventh five year plan prepared for the duration of 2016 to 2020 also concentrates on growth acceleration in agriculture and other sectors, along with employment generation, poverty reduction and social protection. The seventh plan's prime objective includes among others promoting inclusive and sustainable development processes.<sup>65</sup>

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<sup>59</sup> The donors, especially World Bank Group and IMF negotiated for preparing a nationally-owned participatory poverty reduction strategies for their concessional lending and eligibility for debt relief under the enhanced Heavily Indebted Poor Countries (HIPC1 ) Initiative.

<sup>60</sup> Government of the People's Republic of Bangladesh, Planning Commission, *Unlocking the Potential: National Strategy for Accelerated Poverty Reduction* (2005)xxi.

<sup>61</sup> Government of the People's Republic of Bangladesh, Economic Relations Division, *A National Strategy for Economic Growth, Poverty Reduction and Social Development* (2003)8,52.

<sup>62</sup> Government of the People's Republic of Bangladesh, Planning Commission, *Perspective Plan of Bangladesh: Making Vision 2021 A Reality* (2012)2, 11, 12.

<sup>63</sup> Government of the People's Republic of Bangladesh, Planning Commission, *Sixth Five Year Plan*(2011-2015)2, 24-26.

<sup>64</sup> *Ibid* 27-28.

<sup>65</sup> Government of the People's Republic of Bangladesh, above n 13, xlvi-xlviii.

This general discussion on different plans and strategies for development in Bangladesh reveals that although the government started with a centralised planning model of development, development planning was not limited to one central agency. There have been efforts to decentralize the national planning process, though this has not taken a definite shape until the latest plan period.

In contrast to the pre- and post-Second World War planning approach in centralized socialist states, Bangladesh started with a mixed development path, where the public sector contribution dominated at the initial stages but that changed over the time.<sup>66</sup> From the second decade of independence the government started reforming the economy and adjusted to the dominant global economic policy of neoliberalism through privatisation and deregulation. The planned development process, however still continues into the age of neoliberalism and the government now adopts policies and strategies to promote public sector investment and facilitate private sector improvement.

The goals of the development planning have remained unchanged over the periods where poverty reduction efforts have been the main focus, employment generation has been a key factor and agricultural development considered the prime driver in this respect. The next section will discuss the agricultural planning issues in more detail, highlighting sectoral planning aspects of the development planning frameworks.

## *2 Sectoral Planning Agendas: Agricultural Development in Bangladesh*

Given the almost half of the labour force and about 70 per cent of rural people are engaged in agriculture, its development still bears the significance in being in the development process, particularly in the context of the promotion of sustainable development (SD) and climate change interventions in Bangladesh. Agriculture has been considered as the prime sector for the development of the rural economy as well as a critical factor for poverty alleviation and employment generation in Bangladesh. The following discussion highlights the prominent features of sectoral plans relevant to agriculture that have been pursued through development planning frameworks in Bangladesh.

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<sup>66</sup> Ibid Foreword; Government of the People's Republic of Bangladesh, above n 48,13. The expected public sector investment in the seventh plan period is 22.7 per cent while in the first plan it was 88.70 per cent.

*(a) The Pre-independence Period*

There was an emphasis on agricultural production in the pre-independence period as the sector was contributing to the economy through earning foreign exchange as well as meeting domestic food demands. The priorities for agricultural development were in irrigation, infrastructure and power, seed and credit extension.<sup>67</sup> However, the agriculture in Bangladesh lacked modernization and there were major institutional weaknesses as well as a deficiency in capital flow to smallholder farmers.<sup>68</sup> The growth of agriculture during this period was inconsistent, more particularly in the Bangladesh region, where agriculture suffered from low growth due to inequitable investment from the central government of Pakistan.<sup>69</sup>

*(b) The Post-independence Period*

In the post-independence period, the first five-year plan in Bangladesh aimed to transform the institutional, technological and infrastructural base of agriculture with a view to attaining self-sufficiency in food grains and widen employment in agriculture.<sup>70</sup> Apart from incentives through agricultural inputs supply, credit and extension, there was an emphasis on efficiency in input use and withdrawing subsidies to promote equity among farmers.<sup>71</sup> Land reform was planned along with the extension of cooperatives incorporating small farmers and land labourers in decision making.<sup>72</sup>

The development goals of the government in the 1980s were similar to previous decade and similar interventions were promoted for agricultural improvement and meeting the minimum basic needs of people.<sup>73</sup> The goal of self-sufficiency in food grains also continued in the 1990s and, apart from similar promotional activities of previous planned periods, equitable access to resources received significance.<sup>74</sup> The sustainable practices, such as soil fertility enhancement, integrated pest management, and the judicious use of agricultural inputs to maintain an ecological balance were also promoted.<sup>75</sup>

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<sup>67</sup> Government of Pakistan, above 45, 4.

<sup>68</sup> Ibid.

<sup>69</sup> Ibid 2, 4.

<sup>70</sup> Government of the People's Republic of Bangladesh, above n 48, 10, 33-36.

<sup>71</sup> Ibid 88-89, 92.

<sup>72</sup> Ibid 6, 88-89.

<sup>73</sup> Government of the People's Republic of Bangladesh, Planning Commission, *Third Five Year Plan*(1985-90)37-39, 136-139, 148-150, 154,180; Government of the People's Republic of Bangladesh, above n 51, 5,29,31, 33, 144-145, 177.

<sup>74</sup> Government of the People's Republic of Bangladesh, above n 53, X-1-6, 23.

<sup>75</sup> Ibid X1-13-17.

In the late 1990s, the government planned to move beyond self-sufficiency in food and emphasised extension of credit and insurance along with public goods creation and input subsidies.<sup>76</sup> The prevention of agricultural land conversion and ecological improvement were pursued through an integrated farming and resource systems approach.<sup>77</sup> In the first decade of the 21<sup>st</sup> century, the government also emphasised public goods creation and providing incentives, along with removing structural barriers in marketing and the promotion of cooperatives for pro-poor growth and rapid agricultural development.<sup>78</sup> The rights-based approach was planned to apply, through updating share-cropping and minimum wage legislation.<sup>79</sup>

The goal of self-sufficiency in food grain continues to the present decade and the sixth five year plan, implemented from 2011 to 2015, focused on farmer incentives and infusion of new technology along with spending on input subsidies, credit support and developing rural infrastructure.<sup>80</sup> In responding to climate change threats the government emphasised adaptation measures such as the development of stress tolerant varieties, conjunctive use of surface and ground water as well as the gradual shifting of the rice production areas from the water-deficient northern part of the country.<sup>81</sup>

The latest seventh five year plan continues with the priority on productivity improvement, diversification and environmental protection and climate change adaptation. The government plans to transform the existing semi-subsistence farming to commercial agriculture through applying new technology, mechanisation, extending credit facilities to small farmers and improving marketing services.<sup>82</sup> The support price for agricultural outputs is planned along with other livelihood support strategies and appropriate land use planning and crop zoning.<sup>83</sup>

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<sup>76</sup> Government of the People's Republic of Bangladesh, above n 60, 2, 43; Government of the People's Republic of Bangladesh, above n 55, 233,241-242.

<sup>77</sup> Government of the People's Republic of Bangladesh, *Fifth Five Year Plan*, above n 55, 240, 247, 250.

<sup>78</sup> Government of the People's Republic of Bangladesh, above n 60, 89-91,95-98.

<sup>79</sup> *Ibid* 97.

<sup>80</sup> Government of the People's Republic of Bangladesh, above n 63, 76, 149.

<sup>81</sup> *Ibid* 11,27.

<sup>82</sup> Government of the People's Republic of Bangladesh, above n 13, xlvi, xlix,li-1ii,268.

<sup>83</sup> *Ibid* 270-271.

The seventh five year plan also focuses on sustainable agricultural development interventions<sup>84</sup> through resource conservation, balanced use of chemical fertiliser and production and use of bio-fertilisers.<sup>85</sup> There is also emphasis on genetic improvement and crop protection interventions.<sup>86</sup> The plan emphasises conducting micro-climatic zone specific assessments, weather forecasting and developing climate resilient cropping systems in addition to the development of varieties and technological packages.<sup>87</sup> A long term *Delta Plan* is under preparation in the Planning Commission to guide adaptive planning against the impacts of climate change and water management challenges in the Bangladesh delta.<sup>88</sup> This plan may promote agricultural development in the long run, but requires an effective integration among sectoral interventions and elimination of authority and capacity gaps in implementation.

Apart from the abovementioned development agendas incorporated in national plans, the development visions of the government are also reflected in the policies and strategies of the Ministry of Agriculture. The *National Agriculture Policy 2013* adopted a goal for sustainable and self-sufficient profitable agriculture.<sup>89</sup> The research and extension received priority in this policy along with marketing and agro-processing industry development.<sup>90</sup> The priority of this policy on a 'bottom up' extension system is further reflected in *Draft National Agriculture Extension Policy 2015* for productivity improvement.<sup>91</sup>

The goal of self-sufficiency in food is also reflected in the latest medium term strategic plan of the Ministry of Agriculture.<sup>92</sup> This strategic plan emphasised increased investment in agriculture, rural infrastructure and shifting from subsidy based regime to a competitive agriculture system. It also plans to promote agricultural diversification and commercialisation for livelihoods improvement and faster poverty reduction in rural areas.<sup>93</sup> A Master Plan has been prepared in 2013 for agricultural development in coastal areas of Bangladesh.<sup>94</sup> This

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<sup>84</sup> Ibid 268, 271.

<sup>85</sup> Ibid 275-276.

<sup>86</sup> Ibid 268.

<sup>87</sup> Ibid 269, 276.

<sup>88</sup> Ibid 41, 297.

<sup>89</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, above n 21, 3,7.

<sup>90</sup> Ibid 7.

<sup>91</sup> Ibid 12; Government of the People's Republic of Bangladesh, Department of Agriculture Extension, *Draft National Agriculture Extension Policy* (2015)[1.4].

<sup>92</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, above n 22, xvii.

<sup>93</sup> Ibid xvi-xvii.

<sup>94</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture and FAO, above n 20.

plan aims to promote integrated agricultural development in coastal districts in coordination with fisheries, livestock and water sectors.<sup>95</sup> It is yet to promote integrated interventions in coastal areas in the context of poor integration among targeted sectors.

The Ministry of Agriculture also has some discrete policies that promote different aspects of agricultural development. While the *National Seed Policy* promotes convenient supply of best quality seeds to farmers,<sup>96</sup> the fertiliser distribution policy facilitates timely supply of chemical fertiliser at farmers end.<sup>97</sup> The government also adopted an *Integrated Pest Management Policy* for ecological and economic sustainability of agricultural production through an effective, safe and sustainable crop protection system.<sup>98</sup> Two draft policies about sustainable minor irrigation system development,<sup>99</sup> and short duration early maturing climate resilient crop varieties and technology development are pending for approval for about five years.<sup>100</sup>

There are policies, strategies and laws of different ministries that also supplement agricultural development initiatives in Bangladesh. For example, the environmental policies and laws of the government facilitate agricultural development through prohibiting activities detrimental to agriculture,<sup>101</sup> promoting soil fertility, controlling harmful pesticide use in agricultural production,<sup>102</sup> and facilitating use of biotechnology for agricultural development.<sup>103</sup>

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<sup>95</sup> Ibid xix.

<sup>96</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture No Agril-12/Seed-110(2)92/42, Date: 8-3-1993, *National Seed Policy-1993*, Section 12.

<sup>97</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, *Fertiliser Dealer Appointment and Fertiliser Distribution Policy 2009*, Agriculture/AER/599/2009/688-689, 2 August 2009;

<sup>98</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, *Integrated Pest Management Policy* (2002)4.

<sup>99</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, *Draft Integrated Minor Irrigation Policy* (2014)[4].

The draft was primarily prepared in 2010.

<sup>100</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, জলবায়ু পরিবর্তনের প্রভাব সহিষ্ণু আগাম ও স্বল্পমেয়াদী ফসলের জাত ও প্রযুক্তি উদ্ভাবন বিষয়ক নীতিমালা [*Draft Policy for Development of Climate Resilient Short Duration and Early Maturing Varieties and Technologies*](2010)2.

<sup>101</sup> বাংলাদেশ পরিবেশ সংরক্ষণ (সংশোধন) আইন ২০১০ [Bangladesh Environment Conservation (Amendment) Act 2010] (Bangladesh) Act No 50 of 2010 art 2; ইট প্রস্তুত ও ভাটা স্থাপন (নিয়ন্ত্রণ) আইন ২০১৩ [Brick Making and Vata Establishment (Control) Act 2013](Bangladesh) Act No 59 of 2013 art 5.

<sup>102</sup> Government of the People's Republic of Bangladesh, Ministry of Environment and Forests, *National Environment Policy 1992 and Implementation Activities* (2002)[3.1], [3.6].

<sup>103</sup> Government of the People's Republic of Bangladesh, Ministry of Environment and Forests, *Biosafety Guidelines of Bangladesh* (2007)6-7.



The policies and laws of water sector emphasised conjunctive use of groundwater and surface water for irrigation, water use efficiency,<sup>104</sup> crop diversification, stress tolerant crop varieties development,<sup>105</sup> and soil less agriculture for development of agriculture.<sup>106</sup> Agriculture receives priority in water use in water deficient critical areas.<sup>107</sup>

The sustainable and best use of land for agricultural production was highlighted in different policies of the government.<sup>108</sup> The development agendas of agriculture are also supported by rural development and food security relevant policies. These policies focus on supply of agricultural inputs including insurance supported credit, strengthening research and extension and investment in agriculture infrastructure and technology, marketing networks and human resources development.<sup>109</sup> The government also facilitates ensuring equal wages and benefit sharing for women agricultural labourers.<sup>110</sup>

The brief of the plans, policies and strategies of the government stated above has revealed that the government, by directing the prime goal of self-sufficiency in food grains, has been supporting the agriculture sector to facilitate food security, poverty alleviation and employment generation. Despite the changes in economic principles and deregulation and privatisation of input distributions, the regular support in the form of subsidy, free inputs supply and credit support has continued over the decades. The reform plans for subsidy

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<sup>104</sup>Government of the People's Republic of Bangladesh, Ministry of Water Resources, *National Water Policy* (1999)11; Government of the People's Republic of Bangladesh, Ministry of Food and Disaster Management, *National Food Policy* (2006)3; Government of the People's Republic of Bangladesh, Ministry of Food and Disaster Management, *Bangladesh Country Investment Plan* (2011)6.

<sup>105</sup>Government of the People's Republic of Bangladesh, Ministry of Water Resources, *Coastal Zone Policy* (2005) [4.4.5].

<sup>106</sup> Government of the People's Republic of Bangladesh, Ministry of Water Resources, *Coastal Development Strategy* (2006)19.

<sup>107</sup>*Bangladesh Water Act 2013* (Bangladesh) Act No 14 of 2013 art 18-19.

<sup>108</sup> Government of the People's Republic of Bangladesh, Ministry of Land, *National Land Use Policy* (2001)[5.5], [17]; খসড়া কৃষি জমি সুরক্ষা ও ভূমি ব্যবহার আইন ২০১৫ [Draft Agricultural Land Protection and Land Use Act 2015] (Bangladesh)art 4; Government of the People's Republic of Bangladesh, Rural Development and Cooperatives Division, *National Rural Development Policy* (2001)[5.4.4].

<sup>109</sup> Government of the People's Republic of Bangladesh, Ministry of Food and Disaster Management, *National Food Policy* (2006)3; Government of the People's Republic of Bangladesh, Ministry of Food and Disaster Management, *National Food Policy Plan of Action 2008-2015*(2008)10; Government of the People's Republic of Bangladesh, Ministry of Food and Disaster Management, Bangladesh Country Investment Plan (2011)6; Government of the People's Republic of Bangladesh, Rural Development and Cooperatives Division, *National Rural Development Policy* (2001)[5.4].

<sup>110</sup>Government of the People's Republic of Bangladesh, Ministry of Women and Children Affairs, *National Women Development Policy* (2011)31.2-31.4.

rationalisation, land reform and the prevention of land conversion have not progressed as planned.<sup>111</sup> The government's recent plan focuses on SDA including ecological improvement, livelihood development, risk management of poor people as well as climate change threats management.<sup>112</sup>

Given these plans, the policies and strategies adopted by the government require some specific procedural formalities in implementing them, the processes of programme planning, project planning, plan implementation and monitoring and evaluation are quite important. The tasks for plan preparation to evaluation are basically the procedural category of development planning in Bangladesh. The following section will discuss these procedural issues that cover remaining parts of development planning: procedural aspects of policy and sectoral planning, programme planning, project planning and monitoring and evaluation that will have a major focus on the agriculture sector apart from general approach.

#### *D Mainstreaming of Development Agendas in the Development Planning Frameworks*

Apart from the central planning agency, the ministries and their subordinate agencies are also engaged in the central planning process in Bangladesh.<sup>113</sup> While the medium term national plans are prepared by the central planning agency, the ministries also prepare (in some cases) their sectoral plans, policies and strategies as well as laws for development purposes.<sup>114</sup>

Despite a disconnection between the central planning and local level planning processes, the local government institutions follow some planning processes for their development activities. The central government's efforts for district level plan implementation started a few years ago<sup>115</sup> but the experiment was stopped after one pilot year. The procedural mandate for local government's planning comes from the Local Government Division (LGD) and is not attached to the core development planning process of the government.<sup>116</sup>

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<sup>111</sup> Agricultural subsidy increases by 90 times, crop land reduces by 0.73 per cent each year in the last decade and there are concerns about land reform.

<sup>112</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 268, 272-276, 416.

<sup>113</sup> Government of the People's Republic of Bangladesh, Planning Division, above n 6, 7.

<sup>114</sup> For example, while the Ministry of Agriculture prepared a Medium Term Strategy and Business Plan (MTSBP) for addressing the challenges in agriculture in coordination with budgetary framework, a law is enacted for managing government established climate change fund under the purview of the Ministry of Environment and Forests.

<sup>115</sup> Government of the People's Republic of Bangladesh, Finance Division, *Budget Documents-District Budget for Tangail*(2013-2014)

< [http://www.mof.gov.bd/en/index.php?option=com\\_content&view=article&id=183&Itemid=1](http://www.mof.gov.bd/en/index.php?option=com_content&view=article&id=183&Itemid=1)>.

<sup>116</sup> See, eg, Government of the People's Republic of Bangladesh, Local Government Division, *Upazila Development Fund Utilization Guidelines, memo no Upa-2/M-02/2010/1252* (28 April 2010).

The discussion about the planning process in this section includes procedures being followed for central and local level planning processes to provide a complete picture of the development planning process in Bangladesh. The discussion will start with the central level planning process and will end with the discussion about local level frameworks.

## 1 Plan Preparation and Approval

### (a) Central Level Plans

The plan preparation process in Bangladesh has been more or less similar over the decades and the government has mostly relied on the General Economics Division (GED) of the Planning Commission for this purpose.<sup>117</sup> In the absence of any explicit government declared procedure,<sup>118</sup> the usual practices followed in the plan preparation process start with an in-principle approval of National Economic Council (NEC).<sup>119</sup> The next steps include the preparation of a concept note, technical framework, conducting background studies and preparation of the draft plan. The ministries and divisions of the government also prepare their part of sectoral plans in line with the guidance of the PC.<sup>120</sup> The draft plan is prepared based on the background papers, the ministry and divisions' draft plans and technical frameworks. The GED organizes consultation workshops and meetings at different levels with different stakeholders and the recommendations of these consultation meetings are reflected in the draft plan.<sup>121</sup> The plan is finally approved by the NEC headed by the Prime Minister.<sup>122</sup> The sectoral or special plans and policies for development purposes prepared at Ministry/Division level are prepared on an ad-hoc basis, although the Secretariat Instructions of the government has explicitly given them the mandate to prepare plans in accordance with the guidelines of the Ministry of Planning.<sup>123</sup> The Ministries and Divisions require mandatory

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<sup>117</sup> Except the preparation of the interim poverty reduction strategy paper in the early 2000s.

<sup>118</sup> Although the General Economics Division coordinates the preparation process, this organisation is not included in the approved Allocation of Business (AOB) so as to the procedure for plan preparation in the *Rules of Business* or *Secretariat Instructions* of the government.

<sup>119</sup> Government of the People's Republic of Bangladesh, Ministry of Planning, *Minutes of the Meeting of NEC held on 26 May 2009* (Issue No. Pabi/NEC-06/2009/175, 9 June 2009).

The decision for preparing sixth and seventh five year plan was taken in a meeting of the National Economic Council on 26 May 2009.

<sup>120</sup> Government of the People's Republic of Bangladesh, Planning Commission, *The Seventh Five Year Plan of Bangladesh (FY2016-FY2020) A Concept Note* (June 2013).

<sup>121</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, Foreword.

<sup>122</sup> Government of the People's Republic of Bangladesh, Cabinet Division, *Gazette No. 04.00.0000.611.006.019.14-78*, 24 April 2014.

<sup>123</sup> Government of the People's Republic of Bangladesh, Ministry of Public Administration, *Secretariat Instructions 2014* (2014)[242].

Cabinet approval when adopting important policy decisions or changing existing policy.<sup>124</sup> Despite the legal mandate to prepare policies, plans, implementation and evaluation of these plans, the preparation tasks at Ministry level are performed without any formal preparation procedure.<sup>125</sup>

### (b) Local Level Plans

Although the government started with centralised planning, it had the vision to introduce local level planning that was reflected in its different plan documents. These visions of local level planning did not take definite shape despite the presence of local level planning guidelines since 1983.<sup>126</sup> The major legislative effort is seen in the present decade through local development rules issued under the local government laws.<sup>127</sup> Although these rules are not integrated with central planning process,<sup>128</sup> this legal mandate for local level planning process initiates a new dimension in planning frameworks in Bangladesh.

At the grassroots level, the lowest tier of local government structure, *Union Parishads* (UP) are now empowered to prepare five-year and annual plans for their development interventions and to undertake locally demanded projects in the areas where they have expertise and experience.<sup>129</sup> The UPs also need to consider the national government's vision of long-term plans and five-year plans in preparing their plans. Annual plans are drafted by a plan preparation committee and are in consultation with the grassroots general assembly, though the plan preparation committee does not have any citizen representation. The drafts are finalized based on the comments of the general assembly of the UP and approved in a full UP meeting.<sup>130</sup>

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<sup>124</sup> Government of the People's Republic of Bangladesh, Cabinet Division, *Rules of Business, 1996* (Revised Up to December 2014) 4(ii), 16(f).

<sup>125</sup> Government of the People's Republic of Bangladesh, Cabinet Division, *Rules of Business, 1996* (Revised Up to December 2014) art 4(ix).

<sup>126</sup> Government of the People's Republic of Bangladesh, Planning Division, above n 6, 180-193.

The government prepared a guideline for sub-district level planning in 1983, especially for implementing projects with a local nature as well as divisible components of national projects. Other tiers of local government were not included in the guidelines.

<sup>127</sup> See, e.g., ইউনিয়ন পরিষদ (উন্নয়ন পরিকল্পনা) বিধিমালা ২০১৩ [Union Parishad (Development Planning) Rules 2013] (Bangladesh); Government of the People's Republic of Bangladesh, Planning Commission, Programming Division, *ADP Allocation for 2015-2016* <[http://plancomm.gov.bd/wp-content/uploads/2015/adp\\_15\\_16/4%20Page%20Summary.pdf](http://plancomm.gov.bd/wp-content/uploads/2015/adp_15_16/4%20Page%20Summary.pdf)>.

<sup>128</sup> সরকারি খাতে উন্নয়ন প্রকল্প প্রণয়ন, প্রক্রিয়াকরণ, অনুমোদন ও সংশোধন পদ্ধতি ২০০৮ [Public sector project preparation, processing, approval and revision procedure 2008] (Bangladesh).

National level planning is pursued under the guidelines issued from the Planning Division of the Ministry of Planning.

<sup>129</sup> ইউনিয়ন পরিষদ (উন্নয়ন পরিকল্পনা) বিধিমালা ২০১৩ [Union Parishad (Development Planning) Rules 2013] (Bangladesh) art 3.

<sup>130</sup> ইউনিয়ন পরিষদ (উন্নয়ন পরিকল্পনা) বিধিমালা ২০১৩ [Union Parishad (Development Planning) Rules 2013] (Bangladesh) art 4-7.

At the sub-district level, the *Upazila Parishad* (UZP) now has the power to prepare a five-year plan, an annual development programme and to approve the estimate and development proposal of subjects handed over to the UZP.<sup>131</sup> The *Upazila Development Fund Utilization Guidelines* issued for administering utilization of UZP development funds for development purposes replaced all previously issued guidelines,<sup>132</sup> although it is not clear whether this guideline supersedes the guidelines prepared by the planning commission in 1983.<sup>133</sup> The guidelines do not provide any direction for plan preparation; they have, however, elaborately illustrated the procedure to be followed for development project selection in plans in consultation with Member of Parliament.<sup>134</sup> *Zila Parishad* or the District Council is another local government institution that covers the area of a district.<sup>135</sup> This organisation is also given the mandate to prepare five-year and other plans in its areas of activities, considering its budgets and in coordination with other local governments of its jurisdiction.<sup>136</sup>

As this research is focused on agricultural development planning issues and agriculture in Bangladesh is more of a rural agenda, the discussion on local level planning is limited to the abovementioned three local government institutions. Moreover, in Bangladesh, the UP and UZP are the two major rural local government institutions engaged in development activities in rural Bangladesh. The urban local governments do not have very much significance to SDA.<sup>137</sup>

## 2 Programme Planning

As a part of programme planning, the government translates the medium-term plans into annual development programmes (ADP) each year, which is basically an allocation of the annual development budget against different projects. The ADP in plan holidays (when there are no plans) also worked as development plans. The ADPs are prepared by the Programming

<sup>131</sup> উপজেলা পরিষদের (কার্যক্রম বাস্তবায়ন) বিধিমালা ২০১০ [Upazila Parishad (Programme Implementation) Rules 2010](Bangladesh)art 5.

<sup>132</sup> Government of the People's Republic of Bangladesh, Local Government Division, *Upazila Development Fund Utilization Guidelines*, memo no Upa-2/M-02/2010/1252 (28 April 2010).

<sup>133</sup> Government of the People's Republic of Bangladesh, Planning Division, above n 6, 180-193.

<sup>134</sup> Government of the People's Republic of Bangladesh, Local Government Division, *Upazila Development Fund Utilization Guidelines*, memo no Upa-2/M-02/2010/1252 (28 April 2010)art 2, 5(1)

The guidelines direct the Upazila Parishad (UZP) to take those projects which are complementary to the national plan and demanded locally, however the supremacy of the local Member of Parliament over UZP in identifying priorities seems to be an impediment for governance in local planning.

<sup>135</sup> জেলা পরিষদ আইন ২০০০ [Zila Parishad Act 2000](Bangladesh) art 1-3.

<sup>136</sup> জেলা পরিষদ আইন ২০০০ [Zila Parishad Act 2000] (Bangladesh) art 49.

<sup>137</sup> See, e.g, স্থানীয় সরকার (পৌরসভা) আইন ২০০৯[Local Government (Pourashava) Act 2009](Bangladesh) art 50.

Division of the Planning Commission. This division issues guidelines every year for the preparation of ADPs and also to revise the ADPs in light of real progress of implementation of projects.<sup>138</sup>

The Programming Committee, constituted under the chairmanship of Member of the Programming Division primarily carries out the task of allocating the annual funds against different projects.<sup>139</sup> The allocation, however, depends on the resource envelope given by the Finance Division (FD) and Economic Relations Division (ERD) to the Programming Division. The Programming Division, after fixing the total outlay of the ADPs, consult the sectoral divisions of the PC to prepare the demand for allocation, considering the proposal of the ministries/divisions.<sup>140</sup> The final recommendation for ADP including the allocation for local governments is prepared by the Programming Division and it is approved by the NEC.<sup>141</sup> This ADP is also a part of the national budget, and it is usually passed in the parliament with a non-development budget and without any discussion and revision in the final ADP approved by the NEC.

The funds allocated to different projects or programmes through the ADP are basically a reflection of the implementation of medium-term development plans into the annual form, although the yearly budget may vary with the medium-term plan's projections based on the actual demand of projects. The implementation of plans through different projects or programmes basically lies with the ministry and divisions and their associated agencies apart from local government bodies. The following discussion will elaborate the process of the implementation of plans, followed by the monitoring and evaluation part of the planning process.

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<sup>138</sup> Government of the People's Republic of Bangladesh, Planning Division, above n 6, 161-162.

<sup>139</sup> Ibid 164.

The designation of the head of different Divisions of the Planning Commission is Member.

<sup>140</sup> Government of the People's Republic of Bangladesh, Planning Commission, Programming Division, *Annual development programme (ADP) preparation policy for 2014-15 fiscal year, No 20.522.020.00.00.011.2014/360* (24 March 2014); Government of the People's Republic of Bangladesh, Planning Commission, Programming Division, *Revised annual development programme (ADP) preparation policy for 2013-14 fiscal year, No PaKa/Karjo/639-1/RADP/2013-14/125* (26 December 2013).

<sup>141</sup> Government of the People's Republic of Bangladesh, Planning Commission, Programming Division, *Functions of the Programming Division* (2016) < <http://www.plancomm.gov.bd/programming-division-2/>>; Government of the People's Republic of Bangladesh, Cabinet Division, *Notification for formation of National Economic Council* (24 April 2014).

### 3 Project Planning and Implementation

Project planning and implementation of development planning frameworks is a part of the project management approach<sup>142</sup> that includes project preparation, approval and implementation and follows the guidelines issued by the Planning Division from time to time.<sup>143</sup> The agencies under different ministries prepare projects following these guidelines. The Planning Commission's role is limited to the appraisal of the project and preparing recommendations for the approving authority.<sup>144</sup> The composition of appraisal committees at ministry and Planning Commission (PC) levels is determined by the government from time to time.<sup>145</sup> The approving authority varies for projects depending on their size and nature. Apart from the Executive Committee of the National Economic Council (ECNEC), the Minister of project initiating ministries and Minister in charge of Planning hold the project approving power.<sup>146</sup> The projects are implemented in accordance with the approved project document and different guidelines of the government,<sup>147</sup> and donor agencies, particularly in foreign aided projects.<sup>148</sup>

The implementation rules issued by the Local Government Division have specified the local level project preparation guidelines for Upazila and Union. Upazila level projects are prepared based on local demand and inter-union jurisdiction considerations and the potential in income and employment generation.<sup>149</sup> While a committee headed by the elected head of this local government appraises the project, the Upazila Parishad approves the projects based on consensus and on a majority basis where consensus is not possible. The projects submitted

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<sup>142</sup> Project Management Institute, *What is Project Management?* < <https://www.pmi.org/about/learn-about-pmi/what-is-project-management>>.

Project management is the 'application of knowledge, skills, tools, and techniques to project activities to meet the project requirements. Project management processes fall into five groups: Initiating, Planning, Executing, Monitoring and Controlling, Closing'.

<sup>143</sup> সরকারি খাতে উন্নয়ন প্রকল্প প্রণয়ন, প্রক্রিয়াকরণ, অনুমোদন ও সংশোধন পদ্ধতি ২০০৮ [Public sector project preparation, processing, approval and revision procedure 2008](Bangladesh).

<sup>144</sup> Government of the People's Republic of Bangladesh, Planning Division, above n 6, 53-54; সরকারি খাতে উন্নয়ন প্রকল্প প্রণয়ন, প্রক্রিয়াকরণ, অনুমোদন ও সংশোধন পদ্ধতি ২০০৮ [Public sector project preparation, processing, approval and revision procedure 2008](Bangladesh)[1.11].

<sup>145</sup> সরকারি খাতে উন্নয়ন প্রকল্প প্রণয়ন, প্রক্রিয়াকরণ, অনুমোদন ও সংশোধন পদ্ধতি ২০০৮ [Public sector project preparation, processing, approval and revision procedure 2008](Bangladesh) 37, 45, 77, 79.

<sup>146</sup> সরকারি খাতে উন্নয়ন প্রকল্প প্রণয়ন, প্রক্রিয়াকরণ, অনুমোদন ও সংশোধন পদ্ধতি ২০০৮ [Public sector project preparation, processing, approval and revision procedure 2008](Bangladesh)[1.13].

<sup>147</sup> See, eg, Government of the People's Republic of Bangladesh, Ministry of Agriculture, *Development Project Proposal of Integrated Agricultural Productivity Project* (2011).

<sup>148</sup> See, eg, The World Bank, *Project Appraisal Document, National Agricultural Technology Programme-Phase II Project* (2015).

<sup>149</sup> Government of the People's Republic of Bangladesh, Local Government Division, উপজেলা পরিষদ উন্নয়ন তহবিল ব্যবহার নির্দেশিকা [Upazila Parishad Development Fund Utilization Guidelines]( memo no Upa-2/M-02/2010/1252, 28 April 2010)[2, 12].

by Union Parishads are scrutinized by the UP chairman and local elites, though inter-Union projects are prepared by an Upazila engineer or the head of the sectoral departments, such as Department of Agriculture Extension. These projects are also approved by the UZP.<sup>150</sup> The UP constitutes a committee, comprising elected representatives and officials to select the projects. There is no scope, however, for citizens to participate in the project selection process.<sup>151</sup>

The projects at the local level usually are of short duration and are implemented through different committees at Upazila and Union levels.<sup>152</sup> Large projects are implemented through private organisations in accordance with the existing procurement and other guidelines of the government.<sup>153</sup> In addition to the UZP and UP, Zila Parishad also prepares projects which do not fall under the purview of other local government institutions. However, projects in agriculture and relevant areas are optional to this local government institution.<sup>154</sup>

While the projects are implemented in accordance with the approved project document, three critical issues – procurement, environmental impact assessment and land acquisition play a significant role in the implementation of projects. The procurement process is administered in accordance with the *Public Procurement Act 2006*,<sup>155</sup> and *Public Procurement Rules 2008*.<sup>156</sup> The land acquisition of any project is also done in accordance with the land acquisition law of the country.<sup>157</sup> Environmental impact assessment, although critical for project appraisal, is not mandatory for all projects. The agriculture sector in most cases does not employ environmental impact assessments as they fall within a less impact-generating category

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<sup>150</sup> Government of the People's Republic of Bangladesh, Local Government Division, উপজেলা পরিষদ উন্নয়ন তহবিল ব্যবহার নির্দেশিকা [Upazila Parishad Development Fund Utilization Guidelines]( memo no Upa-2/M-02/2010/1252, 28 April 2010) [7].

<sup>151</sup> ইউনিয়ন পরিষদ (উন্নয়ন পরিকল্পনা) বিধিমালা ২০১৩ [Union Parishad (Development Planning) Rules 2013](Bangladesh)art5-7.

<sup>152</sup> Government of the People's Republic of Bangladesh, Local Government Division, উপজেলা পরিষদ উন্নয়ন তহবিল ব্যবহার নির্দেশিকা [Upazila Parishad Development Fund Utilization Guidelines]( memo no Upa-2/M-02/2010/1252, 28 April 2010)[8-10]; স্থানীয় সরকার (ইউনিয়ন পরিষদ) আইন ২০০৯ [Local Government (Union Parishad) Act 2009](Bangladesh)art45; ইউনিয়ন পরিষদ(উন্নয়ন পরিকল্পনা) বিধিমালা ২০১৩[Union Parishad (Development Planning) Rules 2013](Bangladesh)art 7[5].

<sup>153</sup> Government of the People's Republic of Bangladesh, Local Government Division, উপজেলা পরিষদ উন্নয়ন তহবিল ব্যবহার নির্দেশিকা [Upazila Parishad Development Fund Utilization Guidelines]( memo no Upa-2/M-02/2010/1252, 28 April 2010) [8]-[9].

<sup>154</sup> জেলা পরিষদ আইন ২০০০ [Zila Parishad Act 2000] (Bangladesh) Sch 1, pt 2.

<sup>155</sup> *The Public Procurement Act 2006* (Bangladesh).

<sup>156</sup> *The Public Procurement Rules 2008* (Bangladesh) S R O No 21 of 2008.

<sup>157</sup> *The Acquisition and Requisition of Immovable Property Ordinance 1982* (Bangladesh) Ordinance No II of 1982; *Acquisition and Requisition of Immovable Property (Amendment) Act 1994* (Bangladesh) Act No XX of 1994.



except for multilateral development banks' funded and large projects.<sup>158</sup> However, EIA is mandatory for different 'red' category projects that have large negative impact potential, such as fertiliser factory construction that usually have significant potential impacts on environment.<sup>159</sup>

#### *4 Implementation Monitoring and Evaluation of Plans and Projects*

The monitoring and evaluation of the progress of plans on a broad scale are now the mandate of General Economics Division (GED) of the Planning Commission. The GED follows up the progress of achievement of plan targets and advancement in development.<sup>160</sup> However, the general duty of monitoring projects or programmes is given to the ministries and implementing agencies. The ministries review the progress of projects every month through review meetings that are supposed to be chaired by the secretary of each ministry or division.<sup>161</sup> However, in the Ministry of Agriculture this meeting is chaired by the minister for close monitoring and quick decision making.<sup>162</sup> The ministries and agencies from time to time also send their officers to monitor the progress of projects in addition to regular monitoring by the project authority. The sectoral divisions of the PC occasionally monitor the progress of the projects.<sup>163</sup> Donor agencies, especially multilateral development banks also monitor the progress periodically in addition to periodic review meetings held in the Economic Relations Division (ERD) on donor funded development projects.<sup>164</sup>

Apart from implementing ministries and other agencies, the projects and programmes included in the ADP are closely monitored and evaluated by the Implementation Monitoring and Evaluation Division (IMED). IMED reports also include the careful analysis of programme outcomes and explanations about performance failure. This analysis is provided

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<sup>158</sup> See, eg, The World Bank, *Project Appraisal Document of Integrated Agricultural Productivity Project* (2011)50-52.

<sup>159</sup> Government of the People's Republic of Bangladesh, Department of Environment, *EIA Guidelines for Industries 1997; Environmental Protection Rules 1997* (Bangladesh) art 7.

<sup>160</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 126-129.

<sup>161</sup> Government of the People's Republic of Bangladesh, *Secretariat Instructions* (2014)art187(1).

<sup>162</sup> See, eg, Government of the People's Republic of Bangladesh, Ministry of Agriculture, *Minutes of Project and Programmes Review Meeting of the Ministry of Agriculture* (Issue No. 12.090.0000.60.18.2015-175, Date 2 March 2016).

<sup>163</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 126.

<sup>164</sup> See, eg, The World Bank, *Bangladesh: Integrated Agricultural Productivity Project (TF01 03 78)*

*Implementation Support Mission: Aide-Memoire* (27 December 2015); Government of the People's Republic of Bangladesh, Economic Relations Division, *Function* (2016) < <http://www.erd.gov.bd/site/page/887fd3af-649b-45d2-8fa8-8538522dcaa9/Functions>>.

to the relevant bodies so that they can improve their performance, if necessary.<sup>165</sup> There is a proposal for decentralising the monitoring through setting up field offices of IMED,<sup>166</sup> though that has not yet been initiated.

The IMED also does compliance monitoring of the procurement and preparation of the annual public procurement report as well as conducts concurrent, midterm and final evaluations.<sup>167</sup> Apart from IMED, the office of Comptroller and Auditor General also monitor the expenditure of projects on a regular basis.<sup>168</sup> They report to the relevant ministries when there are issues to resolve and unresolved issues are finally placed with the Public Accounts Committee of the parliament.

There are provisions for monitoring projects at the local level. The UZP can form committees at the UP level to monitor a project's implementation.<sup>169</sup> The government officials at different levels are also supposed to monitor the local level projects. The UZP also needs to report to the central government about the progress of each year within a month of completion of a fiscal year. The information about the project progress is disseminated at the UZP and UP level, and yearly reports about the project are to be sent to the PC and other agencies.<sup>170</sup> UPs need to monitor and evaluate their plans on a yearly basis and amend them as necessary.<sup>171</sup> Zila Parishads also review the progress of development activities undertaken by them at district level as well as the implementation progress of development activities of UZP.<sup>172</sup>

The above overview of the planning process reveals that the planning frameworks started as a national activity but emphasised distributing responsibilities to ministries and divisions and their subordinate agencies. This is somewhat peculiar in that it is identified as the

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<sup>165</sup> Government of the People's Republic of Bangladesh, Implementation Monitoring and Evaluation Division, *Strategic Plan (2008-2013)* iv.

<sup>166</sup> Ibid 7.

<sup>167</sup> Government of the People's Republic of Bangladesh, Implementation Monitoring and Evaluation Division, *Implementation and Evaluation Procedure of Development Project/Sector wise Development Programme*, Circular No: IMED/Coordination-3/6(3)2004/162 (29 June 2013) 3-6

<[http://imed.portal.gov.bd/sites/default/files/files/imed.portal.gov.bd/page/fc19c129\\_afab\\_4ba5\\_87cf\\_1bba04a8821c/Circular%20for%20Development%20Project%20Monitoring%20Process%20%28Page%201%20to%203%29%20\\_29\\_03\\_2006.pdf](http://imed.portal.gov.bd/sites/default/files/files/imed.portal.gov.bd/page/fc19c129_afab_4ba5_87cf_1bba04a8821c/Circular%20for%20Development%20Project%20Monitoring%20Process%20%28Page%201%20to%203%29%20_29_03_2006.pdf)>.

<sup>168</sup> Office of the Comptroller and Auditor General of Bangladesh, *Brief Introduction*

<<http://www.cagbd.org/in.php?cp=intro>>.

<sup>169</sup> Government of the People's Republic of Bangladesh, Local Government Division, উপজেলা পরিষদ উন্নয়ন তহবিল ব্যবহার নির্দেশিকা [Upazila Parishad Development Fund Utilization Guidelines]( memo no Upa-2/M-02/2010/1252, 28 April 2010) [15].

<sup>170</sup> Government of the People's Republic of Bangladesh, Local Government Division, উপজেলা পরিষদ উন্নয়ন তহবিল ব্যবহার নির্দেশিকা [Upazila Parishad Development Fund Utilization Guidelines]( memo no Upa-2/M-02/2010/1252, 28 April 2010)15[12-14].

<sup>171</sup> See, eg, ইউনিয়ন পরিষদ (উন্নয়ন পরিকল্পনা) বিধিমালা ২০১৩ [Union Parishad (Development Planning) Rules 2013](Bangladesh)art 8.

<sup>172</sup> জেলা পরিষদ আইন ২০০০ [Zila Parishad Act 2010] (Bangladesh)1<sup>st</sup> Sch, 2<sup>nd</sup> Pt .

decentralization of planning process. The recent legal mandate to local government institutions for local level planning is a step towards organising planning at a grassroots level. However, this has not been integrated into the national frameworks of planning.

The general framework for planning at national and local levels includes agricultural development agendas as a part of countrywide development process. While central government pursues the agenda from a national perspective, local government has more of a localized view.<sup>173</sup> The local level projects are more concentrated on roads, culverts, bridge construction as well as small infrastructure creation. The local governments usually do not undertake agricultural development projects unless they implement such as a part of national projects.<sup>174</sup> Agricultural development has therefore been practiced in Bangladesh as a national agenda and local level officials of different departments of the ministry of agriculture implement the local part of different programmes at the local level.

The development plans and projects in the agriculture sector have primarily addressed climate variability challenges and environmental degradation issues since the 1990s. Climate change (CC) challenges have added additional dimensions to these regular agendas. The agriculture sector has been addressing the challenges from two dimensions, one through its regular programmes and one through its special programmes under climate change funds. The plans, strategies, policies and laws prepared by the government in addressing CC challenges have included the agriculture sector as a priority intervention area. The following section specifically reviews the government's plans, policies, strategies, laws and interventions in addressing climate change challenges in the agriculture sector.

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<sup>173</sup> Government of the People's Republic of Bangladesh, General Economics Division, above n 13, Pt 2, Ch 4; Government of the People's Republic of Bangladesh, Local Government Division, *Upazila Development Fund Utilization Guidelines, memo no Upa-2/M-02/2010/1252* (28 April 2010)[6]; ইউনিয়ন পরিষদ (উন্নয়ন পরিকল্পনা) বিধিমালা ২০১৩ [*Union Parishad (Development Planning) Rules 2013*](Bangladesh) art 7[6]; জেলা পরিষদ আইন ২০০০ [*Zila Parishad Act 2010*] (Bangladesh)<sup>1st</sup> Sch, 2<sup>nd</sup> Pt[Gha].

<sup>174</sup> Sheikh Noor Mohammad, *People's Participation in Development Projects at Grassroots Level: A Case study of Alampur and Jagannathpur Union Parishad* (MPP Thesis, North South University, 2010) 43.

## *E Agricultural Development Issues in a Climate Change Context in Bangladesh*

Given the grave threat of climate change to the Bangladesh economy, particularly to agriculture,<sup>175</sup> the government addresses this challenge on a priority basis. Agriculture remains the central of all plans, policies, strategies and legislative provisions adopted to address the CC challenges. There are separate policies and plans for addressing this issue however the sectoral plans of agriculture as well as national plans have also included this agenda as a priority issue.<sup>176</sup>

The basic strategies and plans for addressing climate change are set out in plans and legislation. The *National Adaptation Programme of Action (NAPA)*, the first special plan for addressing climate change adopted the sustainable development approach,<sup>177</sup> and emphasised adaptation activities. It includes promotion of stress tolerant crop varieties and emergency preparedness measures through integrating climate change issues into policies and programmes of agriculture.<sup>178</sup>

The most important plan document in addressing climate change impacts is the *Bangladesh Climate Change Strategy and Action Plan (BCCSAP) 2009*, which also has a high priority on adaptation.<sup>179</sup> While this plan promotes a climate-resilient pro-poor strategy, one of the six pillars of this strategy addresses food security and social protection issues.<sup>180</sup> The major areas of intervention for agricultural development in this plan include the conservation of locally improved varieties, development of crop protection plans, research on climate resilient crop varieties and suitable cropping patterns as well as extension of these varieties and practices.<sup>181</sup>

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<sup>175</sup> For detailed discussion see chapter 1, Section E 3 a, b of this thesis.

<sup>176</sup> See, eg, Government of the People's Republic of Bangladesh, Planning Commission, above n 13, Ch 8, 405; Government of the People's Republic of Bangladesh, Ministry of Agriculture, above n 21, [2.1].

<sup>177</sup> Government of the People's Republic of Bangladesh, Ministry of Environment and Forests, *National Adaptation Programme of Action* (2005)xiv-xv.

This plan emphasised addressing environmental protection and natural resource management with the participation of stakeholders.

<sup>178</sup> *Ibid* xv-xvi.

<sup>179</sup> Government of the People's Republic of Bangladesh, Ministry of Environment and Forests, *Bangladesh Climate Change Strategy and Action Plan* (2009) xi.

<sup>180</sup> *Ibid* xviii, 2, 27-29.

<sup>181</sup> *Ibid* 33-35.

Participatory planning was proposed to build the resilience of severely affected marginal and small farmers, including women in vulnerable areas.<sup>182</sup> The government also plans to identify climate change impacts on agriculture and set up a participatory monitoring system to observe the changes in the ecosystem and biodiversity.<sup>183</sup> The proposed mitigation activities in the BCCSAP include support to research and the extension of lower emission technology for water and fertiliser management.<sup>184</sup> There are provisions for engaging focal point officers at ministry and agency level for coordination of implementation of the BCCSAP through different programmes.<sup>185</sup>

The BCCSAP priorities have been translated into projects for implementation under different funding options. The government has established a domestic funding mechanism through enacting *Climate Change Trust Act 2010* for operationalising the project management process.<sup>186</sup> Although the *Climate Change Trust (CCT) Act* fund's supported projects prepared in light of the BCCSAP, there is inconsistency between the *CCT Act* and BCCSAP. The guidelines of project management under this *CCT Act* have no reference to participatory planning, implementation and monitoring options, as articulated in BCCSAP.<sup>187</sup> There is also no scope for PC and IMED to monitor and evaluate the impact of investment in climate change projects.<sup>188</sup> The appraisal authority is kept in the Ministry of Environment and Forests (MOEF), deviating from the provisions of BCCSAP for integration of project appraisal by the Planning Commission. The composition of the climate change related project approving authority lacks appropriate representation from key ministries, such as the ministry of planning.<sup>189</sup>

Despite the priority of the government of Bangladesh to develop climate resilient agriculture there are only few agricultural development projects under the Bangladesh Climate Change Trust (BCCT) fund. The varieties improvement and technological research projects seem neglected as BCCT fund rules allow short duration projects. This limitation in the duration of projects does not support critical agricultural research and development projects that need

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<sup>182</sup> Ibid 40-41, 60.

<sup>183</sup> Ibid 57-58.

<sup>184</sup> Ibid 65.

<sup>185</sup> Ibid 3.

<sup>186</sup> *জলবায়ু পরিবর্তন ট্রাস্ট আইন ২০১০* [Climate Change Trust Act 2010] (Bangladesh) Act No 57 of 2010.

<sup>187</sup> Government of the People's Republic of Bangladesh, Ministry of Environment and Forests, Bangladesh Climate Change Trust, *Notice No PABAMA/BCCT/PABAMA-Letters/305/2012(part-1)/14* (24 July 2014).

<sup>188</sup> Government of the People's Republic of Bangladesh, Ministry of Environment and Forests, *Circular No PABAMA/CCU/Guideline/54/2010/227*, 27 March 2012 (Bangladesh Gazette, Supplementary, April 9 2012).

<sup>189</sup> *জলবায়ু পরিবর্তন ট্রাস্ট আইন ২০১০* [Climate Change Trust Act 2010] (Bangladesh) Act No 57 of 2010, art 9-10.

longer duration to develop adaptive crop varieties and technologies to address the threats of climate change. There is a lack of synergies between climate change and other agricultural development projects. Similar types of activities, such as rubber dam construction for irrigation support to vulnerable areas and seed multiplication, are undertaken both from the regular development budget as well as climate change funds.

There was also a priority in the agriculture sector in funding agricultural projects for facilitating food security from the donor assisted Bangladesh Climate Change Resilience Fund (BCCRF).<sup>190</sup> While there was a potential duplication in project activities in BCCT fund and donor assisted BCCRF,<sup>191</sup> the only project proposed from the ministry of agriculture suffered from approval failure.<sup>192</sup> Another project for installation of solar powered irrigation pumps contributes to mitigation to CC, however promoting effective coordination between the field level staff of the ministry of agriculture and the project implementing agency seems a challenge for the project.<sup>193</sup>

Another donor funded programme, Strategic Programme for Climate Resilience (SPCR)<sup>194</sup> is supporting coastal agriculture through the scaling up of climate resilient varieties of crops, including efficient irrigation and early warning systems for farming communities for field crop protection.<sup>195</sup> Apart from adaptation in coastal areas, the government also plans to establish a national drought monitoring system and assessment of ecosystem degradation to mitigate impacts of drought in dry land ecosystems in the northern part of Bangladesh.<sup>196</sup> There are some projects for drought management in the northern region of Bangladesh however the drought monitoring system has not yet been institutionalised.<sup>197</sup>

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<sup>190</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 413.

<sup>191</sup> Ibid 414.

<sup>192</sup> Government of the People's Republic of Bangladesh, Bangladesh Climate Change Resilience Fund, *Agricultural Adaptation in Climate Risk Prone Areas of Bangladesh (drought, flood and saline prone areas) Project* <<https://bccrf-bd.org/ProjectDetails.html?ID=10>>.

'Agricultural Adaptation in Climate Risk Prone Areas of Bangladesh (drought, flood and saline prone areas) Project' has been pending for final approval for last 4 years.

<sup>193</sup> Government of the People's Republic of Bangladesh, Bangladesh Climate Change Resilience Fund, *Solar Energy Program, A Green Energy Initiative* (2013) <<http://www.bccrf-bd.org/ProjectDetails.html?ID=11>>.

<sup>194</sup> Government of the People's Republic of Bangladesh, Climate Investment Fund, *Bangladesh: Strategic Program for Climate Resilience (SPCR)*(2010)5.

<sup>195</sup> Ibid 40, 43.

<sup>196</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 435.

<sup>197</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, *List of projects of the Ministry of Agriculture and its subordinate agencies 2015-2016* <<http://moa.gov.bd/site/page/c106d8d9-d024-4836-b020-2df58eadaaf8/প্রকল্প->>>.

Apart from specialised climate change plans, strategies and laws, the *National Agriculture Policy (NAP) 2013* also promoted climate resilient agriculture through research and extension activities such as development of stress-tolerant crop varieties and its extension.<sup>198</sup> However, it does not have special attention to address the climate change threats to agriculture. In order to address the CC challenge in agriculture, a draft policy has also been prepared in the Ministry of Agriculture for developing short duration early maturing crop varieties.<sup>199</sup> This policy could have been instrumental, yet it has failed thus far as the draft has been pending for last five years.

For climate change mitigation, the government now promotes the electrification of diesel-operated irrigation pumps, solar irrigation and ‘alternate wet and dry’ methods for the irrigation in paddy fields.<sup>200</sup> In order to restrict the exhaustion of ground water the government emphasised conducting a nationwide survey on the availability of ground water, sustainable management of aquifers, exploring options for rainwater harvesting and the introduction of zero discharge policy.<sup>201</sup>

In addition to some adaptation and mitigation projects, the government’s priority in mitigation has recently received momentum with the government’s voluntary declaration to the *UNFCCC* concerning the intended nationally determined contributions (INDC) in 2015.<sup>202</sup> The commitment of the government of Bangladesh expressed through INDC has included several mitigation pledges. However, the mitigation pledge in the agriculture sector is conditional and subject to receiving additional international resources. The programmes for mitigation include lower emissions from agricultural land through scaling up the solar irrigation pumps projects.<sup>203</sup> The mitigation commitment also has plans for enhancing the

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<sup>198</sup> Government of the People’s Republic of Bangladesh, Ministry of Agriculture, above n 21[4.3, 5.2, 5.55.8, 5.9]; Government of the People’s Republic of Bangladesh, Ministry of Agriculture, *Report of last 5 years’ activities of the Ministry of Agriculture(2009-2013)*< <http://moa.gov.bd/site/view/publications/প্রতিবেদন/প্রকাশনা>>3-4.

<sup>199</sup> Government of the People’s Republic of Bangladesh, Ministry of Agriculture, জলবায়ু পরিবর্তনের প্রভাব সনাক্ত করা এবং স্বল্পমেয়াদী ফসলের জাত ও প্রযুক্তি উদ্ভাবন বিষয়ক খসড়া নীতিমালা [*Draft Policy for Development of Climate Resilient Short Duration and Early Maturing Varieties and Technologies*] (2010) <[http://moa.portal.gov.bd/sites/default/files/files/moa.portal.gov.bd/policies/90150f53\\_089a\\_4ed7\\_a121\\_289564a7f976/policy\\_converted.pdf](http://moa.portal.gov.bd/sites/default/files/files/moa.portal.gov.bd/policies/90150f53_089a_4ed7_a121_289564a7f976/policy_converted.pdf)>.

<sup>200</sup> Government of the People’s Republic of Bangladesh, Planning Commission, above n 13, 420.

<sup>201</sup> Government of the People’s Republic of Bangladesh, Planning Commission, above n 13, 433.

<sup>202</sup> Government of the People’s Republic of Bangladesh, Ministry of Environment and Forests, *Intended Nationally Determined Contributions* (2015).

<sup>203</sup> *Ibid* 5.

mechanisation in agriculture for a 50 per cent reduction in draft cattle to lower methane emissions, a 35 per cent increase in organic fertiliser to share and the use of alternate wetting and drying irrigation in 20 per cent of all rice cultivation.<sup>204</sup>

Given the mitigation pledges in the agriculture sector are conditional to receiving international assistance, the government's domestic efforts to develop infrastructure and capability to address climate change-induced vulnerabilities are praiseworthy. The allocated fund of nearly US Dollar 400 million for the Bangladesh climate change trust fund (BCCTF) is very encouraging against low commitments and the release of funds from donors.<sup>205</sup> Unfortunately, the allocated amount is not sufficient as the country needs of about \$6.59 billion by 2030 to confront two climate extremes, cyclones and storm surges.<sup>206</sup> This demands extensive international collaboration and funding to address climate change impacts in Bangladesh.

While Bangladesh needs a large amount of funds to address the threats of climate change, it also needs to address other challenges that hinder SDA. SDA has been dependent on other issues, such as addressing ecological destruction, ensuring equity in resources use and taking precautionary measures in addressing potential disasters. There is a need to promote an integrated development effort through effective governance mechanisms. These issues have been examined to identify the gaps where interventions are needed to make the sector sustainable. The following sections will discuss these issues in relations to the seven principles of sustainable development of agriculture identified in chapter four.

#### *F Review of Bangladesh Development Planning Frameworks in light of Proposed SDA Principles*

This section intends to review the plans, policies and strategies adopted by the government of Bangladesh to promote agricultural development. The discussion also includes development related laws, rules and regulations that complement or supplement the development planning process. The issues for discussion are categorised in accordance with the seven principles of SDA identified in the fourth chapter. Even though the government of Bangladesh has not

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<sup>204</sup> Ibid 6-7.

<sup>205</sup> Ibid 11; Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 443.

<sup>206</sup> Government of the People's Republic of Bangladesh, Ministry of Environment and Forests, above n 202, 13.



consistently followed these principles, this research has applied these principles to current Bangladesh development planning frameworks to evaluate problems and progress towards SDA.

## 1 Substantive Principles

### (a) Principle 1: Maintenance and Improvement of Eco-integrity, Biological Diversity and Improving Resource Use Efficiency

The government of Bangladesh emphasises the protection of ecosystems and prevention of resource degradation,<sup>207</sup> and the priority areas include water resources, forestry and biodiversity, land and soil, coastal and marine resources.<sup>208</sup> This conservation agenda was first promoted in the late 1980s through shifting cultivation approaches from mono-cropping to multiple cropping.<sup>209</sup> The conservation issue received momentum in the late 1990s through efforts to institutionalise the environmental protection and preservation initiative.<sup>210</sup> The dimension changes in recent decades and the government emphasises protection of common property resources, ecologically critical areas,<sup>211</sup> and conservation of biodiversity and its sustainable utilization.<sup>212</sup> The following discussion will highlight among others the maintenance, improvement and efficient use of three critical resources for sustainable development of agriculture – land, water and biodiversity.

#### (i) Land and soil

Given the fact that land and water are the most misused natural resources, the government initiatives for land resources conservation and protection include regulating the conversion of good agricultural land and keeping the rural landscape undisturbed through land zoning and mandatory land use plans.<sup>213</sup> Land zoning has started in phases but its application is not yet visible after five years.

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<sup>207</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, liii; Government of the People's Republic of Bangladesh, Planning Commission, *National Sustainable Development Strategy*(2013)15.

<sup>208</sup> Government of the People's Republic of Bangladesh, Planning Commission, *National Sustainable Development Strategy* (2013)19-20.

<sup>209</sup> Government of the People's Republic of Bangladesh, Planning Commission, 'Third Five Year Plan', above n 73, 154.

<sup>210</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 55,43, 184.

<sup>211</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 432, 436; Government of the People's Republic of Bangladesh, Planning Commission, above n 60, 177; Government of the People's Republic of Bangladesh, Planning Commission, above n 53, X.1-16 X.2-5.

<sup>212</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 63, vol 1,195-196.

<sup>213</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 432; Government of the People's Republic of Bangladesh, Ministry of Land, *National Land Policy* (2001)[2].

Natural resources, including natural water bodies and lands, are protected through prohibiting changing the class of lands,<sup>214</sup> as well as controlling the collection of soil from agricultural land,<sup>215</sup> and prohibiting the removal of top-soils for non-agricultural purposes in order to sustain the soil fertility.<sup>216</sup> In addition to these land and soil protection efforts, the government also emphasised prohibition of acquisition of irrigable land.<sup>217</sup>

Despite all these provisions, the loss of crop land per year is about 0.73 per cent, which exhibits a gross implementation deficit.<sup>218</sup> The conservation plan for agricultural land also passes through definitional inconsistencies in different laws.<sup>219</sup> With this backdrop, there has been an initiative to enact a law for agricultural land use control purposes with a strict provision against conversion.<sup>220</sup> This draft law, pending approval for over the last five years, has however no provision for soil fertility maintenance.<sup>221</sup> Moreover, the *Land Improvement Loans Act 1883* introduced in the British era for land improvement through providing credit has been found ineffective.<sup>222</sup>

Declining soil fertility is an issue in Bangladesh since the pre-independence period but there were very few interventions during the pre-independence period.<sup>223</sup> In the post-independence period, the government of Bangladesh, however, undertook soil fertility improvement plans in the early 1980s, along with a plan to rebalance the price of fertiliser, organic fertiliser use and careful utilisation of chemical pesticides.<sup>224</sup> The initiative was continued afterwards through the promotion of crop rotation and the application of a balanced dose of fertiliser,<sup>225</sup>

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<sup>214</sup> মহানগরী, বিভাগীয় শহর ও জেলা শহরের পৌর এলাকাসহ দেশের সকল পৌর এলাকার খেলার মাঠ, উন্মুক্ত স্থান, উদ্যান এবং প্রাকৃতিক জলাধার সংরক্ষণ আইন ২০০০ [Conservation of playing field, open space, park and natural water bodies of all municipal areas including large city and cities of Divisions and District Act 2000](Bangladesh) Act No 36 of 2000 art 5.

<sup>215</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 55, 247; ইট প্রস্তুত ও ভাটা স্থাপন (নিয়ন্ত্রণ) আইন ২০১৩ [Brick Making and Vata Establishment (Control) Act 2013](Bangladesh) Act No 59 of 2013 art 5.

<sup>216</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 208, 121-123.

<sup>217</sup> Government of the People's Republic of Bangladesh, Ministry of Land, above n 213, [5.5], [17].

<sup>218</sup> Nazmul Hasan, 'Trend in the Availability of Agricultural Land in Bangladesh'(Study Report, National Food Policy Capacity Strengthening Programme, Bangladesh, 2013) 6[3].

<sup>219</sup> ইট প্রস্তুত ও ভাটা স্থাপন (নিয়ন্ত্রণ) আইন ২০১৩ [Brick Making and Vata Establishment (Control) Act 2013](Bangladesh) Act No 59 of 2013 art 2 Jha.

<sup>220</sup> Government of the People's Republic of Bangladesh, Ministry of Land, খসড়া কৃষি জমি সুরক্ষা ও ভূমি ব্যবহার আইন ২০১৫ [Draft Agricultural Land Protection and Land Use Act 2015] (Bangladesh)art 4.

<sup>221</sup> Government of the People's Republic of Bangladesh, Ministry of Land, খসড়া কৃষি জমি সুরক্ষা ও ভূমি ব্যবহার আইন ২০১৫ [Draft Agricultural Land Protection and Land Use Act 2015] (Bangladesh)art 12.

<sup>222</sup> *The Land Improvement Loans Act 1883*(Bangladesh) Act No XIX of 1883.

<sup>223</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 48, 34[101]; Government of the People's Republic of Bangladesh, Planning Commission, above n 73, 404-405.

<sup>224</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 51, 136,144-146.

<sup>225</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 62, 96; Government of the People's Republic of Bangladesh, Planning Commission, above n 53, X.1-7.

the promotion of organic fertiliser,<sup>226</sup> integrated pest management (IPM) and controlling pesticide and the indiscriminate use of agro-chemicals.<sup>227</sup> The government's plan for the gradual withdrawal of subsidies suffers from inconsistency in commitments.<sup>228</sup> The plan for promotion of organic fertiliser and crop rotation for soil fertility has also been introduced without any direction for incentives or subsidy,<sup>229</sup> and the recent voluntary declaration of the country in its INDC to *UNFCCC* includes the promotion of organic fertiliser as a conditional pledge, subject to receiving donors' assistance.

## (ii) Water Resources

In respect to conservation of water resources, the latest legislative provisions for common water resources is seen in the *Bangladesh Water Act 2013*, that emphasises keeping a natural flow of water as well as fixing the critical level of groundwater including potential restrictions on withdrawal.<sup>230</sup> The Coastal Zone Policy also emphasised keeping a flow in water channels, building small water reservoirs, rainwater harvesting and the sustainable use and management of ground water.<sup>231</sup> The government prohibits the filling of private water bodies,<sup>232</sup> and plans to initiate watershed management and wetland conservation for a continuous supply of water, reducing the rate of salinity intrusion and ensuring the maintenance of ground water levels at 2005 levels.<sup>233</sup> All these efforts failed to generate

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<sup>226</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 62,; Government of the People's Republic of Bangladesh, Planning Commission, above n 53, X.1-16.

<sup>227</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, *Focused Write-up for Seventh Five Year Plan*(2015)5; Government of the People's Republic of Bangladesh, Planning Commission, above n 53, X.1-17; Government of the People's Republic of Bangladesh, Planning Commission, above n 55, 247; Government of the People's Republic of Bangladesh, Ministry of Food, *Bangladesh Country Investment Plan: A road map towards investment in agriculture, food security and nutrition* (2011)23-24; Government of the People's Republic of Bangladesh, Department of Agriculture Extension, *Draft National Agriculture Extension Policy* (2015).

<sup>228</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 208, 19-21; Government of the People's Republic of Bangladesh, Ministry of Agriculture, above n 22.

<sup>229</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, above n 21,[7]; Government of the People's Republic of Bangladesh, Planning Commission, above n 208, 121-123.

The government finds it challenging to restore the soil health.

<sup>230</sup> *বাংলাদেশ পানি আইন ২০১৩* [Bangladesh Water Act 2013] (Bangladesh) Act No 14 of 2013 art 19, 20; Government of the People's Republic of Bangladesh, Ministry of Water Resources, *National Water Policy* (1999)art4.3.

<sup>231</sup> Government of the People's Republic of Bangladesh, Ministry of Water Resources, Coastal Zone Policy (2005)[4.4.2]; Government of the People's Republic of Bangladesh, Planning Commission, above n 62, 28; Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 271, 433.

<sup>232</sup> Government of the People's Republic of Bangladesh, Ministry of Land, above n 213, [17.15]; Government of the People's Republic of Bangladesh, Ministry of Agriculture, above n 13, 432; Government of the People's Republic of Bangladesh, Planning Commission, above n 208, 20.

<sup>233</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 406, 432.

expected results in water conservation due to gaps in legislation, the weak enforcement of laws, improper planning and limited monitoring as well as low coordination between concerned departments.<sup>234</sup>

### (iii) Biodiversity

Given the severe environmental strain on agriculture,<sup>235</sup> the government emphasised the preservation of biodiversity for the sustainable use of resources,<sup>236</sup> and for addressing the challenges of environmental degradation and climate change.<sup>237</sup> The government also promotes a co-management approach for conservation of wetland biodiversity and the judicious use of resources.<sup>238</sup> The legislation introduced for safe practice in pest control is also promoting the protection of the biodiversity.<sup>239</sup> The recently approved draft *Bangladesh Biodiversity Act 2015* includes punitive provisions for the violators of biodiversity conservation regulations. However, the procedural complexities for the filing of cases through the appropriate authority may impede the justice through delaying the process.<sup>240</sup>

### (iv) Ecological Improvement

Ecological improvement is now planned to be promoted through the use of the integrated pest management (IPM) programme, the promotion of organic farming, agroforestry and genetic improvement,<sup>241</sup> and use of renewable energy in agriculture production.<sup>242</sup> Moreover, the

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<sup>234</sup> Md. Khalequzzaman, 'Water', in Ali Riaz and Mohammad Sajjadur Rahman(eds), *Routledge Handbook of Contemporary Bangladesh* (Routledge, 2016)277; Syed Mahbulul Alam, *Review of law and policy to protect water bodies in Bangladesh*(WBB Trust)< [http://www.wbbtrust.org/view/article\\_details/22](http://www.wbbtrust.org/view/article_details/22)>.

<sup>235</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 55, 182.

<sup>236</sup> Ibid.

<sup>237</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 63, vol 1, 195-196; Government of the People's Republic of Bangladesh, Ministry of Agriculture, above n 227, 12-13.

<sup>238</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 62, 96; Government of the People's Republic of Bangladesh, Planning Commission, above n 208, 121.

<sup>239</sup> *Agricultural Pests Ordinance 1962* (East Pakistan) Ordinance No VI of 1962.

<sup>240</sup> *Draft Bangladesh Biological Diversity Act 2012* (Bangladesh) Government of the People's Republic of Bangladesh, Ministry of Environment and Forests art 18, 24.

<sup>241</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 268; Government of the People's Republic of Bangladesh, Department of Agriculture Extension, *Draft National Agriculture Extension Policy* (2015)[7]-[8].

Food and Agriculture Organization of the United Nations (FAO), *Agroforestry* < <http://www.fao.org/forestry/agroforestry/en/>>

Agroforestry systems include both traditional and modern land-use systems where trees are managed together with crops and/or animal production systems in agricultural settings. They are dynamic, ecologically based, natural resource management systems that diversify and sustain production in order to increase social, economic and environmental benefits for land users at all scales.

government, by law, prohibits the sale of fertilisers which are detrimental to the environment and it is mandated to prosecute any person for offending the rules.<sup>243</sup>

Despite the ecological improvement efforts of the government, the progress of IPM since its introduction in the early 1980s has been only 30 per cent,<sup>244</sup> and organic farming has had only two per cent coverage.<sup>245</sup> Given the high subsidy for chemical fertiliser, organic fertiliser promotion without any subsidies does not yield results due to low productive efficiency and higher costs.<sup>246</sup> The trends in agro-biodiversity protection have also shown declining trends for almost all the crops in the context of the infusion of modern varieties.<sup>247</sup>

#### (v) *Efficiency in Resource Use*

In respect to the efficient use of resources, the major emphasis is given to the optimum utilisation of water resources and improving irrigation efficiency.<sup>248</sup> The government has also focused on extended use of rainwater and its conservation,<sup>249</sup> and the use of solar energy in farm activities.<sup>250</sup> There has also been a focus on a co-management approach for sustainable use of its resources.<sup>251</sup> Although the pricing policy for efficient use of resources and the rationalisation of irrigation subsidy had been pursued previously,<sup>252</sup> the recent plans do not have any direction to this end.

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<sup>242</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, above n 21, [5.9]; Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 272; Government of the People's Republic of Bangladesh, Ministry of Agriculture, above n 198, 11.

<sup>243</sup> সার (ব্যবস্থাপনা) আইন, ২০০৬ [Fertiliser (Management) Act 2006] (Bangladesh) Act No 6 of 2006 s12-26, সার (নিয়ন্ত্রণ) আদেশ, ১৯৯৯ [Fertiliser (control) Order 1999] (Bangladesh).

<sup>244</sup> Muhammad Humayun Kabir and Rainis Ruslan, 'Adoption and intensity of integrated pest management (IPM) vegetable farming in Bangladesh: an approach to sustainable agricultural development' (2015)17(6)*Environment, Development and Sustainability*1413.

<sup>245</sup> Rasha Binte Mohiuddin, 'Prospects of Organic Farming in Bangladesh' *Green Watch*(online),15 March 2016 < <http://greenwatchbd.com/prospects-of-organic-farming-in-bangladesh/#prettyPhoto>>.

<sup>246</sup> Halim Miah, Practical Action, *Promoting Organic Fertiliser in Bangladesh: Challenges and Prospect* (15 March 2015) < <http://practicalaction.org/blog/where-we-work/bangladesh/promoting-organic-fertiliser-in-bangladesh-challenges-and-prospects/>>.

<sup>247</sup> Government of the People's Republic of Bangladesh, Department of Environment, *Fifth National Report to the Convention of Biological Diversity* (2015)66.

<sup>248</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 55, 188; Government of the People's Republic of Bangladesh, Planning Commission, above n 208, 20; Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 267-269; Government of the People's Republic of Bangladesh, Department of Agriculture Extension, *Draft National Agriculture Extension Policy* (2015)[7]; Government of the People's Republic of Bangladesh, Ministry of Food and Disaster Management, 'National Food Policy Plan of Action ' above n 109, 10-11.

<sup>249</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 62, 35.

<sup>250</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, above n 227, 12-13; Government of the People's Republic of Bangladesh, Ministry of Agriculture, above n 198, 11.

Government of the People's Republic of Bangladesh, Planning Commission, above n 53, X.2-2; Government of the People's Republic of Bangladesh, Planning Commission, above n 208, 121.

<sup>252</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 73, 154, 207.

The *Ground Water Management Rules 1987* promoted water use efficiency in irrigation through introduction of spacing direction for tube well sinking.<sup>253</sup> The gaps between tube wells were relaxed in 1992 and that has to some extent induced unsustainable water mining. The policy initiative of the government to improve irrigation efficiency along with the control of water mining is yet to receive approval.<sup>254</sup> In such a context the use of ground water has seen a sharp increase, from 16 per cent to 80 per cent from 1981 to 2012, against a sharp decrease of surface water use from 76 per cent to 23 per cent in the same period.<sup>255</sup> This has contributed to large increases of low water table areas, from 4 per cent to 14 per cent between 1998 and 2012.<sup>256</sup> The use of water saving technology, alternate wet and drying (AWD) is also relatively poor due to structural weaknesses in the irrigation mode.<sup>257</sup>

Apart from stated initiatives, the *Bangladesh Environment Conservation Act 1995* also promotes ecological integrity as well as prohibiting activities detrimental to agriculture.<sup>258</sup> Given the shortcomings in addressing the liability issue, this legislation makes provisions for assigning liabilities to company management in the case of violation of this law by any private company.<sup>259</sup> The formalities before filing cases have been relaxed through giving the prerogative to courts to accept cases in case of delay or non-approval of application of the complainant by the assigned government agency.<sup>260</sup> This law lacks some critical environmental agenda including flood management and suffers due to absence of effective institutional coordination.<sup>261</sup>

The role of the judiciary in Bangladesh for the promotion of protection and conservation of the environment has been prominent. The Supreme Court, through its judgement in *Dr. M. Farooque v Bangladesh*,<sup>262</sup> extended the meaning of fundamental rights for life<sup>263</sup> to the

<sup>253</sup> *Ground Water Management Rules 1987* (Bangladesh) art 6.

<sup>254</sup> খসড়া সমন্বিত ক্ষুদ্র সেচ নীতিমালা [Draft Minor Irrigation Policy] (Bangladesh, 2014)[1], [5.4].

<sup>255</sup> Asad Sarwar Qureshi, Zia Uddin Ahmed, Timothy J. Krupnik, 'Groundwater management in Bangladesh: An analysis of problems and opportunities' (Research Report No 2, Cereal Systems Initiative for South Asia - Mechanisation and Irrigation (CSISA-MI) Project, Bangladesh, 2014) 17-18.

<sup>256</sup> *Ibid* 21.

<sup>257</sup> *Ibid* 30.

<sup>258</sup> বাংলাদেশ পরিবেশ সংরক্ষণ (সংশোধন) আইন ২০১০ [Bangladesh Environment Conservation (Amendment) Act 2010] (Bangladesh) Act No 50 of 2010 art 2.

<sup>259</sup> বাংলাদেশ পরিবেশ সংরক্ষণ (সংশোধন) আইন ২০১০ [Bangladesh Environment Conservation (Amendment) Act 2010] (Bangladesh) Act No 50 of 2010 art 16.

<sup>260</sup> বাংলাদেশ পরিবেশ সংরক্ষণ (সংশোধন) আইন ২০১০ [Bangladesh Environment Conservation (Amendment) Act 2010] (Bangladesh) Act No 50 of 2010 art 17.

<sup>261</sup> Niaz Ahmed Khan and Ataur Rahman Belal, 'The politics of the Bangladesh environmental protection act'(1999) 8(1) *Environmental Politics* 316.

<sup>262</sup> *Dr. Mohiuddin Farooque v Bangladesh & Ors* 49 DLR (AD) (1997) 1

<sup>263</sup> *Constitution of the People's Republic of Bangladesh*, art 31, 32.

protection and preservation of the environment. This judgement is preceded by the constitutional provision for ecological protection including biodiversity.<sup>264</sup> The judicial decisions for environmental protection however sometimes failed to generate results due to executive failure in implementation.<sup>265</sup>

*(b) Principle 2: People centric Development for Addressing Poverty, Employment and Livelihoods*

The objectives of the planned development in Bangladesh since the pre-independence period were to alleviate poverty, raise the standards of living and increase the employment opportunities for citizens.<sup>266</sup> Agriculture has always been the priority sector<sup>267</sup> because of its instrumental role in employment creation and the rational distribution of income.<sup>268</sup> The special employment creation programmes of the government concentrate on irrigation and transport infrastructure creation for the livelihood development of the poor.<sup>269</sup> There are also efforts for advancement of the rights of the sharecroppers and fixation of the minimum agricultural wage.<sup>270</sup>

The priority of agriculture for livelihood improvement and profitability were facilitated through a credit policy,<sup>271</sup> price support to input and outputs and promoting mechanisation.<sup>272</sup> The government also planned for the introduction of insurance for risk minimisation as well as crop diversification for intensification and profit.<sup>273</sup> The relief oriented programmes were converted into development oriented target group programmes to benefit poor people.<sup>274</sup>

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<sup>264</sup> *Constitution of the People's Republic of Bangladesh*, art 18 A.

<sup>265</sup> *Bangladesh Environmental Lawyers Association (BELA) v Government of the People's Republic of Bangladesh and others*, WP of 2003.

Shadman Sahir Ahmed, 'Relocation of Hazaribag Tanneries', *The Independent* (online), 5 July 2016 <<http://www.theindependentbd.com/printversion/details/50368>>.

The order of court for relocation of leather industries from Hazaribag area of Dhaka city has not been accomplished even after 7 years of judgement.

Golam Rabbani, 'Environmental Governance in Bangladesh' in Sacchidananda Mukherjee and Debashis Chakraborty (eds) *Environmental Challenges and Governance Diverse Perspective from Asia* (Routledge, 2015)44-45.

<sup>266</sup> Government of Pakistan, Planning Commission, *First Five Year Plan (1955-60)*13; Government of the People's Republic of Bangladesh, Planning Commission, above n 48, 9,87 ; Government of the People's Republic of Bangladesh, Planning Commission, above n 55, 158.

<sup>267</sup> Government of Pakistan, above n 42, 11.

<sup>268</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 48, 138; Government of the People's Republic of Bangladesh, Planning Commission, above n 51, 147, 183-184.

<sup>269</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 51, 87,108-109.

<sup>270</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 55, 161; *The Agricultural Labour (Minimum Wages) Ordinance 1984* (Bangladesh) Ordinance No XVII of 1984.

<sup>271</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 51, 29,108.

<sup>272</sup> *Ibid* 136,139,147; Government of the People's Republic of Bangladesh, Planning Commission, above n 53, X.1-21.

<sup>273</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 73, 150, 156.

<sup>274</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 53, VII-2.

The people centric development policy of the government of Bangladesh has been continued since the introduction of development planning immediately after independence in 1971. The government has focused on increasing farm income through better productivity, crop diversification and enhancing the access of the poor to production inputs and institutional finance.<sup>275</sup> The government now emphasises the reduction of extreme poverty and productive employment generation enhancing social protection,<sup>276</sup> as well as asset generation and preventing asset erosion of poor.<sup>277</sup>

With the implementation challenges in public land distribution, the government implements special land distribution projects and undertakes plans for improving land management.<sup>278</sup> A social protection, disaster rehabilitation and village infrastructure maintenance programme emphasises agricultural development activities to generate employment in addressing the poverty situation in rural areas.<sup>279</sup> Climate change mitigation projects such as solar panel and bio-gas projects are now included in the scope of these programmes.<sup>280</sup>

Given the long term plan to withdraw the subsidies to eliminate the benefits captured by the influential and privileged people and regions,<sup>281</sup> subsidies have continued in a larger volume.<sup>282</sup> The government spending for agriculture subsidies amount to about 66 per cent of total budget for the Ministry of Agriculture. Subsidy allocation is about five times of the development budget allocation of this ministry.<sup>283</sup> The large volume of subsidies is now passed through a contradiction where the latest seventh five year plan does not include subsidy reduction against the plan for subsidy reduction in Ministry of Agriculture's business plan.<sup>284</sup> The experts are advocating the continuation of subsidies for the profitability of

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<sup>275</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 63, 26,149; Government of the People's Republic of Bangladesh, Planning Commission, above n 13, li.

<sup>276</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, xlvi, 45,

<sup>277</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, above n 227, 5.

<sup>278</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 55, 286.

<sup>279</sup> গ্রামীণ অবকাঠামো সংস্কার (কাবিখা-খাদ্যশস্য/নগদ টাকা) কর্মসূচি নির্দেশিকা [Rural Infrastructure Rehabilitation Programme Guidelines 2013] Government of Bangladesh, Ministry of Disaster Management and Relief) No 51.00.0000.422.22.001.13-480, 19.08.2013(Bangladesh)art1, 3; গ্রামীণ অবকাঠামো রক্ষণাবেক্ষণ (টিআর-খাদ্যশস্য/নগদ টাকা) কর্মসূচি নির্দেশিকা [Rural Infrastructure Maintenance Programme Guidelines] Government of Bangladesh, Ministry of Disaster Management and Relief) No 51.00.0000.422.22.001.13-481, 19.08.2013 (Bangladesh) art 1.

<sup>280</sup> Government of the People's Republic of Bangladesh, Ministry of Disaster Management and Relief, *Order No: 51.00.0000.422.22.01.13-163*, (16 September 2014).

<sup>281</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 48, 89.

<sup>282</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, above n 22, 24.

<sup>283</sup> Government of the People's Republic of Bangladesh, Finance Division, *Budget in Brief 2016-2017: Statement II Non-Development and Development Expenditure* (2016)11.

<sup>284</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, above n 22, 19-21.



farmers,<sup>285</sup> while they are ignoring organic or bio-fertilisers that do not receive any subsidy for soil fertility improvement. The 20 per cent rebate in electricity bills for irrigation directly reduces the irrigation cost, but it is not consistent with ecological protection agenda when subsidised electricity is used for non-regulated groundwater withdrawal and causes the decline of groundwater levels. Nevertheless, the subsidy for limited promotion of mechanisation as well as the facilitation of climate change mitigation helps the farmers have the opportunity to gain more profits from agriculture.<sup>286</sup>

While a large volume of seeds are supplied by the government agencies at a subsidised price, credit facilities are extended along with discounted interest rates for some special crops cultivation. The government also provides subsidised credit to farmers on a limited scale to assist them in overcoming distressed sales.<sup>287</sup> The transfer of incentives through an input assistance card and bank account reduces the cost of receiving the funds at the farmers end. The government also tries to keep farmers livelihoods running through cash support for purchasing inputs or in some cases direct input support after any disaster.<sup>288</sup>

The *Internal Food Grain Collection Policy 2010* was introduced to assist farmers in receiving a fair price for their produce as well as stabilizing the grain markets.<sup>289</sup> The farmers however, face procedural difficulties in supplying their produce because of the technical specification complexities and domination of local elites over the purchase process.<sup>290</sup>

When concerns about profit are managed through subsidies and safety net programmes for the majority of farmers, the large portion of profit goes to the well-off farmers as small and marginal farmers own only 45 per cent of agricultural lands and share croppers need to share their crops with landlords. Given the strong positive correlation between credit facilities and

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<sup>285</sup> Staff Correspondent, 'IFPRI calls for enhancing agricultural subsidy in Bangladesh' *The New Age* (online), 19 August 2015 < <http://newagebd.net/149068/ifpri-calls-for-enhancing-agricultural-subsidy-in-bangladesh/>>.

<sup>286</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, above n 198, 2; Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 270-272.

<sup>287</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, above n 22, 17; Government of the People's Republic of Bangladesh, Ministry of Agriculture, above n 198, 10.

<sup>288</sup> See, eg, Government of the People's Republic of Bangladesh Finance Division, *Social Safety Net Programmes* < [http://www.mof.gov.bd/en/budget/15\\_16/safety\\_net/safety\\_net\\_en.pdf](http://www.mof.gov.bd/en/budget/15_16/safety_net/safety_net_en.pdf)>2; Government of the People's Republic of Bangladesh, above n 198, 6-7.

<sup>289</sup> *Government of the People's Republic of Bangladesh, Ministry of Food and Disaster Management, Internal Food-grain Collection Policy* (2010); Government of the People's Republic of Bangladesh, Planning Commission, above n 62, 96.

<sup>290</sup> Quazi Shahabuddin, M. Asaduzzaman, Edward Clay and Steve Jones, 'Price Support, Domestic Procurement Programme and Public Stock Management' (Policy Brief, Bangladesh Institute of Development Studies, 2009)5-6; Bangladesh Agriculture University, 'Bangladesh's rice procurement system and possible alternatives in supporting farmers' income and sustaining production incentives' (Research Summary 3, Food Policy Monitoring Unit)1.

improved productivity and a significant increase in credit disbursement, there are significant problems for marginal and small farmers who find the procedural formalities of accessing credit difficult. The volume of total agricultural credit also falls short of demand. The low volume of high interest bearing NGO loans are also not available in many cases, which forces the poor and marginal farmers to rely on higher interest bearing informal sector.<sup>291</sup>

Despite the inefficiencies in subsidy and other safety net programmes, the progress in poverty reduction, employment generation and livelihood improvement is encouraging in Bangladesh. The food security situation also improves and food insecurity dropped from two thirds to one third in the 2011 to 2014 period.<sup>292</sup> However, there are questions about income inequality and other equity issues which are discussed below under the principle of equity.

### *(c) Principle 3: The Principle of Equity*

Pre-independence agriculture in Bangladesh suffered from unequal investment from the central government of Pakistan,<sup>293</sup> because, the government of Pakistan did not promote equal distribution of wealth.<sup>294</sup> Moreover, a ‘trickle down’ approach was promoted during this period where the rising capitalist class was supported for rapid industrialisation.<sup>295</sup>

The equity issue was addressed through land redistribution, facilitating rights to property as well as tenants’ rights through legislative reform in pre-independence period.<sup>296</sup> The reform in post-independence period was primarily occupied with arrangement for land ceiling and the settling of redistribution claims. The rights of sharecroppers did not receive attention during this period. Moreover, the effort to impose land ceiling and redistribution of land suffers from loopholes in laws used by the rich and leakage in distribution process.<sup>297</sup>

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<sup>291</sup>Md. Alauddin and Jyotirmoy Biswas, ‘Agricultural Credit in Bangladesh: Present Trend, Problems and Recommendations’ (2014)5(27)*Journal of Economics and Sustainable Development* 14-15; Kashfia Sharmeen and Samia Tarannum Chowdhury, ‘Agricultural growth and agricultural credit in the context of Bangladesh’ (2013) 8(2) *Bangladesh Research Publications Journal* 174-179.

<sup>292</sup> Special correspondent, ‘Huge Improvement in Food Security Situation in Bangladesh’ *The Daily Prothom Alo* (online), 27 March 2016 < <http://www.prothom-alo.com/bangladesh/article/811417/>>.

<sup>293</sup> Government of Pakistan, above n 42, 13,19; Government of Pakistan, above n 44,21,29.

<sup>294</sup> Government of Pakistan, above n 45, v.

<sup>295</sup> Iftekhar Ahmed Chowdhury, ‘Foundations of Bangladesh’s Economic Development: Politics of Aid’ (ISAS Working Paper No. 187, National University of Singapore, 2014)3.

<sup>296</sup> *The State Acquisition and Tenancy Act 1950* (Bangladesh) East Bengal Act No XXVIII of 1951.

<sup>297</sup> Abul Barakat, Shafique uz Zaman and Selim Raihan, *Distribution and Retention of Khas Land in Bangladesh* (Association for Land Reform and Development,2010)2-3; International Business Publications, *Bangladesh Land Ownership and Agricultural Laws Handbook volume 1* (2013) <<https://books.google.com.au/books?id=ngBqCwAAQBAJ&pg=PA288&lpg=PA288&dq=Bangladesh+Land+Ownership+and+Agricultural+Laws+Handbook>>58.

The introduction of the *Land Reform Ordinance 1984*, concentrated on land rights issues with a view to maximising production and facilitating share croppers' rights.<sup>298</sup> This law failed to promote sharecroppers' rights and a written contract for sharecropping was rarely applied.<sup>299</sup> There is a recent initiative by the government for revising land reform law, however the draft law is similar to previous legislation and may not be able to promote share croppers' rights unless there is major change in the tenancy system.<sup>300</sup> The government plans to include female heads of households in allocating government owned lands.<sup>301</sup> Nevertheless, in the absence of proper land management procedures, the reform may come to nothing.

The government's programme in ensuring equity included the creation of effective safety nets for the disadvantaged groups, including women,<sup>302</sup> and promotion of equality in wages between women and men's labour in agriculture.<sup>303</sup> An open market sale (OMS) programme is directed to support low income earning groups.<sup>304</sup> The government undertook capacity building programmes to equitably benefit the poor farmers, tenants, share-croppers and landless agricultural workers.<sup>305</sup> The government's strategy focused on introducing a regional dimension in the allocation and utilization of resources,<sup>306</sup> as well as establishing an institutional mechanism to address all issues of spatial inequality.<sup>307</sup> This was reflected in a sporadic move to introduce a district budget in 2014, however that ceased after one pilot year.

The inclusive growth strategy is undertaken by the government of Bangladesh to pursue inequality reduction through reducing or maintaining the current income inequality of 0.45 between the rich and poor.<sup>308</sup> There are some targeted safety net programmes, such as Food

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<sup>298</sup> *The Land Reform Ordinance 1984* (Bangladesh) Ordinance No X of 1984 art 4(1), 8-14.

<sup>299</sup> S M Masum Billah, 'The Sharecroppers of Bangladesh: A Call for Legal Reform', (Paper presented in Annual World Bank Conference on Land and Poverty, March 2015)6-8.

<sup>300</sup> Government of the People's Republic of Bangladesh, Ministry of Land, *Draft Land Reform Law 2014* art 4, 8-14.

<sup>301</sup> Government of the People's Republic of Bangladesh, Economic Relations Division, above n 61, 109.

<sup>302</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 55, 44, 159; Government of the People's Republic of Bangladesh, Planning Commission, above n 63, 29-30.

<sup>303</sup> Government of the People's Republic of Bangladesh, Economic Relations Division, above n 63, 109; Government of the People's Republic of Bangladesh, Planning Commission, above n 63, 11.

<sup>304</sup> Government of the People's Republic of Bangladesh, *Open Market Sale (OMS) Policy* (2015)introduction

<sup>305</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 63, 35; Government of the People's Republic of Bangladesh, Planning Commission, above n 53, I-6-7; Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 274.

<sup>306</sup> Government of the People's Republic of Bangladesh, Planning Commission, *Steps Towards Change, National Strategy for Accelerated Poverty Reduction(Revised)* (2009-2011)6, 10, 96; Government of the People's Republic of Bangladesh, Planning Commission, above n 63, 87.

<sup>307</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 63, 187.

<sup>308</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, xlix.

for Work, Agriculture Rehabilitation, and 'One House One Farm' programme.<sup>309</sup> The government also emphasised strengthening partnership with NGOs to deliver social services to socially excluded people in hard-to-reach areas.<sup>310</sup> The unique opportunity is given to farmers to open bank accounts with a nominal deposit and used to transfer rehabilitation assistance to farmers.<sup>311</sup>

Despite the continuous intervention by the government in promoting equity, the progress shows a varied result where poverty reduction is not always contributing to inequality reduction. Despite the commendable progress in poverty reduction that has halved in the last 15 years, along with reduction of depth of poverty by about a quarter,<sup>312</sup> the income inequality between poor and rich rose from 0.36 in 1984-85 to 0.46 in 2010. Yet, there is a progress in the reduction in consumption inequality, probably because of the increased allocation for social security programmes (SSPs) of the government that increased from 1.3 per cent of GDP in 1998 to 2.0 per cent of GDP in the current decade.<sup>313</sup> However, the contribution of this spending for well-being of the poor and vulnerable population is low because of the imbalance between targeted and non-targeted programmes.<sup>314</sup> The SSPs also suffer due to absence of effective monitoring and evaluation mechanisms.<sup>315</sup> Nevertheless, there is progress in female labourer participation, which has increased by 4.5 per cent in the last decade, followed by a reduction in inequity in wages between male and female agricultural labourers.<sup>316</sup>

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<sup>309</sup> See, eg, Government of the People's Republic of Bangladesh, Ministry of Agriculture, *Incentives for Farmers* <[http://moa.portal.gov.bd/sites/default/files/files/moa.portal.gov.bd/page/cde70021\\_2743\\_4d18\\_8dd4\\_a72287941720/Fertilizer\\_Incentive.pdf](http://moa.portal.gov.bd/sites/default/files/files/moa.portal.gov.bd/page/cde70021_2743_4d18_8dd4_a72287941720/Fertilizer_Incentive.pdf)>; <[http://moa.portal.gov.bd/sites/default/files/files/moa.portal.gov.bd/page/cde70021\\_2743\\_4d18\\_8dd4\\_a72287941720/pronodona\\_54\\_11-06-2014.pdf](http://moa.portal.gov.bd/sites/default/files/files/moa.portal.gov.bd/page/cde70021_2743_4d18_8dd4_a72287941720/pronodona_54_11-06-2014.pdf)>; <[http://moa.portal.gov.bd/sites/default/files/files/moa.portal.gov.bd/page/cde70021\\_2743\\_4d18\\_8dd4\\_a72287941720/pronodona\\_172\\_22-04-2015.pdf](http://moa.portal.gov.bd/sites/default/files/files/moa.portal.gov.bd/page/cde70021_2743_4d18_8dd4_a72287941720/pronodona_172_22-04-2015.pdf)>.

<sup>310</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 19.

<sup>311</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, *Yearly Report (2014-2015)* ii.-iii <[http://moa.portal.gov.bd/sites/default/files/files/moa.portal.gov.bd/annual\\_reports/6ab3d0e2\\_e94f\\_4379\\_b33b\\_72ce3eca3d12/Annual\\_Report\\_2014-15%20\(2\).pdf](http://moa.portal.gov.bd/sites/default/files/files/moa.portal.gov.bd/annual_reports/6ab3d0e2_e94f_4379_b33b_72ce3eca3d12/Annual_Report_2014-15%20(2).pdf)>.

Rubber dam is constructed for increasing the efficiency of water and smart/prepaid meter has been installed for improving efficiency in irrigation.

<sup>312</sup> Government of the People's Republic of Bangladesh, *National Social Security Strategy*(2015)xvii

The poverty incidence falls from 31.5 per cent in 2010 to 24.8 per cent in 2015 and chronic poverty also fall from 34.3 per cent in 2000 to 12.9 per cent in 2015. There is also exemplary progress in reducing the depth of poverty that falls from 26 per cent in 2000 to 19 per cent in 2015.

<sup>313</sup> *Ibid* xviii.

<sup>314</sup> S. R. Osmani, 'Linking Equity and Growth in Bangladesh' (Background paper prepared for the Seventh Five Year Plan, Planning Commission, January 2015)22-23.

<sup>315</sup> Government of the People's Republic of Bangladesh, above n 312, xx.

<sup>316</sup> Iftekhar Mahmud, 'Male-female wage difference has been reduced in agriculture' *The Daily Prothom Alo* (online), 29 September 2015.

Given the evidence that, compared to industry and services, agriculture contributes the least inequality, there are arguments for more investment in agriculture for its higher growth in reducing poverty and limiting inequality.<sup>317</sup> In Bangladesh there is comparatively low equity in public resource use compared to India: equity in public resource use in Bangladesh is 3.5 out of 10 against 4.0 of India.<sup>318</sup> The inequitable access to land continues and the number of landless is increasing over the years, despite land reform initiatives.<sup>319</sup> The high inequity in land distribution is visible where fifty-two per cent of the rural population is landless or holds less than 0.05 acres of land.<sup>320</sup> Women also rarely enjoy equal property rights as they usually lack title of lands due to social discrimination.<sup>321</sup>

Given the equality principle is promoted as the development philosophy of the country, the Constitutional provisions indirectly promotes both the intergenerational,<sup>322</sup> and intra-generational equity principles.<sup>323</sup> The application of these principles is problematic when the government subsidises fertiliser and irrigation for the benefit of the present generation at the cost of degradation in land, water and biodiversity that affects the intergenerational equity.

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<sup>317</sup> Bazlul Haque Khondoker and Abdul Hamid Chowdhury, 'Growth with Equity: A Bangladesh Perspective' (2001)2(1) *South Asia Economic Journal* 84.

<sup>318</sup> IDA Resource Allocation Index (IRAI), *Equity of Public Resource Use* (2014)

< <http://knoema.com/GSCPIA2014/ida-resource-allocation-index-irai-2014?country=1000050-bangladesh>>.

Nevertheless, in respect to gender equality, Bangladesh has done better where Indian score is 3.0 against 3.5 of Bangladesh score. However, the score of Bangladesh is not promising as it declines from 4 to 3.5 during 2005 to 2013.

<sup>319</sup> United States Agency for International Development, *Bangladesh Country Profile Property Rights and Resource Governance*(2010)5<[http://www.usaidlandtenure.net/sites/default/files/country-profiles/full-reports/USAID\\_Land\\_Tenure\\_Bangladesh\\_Profile.pdf](http://www.usaidlandtenure.net/sites/default/files/country-profiles/full-reports/USAID_Land_Tenure_Bangladesh_Profile.pdf)>.

<sup>320</sup> *Ibid* 3.

<sup>321</sup> International Business Publications, *Bangladesh Land Ownership and Agricultural Laws Handbook volume 1* (2013) 55-56

<<https://books.google.com.au/books?id=ngBqCwAAQBAJ&pg=PA288&lpg=PA288&dq=Bangladesh+Land+Ownership+and+Agricultural+Laws+Handbook>>.

<sup>322</sup> *Constitution of the People's Republic of Bangladesh* art 8[1], 10, 14, 16, 19.

The fundamental principles of the constitution, such as ensuring social justice, empowerment of women and participation in national frameworks, ensuring equality of citizens in the distribution of benefits are relevant to intra-generational equity issues.

<sup>323</sup> *Constitution of the People's Republic of Bangladesh* art 18A

18A. The State shall endeavour to protect and improve the environment and to preserve and safeguard the natural resources, bio-diversity, wetlands, forests and wild life for the present and future citizens.

This principle promotes intergenerational equity indirectly through the inclusion of protection and maintenance of ecological integrity.

(d) *Principle 4: The Precautionary Principle*

The precautionary measures did not receive significance in the early periods of development planning in Bangladesh. There were a few initiatives in the 1980s for the impact assessment of chemical pesticide use, introduction of disease resistant varieties, water quality analysis and the mechanical and biological control of pests.<sup>324</sup>

As there were few early warning systems to protect the environment in the late 1980s,<sup>325</sup> the influential precautionary measures, EIA and cost benefit analysis received prominence in the early 1990s.<sup>326</sup> The EIA was planned to be followed as a mechanism in project management in addition to continuous updating of basic data on pollution levels.<sup>327</sup> There was also a motivation programme for voluntary compliance by the firms through extending financial concessions.<sup>328</sup> Given the decline in groundwater levels in the northern part of the country, the government plans to shift irrigation dependent winter rice cultivation from that area.<sup>329</sup> However this voluntary adoption policy lacks definite interventions and subsidies for inducing the implementation.

The rules for activating environmental impact assessments under different categories<sup>330</sup> and the mandatory application of an EIA for development projects have been explicitly pursued in the present decade.<sup>331</sup> However, the commitment for the promotion of an EIA as a mandatory tool on a project scale is not followed in most of the developing ministries and agencies.<sup>332</sup> The EIA also suffers due to institutional incapacity and a lack of public

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<sup>324</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 51, 146; Government of the People's Republic of Bangladesh, Planning Commission, above n 73, 167, 183.

<sup>325</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 53, X.2-4.

<sup>326</sup> *Ibid* IX-4.

<sup>327</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 55, 200.

<sup>328</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 53, XVII-7; Government of the People's Republic of Bangladesh, Planning Commission, above n 55, 186-188.

<sup>329</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 63, 12.

<sup>330</sup> *Environmental Conservation Rule, 1997*(Bangladesh)art 7.

It was issued through the SRO No 197-Law/97 and later amended by SRO No 29-Law/2002 and SRO No. 234-Law/2002, and SRO No.88-Law/2003.

<sup>331</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 63, vol 2, 196-197.

<sup>332</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 437.

participation. The issuance of environmental clearance for non-industrial projects is also ad-hoc in absence of any guidelines.<sup>333</sup> The Strategic Environmental Impact Assessment (SIA) of different sectoral policies and strategies has been planned,<sup>334</sup> but it has not yet been institutionalized.

Apart from impact assessments, the government has also emphasised development and intensified use of integrated pest management (IPM) techniques and the enhanced use of organic and bio-fertiliser.<sup>335</sup> However, the promotion of these programmes lacks incentives except for some assistance for IPM. There are plans for controlling the marketing of adulterated fertiliser and pesticides,<sup>336</sup> as well as monitoring misleading advertisements toward using pesticides and taking legal action against such malpractice.<sup>337</sup> However, government's effort to control malpractice is not often observed and the law does not provide agriculture departments the authority to impose penalties directly to control malpractices.<sup>338</sup>

The research and extension priorities now incorporate developing a diseases prediction system and practice, an Integrated Disease Management (IDM) approach, including plant quarantine. The bio-safety issue is taken care of by the Biosafety Guidelines of Bangladesh that include some precautionary measures for research and development of biotechnology, including genetically modified organisms (GMOs).<sup>339</sup>

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<sup>333</sup> Salahuddin M. Aminuzzaman, 'Environment Policy of Bangladesh: A Case Study of an Ambitious Policy with Implementation' (Paper presented to South Asia Climate Change Forum, Monash Sustainability Institute, Monash University, July 2010).

<sup>334</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 55, 457; Government of the People's Republic of Bangladesh, Planning Commission, above n 63, vol 1, 196; Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 437.

<sup>335</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 55, 23; Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 266-267.

<sup>336</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 63, vol 2, 15.

<sup>337</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, *Integrated Pest Management Policy* (2002) [2.2.2].

<sup>338</sup> সার (নিয়ন্ত্রণ) আদেশ ১৯৯৯ (বাংলাদেশ) [*Fertiliser (Control) Order 1999* (Bangladesh)] art 9-16.

<sup>339</sup> Government of the People's Republic of Bangladesh, Ministry of Environment and Forest, *Biosafety Guidelines of Bangladesh* (2007) art 1.1, 3.2.2.2; Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 266; Saad Hammadi, 'Bangladeshi farmers caught in row over \$600,000 GM aubergine trial' *The Guardian* (online), 6 June 2014)

< <https://www.theguardian.com/environment/2014/jun/05/gm-crop-bangladesh-bt-brinjal>>.

Some concerns were raised about the environmental and health safety issue during the recent introduction of genetically modified Bt Brinjal in Bangladesh.

The government's latest seventh five year plan includes weather related hazards forecasting,<sup>340</sup> and a nation-wide survey on groundwater and drought ecosystem degradation.<sup>341</sup> Significantly, this plan does not have any plan for integration of all impact assessments for comprehensive action. The latest agriculture policy also has no focus on the impact assessment of chemical fertiliser or pesticide use and has not explained any alternative paths against the increased use of chemical fertilisers and pesticides for cultivating high yielding variety (HYV) crops.<sup>342</sup> The recent government initiatives to impose surcharges for environmental protection however could be a major break-through in the future in addressing pollution on agricultural lands.<sup>343</sup>

It has been observed that the precautionary principle is considered as a guiding non-binding principle in enacting laws, such as *Wildlife (Conservation and Security) Act 2012*, *Protection and Conservation of Fish Act 1950* and *The Forest Act 1927*.<sup>344</sup> The High Court Division of the Supreme Court of Bangladesh in *Bangladesh Environmental Lawyers Association (BELA) v Bangladesh and Others* case ordered the Ministry of Industries to adopt the precautionary approach in decision making for new industries.<sup>345</sup> The High Court in its judgement particularly referred to the examples of judgement of Indian Supreme Court about protection of environment, but missed the opportunity to declare the precautionary principle as part of the law of Bangladesh.<sup>346</sup>

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<sup>340</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 276.

<sup>341</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 433-435.

<sup>342</sup> Aminuzzaman, above n 333.

<sup>343</sup> Doulot Akter Mala, 'Polluters to pay green tax: 757 culprit industrial units identified', *The Financial Express* (online) 27 February 2015 < <http://print.thefinancialexpress-bd.com/2015/02/27/82888/print>>.

<sup>344</sup> *Wildlife (Conservation and Security) Act 2012* (Bangladesh) ; *The Protection and Conservation of Fish Act 1950* (Bangladesh); *The Forest Act 1927*(Bangladesh)

These laws integrate the precautionary principle.

*The Bangladesh Environmental Conservation Act, 1995* (Bangladesh) sec 9, 16

This law also integrates the precautionary approach as well as the polluter pays principle. Any person affected or likely to be affected from the pollution or degradation of environment may apply to the Director General, Department of Environment for remedying the damage or apprehended damage. Furthermore, a company would be liable for the violation of any provision of the Act.

<sup>345</sup> *Bangladesh Environmental Lawyers Association (BELA) v Bangladesh and Others* (1994) WP No. 891 of 1994.

<sup>346</sup> Indian court declares the precautionary principle as part of Indian law.



## 2 Procedural Principles

### (a) Principle 1 Integration across Scales and Disciplines

The integration efforts in the Bangladesh development planning frameworks started with promoting a consistency in resource allocation and expenditure between sectoral and sub-sectoral programmes.<sup>347</sup> Apart from efforts for the integration of group-based approach with the sector based planning approach for integration of poor and disadvantaged people with development planning of different sectors,<sup>348</sup> the government also promoted the integration of local and national planning<sup>349</sup> Despite the plan for integration of national and local level planning, there has been little progress so far and both processes still operate separately. The government plan for effective coordination with NGO activities to integrate them in the country development process is also limited to including them in the service delivery of different programmes.<sup>350</sup>

The sectoral integration was primarily initiated for better synergies among rural development, water resource development and agricultural development.<sup>351</sup> While the government tried to bring synergies between poverty alleviation activities with productive employment,<sup>352</sup> it also emphasised the integration of women in all types of agricultural programmes.<sup>353</sup> In the present decade, the government promotes integration of disaster risk reduction (DRR) and climate change in safety net programmes<sup>354</sup> along with the integration of structural and non-structural mitigation measures.<sup>355</sup>

The integration of the development budget with the national budgeting process has received momentum in the present decade.<sup>356</sup> The previous attempt to integrate gender and

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<sup>347</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 48, ch 7, 10; Government of the People's Republic of Bangladesh, Planning Commission, above n 53, I-10.

<sup>348</sup> Ibid I-6-7.

<sup>349</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 53, I-14, II-2,5-6; Government of the People's Republic of Bangladesh, Planning Commission, above n 55, 42, 144-145.

<sup>350</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 53, XXII-5.

<sup>351</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 51, 184; Government of the People's Republic of Bangladesh, Planning Commission, above n 73, 217- 218.

<sup>352</sup> Ibid 38-39.

<sup>353</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 53, X.1-25.

<sup>354</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, xlix, 634.

<sup>355</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 63, vol 2, 480.

Non-structural mitigation measures include among others, disaster preparedness training, awareness building and advocacy while structural mitigation measures include some activities, such as construction of cyclone shelters and disaster resilient houses.

<sup>356</sup> Ibid 10.

environmental issues in planning and budgeting,<sup>357</sup> was further extended to climate and disaster risk identification, biodiversity and mitigation in project design, budgetary allocations and implementation processes.<sup>358</sup> Apart from an increased alignment between domestic and external sources of funding,<sup>359</sup> the Country Investment Plan (CIP) for food security emphasised integration between research and extension for sustainable agricultural development.<sup>360</sup>

The Ministry of Agriculture has been implementing several integrated projects in different regions of the country. These projects basically pooled some of its agency activities under one umbrella project and, in a few cases it goes beyond the crop sub-sector.<sup>361</sup> The climate change projects in agriculture and water resources sectors have also been implemented without any integration among the sectoral activities. There is a gap in the integration of climate change planning with regular development planning mechanisms that creates options for duplication in funding similar activities separately from different funding sources.<sup>362</sup> The major strategy documents of climate change also did not plan to include climate change issues in the existing environmental legislation.<sup>363</sup>

#### *(b) Principle 2: The Principle of Good Governance*

The governance in operation of development planning as well as its determining factors include effective planning processes, transparency, accountability, responsiveness and corruption prevention agenda along with decentralisation, institutional improvement and the promotion of innovation. Many of these agendas are the latest inclusion in a global governance paradigm and were not part of the agenda of the government at the beginning of the planned period.

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<sup>357</sup> Ibid 156.

<sup>358</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 55, 181, 264; Government of the People's Republic of Bangladesh, Planning Commission, above n 63, vol 2, 22, 212; Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 21 443.

<sup>359</sup> Government of the People's Republic of Bangladesh, Ministry of Food, *Bangladesh Country Investment Plan: A Road map towards Investment in Agriculture, Food Security and Nutrition* (2011)8.

<sup>360</sup> Ibid 21-22.

<sup>361</sup> See, eg, Ministry of Agriculture, *Project in 2015-2016 ADP*

<[http://moa.portal.gov.bd/sites/default/files/files/moa.portal.gov.bd/page/f2d46a82\\_d888\\_4f30\\_aca9\\_064d9d106d99/adp\\_30\\_28-07-2015.pdf](http://moa.portal.gov.bd/sites/default/files/files/moa.portal.gov.bd/page/f2d46a82_d888_4f30_aca9_064d9d106d99/adp_30_28-07-2015.pdf)>.

<sup>362</sup> Khurshid Alam et al, 'The Political Economy of Climate Resilient Development Planning in Bangladesh' (2011) 42(3) *Institute of Development Studies Bulletin* 27-32.

<sup>363</sup> Junayed Ahmed Chowdhury, *Public Participation in Bangladesh's Response to Climate Change Issues* (Advocates for International Development, 2012).

The centralised approach of the government in the early periods of planning<sup>364</sup> changed within a decade in policy orientation,<sup>365</sup> and reforms in administration to address the concerns in accountability, efficiency and effectiveness.<sup>366</sup> Given the weaknesses in planning machineries, the government delegated extended power and flexibility to different ministries.<sup>367</sup> The government emphasised strengthening the relationship between the ministries, statistical organisations and the planning commission to ensure policy consistency and its implementation.<sup>368</sup>

The governance agenda changed from the late 1980s through the promotion of decentralized participatory planning,<sup>369</sup> which aimed to facilitate greater accountability, transparency and effectiveness<sup>370</sup> through blending of ‘top-down’ and ‘bottom-up’ mechanisms.<sup>371</sup> The government focused on flexibility and harmonisation of the development procedures of donors in the country process to ensure appropriate use of foreign aid.<sup>372</sup> The governance priority in the first decade of this century included establishing and enforcing clear rules and regulations along with pragmatic oversight arrangements,<sup>373</sup> the enhancement of implementation capacity, addressing corruption and improving sectoral governance.<sup>374</sup>

Effective implementation is planned through strengthening planning and budgetary processes,<sup>375</sup> shifting the existing project-by-project approach to a programme approach and efficient procurement and capacity building of implementers.<sup>376</sup> The institutionalisation of this strategic and policy based approach to budgeting is promoted through the adoption of the *Medium Term Strategy and Business Plans* (MTSBP) and the capacity building of line ministries for proper coordination among the planning and budgeting process.<sup>377</sup>

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<sup>364</sup> Government of the People’s Republic of Bangladesh, Planning Commission, above n 51, 73.

<sup>365</sup> Ibid 127; Government of the People’s Republic of Bangladesh, Planning Commission, above n 73, 25.

<sup>366</sup> Government of the People’s Republic of Bangladesh, Planning Commission, above n 53, I-9.

<sup>367</sup> Government of the People’s Republic of Bangladesh, Planning Commission, above n 51, 131-132; Government of the People’s Republic of Bangladesh, Planning Commission, above n 55, 123.

<sup>368</sup> Government of the People’s Republic of Bangladesh, Planning Commission, above n 73, 120, 122.

<sup>369</sup> Government of the People’s Republic of Bangladesh, Planning Commission, above n 53, II-12.

<sup>370</sup> Ibid II-8, II-12.

<sup>371</sup> Ibid II-1.

<sup>372</sup> Ibid XXII-5; Government of the People’s Republic of Bangladesh, Planning Commission, above n 13, 118.

<sup>373</sup> Government of the People’s Republic of Bangladesh, Economic Relations Division, above n 61, 10,34.

<sup>374</sup> Government of the People’s Republic of Bangladesh, Planning Commission, above n 60, 61,163.

<sup>375</sup> Government of the People’s Republic of Bangladesh, Planning Commission, above n 63, 32.

<sup>376</sup> Ibid 225.

<sup>377</sup> Government of the People’s Republic of Bangladesh, Planning Commission, above n 13, 163.

Given the limitations of existing programme and project planning, the government now emphasises a stringent approval process, a combination of top-down resource allocation and bottom up project prioritization,<sup>378</sup> as well as a reliable information system in public investment management (PIM). The latest plan also promotes transparency and accountability in public sector procurement as well as public audit systems.<sup>379</sup>

The government priority for reducing corruption in implementing development programs is facilitated by the independent Anti-corruption Commission as well as a recently enacted whistle-blowers' law.<sup>380</sup> Sectoral anticorruption strategies are now proposed for adoption to improve governance in corruption and rent seeking prone sectors.<sup>381</sup> Given the failure in establishing tenured rights through the land reform process and corruption in land management systems, the government emphasises digitized land record management to improve the governance in land administration.<sup>382</sup>

The government plans to strengthen the role of the legislative part of the state in promoting good governance through increasing the number of public hearings and encouraging multiparty participation in formal reviews of government actions<sup>383</sup> and it plans to improve the judiciary for efficient and transparent justice delivery.<sup>384</sup>

The government also plans to strengthen institutions, change the nature of incentives, institute management information systems, result-based monitoring and evaluation mechanisms and a grievance-redress mechanism to improve social protection systems.<sup>385</sup> Given the institutional weaknesses and incapacity to initiate problem-solving actions, the government plans to undertake major institutional reforms for an effective monitoring and evaluation system

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<sup>378</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 161-162.

<sup>379</sup> Government of the People's Republic of Bangladesh, Planning Commission, *above n 13*, 164.

<sup>380</sup> *The Anti-Corruption Commission Act 2004* (Bangladesh); Government of the People's Republic of Bangladesh, Planning Commission, above n 63, 218, 221; Anti-Corruption Commission Bangladesh, *Annual Report* (2014)38; Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 170.

<sup>381</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 63, 225; Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 170.

<sup>382</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 63, vol 1, 13.

<sup>383</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 63, vol 2, 220; Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 169.

<sup>384</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 63, vol 2, 223 ; Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 19-20,149.

<sup>385</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 1, 115.

which, however, is yet to take place.<sup>386</sup> Apart from use of information communication services, social media and virtual platforms at a grassroots level, the *Right to Information Act 2009* expects to promote transparency through enhancing the volume of proactive disclosure.<sup>387</sup>

In order to promote the accountability and better service delivery of the civil servants the government plans to introduce legislation that has been under discussion for last nine years.<sup>388</sup> The government has institutionalized the citizen's charter and grievance redress system along with Annual Performance Agreement (APA) system to enhance the state of accountability across public sector organisations and government employees.<sup>389</sup> The government introduced the National Integrity Strategy for working with propriety in different government institutions.<sup>390</sup> However, environmental policies suffer a huge implementation deficit at grassroots level due to lack of enthusiasm of elected leaders and inefficiency of internal machineries apart from biased project selection.<sup>391</sup>

The SD agenda of the country faces implementation challenges due to inadequate institutional support and low governance.<sup>392</sup> Given that most of the seventy two targets for governance improvement in the sixth plan period failed to achieve its targets,<sup>393</sup> Bangladesh still struggles to improve its governance situation. The country's average governance score falls below the lower middle income countries and more specifically lags behind the low income countries in terms of regulatory quality.<sup>394</sup>

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<sup>386</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 126-127.

<sup>387</sup> Ibid 169-170.

<sup>388</sup> Shariful Islam, 'What will happen to public servant's law?' *The Daily Samakal* (online), 20 February 2016.

<sup>389</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 160-161.

<sup>390</sup> Government of the People's Republic of Bangladesh, Cabinet Division, *National Integrity Strategy of Bangladesh* (2012)5-7.

<sup>391</sup> Asia Foundation, *A Situation Analysis of Climate Change Adaptation Initiatives in Bangladesh* (2012)50; Golam Rabbani, 'Environmental Governance: Policies and Practices at Local Government Level in Bangladesh' (2012) *Social Science Research Network* 1.

<sup>392</sup> M. Niaz Asadullah, and Antonio Savoia, Wahiduddin Mahmud, 'Paths to Development: Is there a Bangladesh Surprise?' (2014) 62 *World Development* 138-154.

<sup>393</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 19.

<sup>394</sup> Ibid 149-150.

(c) *Principle 3: Right to Participative Processes and Access to Information and Justice*

The public participation in the development process was indirect and authoritative in the pre-independence planning period.<sup>395</sup> The participation agenda received a major thrust when the government pursued a socialist transformation of the economy in the early post-independence period. The government engaged political cadres in development planning, especially in irrigation and other agricultural activities.<sup>396</sup> The inclusion of citizens in the management of drainage and irrigation programmes received more emphasis later in different plan periods.<sup>397</sup> The government also emphasised local level people centric environmental resource management and protection, as well as adaptation planning and climate change programmes.<sup>398</sup>

The medium-term and long-term plan preparation includes some form of participation of stakeholders, however the extent of citizen participation has always been limited except in the case of strategy papers prepared in the first decade of this millennium.<sup>399</sup> Although sectoral plans are in many cases non-participatory, there are some examples where the sectoral plan preparation included wider participation, such as the National Environmental Management Action Programme (NEMAP) and the Country Investment Plan (CIP) for planning food security which were prepared in a participatory manner.<sup>400</sup>

Project preparation suffers from a lack of opportunity for citizen participation. The central level project preparation procedure does not have any thrust on public participation and it is not common except for donor assisted projects.<sup>401</sup> In the case of agriculture sector projects where the major stakeholders are farmers, the participation process in many cases begins

<sup>395</sup>Government of Pakistan, above n 42, 21, 103.

<sup>396</sup>Government of the People's Republic of Bangladesh, Planning Commission, above n 48, 4-5, 7-8.

<sup>397</sup>Government of the People's Republic of Bangladesh, Planning Commission, above n 73, 177; Government of the People's Republic of Bangladesh, Planning Commission, above n 306, 233-240; Government of the People's Republic of Bangladesh, Planning Commission, above n 63, 37, 40; Government of the People's Republic of Bangladesh, Planning Commission, above n 60, 270; Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 298, 302.

<sup>398</sup>Government of the People's Republic of Bangladesh, Planning Commission, above n 60, 179; Government of the People's Republic of Bangladesh, Planning Commission, above n 63, (42, 160, 447, 456); Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 417.

<sup>399</sup>Government of the People's Republic of Bangladesh, Economic Relations Division, above 61, 1-2; Government of the People's Republic of Bangladesh, Planning Commission, above n 60, 24-28; Golam Rasul, *State Policies and Land Use in the Chittagong Hill Tracts of Bangladesh* (International Institute for Environment and Development, 2005)13.

<sup>400</sup>Jona Razzaque, *Public Interest Environmental Litigation in India, Pakistan and Bangladesh*(Kluwer Law International, 2004)413.; Government of the People's Republic of Bangladesh, Ministry of Food, above n 359, 12.

<sup>401</sup>সরকারি খাতে উন্নয়ন প্রকল্প প্রণয়ন, প্রক্রিয়াকরণ, অনুমোদন ও সংশোধন পদ্ধতি ২০০৮ [Public sector project preparation, processing, approval and revision procedure 2008](Bangladesh)1.

after a project is designed. Community participation is legitimized by unpacking the program designed for them and accommodating them in implementation.<sup>402</sup>

Citizen participation is now promoted through the inclusion of the socially marginalized population, including women, in the development process in different decision-making committees.<sup>403</sup> While some of the decision-making committees in the agriculture sector include citizens, many of the committees avoid the inclusion of citizens in the decision-making process and community representatives are selected arbitrarily.<sup>404</sup> The government vision for new green revolution in view of the threat of climate change through participation of farmers is however approached without any involvement of citizens in the decision making process.<sup>405</sup> The government however promotes partnerships with NGOs for community mobilisation to reach out to the socially-excluded groups and develop a wider awareness about environmental issues.<sup>406</sup>

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<sup>402</sup> Harold Sougato Baroi and Golam Rabbani, 'Community Driven Development in Bangladesh: Factors Behind the Reality' (2011)7(4) *Canadian Social Science* 77-78.

<sup>403</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, (267, 271, 274-275, 302-303, 659-660); Government of the People's Republic of Bangladesh, Planning Commission, above n 306, 150; Government of the People's Republic of Bangladesh, Planning Commission, above n 63, 231; Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 706; Government of the People's Republic of Bangladesh, Planning Commission, above n 60, 334.

<sup>404</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, *Integrated Pest Management Policy* (2002)11-12.

The promotion of integrated pest management at grassroots union level is not supported by any representative organisation;

*Ground Water Management Rules 1987*(Bangladesh)art 3

The ground water withdrawal decision making is also not facilitated with citizen participation;

*Agricultural Produce Markets Regulation (Amendment) Ordinance, 1985* (Bangladesh)

The Market Advisory Committee for proper management of agricultural markets includes representatives of growers and citizens, however the community does not have any say in selection of representatives;

Government of the People's Republic of Bangladesh, Ministry of Agriculture, *Fertiliser Dealer Appointment and Fertiliser Distribution Policy 2009*, Agriculture/AER/599/2009/688, 689(2 August 2009);

Fertiliser distribution monitoring committees include farmer representatives. However, there is no representative from civil society or environmentalists group and representative selection process is not democratic

The union fertiliser retailer selection committee has no representation of farmers and some members are selected by the local Member of Parliament that demonstrates the supremacy of law makers to control the decision of the committee.

<sup>405</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 62, 12; জলবায়ু পরিবর্তন ট্রাস্ট আইন, ২০১০ [Climate Change Trust Act,2010](Bangladesh)art 9, 10; Chowdhury, above n 363, 13; Asia Foundation, *A Situation Analysis of Climate Change Adaptation Initiatives in Bangladesh* (2012)53.

<sup>406</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 19, 97, 132, 155, 440; Government of the People's Republic of Bangladesh, Planning Commission, above n 53, I-12-13,25; Government of the People's Republic of Bangladesh, Planning Commission, above n 55, 44.

Despite the negligible participation of citizens in decision making, there are examples of wider participation of people in water resource management through raising funds and implementing decisions.<sup>407</sup> The co-management approach promotes citizen participation in the protection of the forest and wetland resources.<sup>408</sup> Despite some good examples of participatory plan preparation and the implementation of rural development and disaster sector projects,<sup>409</sup> the planners find ‘top down’ processes appropriate until the lay stakeholders are educated.<sup>410</sup>

Despite the government plans for the active participation of citizens as well as NGOs in local level plans and project preparation,<sup>411</sup> several studies found citizen participation process donor driven and cosmetic.<sup>412</sup> Citizen participation is identified as a mechanism for accommodating factional interests and exploiting the development resources by the local leaders.<sup>413</sup> Political reluctance and bureaucratic resistance are considered as major challenges to people’s participation in the development planning process.<sup>414</sup> There is also the observation that corruption also plays a role on top of class bias in people’s participation in

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<sup>407</sup> Parvin Sultana, Paul Thompson and Colin Green, ‘Can England Learn Lessons from Bangladesh in Introducing Participatory Floodplain Management?’(2008)22 *Water Resource Management* 357.

<sup>408</sup> Government of the People’s Republic of Bangladesh, Planning Commission, above n 208, 20-24; Government of the People’s Republic of Bangladesh, Planning Commission, above n 306, 233; A. Z. M. Manzoor Rashid, *Legal Framework for Community Participation in Governance : The Role of Co-management in the Forest Protected Areas Management of Bangladesh* (PhD Thesis, University of Western Sydney, 2012)3.

Rashid argues that despite the initial positive results of different forest management approaches in Bangladesh, these programmes failed to promote expected outcome because of absence of effective participation of relevant stakeholders and appropriate regulatory frameworks.

A. Z. M. Manzoor Rashid, Donna Craig, Michael I Jeffery and Niaz Ahmed Khan, ‘Forest protected area governance in Bangladesh: A focus on the legal and policy framework’ (2013) 11(4) *Chinese Journal of Population, Resources and Environment* 345.

Rashid et al argue that co-management approach although has been gradually instituted in Bangladesh, the extent of active community participation in this practice is limited.

<sup>409</sup> See, Government of the People’s Republic of Bangladesh, Rural Development and Cooperatives Division, *Revised Technical Assistance Project Proposal for Participatory Rural Development Project, Phase II*(2010)1; Government of the People’s Republic of Bangladesh, Ministry of Disaster Management and Relief, *Project Brief of Comprehensive Disaster Management Project Phase II*(2010)1-2.

<sup>410</sup> Government of the People’s Republic of Bangladesh, Planning Commission, above n 55, 141,163.

<sup>411</sup> Government of the People’s Republic of Bangladesh, Planning Commission, above n 55, 44.

<sup>412</sup> Razzaque, above n 400, 414; Sheikh Noor Mohammad, *People’s Participation in Development Projects at Grass-root Level: A Case Study of Alampur and Jagannathpur Union Parishad* (MPP Thesis, North South University, 2010)ii.

<sup>413</sup> S. Khan and M. Asaduzzaman, ‘Politics of People’s Participation: A Focus on a Government Development Project’ (1995)24(2)*The Journal of National Institute of Local Government*; D.R.Z.A. Nazneen, *Popular Participation in Local Administration: A Case Study of Bangladesh* (Gyan Bitarani, 2004); M. N. A. Siddiquee, ‘Problems of People’s Participation at the Grassroots: Decentralized Local Government in Perspective’ (1995)3(1&2) *Journal of Administration and Diplomacy*.

<sup>414</sup> M. Asaduzzaman, *Governance in Practice: Decentralization and People’s Participation in the Local Government of the People’s Republic of Bangladesh* (PhD Thesis, University of Tampere Press, 2008).



local development activities and in the decision-making process,<sup>415</sup> that finally results in poor governance.<sup>416</sup>

Given the institutionalization of participation is passing through a confusing stage along with some good examples, the citizens' right to information is now promoted through the introduction of the *Right to Information Act 2009*.<sup>417</sup> Apart from the proactive disclosure of information by the public sector institutions and NGOs,<sup>418</sup> the citizens now have rights to seek information and the application process is flexible. Although the government agencies can refuse disclosure, it has few exceptions<sup>419</sup> and the provision for imposing fines for obstructing information disclosure is quite significant to facilitate the right to information. Transparency International finds this law strong against the weak capacity of the government and a lack of awareness of citizens.<sup>420</sup> The Asia Foundation report finds an implementation deficit because of the absence of judicial remedy, poor disclosure, and the reluctance of NGOs to use the law.<sup>421</sup> The right to environmental information also becomes limited due to the absence of mandatory reporting provisions for pollution from companies and the private sector.<sup>422</sup>

The implementation of regular updating of the right to information based portals,<sup>423</sup> use of information and communication facilities as well as mobile phone services and social media has, however, started on a limited scale.<sup>424</sup> Although the disaster forecasting and information

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<sup>415</sup> R. Afsar, 'The State of Urban Governance and People's Participation in Bangladesh' (1999)28(2) *The Journal of Local Government*.

<sup>416</sup> Mohammad Shahidul Hasan Swapan, *The Realities of Participation in Planning in Bangladesh: The Role of Institutional and Socio-political Factors in Shaping Participatory Planning in Developing Countries* (PhD Thesis, Curtin University 2013); VSO International, *Case study – Bangladesh, SCORE : Strengthening Communities' Rights and Empowerment* <[http://www.vsointernational.org/sites/vso\\_international/files/score-strengthening-communities-rights-and-empowerment\\_tcm76-37663.pdf](http://www.vsointernational.org/sites/vso_international/files/score-strengthening-communities-rights-and-empowerment_tcm76-37663.pdf)>; Manoj Rai, 'Legal Framework and Citizen Participation in South Asia' (South Asia Regional Report, Institute of Development Studies)5 < <http://unpan1.un.org/intradoc/groups/public/documents/unpdadm/unpan039370.pdf>>.

<sup>417</sup> *The Right to Information Act 2009* (Bangladesh) Act No 20 of 2009; Government of the People's Republic of Bangladesh, Planning Commission, above n 208, 132.

<sup>418</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 169-170.

<sup>419</sup> *The Right to Information Act 2009* (Bangladesh) Act No 20 of 2009 sec 9.

<sup>420</sup> Transparency International, *Fighting Corruption in South Asia: Building Accountability* (2014)11.

<sup>421</sup> Asia Foundation, 'Citizens Access to Information in South Asia' (Regional Synthesis Report, 2014)19, 25, 27, 47-48.

Asian Foundation although criticised the poor implementation of the *Right to Information Act 2009*, it presented an example of successful use of this law at grassroots level. The farmers of Amanullah Union in Chittagong district set a directional effort where they resorted to *Right to Information Act 2009* and became successful in obtaining information and finally scrapping a fee charging scheme of the Union Parishad.

<sup>422</sup> Razzaque, above n 400, 419-420.

<sup>423</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 171.

<sup>424</sup> Ibid 188, 305; Government of the People's Republic of Bangladesh, Planning Commission, above n 208, 100, 110; T. Rahman and Niaz Ahmed Khan, 'Reckoning Electronic Government in Bangladesh' (2012) 35(2) *International Journal of Public Administration* 112.

Rahman and Khan find progresses in reducing the gaps in respect to use of digital communication system in Bangladesh.

dissemination is an example of information sharing efforts of the government in Bangladesh,<sup>425</sup> the assessment, forecasting and information sharing on adaptation to climate change is still in the primary stages and forecasting and dissemination of pest and disease information is yet to receive momentum.<sup>426</sup>

While there is a commitment for the dissemination of data and results including foreign aid information on websites,<sup>427</sup> the development projects information is not regularly updated and in many cases suffers from incompleteness. The government's whistle blower protection law,<sup>428</sup> facilitates public interest disclosure, however it is yet to be tested in the absence of awareness among potential users.<sup>429</sup> The *National Broadcasting Policy 2014* has provisions for controlling information dissemination detrimental to the public interest; however this policy needs to accommodate flexibility in respect of information dissemination by the media about governance.

While the state, through its fundamental principles, established the citizens' entitlement to get equal protection of law,<sup>430</sup> the government plans to improve the judiciary as a part of governance improvement. The major focus is on access to the justice system for the disadvantaged including women.<sup>431</sup> The government enacted a law for extending legal aid services with a view to improving the access to justice for the rural poor,<sup>432</sup> and this service is supported on a limited scale from the safety net budget.<sup>433</sup> The national legal aid services organisation (NLASO) is mandated to promote access to justice, particularly for the poor, women and marginalized.<sup>434</sup> It is not clear whether rights-based cases, including environmental litigation, will receive support from this public funding.<sup>435</sup>

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<sup>425</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 62, 91.

<sup>426</sup> Ibid 13.

<sup>427</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 118-119.

<sup>428</sup> *Public-interest Information Disclosure Act (Provide Protection) 2011* (Bangladesh) Act No 7 of 2011.

<sup>429</sup> Transparency International, *Fighting Corruption in South Asia: Building Accountability* (2014)4.

<sup>430</sup> *Constitution of the People's Republic of Bangladesh* art 27.

<sup>431</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 208, 131; Government of the People's Republic of Bangladesh, Planning Commission, above n 63, 223.

<sup>432</sup> আইনগত সহায়তা প্রদান আইন ২০০০ [The Legal Aid Act 2000] (Bangladesh) Act No 6 of 2000 art 5, 14, 15, 16.

Under the law, the state will finance lawyers for those who are needy, helpless and unable to get justice for various socio-economic reasons. Such people can apply for legal assistance from the state. A state-financed panel of lawyers will assist the deserving persons after scrutiny of their applications by a committee.

<sup>433</sup> Government of the People's Republic of Bangladesh, Finance Division, *Safety Net Budget of the Government* (2015-2016) <[http://mof.gov.bd/en/budget/15\\_16/safety\\_net/safety\\_net\\_en.pdf](http://mof.gov.bd/en/budget/15_16/safety_net/safety_net_en.pdf)>.

<sup>434</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 159.

<sup>435</sup> See, eg, Government of the People's Republic of Bangladesh, National Legal Aid Services Organisation, *Legal Assistance, Cases where government assistances are provided*

<[http://nlaso.portal.gov.bd/sites/default/files/files/nlaso.portal.gov.bd/page/fb1ce903\\_3f7e\\_4562\\_8780\\_d7280944c08f/%E0%A6%B8%E0%A6%B9%E0%A6%BE%E0%A6%AF%E0%A6%BC%E0%A6%A4%E0%A6%BE-%E0%A7%A8.pdf](http://nlaso.portal.gov.bd/sites/default/files/files/nlaso.portal.gov.bd/page/fb1ce903_3f7e_4562_8780_d7280944c08f/%E0%A6%B8%E0%A6%B9%E0%A6%BE%E0%A6%AF%E0%A6%BC%E0%A6%A4%E0%A6%BE-%E0%A7%A8.pdf)>.

The government now plans to bring the courts under information communication technology networks and make laws to record the testimony of witnesses by audio recording system.<sup>436</sup> Given the three million cases pending in courts,<sup>437</sup> the government suggested local governments encourage citizens, particularly in rural areas, to resort to the village courts that have jurisdiction over the locality of grassroots level Union Parishad. This court has the power to judge the cases concerning disputes over agriculture wages at local level.<sup>438</sup> However, the lack of expert adjudicators at local level, as well as political favouritism, may be some of the concerns about the effectiveness of the activities of this court.

Despite having separate environmental courts that have strict time limits and appeal procedures, the narrow jurisdiction of these courts delay the overall process.<sup>439</sup> The procedural formalities before filing a case also delay the access to justice. The options to challenge governmental policy decision or laws under judicial review are expensive and a post action judicial remedy may not bring the desired results.<sup>440</sup>

Given the role of the judiciary is critical to governance improvement, there are some good examples of judicial activism in Bangladesh, similar to India. The constitutional provisions in Bangladesh for planned development in conjunction with the protection of the environment, including biodiversity, were amplified by the Supreme Court of Bangladesh much before the inclusion of environmental protection in the constitution.<sup>441</sup> In respect to standing, the Supreme Court of Bangladesh took the liberal view from the mid-1990s and extended the rights to citizens or groups who have sufficient interest in the dispute, even if they are not personally affected.<sup>442</sup> Similar to Indian courts,<sup>443</sup> the courts in Bangladesh promoted protection and preservation of the ecology and found larger economic benefits of society in government's development projects against the arguments of pro-environmentalists in

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<sup>436</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 583; Chief Justice of Bangladesh Mr Surendra Kumar Sinha, 'Contribution of the Judiciary of Bangladesh in Strengthening Rule of Law and Democracy' (Speech delivered at Gujrat National Law University, India, 5 October 2015) <[www.supremecourt.gov.bd/resources/contents/Speech\\_by\\_HCJ\\_SK\\_Sinha\\_GNLU.pdf](http://www.supremecourt.gov.bd/resources/contents/Speech_by_HCJ_SK_Sinha_GNLU.pdf)> 6.

<sup>437</sup> Ibid 5; Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 156.

<sup>438</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 172.

গ্রাম আদালত আইন ২০০৬ [Village Court Act 2006](Bangladesh) Act No 19 of 2006 schedule 2.

<sup>439</sup> Razzaque, above n 400, 373, 379; Aminuzzaman, above n 333.

<sup>440</sup> Chowdhury, above n 363.

<sup>441</sup> *Dr Mohiuddin Farooque v Bangladesh and others* 17 BLD (AD) (1997) 1; *Dr Mohiuddin Farooque v Bangladesh and others* 48 DLR (HCD) (1996) 438.

<sup>442</sup> *Dr Mohiuddin Farooque and Sekandar Ali Mondol v Bangladesh* (1994) writ petition No 998 & 1576 .

<sup>443</sup> Jona Razzaque, 'Access to environmental justice, Role of the Judiciary in Bangladesh' (2000)4(1&2) *Bangladesh Journal of Law* 7-8; Razzaque, above n 400, 321-322.

*Dr Mohiuddin Farooque v Bangladesh* case.<sup>444</sup> The court although promoted protection of environment from damage, the threshold of such damage was not examined in *Dr Mohiuddin Farooque v Bangladesh* case.<sup>445</sup>

The Supreme Court in Bangladesh has, in different cases, favoured the protection of the environment and the larger benefits of society instead of private interests. Given the severe pollution by the tanneries in the Hazaribagh area of Dhaka city, the court ordered the relocation of these industries or shut down on failure to do so.<sup>446</sup> However, the actual relocation of tannery industries (except one) has not yet been completed due to critical executive failure, even a decade since the judgement. The court's role in protecting the free flow of water was found in a case against a housing project nearby Dhaka city and the court ordered the closure of the housing project after considering the larger benefits for citizens against the limited interests of private investors in the housing project.<sup>447</sup>

The foregoing discussion of development planning and its associated interventions, including legislative and judicial actions, has presented a picture that there are many agendas in government interventions for promotion of agricultural development. Some of these interventions are relevant to the sustainable development of agriculture however these interventions in many cases face challenges in implementation. Moreover, there are also critical gaps in agendas and processes for advancing the sustainable development of agriculture in Bangladesh. The following section in part II presents some of these gaps and challenges in light of above discussion and gaps identified in chapter one of this thesis. This chapter prepares the basis for recommendations for transformation of development planning frameworks in the next chapter. The discussion about gaps in development planning frameworks of Bangladesh will be followed by a review of examples of replicable potential interventions from the Indian planning frameworks, as well as sustainable agricultural practices of different countries.

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<sup>444</sup>*Dr Mohiuddin Farooque v Bangladesh* (1994) writ petition no. 998 of 1994.

<sup>445</sup>Razzaque, above n 400, 321-322.

<sup>446</sup> *Bangladesh Environmental Lawyers Association (BELA) v Government of the People's Republic of Bangladesh and others*, writ petition of 2003 in the High Court Division of the Supreme Court of Bangladesh (Tannery Case); Staff Correspondent, 'HC ask 154 tannery owners to pay Tk 50,000 per day each' *The Daily Prothom Alo* (online), 16 June 2016

The High Court Division of the Supreme Court ordered these industries to pay fines on their failure to relocate. However, this order was stayed for further review by the Appellate Division of the Supreme Court of Bangladesh. Finally, the Appellate Division ordered the owner of each tannery industry to pay Taka 10,000 per day on failure of relocation.

<sup>447</sup> *Metro Makers and Developers Ltd and Others v Bangladesh Environmental Lawyers Association and Others*, Civil Appeal No. 256 of 2009, Civil Appeal Nos.253-255 of 2009 (Appellate Division of Supreme Court of Bangladesh).

## Part II

### *G Gaps in Development Planning Frameworks of Bangladesh for Promotion of SDA*

While development planning frameworks in Bangladesh have moved to the indicative planning process from normative production planning in a private sector dominated neo-liberal economy, the inclusive planning agenda is consistent with the latest planning ideologies. However, the agenda does not include the essence of the communicative planning approach to facilitate inclusiveness in planning process. Local level planning frameworks simply include a citizen participation agenda in the development planning process. The process faces huge implementation challenges in an elite dominated political and social structure. Although the national planning frameworks have participation agenda, planning procedure does not have any direction to incorporate this agenda in the planning process. The general planning ideologies seem aligned with global planning discourse, but there are huge gaps in appropriate synchronisation of ideologies in development planning frameworks, as well as in the implementation of inclusive planning in light of the latest planning discourse.

Given these gaps in the planning ideologies of the government of Bangladesh need to be minimised to be consistent with the latest global planning discourse, this section highlights gaps in the substantive and procedural aspects of SDA that need improvement for its effective promotion. These are not exhaustive agendas but they include major potential areas for intervention. The issues presented below are in the similar format to the discussion about the planning frameworks in previous sections. The discussion on general development planning approaches and agricultural planning is discussed together as agricultural planning is not separate from the development planning frameworks of the government of Bangladesh.

#### *1 Substantive Issues of Development Planning*

The planning priorities include poverty alleviation, livelihood improvement and equity, employment generation as well as self-sufficiency in food for facilitating food security. These goals have been promoted through public sector investment in agricultural

development, despite the emphasis on private sector development, privatisation and deregulation. The revolutionary agricultural development agenda becomes the priority of the country through the article 16 of the constitution of Bangladesh.<sup>448</sup> Now agricultural development also needs to be pursued along with the environmental protection related fundamental principles of the constitution.<sup>449</sup>

Given the adoption of SDGs globally, and more particularly in Bangladesh planning ideologies,<sup>450</sup> the planning agenda suffers from inconsistency in prioritization and implementation. The priority is not defined in most cases in agricultural planning. Therefore, the allocation of funds for implementation of different agendas suffers due to the arbitrary allocation procedure as well as the power structures in different departments. The inconsistency between project selection and priority in plans, especially in a climate change context, is also a major challenge to overcome.<sup>451</sup> The large mismatch in the projection of allocation and real investment in the agriculture sector raises the question of commitment to the development of agriculture compared to other sectors.<sup>452</sup>

The rationalisation of subsidies is an issue where inconsistency may dilute the priority of the government as sectoral and national plans have differences in approach.<sup>453</sup> Another inconsistency is seen in the case of citizen participation in the planning process. Though the citizen participation agenda is emphasised in different plans, there is no effective intervention in this regard to the national planning process. The local level planning has delegated local governments to accommodate citizen participation; however, it is rather cosmetic, elite dominated and not synchronized with the national planning process.<sup>454</sup>

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<sup>448</sup> *Constitution of the People's Republic of Bangladesh*, art 16

16. The State shall adopt effective measures to bring about a radical transformation in the rural areas through the promotion of an agricultural revolution, the provision of rural electrification, the development of cottage and other industries, and the improvement of education, communications and public health, in those areas, so as progressively to remove the disparity in the standards of living between the urban and the rural areas.

<sup>449</sup> *Constitution of the People's Republic of Bangladesh*, art 18[A]

Protection and improvement of environment and biodiversity [18A. The State shall endeavour to protect and improve the environment and to preserve and safeguard the natural resources, bio-diversity, wetlands, forests and wild life for the present and future citizens].

<sup>450</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 27-28.

<sup>451</sup> See, eg, Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 266-276, 417-422.

The latest seventh five year plan includes a large number of agendas for agricultural development, however they lack any prioritization. There is also inconsistency between objectives and strategies for agricultural development. The agendas for addressing climate change lack similarities with the commitment of the government to the UNFCCC.

<sup>452</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 258 Table 4.1.

<sup>453</sup> See, the discussion above in section F 1(a)(i) *Land and Soil* of this chapter.

<sup>454</sup> See the discussion above in principle 3 of section F 2 (c) and section D 1(b) of this chapter.

## 2 Procedural Aspects of Development Planning

The plan preparation process lacks a definitive procedural mechanism, runs on an ad-hoc basis and lacks any vetting from the national parliament.<sup>455</sup> The ministry and divisions are mandated to prepare plans, policies and strategies but this mandate is not followed up with any procedural mechanism. The policy approval is not integrated with the parliamentary approval process.<sup>456</sup>

The sectoral and programming divisions of the Planning Commission do not have legal reference to the government businesses.<sup>457</sup> Programme planning suffers due to the large number of projects and there is no regulatory mechanism to address this issue. Programme planning also lacks any regulation and this part of planning is done through issuing some guidelines. The programming also suffers due to an expenditure failure in the first three quarters every year.<sup>458</sup> The project appraisal process is conducted by the bureaucracy under different committees however there is no provision to include experts from relevant fields outside the government in this appraisal process.<sup>459</sup> EIA and SIA are not common in government funded projects, especially in agriculture sector projects. Appraisal and approval of climate change projects is separated from the mainstream planning process which perhaps hinders appropriate national integration of climate change planning with the overall planning process.<sup>460</sup>

The decentralisation approach is not complete and the national planning process does not have any decentralisation effect. The supremacy of parliament members in local level development intervention prioritisation is not consistent with self-governance of local government institutions. Given the weaknesses in local level project planning, this part of

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<sup>455</sup>See, the above discussion in section D 1 of this chapter; Government of the People's Republic of Bangladesh, Cabinet Division, *Rules of Business 1996*(2014)10.

The drafting of medium term plan is outsourced to consulting firms. It presents either a capacity gap of bureaucracy in plan preparation or a lack of confidence from the policy makers over the bureaucracy in the preparation of plans.

<sup>456</sup> See, the above discussion in section D 1 of this chapter.

<sup>457</sup> See above discussion under section D 2 of this chapter.

<sup>458</sup> See above discussion under section D 2 of this chapter; Kayes Sohel, 'ADP implementation slowest in seven years' *Dhaka Tribune* (online), 10 April 2016

< <http://www.dhakatribune.com/business/2016/apr/10/adp-implementation-slowest-seven-years>>.

<sup>459</sup>See above discussion under section D 3 of this chapter; সরকারি খাতে উন্নয়ন প্রকল্প প্রণয়ন, প্রক্রিয়াকরণ, অনুমোদন ও সংশোধন পদ্ধতি ২০০৮ [Public sector project preparation, processing, approval and revision procedure 2008](Bangladesh)art 1.13;

<sup>460</sup>See above section E of this chapter; See above discussion of section D 3 of this chapter.

development planning frameworks also lack an appropriate appraisal process at local level and that may lead to mal-adoption of development interventions.<sup>461</sup>

Monitoring and evaluation of plan implementation is done by the General Economics Division of the Planning Commission, however, there is no institutional mechanism at ministry level to monitor and evaluate the progress of plans. There is no example of regular sectoral impact assessment in identifying the impact of different interventions of different sectors. While projects are monitored and evaluated by the IMED, the centralised and limited capacity for monitoring and taking remedial action is also coupled with the absence of any local level monitoring mechanisms by the IMED.

Procurement has been streamlined through the adoption of laws and rules. However, exemption of experience for small works procurement creates a non-competitive situation among experienced and non-experienced contractors that may lead to corruption. There is also no provision for favouring the environment friendly products and services in the procurement laws.

In climate change interventions, long term issues are addressed through short term projects that raise questions about the approach to addressing this threat. Overlapping is observed in development activities from general and climate change related special funds. Coordination of climate change issues suffers from low integration and inadequate institutionalisation in regular business at ministry and agency level.

Apart from these general gaps, there are also specific deficiencies in promoting the seven principles of SDA in Bangladesh. These deficiencies or challenges are diversified, but are often integrated and need comprehensive interventions. The following discussion presents some of these challenges for Bangladesh in addition to the limitations discussed in the previous two sub-sections. These discussions are intended to prepare recommendations for Bangladesh in the next chapter in light of international standards, practices in other countries and the experience of Indian planning frameworks.

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<sup>461</sup>See above section D 1(b) of this chapter; উপজেলা পরিষদের (কার্যক্রম বাস্তবায়ন) বিধিমালা ২০১০ [Upazila Parishad (Programme Implementation) Rules 2010](Bangladesh)art 12; ইউনিয়ন পরিষদ (উন্নয়ন পরিকল্পনা) বিধিমালা ২০১৩ [Union Parishad (Development Planning)Rules 2013](Bangladesh)art 5.



### 3 Specific Challenges in Promotion of SDA

#### (a) Substantive Principles

##### (i) Principle 1: Maintenance and Improvement of Eco-integrity, Biological Diversity and Improving Resource Use Efficiency

The discussion under this principle is limited to major natural resources, land, water and biodiversity that are critical to promotion of sustainable development of agriculture. Given the declining agricultural land base and degradation of natural resources, the gaps in mapping of natural resources and the present state of agro-ecology limit evidence based planning. The protection of conversion of agricultural lands, land development, reversing soil degradation and soil fertility improvement lacks effective implementation of existing laws and policies, insufficient legislative provisions and inconsistency in the primary definition of agricultural land. The limitations in common property management such as public lands, water bodies and forestry are coupled with ineffective over exploitation control mechanisms.<sup>462</sup>

There is a gap in the effective promotion of regulatory mechanisms for controlling the over withdrawal of groundwater as well as the conjunctive use of surface and groundwater. There is also a dearth of effective measures to improve irrigation water use efficiency to avoid over withdrawal and misuse of water. There is also a gap in planning, coordination and monitoring of wider retention of water in critical areas and watershed development for the complete renewal of water resources.<sup>463</sup>

In the context of decreasing soil fertility, the subsidy mechanism for determining chemical fertiliser prices suffers inappropriateness for balanced use of fertiliser. There is an absence of promotional mechanisms to enhance the use of environment friendly fertilisers. Flat subsidies

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<sup>462</sup> See above discussion in section F 1 principle 1; Hasan, above n 218,6[3]; ইট প্রস্তুত ও ভাটা স্থাপন (নিয়ন্ত্রণ) আইন ২০১৩ [Brick Making and Vata Establishment (Control) Act 2013](Bangladesh) Act No 59 of 2013 art 2 Jha, 5; Government of the People's Republic of Bangladesh, Planning Commission, above n 208, 121-123; মহানগরী, বিভাগীয় শহর ও জেলা শহরের পৌর এলাকাসহ দেশের সকল পৌর এলাকার খেলার মাঠ, উন্মুক্ত স্থান, উদ্যান এবং প্রাকৃতিক জলাধার সংরক্ষণ আইন ২০০০ [Conservation of playing field, open space, park and natural water bodies of all municipal areas including large city and cities of Divisions and District Act 2000](Bangladesh) Act No 36 of 2000 art 5.

<sup>463</sup> See above discussion in section F 1(a) principle 1 of this chapter; বাংলাদেশ পানি আইন ২০১৩ [Bangladesh Water Act 2013] (Bangladesh) Act No 14 of 2013 art 19, 20; Altab Hossain, 'Bangladesh has the highest irrigation cost in the world', *The Daily Samakal* (online), 22 March 2016.

for irrigation lack any evaluation to address the declining groundwater level.<sup>464</sup> There are also gaps in the promotional activities for soil and moisture conservation as well as controlling the over exploitation of bio mass.<sup>465</sup>

There is a limitation in the promotion of integrated pest management and strict control of pesticide use as well as adulterated pesticide sales that causes biodiversity erosion. The approved draft law for biodiversity protection lacks incentive based in-situ conservation and has procedural shortcomings in respect to access to a judicial procedure. There is also an implementation deficit in safe practice legislation for controlling pests.<sup>466</sup>

There are no specific government funds for ecological protection and its integration with development interventions and so options for eco-centric technology adoption suffer from the lack of appropriate incentives. The arrangement to establish separate funds for funding scientific, technological and educational improvement of agriculture through tax collection also lacks implementation initiatives.<sup>467</sup> The judicial decisions for environmental protection are not supported through effective and timely implementation by the executives.<sup>468</sup>

#### *(ii) Principle 2: People centric Development for Addressing Poverty, Employment and Livelihoods*

Despite the Bangladesh government's extensive role in poverty alleviation, employment generation and livelihood improvement, and with success in all these fronts, there are some critical gaps in different areas where improvement is needed. There are gaps in ensuring people's command over resources, especially common public resources. The subsidies in inputs for facilitating profitability lack proper alignment to livelihood improvements for poor farming communities. Given the volume of subsidy in agriculture occupies about 66 per cent

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<sup>464</sup> See above discussion in section F 1(a) of this chapter; Government of the People's Republic of Bangladesh, Ministry of Agriculture, above n 22, 18.

<sup>465</sup> See above discussion in section F 1(a) of this chapter; Government of the People's Republic of Bangladesh, Ministry of Agriculture, above n 22, 19-21.

<sup>466</sup> See above discussion in section F 1(a) of this chapter; *The Agricultural Pests Ordinance 1962* (Bangladesh) East Pakistan Ordinance No VI of 1962; Government of the People's Republic of Bangladesh, Ministry of Environment and Forests, *Draft Biodiversity Act 2012* art 18, 24;

<sup>467</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, above n 21, [5.9]; Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 299-300; Government of the People's Republic of Bangladesh, Ministry of Agriculture, above n 198, 11; *The Agricultural Produce Cess Act 1940* (Bangladesh) Act No XXVII of 1940.

<sup>468</sup> *Bangladesh Environmental Lawyers Association (BELA) v Government of Bangladesh and others*, writ petition of 2003 in the High Court Division of the Supreme Court of Bangladesh (Tannery Case); Ahmed above n 265, Rabbani, above n 265, 44-45.

of total budget of Ministry of Agriculture, the government may find it difficult to realign it for enhanced investment in poverty alleviation and livelihood improvement activities.<sup>469</sup> The limitations in output subsidies' management in public food procurement include delayed, non-participatory and political elite dominated approaches that restrict the poor farmers' ability to supply their produce at a profitable rate. The limited marketing facilities suffer from an absence of participatory management.<sup>470</sup>

When institutional credit supply suffers from low allocation and complications for sharecroppers and women farmers to access it, its benefit also becomes low due to comparatively high interest rates. Repayment has also not been designed with any incentives when a lack of low cost credit for technological and eco-centric development activities impedes the maintenance of eco-integrity. The subsidised credit to farmers to assist them in overcoming distressed sales suffers from low coverage, a lack of speedy and responsive transfer to reduce the transaction cost as well as leakage.<sup>471</sup>

The safety net programmes for agricultural development activities suffer from an absence of institutionalised monitoring and evaluation mechanisms that may lead to leakage and arbitrary allocation and priority setting for investment. Although other safety net programmes include agricultural activities at local level, however, this is not a mandatory agenda for safety net programmes. The risk minimising mechanisms lack any effective and countrywide insurance provisions for addressing both disease and weather risks. The asset generation and asset erosion prevention mechanism is not a clear procedural mechanism for saving the poor's circumstances from getting worse.<sup>472</sup>

There are gaps in acknowledging the rights of farmers to intellectual property including biodiversity. Given the implementation challenges in public land distribution, there are gaps in the speedy settlement of land rights disputes. When mechanisation is supported with

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<sup>469</sup>Government of the People's Republic of Bangladesh, Finance Division, above n 283, 11.

<sup>470</sup> See above discussion in section F 1(b) *principle 2* in this chapter.

<sup>471</sup>Alauddin and Biswas, above n 291, 34-36; Bangladesh Bank, *Announced interest rate chart of the scheduled banks (lending rate)* < <https://www.bb.org.bd/fnansys/interestlending.php>>; Government of the People's Republic of Bangladesh, Planning Commission, above n 55, 160; Government of the People's Republic of Bangladesh, Ministry of Agriculture, above n 198, 6-7.

<sup>472</sup> See above discussion in section F 1(b) of this chapter.

subsidies, the gender supported mechanisation lacks promotional incentives. The labour productivity improvement also lacks category wide human capital building programmes.<sup>473</sup>

*(iii) Principle 3: The Principle of Equity*

Given the principle discussed above about maintenance and improvement of eco-integrity, biological diversity and improving resource use efficiency has mostly covered intergenerational equity issues, the discussion under this principle will mostly cover the intra-generational equity issues.

The government of Bangladesh provides incentives to different strata of farmers, however the major incentives provided through subsidies, such as in electricity rebates and subsidies in fertiliser and seed are not equitable because of the flat rate for all farmers. Moreover, government subsidies in fertiliser and irrigation affect the intergenerational equity through degradation in land, water and biodiversity. The programmes to facilitate the equal participation of women in the development process as well as equality in wages between women and men's labour in agriculture face implementation challenges.<sup>474</sup> The sharecroppers also face difficulties due to an absence of effective land lease rights and contracts.

The special programmes and allocation to give priority in terms of agricultural subsidies and agricultural loans at a lower interest rate to farmers in the poorest sub-districts suffers from low implementation commitment. The spatial inequality issues are not addressed with any institutional mechanism. While the income inequality reduction plans have no clear policy orientation and are not prepared based on solid projections, there is also an imbalance between targeted and non-targeted programmes. A declining inequality in wages is not supported through safety net programmes, such as day care centres for female labours.<sup>475</sup>

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<sup>473</sup> See above discussion in section F 1 (b) of this chapter; Government of the People's Republic of Bangladesh, Ministry of Agriculture, above n 227, 5; Government of the People's Republic of Bangladesh, Planning Commission, above n 55, 161, 286; *The Agricultural Labour (Minimum Wages) Ordinance 1984* (Bangladesh) Ordinance XVII of 1984.

<sup>474</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 55, 159; Government of the People's Republic of Bangladesh, Planning Commission, above n 63, vol 2, 11.

<sup>475</sup> See above discussion in section F 1(c) of this chapter.

The land tenure, land holding and land transfer arrangements are unequal to women and disadvantaged groups and do not consider the promotion of better relationships between land owners and share croppers.<sup>476</sup> The distribution process of public lands to genuine farmers lacks participatory and proper targeting approaches. Women face difficulties in accessing credit and other resources in the absence of the proper application of women rights to land.<sup>477</sup>

The interest rate for credit and charges for other services of the government do not specially favour the landless, poor farmers or sharecroppers. The public resource use is not equitable especially as women and disadvantaged groups have a low entitlement to exploit public resources. Given the consumption patterns are not equitable between the poor and rich and social safety net programmes for increased consumption by poor and vulnerable groups are not enough, there are no mechanisms to tax the rich for their increased consumption.<sup>478</sup>

*(iv) Principle 4: The Precautionary Principle*

The application of precautionary principle has potential to address detrimental effects of agricultural development activities however there are few efforts to effectively apply this principle in the agriculture sector in Bangladesh. While withdrawing subsidies from chemical fertiliser seems unrealisable in Bangladesh, the rationalisation of the price of fertiliser does not follow nutrient-based mechanisms that could improve the soil fertility situation. There is also a gap in any comprehensive assessment of the impact of the use of agro-chemicals and pesticides.

While agriculture lands are converted at a high rate, the plan for stopping the acquisition of agricultural land for other development purposes has not yet been effective and lands are released in the absence of any projections about food demand and food productivity improvement.

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<sup>476</sup> See above discussion in section F 1(c) of this chapter.

<sup>477</sup> See above discussion in section F 1(c) of this chapter; *The Land Reform Ordinance 1984* (Bangladesh) Ordinance No X of 1984 art 4(1).

<sup>478</sup> See above discussion in section F 1(c) of this chapter; A K M Jahir Uddin Chowdhury and Golam Rasul, 'Equity and Social Justice in Water Resource Governance: The case of Bangladesh', (2014)2(2) *South Asian Water Studies Journal* 44; IDA Resource Allocation Index, *Bangladesh* (2014) <<http://knoema.com/GSCPIA2014/ida-resource-allocation-index-irai-2014?country=1000050-bangladesh>>.

The low prioritised EIA process suffers from lack of strict legislative control and procedural improvement.<sup>479</sup> The strategic environmental impact assessment (SIA) mechanisms being practiced in different countries for impact assessment of agricultural development interventions are not yet institutionalised in Bangladesh.<sup>480</sup> There is an absence of climate change impact assessment and integration of all impact assessments for comprehensive action.

The plans to adopt some precautionary measures, such as integrated pest management and organic manure application, have not progressed well in the absence of a proper incentive mechanism and a lack of stakeholders' awareness in adopting good agricultural practices. There is an absence of regulatory mechanisms for controlling misleading advertisements about pesticides and their overuse.<sup>481</sup> The agriculture departments of the government lack authority to impose penalties directly to control environmentally damaging fertiliser.<sup>482</sup>

Although the biotechnological research follows biosafety guidelines, it fails to address social concerns. The early warning or forecasting system has limited focus that concentrates primarily on disaster warnings however it includes few provisions for pest attacks, disease prediction, domestic and international food production and price forecasting.<sup>483</sup>

While the precautionary principle is not mandatorily used in the development sectors in the absence of legislative provisions, the absence of specific thresholds about ecological integrity, such as declaration of critical level of underground water hinders its implementation. The judiciary used this principle indirectly in different cases, such as in *Bangladesh Environmental Lawyers Association (BELA) v Government of Bangladesh and others*.<sup>484</sup> It has however been difficult for the judiciary to define the extent of application of this principle in absence of any thresholds on ecological integrity in Bangladesh. The court also missed the opportunity to declare this principle as a part of law in Bangladesh in reference to

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<sup>479</sup> See above discussion in section F 1 (d) of this chapter.

<sup>480</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 55, 200.

<sup>481</sup> See above discussion in section F 1 (d) of this chapter; Government of the People's Republic of Bangladesh, Ministry of Agriculture, above n 98, [2.2.2], [3.1].

<sup>482</sup> সার (নিয়ন্ত্রণ) আদেশ ১৯৯৯ (বাংলাদেশ) [Fertiliser (Control) Order 1999] (Bangladesh) art 10.

<sup>483</sup> See above discussion in section F 1 (d) of this chapter.

<sup>484</sup> *Bangladesh Environmental Lawyers Association (BELA) v Government of Bangladesh and others* Writ Petition No. 4958 of 2009 [Judgment 14 January 2010].

This writ petition was filed to protect the rivers Piain, Dawki and Dhala flowing through Goainghat and Companygonj Upazilas of Sylhet district of Bangladesh from the use of mechanized excavators. The High Court Division of Supreme Court of Bangladesh held that -

... If an activity is allowed to go ahead, there may be irresponsible damage to the environment and if it is stopped, there may be irresponsible damage to economic interest. In case of doubt, however, protection of environment would have precedence over the economic interest.

the constitutional provisions in Bangladesh and the judgement of Indian Supreme Court that declared this principle as a part of Indian law.

*(b) Procedural Principles*

*(i) Principle 1: Integration across Scales and Disciplines*

The plans for the integration of group-based planning with sectoral, national and local level planning suffer from low progress in implementation. The transfer of divisible components of national projects to local governments usually takes place in safety net programmes. However, the capacity gap at the local level and departmental hegemony hinders the process. The NGO activities are also not integrated with the government programmes and lack national orientation.<sup>485</sup>

The plan for assigning a point of co-ordination and integration of the projects as well as bottom up and top down planning process integration has not yet received momentum. Despite the integration efforts of the development budget with the national budgeting process, there is low integration between medium-term plans and medium-term budgets.

The integration of the environment into development planning faces a commitment crisis when ministries try to avoid an environmental impact analysis in project design and implementation. Disaster risk reduction plans such as insurance mechanisms are not usually integrated with the promotion of production. The collaboration among local government representatives, extension workers and NGOs for the integration of sustainable production processes is also low when the sectoral agencies follow their own hierarchies in implementing their projects.<sup>486</sup>

In terms of linking local and national levels, existing budgetary mechanisms lack community opinions in decision making process. The integration in intra-sectoral and inter-sectoral projects is not common and agencies are comfortable in implementing their own projects rather than integrating with others.

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<sup>485</sup> See above discussion in section F 2 (a) of this chapter.

<sup>486</sup> See above discussion in section F 2 (a) of this chapter; Government of the People's Republic of Bangladesh, Planning Commission, above n 13, (199, 324).

The climate change issues have not been integrated in the existing environmental legislation. The climate change projects suffer from very low or no integration among the sectors and low integration between climate change planning and regular development planning. There are concerns for inter-policy hierarchical issues. There are also gaps in integrating traditional and modern technologies as well as local knowledge with an international knowledge base.<sup>487</sup>

*(ii) Principle 2: The Principle of Good Governance*

The planning process lacks any legislative mechanisms, including the synchronisation of local level planning with national planning frameworks. There is also a lack of capacity for implementation, use of allocated funds and avoiding expenditure glut.<sup>488</sup> The pressure of a large number of projects in programme planning is not properly addressed despite repeated commitments by the government. The plan for adopting a programme approach also has not yet materialized. There is a gap in aligning the medium term plans and budgetary frameworks and a budget is not allocated in light of the environmental performances of different ministries.<sup>489</sup>

The monitoring and evaluation activities lack civil society and joint monitoring mechanisms of development activities. The project selection in many cases suffers from relevant, reliable and latest data and concrete evidence of potential economic return from the project against any damages to environment. The selection process in some cases also suffers from political choice over technical feasibility.

The relaxation of the qualifications of private contractors in small works procurement extends discrepancy between experienced and inexperienced contractors.<sup>490</sup> The procurement law also

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<sup>487</sup> Kevan Christensen, Sajid Raihan, Rubayat Ahsan, A M Nasir Uddin, Chowdhury Saleh Ahmed and Helena Wright. 'Financing Local Adaptation: Ensuring Access for the Climate Vulnerable in Bangladesh' (Report Summary, ActionAid, Bangladesh, Action Research for Community Adaptation in Bangladesh, Bangladesh Centre for Advanced Studies, and International Centre for Climate Change and Development, 2012)2; Asia Foundation, above n 391, 45-46; Chowdhury, above n 363; Alam et al, above n 362, 27-32.

<sup>488</sup> See above discussion in section F 2 (b) of this chapter.

<sup>489</sup> See above discussion in section F 2 (b) of this chapter.

<sup>490</sup> *Public Procurement (Amendment) Act 2010* (Bangladesh)art 3.



lacks any provision for the promotion of eco-friendly goods and services. Audit reports are not published under the pro-active disclosure policy and the reporting and remedial procedure is time consuming. Parliamentary oversights over development planning are not mandated with clear rules and regulations.

The anti-corruption drives do not usually give any special attention to development activities, including expenditure and procurement. Given the difference in sectoral activities, the agriculture sector lacks any sectoral anticorruption strategy for reducing any leakage. The integration between anti-corruption initiatives and whistle blower's law has not yet occurred.<sup>491</sup>

While several service delivery mechanisms are promoted by the government agencies for time bound delivery of service and redress for citizens' grievances, the government does not have any rights based regulatory mechanism for facilitating the citizens' unhindered access to government services. Common and public property rights along with intellectual property rights in the agriculture sector are not facilitated through any regulatory mechanism.

Innovations have started getting recognition in the areas of governance and better service delivery to citizens by the government agencies,<sup>492</sup> however they may not receive momentum due to lack of appropriate incentives. The right to information law is simply used as an instrument for information dissemination purposes instead of using it as an instrument for facilitating quality service delivery by the government and non-government agencies. The promotion of the procedural efficiency in courts through digitization is slow and it suffers from low cooperation from lawyers.

### *(iii) Principle 3: Right to Participative Processes and Access to Information and Justice*

While citizen participation in the planning process received significance to some extent, early participation is not yet institutionalised and there are no specific procedural mechanisms in this regard in national planning frameworks. The participation process is legally mandated in local level planning, though it lacks opportunities for deliberation and the appropriate

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<sup>491</sup> দুর্নীতি দমন কমিশন আইন ২০০৪ [The Anti-Corruption Commission Act, 2004] (Bangladesh) Act No 5 of 2004; Government of the People's Republic of Bangladesh, Anti-Corruption Commission, *Annual Report* (2014).

<sup>492</sup> Government of the People's Republic of Bangladesh, Cabinet Division, Gazette Notification No 04.00.0000.232.35.006.13-18, 8 April 2013.

inclusion of socially disadvantaged groups. Despite good examples in different sectors in addressing different developmental issues through partnerships,<sup>493</sup> there is lack of institutional mechanism to adopt the process in agricultural development planning. A partnership between government departments and citizens could improve the development project's design and facilitate efficient implementation in association with informed citizens.

The committees for managing natural resources, ecological protection and climate change planning in many cases do not promote citizen participation. The participation process does not have appropriate incentive provisions for the participation of poor citizens and the outcome of participation process is also not usually made visible. Political reluctance, bureaucratic resistance and corruption are major challenges to the promotion of people's participation in local development activities and in the decision-making process.<sup>494</sup>

The volume of proactive disclosures, including NGOs' disclosure of information, is limited and sometime unavailable in local languages. The Information Commission established under the *Right to Information Act 2009* lacks mechanisms to monitor the information dissemination process. The implementation of a whistle blowers law faces challenges because of 'a deep-rooted culture of secrecy and very low awareness and capacity in both demand and supply side.'<sup>495</sup>

While the government plans to improve the judiciary as a part of governance improvement, access to justice is facilitated through limited legal aid services. Moreover, this legal aid service is not extended to address the environmental rights of the poor. The poor application of alternative dispute resolution mechanism limits the benefit of this facilitative process in ensuring poor farmers' rights and entitlements. The existing flexibility concerning standing requirements in writ petition submissions in public interest litigation is yet to accommodate flexibility in observing procedural formalities for submitting petitions in the High Court.

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<sup>493</sup> Government of the People's Republic of Bangladesh, Rural Development and Cooperatives Division, *Revised Technical Assistance Project Proposal for Participatory Rural Development Project, Phase II*(2010)1; Government of the People's Republic of Bangladesh, Ministry of Disaster Management and Relief, *Project Brief of Comprehensive Disaster Management Project Phase II*(2010)1-2.

<sup>494</sup> Afsar, above n 415; Asaduzzaman, above n 414.

<sup>495</sup> Sofia Wickberg, *Overview of corruption and anti-corruption in Bangladesh* (Transparency International,2012)9.

The environmental courts established under the *Environment Court Act 2010* suffer from critical incapacity in respect to jurisdiction and functions.<sup>496</sup> The absence of any time limit for investigation of cases by the officials of the environment department also delays the disposal of cases.

The limitations presented above and in previous sections are not the complete pictures of all of the issues. However, they present critical agendas that need to be addressed in an integrated manner for the promotion of SDA. The measures needed to promote SDA will be discussed in next chapter through offering potential mechanisms to address these challenges. However, before identifying the potential remedies, this chapter will finally note the relevance of examples of different sustainable practices from different countries and the development planning frameworks of India in respect to Bangladesh's planning frameworks. This analysis will contribute to the justification of many of the recommendations presented in the next chapter.

#### *H Relevance of Other Country Experiences for Promotion of SDA in Bangladesh*

When discussing the replicability of different approaches pursued in different countries for sustainable development of agriculture, the first sub-section will highlight the relevance of the experiences of several countries discussed in chapter four in the light of sustainable agricultural practices in Bangladesh. The next sub-section will discuss the relevance of Indian planning approaches and SDA practices illustrated in chapter five to incorporate the lessons in the planning frameworks in Bangladesh.

##### *1 Experience of Some Countries about the Promotion of SDA Practices*

The approaches or practices presented about sustainable agricultural developments in chapter four are basically some good examples of different countries whose experiences can be replicated in other countries. These examples are in most cases relevant to SDA planning frameworks in Bangladesh with a few adjustments before application.

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<sup>496</sup> The courts can only exercise jurisdiction over the issues relevant to *Environment Conservation Act 1995* and the judges are designated to hear the cases on part-time basis. The court activities also suffer from procedural shortcomings that limit direct submission of case by any aggrieved person to this court.

The Moroccan, Chinese and Ugandan experiences suggest ensuring higher returns for farmers and a decrease in environmental degradation and climate change mitigation through government assistances, policies, regulations and domestic standards for agricultural products. The assistance provided in these countries along with regulations for sustainable farming and domestic standards can be relevant to the Bangladesh situation when the government of Bangladesh is addressing profitability concerns through different incentive mechanisms.<sup>497</sup> The Canadian experience of institutionalisation of SDA through capacity building of farmers as well as their participation and partnership in the maintenance and development of sustainable agricultural systems is also relevant to design inclusive development policy in Bangladesh.<sup>498</sup>

Given the experiences of national support for promotion of sustainable farming in different countries suggest targeting conventional farmers, the government of Bangladesh can also follow their approach for the effective promotion of sustainable farming through incentivising conventional small and marginal farmers. Moreover, the experiences of Cuba and Switzerland about the adoption of a national policy for sustainable farming to promote resource-conserving and eco-friendly technologies and cooperation among farmers and between communities could be encouraging examples for Bangladesh.<sup>499</sup>

The examples of institutional support from the government for group-based practices for sustainable irrigation, conservation farming, and business management in different countries such as the Philippines, Australia, India and Pakistan may also be relevant to Bangladesh planning frameworks. The examples of proactive role of the governments' in Indonesia, Sri Lanka and Vietnam in improving ecological integrity and increased profit through promoting the integrated pest management (IPM) programme are also encouraging for Bangladesh to justify extra support for a similar programme.<sup>500</sup>

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<sup>497</sup> See, for detailed discussion, section C of chapter IV of this thesis.

<sup>498</sup> Ibid.

<sup>499</sup> Ibid.

<sup>500</sup> Ibid

The Common Agriculture Policy (CAP) of the European Union that facilitates sustainable farming and strengthens rural development in European countries through a holistic, integrated and targeted land based approach of direct payments could be a relevant policy example for Bangladesh. However, there would need to be some modifications as the structural difference of farm holdings as well as poor land record management in Bangladesh make this land based subsidy policy partly irrelevant to Bangladesh. Nevertheless, the provision of subsidies for environmental improvement and supporting rural business could be relevant for the promotion of SDA in Bangladesh.<sup>501</sup>

These examples of different countries and organisations present discrete policy issues that have relevance to SDA planning frameworks, however experience of a country planning framework similar to Bangladesh is also relevant to learn lessons about SDA planning. The Indian example presented in the previous chapter has served that purpose, though their efforts in many cases are similar to Bangladesh and not unique. Nevertheless, there are some examples that are relevant to Bangladeshi planning frameworks. The following sub-section presents a synopsis of these prior to preparing recommendations for Bangladesh in the next chapter.

## *2 Indian Experiences about the Promotion of SDA through Development Planning Frameworks*

While the development planning frameworks in India are consistent with planning ideologies practiced in Bangladesh, the government's dominant role in promoting growth through agricultural development is also quite similar in these two countries. The agendas in respect of poverty alleviation, self-sufficiency in food production and better distribution of income and employment generation are also quite similar.<sup>502</sup> While India pursues goals beyond food security for income security of farming communities, the agenda for SDA is also to a greater extent consistent to the interventionist approach adopted in Bangladesh.<sup>503</sup> Given the major threats of climate change to agriculture, the Indian approach is also similar to Bangladesh in that it mostly relies on adaptation.<sup>504</sup>

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<sup>501</sup> Ibid.

<sup>502</sup> See, for detailed discussion, this thesis, section C 1 of chapter V and section C of this chapter.

<sup>503</sup> See, for detailed discussion, this thesis, section C 2 of chapter V, and section C of this chapter.

<sup>504</sup> See for detailed discussion, this thesis, section C 4 of chapter V, and section E of this chapter.

Despite large similarities between India and Bangladesh, there are some areas where the Indian approach is more advanced and closer to the required interventions for the promotion of SDA. These approaches could be employed in Bangladesh planning frameworks in order to achieve similar goals in Bangladesh. The following discussion will highlight these issues under the identified seven SDA principles along with some lessons for the procedural aspects of the planning process.

*(a) Major Lessons from Procedural Aspects*

The legal mandate of the Indian planning process and parliamentary vetting of plans as discussed in chapter five are examples that Bangladesh can consider along with international consensus about the legal mandating and Constitutional provisions in Bangladesh for development planning.<sup>505</sup> The agenda for the removal of procedural deficiencies in the institutionalisation of well-informed public participation in the EIA process is a lesson for planning frameworks in Bangladesh that suffer from poor application of EIA and low citizen participation in it.<sup>506</sup>

State mandated agricultural development planning processes through an indicative approach and direct state intervention can pursue sustainable agricultural growth through a coordinated approach.<sup>507</sup> The innovative monitoring instruments of Indian planning frameworks, such as social audit, community score cards and citizens' report cards could also be institutionalised in Bangladesh for effective monitoring and evaluation of development activities.<sup>508</sup>

The suggestions for preparation of detailed plans and adoption of easy procedures for project management are relevant to Bangladesh. The participation of local government institutions in national project preparation activities, coordination among different sectors as well as cooperation from citizens are also good experiences that Bangladesh can adopt for inclusive planning and better implementation of projects.<sup>509</sup>

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<sup>505</sup> See, for detailed discussion, section C 3 of chapter V of this thesis.

<sup>506</sup> Ibid.

<sup>507</sup> See, for detailed discussion, section E 1 of chapter V of this thesis.

<sup>508</sup> See, for detailed discussion, section C 3 of chapter V of this thesis.

<sup>509</sup> Ibid.

Given the above general agendas, the next sub-section will specifically focus on citing some examples of Indian approaches that facilitate SDA promotion. The discussion excludes similar initiatives available in Bangladesh and presents a preview of major approaches in India that can be considered for incorporation in Bangladesh planning frameworks with few adjustments.

*(b) Major Lessons from Application of SDA Principles*

*(i) Principle 1: Maintenance and Improvement of Eco-integrity, Biological Diversity and Improving Resource Use Efficiency*

Resource conservation planning is needed as it can incorporate comprehensive inventory preparation for ecological resources, soil and water mapping. Soil fertility can be promoted through soil and moisture conservation and location specific in-situ practices with the help of institutional credit support. In respect of the fertiliser subsidy, the nutrient-based subsidy (NBS) system could facilitate a balanced use of chemical fertiliser along with an incentive based application of bio-fertilisers, organic manures and agro-forestry.<sup>510</sup>

Agricultural land conservation needs to be promoted through strengthening laws relating to land reforms including tenancy, land leasing laws and prevention of conversion of prime agricultural land.<sup>511</sup> In response to falling groundwater levels and improving water use efficiency, there is a need to separate the electricity feeders and follow stricter scheduling of electricity. The government should also monitor water quality and introduce legislation for controlling the degradation of wetlands.<sup>512</sup>

A participatory people's biodiversity register (PBR) can be useful for preserving traditional ecological knowledge and practices about conservation. The in-situ conservation of genetic diversity of indigenous crop varieties needs to be promoted through incentives.<sup>513</sup>

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<sup>510</sup> See, for detailed discussion, section D 1 and E 4 of chapter V of this thesis.

<sup>511</sup> Ibid.

<sup>512</sup> Ibid.

<sup>513</sup> Ibid.

The government can enact new legislation or revise existing legislation to include an appropriate ecological protection agenda based on long term projections about sustainable development of agriculture. This legislation can incorporate government's commitment to international agreements and consensuses and facilitate judicial remedy in the SDA issues.<sup>514</sup>

(ii) *Principle 2: People centric Development for Addressing Poverty, Employment and Livelihoods*

Agricultural development programmes need to be mandatorily included in employment programmes for livelihood improvement. The government needs to extend subsidies for the promotion of eco-friendly farming and its allied businesses. Community food grains banks, cooperatives and self-help groups may facilitate greater control of farmers over the market channels. The purchase of agricultural produce from the farmers could be facilitated through institutionalising a price stabilisation fund along with transparent, participatory and digital public procurement processes.<sup>515</sup>

The subsidised credit system for agriculture needs to be facilitated by the introduction of single window credit operation schemes, along with debt waiver provisions. The farmers can be offered a further discount on subsidised interest rates to ensure regular payments. The women farmers also need to be supported with the issuance of credit cards with fewer formalities. The weather based agricultural insurance scheme can be promoted along with the subsidy for marginal and small farmers on premiums as well as tax incentives for eco-centric farming.<sup>516</sup>

(iii) *Principle 3: The Principle of Equity*

The government of a country should emphasise regional and local balance in investment in agriculture. The collateral free general credit cards need to be extended especially to poor farmers. The public land distribution to genuine poor and landless farmers can be conditional on improving the environmental and ecological conditions of the land. The government should undertake gender-focussed and special programmes for small and marginal farmers,

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<sup>514</sup> Ibid.

<sup>515</sup> Ibid.

<sup>516</sup> Ibid.



tribal and disadvantaged groups and farmers in ecologically isolated areas.<sup>517</sup> Special support needs to be extended for their easy access to institutional credit and other agricultural inputs such as irrigation water, fertilisers and seeds.<sup>518</sup>

The judiciary can play a significant role in safeguarding intra-generational and intergenerational equity through speedy judgements addressing the equitable rights of the poor in benefit sharing and ordering fines and taxes from industries harmful to agricultural production.<sup>519</sup>

(iv) *Principle 4: The Precautionary Principle*

A regular survey on natural resource degradation and land and water quality mapping needs to be promoted. Universal use of soil health cards for the application of fertilisers and other nutrients would help protect natural resource degradation. There must be a mandatory mechanism for public disclosure of information on polluting activities of industries adjacent to agricultural lands.<sup>520</sup>

An EIA needs to be included in development projects at different stages of planning and policy implementation. Cumulative environmental impact assessments can be introduced for vulnerable regions along with an environmental performance index (EPI) for allocating funds to different agencies. In the application of bio-technology, especially genetically modified crops, the government should strictly follow the precautionary principle and accommodate social concerns in decision making. Early warning systems need to be institutionalised along with sensitisation of the farming community about the environmental concerns for risk management. The judiciary can also promote the precautionary principle considering this principle as a part of national law through explaining constitutional provisions and their relevance to internationally agreed sustainable development principles.<sup>521</sup>

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<sup>517</sup> Ibid.

<sup>518</sup> Ibid.

<sup>519</sup> Ibid.

<sup>520</sup> Ibid.

<sup>521</sup> Ibid.

(v) *Principle 5: Integration across Scales and Disciplines*

Integration has to be promoted at different stages of development planning as well as local and state level planning. Environmental issues and disaster management agendas should be incorporated into agricultural planning and decision making at all levels, along with the integration of climate change impact assessments and environmental impact assessments. The conjunctive use of surface and groundwater is to be promoted along with watershed management and coastal zone management. IPM practices need to be applied along with integrated nutrient management and natural resources management.<sup>522</sup>

The integration of programmes of agriculture and other sectors, such as village and small industries and flood management, need to be pursued through strong partnerships between different departments of government. There is also a need to blend local and national level knowledge, along with traditional and frontier technologies in the conservation and planning and management of resources. The ecological protection activities need to be integrated with livelihood development and group based cultivation could be promoted as an integrated approach for agricultural development.<sup>523</sup>

(vi) *Principle 6: The Principle of Good Governance*

The development projects including projects for sustainable development of agriculture need to be prepared properly and pre-investment planning is needed before initiating large individual projects. There is need to strengthen local level institutions and promoting grassroots planning to minimize the shortcomings in top down planning. Large scale projects' implementation and evaluation can also be monitored by an independent unit along with social audits and parliamentary oversight.<sup>524</sup>

An expenditure restructuring plan may facilitate avoiding an expenditure glut in the last quarter of the fiscal year. Moreover, the retention of key officials in project management can improve implementation. The leakage in incentive distribution, and any other irregularities, can be minimized through the use of unique ID numbers with the biometrics of the ID holders

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<sup>522</sup> See, for detailed discussion, section D 2 and E 4 of chapter V of this thesis.

<sup>523</sup> Ibid.

<sup>524</sup> Ibid.

so that incentives are directly channelled to eligible beneficiaries. Wider use of e-governance, especially in the award of government contracts and regular monitoring involving elected representatives are also important for the improvement of governance. The law about right to information needs to be enforced to facilitate transparency, accountability and addressing corruption at different levels.<sup>525</sup>

A comprehensive monitoring mechanism is needed for constant monitoring of critical conditions of the natural environment involving government agencies, people's organisations and local government institutions. The intellectual property rights in the agriculture sector can be facilitated by the law for the protection of rights of farmers and prevent the misappropriation of indigenous knowledge of communities.<sup>526</sup>

The institutional innovations such as community managed sustainable agriculture programmes and use of information communication systems and geographical information systems can be effective for streamlining local plan formulation, appraisal, approval and monitoring of planned development. The right to service including a grievance redress mechanism needs to be pursued through law along with penalties and efficiency improvement provisions.<sup>527</sup>

(vii) *Principle 7: Right to Participative Processes and Access to Information and Justice*

Consultative planning through a group based approach with the assistance of a facilitator may help coordinate citizen participation in the planning process. The participation of farmer organisations at different levels of project implementation including sharing information on schemes and budgets and social auditing can also be promoted with the introduction of legislation.<sup>528</sup>

The provision for mandatory public disclosure of information in the right to information related law can encourage environment-friendly production by the private organisations. The facilitation of citizen participation in the conservation of natural and genetic diversity can be

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<sup>525</sup> Ibid.

<sup>526</sup> Ibid.

<sup>527</sup> Ibid.

<sup>528</sup> Ibid.

promoted through incentives. NGOs can also facilitate participatory planning and implementation however there is a need to protect a creation of a patron–client relationship between the NGOs and citizens.<sup>529</sup>

A citizen’s right to justice can be facilitated through the establishment of a special tribunal for the effective and expeditious disposal of cases relating to environmental protection and the conservation of natural resources.<sup>530</sup> The right of access to justice could be extended by waiving the formal requirements for case submission in public interest litigation and reducing the costs of courts.<sup>531</sup>

The examples illustrated above from the sustainable agricultural practices of different countries and the SDA planning frameworks of India could play a guiding role along with other measures for the promotion of SDA in Bangladesh. These examples are consistent with the promotion of SDA in Bangladesh with adjustments to accommodate them into the country’s legal, socio-political and economic context.

### *I Conclusion*

The promotion of the development of agriculture as a priority area has been pursued through planning processes since the beginning of development planning in Bangladesh. The agendas to pursue for the development of agriculture have changed over the generations. Now, the agenda of promotion of sustainable development of agriculture (SDA) depends not only to continuation of production, but also to persuasion of ecological protection, improvement of livelihoods and promotion of equity, governance and participation in an integrated manner.<sup>532</sup>

The government initiatives for the development of agriculture in Bangladesh have in some cases addressed a part of these agendas.<sup>533</sup> There are however major gaps in the areas of legislation along with weak enforcement of laws, gaps in policies, improper planning and limited monitoring as well as low coordination between concerned departments.<sup>534</sup> Studies

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<sup>529</sup> Ibid.

<sup>530</sup> Ibid.

<sup>531</sup> Ibid.

<sup>532</sup> *Constitution of the People’s Republic of Bangladesh*, arts 16, 18[A].

<sup>533</sup> Government of the People’s Republic of Bangladesh, Planning Commission, above n 13, 268, 272-276, 416.

<sup>534</sup> Khalequzzaman, above n 234; Alam, above n 234; Khan and Belal, above n 261.

found gross implementation deficit,<sup>535</sup> structural weaknesses and very low progress in practicing some ecologically suitable practices.<sup>536</sup> The imbalance between targeted and non-targeted safety net programmes is coupled with absence of effective monitoring and evaluation mechanisms.<sup>537</sup> The disconnection between climate change planning and regular development planning is experienced along with non-integration of climate change issues with the existing environmental legislation and huge implementation deficit at grassroots level.<sup>538</sup>

The studies have also found that the SD agenda of the country faces implementation challenges due to inadequate institutional support and poor governance.<sup>539</sup> Citizen participation process is identified as ornamental,<sup>540</sup> and political reluctance and bureaucratic resistance are considered as major challenges to people's participation in the development planning process.<sup>541</sup> The options to challenge governmental policy decision or laws under judicial review are expensive and a post action judicial remedy does not bring desired results.<sup>542</sup> The judicial decisions for environmental protection are not supported through effective and timely implementation by the executives.<sup>543</sup>

Given the previously conducted limited number of studies have identified fewer number of the gaps in a discrete manner; this research identified major grey areas in a comprehensive manner and discussed them under general and specific terms of development planning and SDA principles. It is found that the planning agenda suffers from inconsistency in prioritization and implementation<sup>544</sup> along with the inconsistent commitment in rationalisation of subsidies.<sup>545</sup> The agriculture sector suffered from large mismatch in the projection of allocation and real investment in the sector.<sup>546</sup>

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<sup>535</sup> Hasan, above n 218.

<sup>536</sup> Kabir and Ruslan, above n 244; Mohiuddin, above n 245.

<sup>537</sup> Osmani, above n 314; Government of the People's Republic of Bangladesh, above n 312, xx.

<sup>538</sup> Asia Foundation, above n 391; Rabbani, above n 391; Alam et al, 362; Chowdhury, above n 362.

<sup>539</sup> Asadullah, Savoia and Mahmud, above n 392; Swapan, above n 416.

<sup>540</sup> Razaque, above n 400, 414; Mohammad, above n 412.

<sup>541</sup> Asaduzzaman, above n 414.

<sup>542</sup> Chowdhury, above n 363.

<sup>543</sup> Ahmed above n 265, Rabbani, above n 265, 44-45.

<sup>544</sup> See, eg, Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 266-276, 417-422.

<sup>545</sup> See, the discussion above in section F 1(a)(i) *Land and Soil* of this chapter.

<sup>546</sup> Government of the People's Republic of Bangladesh, Planning Commission, above n 13, 258 Table 4.1.

The plan preparation process lacks a definitive procedural mechanism, runs on an ad-hoc basis and lacks any vetting from the national parliament.<sup>547</sup> The decentralisation approach is not complete and the national planning process does not have any decentralisation effect.<sup>548</sup> The centralised and limited capacity for monitoring and taking remedial action is also coupled with the absence of any local level monitoring mechanisms.

The above mentioned limitations are some of the areas that have been identified in this chapter that need interventions for effective promotion of SDA in Bangladesh. Moreover, there are specific gaps in promoting the seven principles of SDA in Bangladesh. These gaps have also been discussed in this chapter that include weaknesses in legislation, policies and practices to address ecological protection, overexploitation of natural resources and promotion of environmental improvement activities.<sup>549</sup> The weaknesses are also found in addressing poverty, employment, safety net and livelihood development.<sup>550</sup> There are gaps in addressing equity as programmes facilitating the gender equity in agriculture face implementation challenges.<sup>551</sup> It is found that the declining inequality in wages is not supported through safety net programmes.<sup>552</sup> The low prioritised EIA process suffers from lack of strict legislative control and procedural improvement.<sup>553</sup> Precautionary measures are not usually integrated with regular activities and have limited focus.<sup>554</sup> The weaknesses are found in integration of national and local level planning, public sector and NGO activities,<sup>555</sup> and between medium-term plans and medium-term budgets.<sup>556</sup>

The project selection in many cases suffers from political choice over technical feasibility. The monitoring and evaluation activities lack civil society and joint monitoring mechanisms of development activities. The anti-corruption drives do not usually give any special attention to development activities. The government does not have any rights based regulatory mechanism for facilitating the citizens' unhindered access to government services. The right to information law is simply used as an instrument for information dissemination purposes. The existing flexibility concerning standing requirements in writ

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<sup>547</sup> See, the above discussion in section G 2 of this chapter.

<sup>548</sup> Ibid.

<sup>549</sup> See above discussion in section G 3 of this chapter.

<sup>550</sup> Ibid; See above discussion in section F 1(b) of this chapter; See above discussion in section G 3 (a)(iii).

<sup>551</sup> See above discussion in section G 3 (a)(iii); See above discussion in section G 3(a)(iv).

<sup>552</sup> See above discussion in section F 1(c) of this chapter.

<sup>553</sup> See above discussion in section F 1 (d) of this chapter.

<sup>554</sup> Ibid.

<sup>555</sup> See above discussion in section G 3 (b)(i) of this chapter.

<sup>556</sup> Ibid.

petition submissions in public interest litigation is yet to accommodate flexibility in observing procedural formalities.

In addition to gaps identified by different scholars and through this research, the experience of different countries in pursuing sustainable agricultural practices and their shortcomings, planning processes in India for the promotion of SDA have also broadly presented some examples that are examined in Bangladesh perspective. These reviews have provided a context for articulating the recommendations about reform in development planning frameworks of Bangladesh for the promotion of SDA. The next chapter presents the recommendations in this respect and emphasis is given to major agendas necessary to promote sustainable development of agriculture in Bangladesh.

## CHAPTER VII

### RECOMMENDATIONS FOR TRANSFORMATION IN DEVELOPMENT PLANNING FRAMEWORKS FOR PROMOTION OF SUSTAINABLE DEVELOPMENT OF AGRICULTURE IN BANGLADESH

#### *A Introduction*

Given the state responsibility to pursue SD through development planning frameworks, the promotion of the SDA in Bangladesh has gained momentum with the adoption of inclusive planning agendas over the present decade. The government has been supporting this sector to facilitate food security as well as improving the livelihoods of the people. The nature and volume of support varies along with the mode of delivery over different decades. However, the government interventions are directed to promote some forms of development of this sector that primarily concentrate on production increases and productivity improvement.

This government's promotional activities in the form of direct support, such as subsidies, along with indirect support, such as varietals development, have resulted in significant improvement in production in food grains that has helped Bangladesh to attain food security.<sup>1</sup> The progress in poverty alleviation, employment generation and livelihood development have also been encouraging in recent decades against increasing income inequality. However, when agricultural development is reviewed in a sustainable development context, limitations are found in interventions in substantive areas such as ecological integrity, equity and the application of a precautionary approach in addressing the risks to agriculture. Additionally, more limitations are found in procedural issues in the area of governance and public participation where extensive improvements are necessary. However, the critical problem lies in integration of different agendas including climate change and its implementation in pursuing the common goal of SDA.

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<sup>1</sup> Government of the People's Republic of Bangladesh, Planning Commission, *Seventh Five Year Plan (2016-2020)* 258.



The last chapter presented the shortcomings in promoting SDA in Bangladesh in light of seven principles of SDA. This chapter addresses the sixth research question. What changes will be necessary in development planning frameworks to promote future sustainable development of agriculture in Bangladesh? The answer to this question will guide the reform agenda for transformation in SDA planning approaches. These recommendations have been prepared in light of identified SDA principles, approaches and principles of SD and planning, the sustainable agricultural approaches of different countries, SDA planning approaches of India as well as good examples of different initiatives of the government of Bangladesh. The reform proposals have relevance to plans, policies and legislation that directly, and indirectly, impact the planning for SDA. Given the unitary form of government in Bangladesh and the dominance of a central planning approach, the recommendations will primarily focus on addressing the gaps in central level planning approaches and its integration with local level planning frameworks. Longer term transformation proposals must include reforms in the local level planning frameworks, as effective implementation of SDA principles depends on appropriate local level planning because of the local nature of the agriculture sector.

The proposed reform proposals suggested for interventions in central and local level planning frameworks are mostly medium to long-term measures that could be implemented in three to ten years' time, though some short term measures are also suggested that can be pursued immediately. Nevertheless, there are some agendas that are relevant to the reform of core planning processes, as it is necessary to streamline the overall planning frameworks under which SDA planning is practiced. These reforms will guide the SDA planning in the agriculture sector. This reform proposal for the general planning issues includes approaches and processes such as synchronising the planning frameworks with international planning approaches and SD perspectives. Other reform measures are categorised in accordance with the seven principles of SDA that are necessary for promotion of sustainable development of agriculture in a holistic manner. Crucially, they are interlinked and they need to be pursued in an integrated manner. This chapter will conclude with a brief discussion of the challenges in the implementation of reform proposals and the potential remedies, along with further areas of research in the field of SDA promotion in Bangladesh.

## B General Recommendations for Development Planning Frameworks

### 1 Development Planning Approach

Given that the inclusive approach has been adopted in indicative planning frameworks of the country,<sup>2</sup> the development planning approaches adopted by the government of Bangladesh have not completely embraced the dominant approaches of recent planning discourse.<sup>3</sup> In the context of these shortcomings in the planning approaches, this research recommends two reforms in planning approach.

Firstly, the indicative planning approach needs to be evaluated and adjusted to realign the structure, volume and governance of incentives and programmes for promotion of sustainable development along with appropriate policy and legislation.<sup>4</sup> The coordination between public and private sector has to be promoted, along with appropriate selection of development sectors, in light of Bangladesh's comparative advantage and greater interest of the country in association with broader community consultation. The agriculture sector has to be at the centre of sustainable development goals of Bangladesh to address the risk of ecological degradation, food insecurity, poverty alleviation and livelihood improvement and equitable development of poor farming communities. The promotional measures in the agriculture sector need to be adjusted to accommodate the future challenges to exploit the benefits from world trading mechanisms.

Secondly, in order to promote the inclusive planning approach, the present planning approach of the government should incorporate three planning ideologies: communicative, rational and incremental (CRI) approaches in an integrated manner. These approaches need to incorporate some components of other planning approaches, such as innovation and dialogue as a basis for mutual learning between planners and client groups that are considered key to social or transactive planning.<sup>5</sup>

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<sup>2</sup> Ibid xlvii.

<sup>3</sup> See, for detailed discussion, this thesis, sections B 2 and B 3 of chapter III and sections C, D, E, G of chapter VI.

<sup>4</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, *Transformation of Agriculture for Sustainable Development and Poverty Alleviation in Bangladesh: Actionable Policies and Programmes* (2006) 5.

The recommendation proposed in this thesis for reform in indicative planning process of Bangladesh development planning frameworks is consistent with policy recommendations prescribed for agriculture sector.

<sup>5</sup> See, for detailed discussion, this thesis, sections B 2 and B 3 of chapter III and sections C, D, E and G of chapter VI.

The communicative planning approach in this case can include people centric inclusive planning that promotes collaboration, or deliberation, depending on the nature of the agenda. The planners need to play an advocacy role for effective citizen participation in the planning process and to promote innovation through mutual learning between planners and client groups. The rational planning approach in this case can promote development by evaluating potential options in an objective manner in light of their consequences and include participation and alternative options to respond flexibly to new situations. While the planners will frame the political aspirations in the planning frameworks, the selection of programmes should be based on objective and rational choices, which are based on different appraisal mechanisms, such as cost-benefit analysis, environmental impact assessment, social impact assessment and climate change impact assessment. Moreover, the incremental planning approach is proposed to be applied in planning frameworks, based on solid evidence explored through monitoring and evaluation. Since SD agendas need interventions in different aspects that have a long term orientation, the incremental planning approach could deliver shorter term benefits for Bangladesh.<sup>6</sup> However, in this case, incremental planning has to consider available alternative options for SD, rather than limited arbitrary agendas.

Given that the proposed ideologies discussed above are partially applied in Bangladesh planning frameworks, the visible gaps in planning approaches need to be minimised through reform in the planning processes. These issues are discussed below, along with other reform agendas in substantive areas of development planning. While some reforms are proposed in regulatory aspects of development planning frameworks, many of these recommendations are relevant to policy reforms in the development planning frameworks.

## *2 General Procedural Aspects of Development Planning*

The planning process at the central level requires a national mandate to address integrated and large scale issues of SD and SDA, such as the promotion of ecological integrity, the integration of environmental and climate change agendas, the integration of development interventions across sectors and geographical scales, governance, participation and access to justice.<sup>7</sup> The legislative provisions for local level planning need to be mandated through national orientation and integration of local level planning processes with central processes.

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<sup>6</sup>See, detailed discussion in section B 2, B 3 and C of chapter III of this thesis.

<sup>7</sup>See, detailed discussion in Section B 3 and C and E 2 of chapter II, section C and E 2 of chapter III, section F 2 of chapter IV, section E 3, 4 of chapter V and section H of chapter VI of this thesis.

(a) *Legislative Mandate to Development Planning Frameworks*

In respect to addressing the mandate issue, the following recommendations can advance effective promotion of development planning in Bangladesh.

- The mandate for overall planning given in the constitution of Bangladesh has to be interpreted for the effective promotion of planning processes and to institutionalise the procedural issues.<sup>8</sup> The government can do this through enacting a framework law for all types of development interventions management, followed by some implementing legislation or rules for different aspects of development planning frameworks - policy planning, programme planning, project planning, project implementation, project monitoring and evaluation. This framework law would be legislation that will interpret the constitutional provisions about development planning in broad terms to make them operational in practice.<sup>9</sup>
- This framework law can incorporate the SD principles to follow for development planning of existing three different funding streams – development budget funding streams, programme funding streams from non-development budget and climate change project funding streams. Any future funding stream can be operated under this framework law. Given the SDA principles are completely aligned with SD principles, the inclusion of SD principles in the proposed framework law will promote SDA planning.
- The sectoral priorities for SDA can be reflected through updating the existing policies, plans and legislation by the relevant ministries. The procedural issues for managing development interventions, such as programming for budget allocation, appraisal and approval of projects, implementation, monitoring and evaluation can be guided separately through implementing legislation, or rules, prepared under this framework law.<sup>10</sup>

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<sup>8</sup> *The Constitution of the People's Republic of Bangladesh*, art 15, 16.

<sup>9</sup> Food and Agriculture Organization of the United Nations (FAO), 'Guide in Legislating for the Right to Food' (2009)4 quoted in Food and Agriculture Organization of the United Nations (FAO), *Constitutional and Legal Protection of the Right to Food around the World* (2011)30 .

The term 'framework law' in this case refers to -

A legislative technique used to address cross-sectoral issues. Framework legislation lay down general principles and obligations, and leaves it to implementing legislation and the competent authorities to determine specific measures to be taken so as to realize such obligations.

<sup>10</sup> Government of England, *The National Planning Policy Framework* (2012)

< <https://www.gov.uk/government/publications/national-planning-policy-framework--2>>.

- Preparing or amending the implementing legislation can be left to concerned institutions – the Planning Commission, Finance Division and Ministry of Environment and Forests to determine specific provisions for internalisation of general guidelines in specific fund management legislation.
- This framework law should also interpret the planning mandate provided in the Constitution of Bangladesh for local level development and integration of central planning with procedural issues already institutionalised through local government development rules.
- The communicative planning approach can be incorporated under the proposed framework law through incorporating the provisions for effective public participation and planners’ advocacy role in the development planning process. The facilitation of public participation needs to be followed up in the implementing legislation as a mandatory agenda for central and local level planning. The Indian and English examples of legislative provisions for community participation in the decentralised planning process and environmental decision making respectively can be used in this respect.<sup>11</sup> There is a strong need to extend the participation agenda at central level planning for better alignment with local level planning. The local level planning also needs to be modified to incorporate provisions for facilitating wider participation in already enacted local development rules, especially in the UZP development fund utilization guidelines.<sup>12</sup> The legislative provisions should incorporate the collaboration or deliberation approach for the appropriate inclusiveness, including specific provision for vulnerable people’s participation and their capacity building and information sharing.

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The preparation of proposed framework law can also be guided by the *National Planning Policy Framework* of England that contains the mandatory provisions for promotion of sustainable development.

<sup>11</sup> *The Constitution (Seventy-fourth Amendment) Act 1992* (India); *The Constitution (Seventy-third Amendment) Act 1992* (India); Government of India, Ministry of Urban Development, *Model Nagar Raj Bill* (2006) < [ccs.in/sites/default/files/Misc/NagaraRajBILL.pdf](http://ccs.in/sites/default/files/Misc/NagaraRajBILL.pdf)>; *Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters* opened for signature 25 June 1998 [1998] (entered into force 30 October 2001) popularly known as Aarhus Convention.

The Indian legislative provisions promote citizen participation in development decision making process, while the *Aarhus Convention* promotes citizens’ participation in environmental decision making process in England.

<sup>12</sup> Government of the People’s Republic of Bangladesh, Local Government Division, উপজেলা পরিষদ উন্নয়ন তহবিল ব্যবহার নির্দেশিকা [Upazila Parishad Development Fund Utilization Guidelines]( memo no Upa-2/M-02/2010/1252, 28 April 2010)[2, 12].

### *(b) Reforms in Development Planning Frameworks*

The six areas of development planning frameworks also need the following adjustments to make them competent to promote SD through the development planning processes.

#### *(i) Policy Planning*

Considering the political element of development plans, the substantive planning agendas need to be flexible for decision making by the policy makers. However the plan preparation process needs to be guided through principles and hard law to avoid fragmented approaches and to institutionalise the process. The policy and strategy preparation process at ministry or division level can also follow these approaches.<sup>13</sup> In this case, parliamentary vetting needs to be incorporated in the case of approval of plans and policies.

#### *(ii) Programme Planning*

Programme planning and allocation of funds against projects from three different funding streams can be left to the institutions managing the funds. However, the development programmes of a year need to be integrated in the annual development budget prepared by the Programming Division of the Planning Commission. This integration task needs to be given to the Programming Division of the Planning Commission. The programme planning needs to be improved through stringent procedures for project inclusion in the annual programmes, justifying the budget and its consistency with the completion of projects. There is a need to have a priority ranking for projects of ministries consistent with the priority in plans so that the budget allocation can also follow the same priority and avoid power structure dominated arbitrary allocations to proposals. There is also a need to have synchronisation between local and national level planning. The annual budget given to the local level has to be consistent with the area's specific demands and based on vulnerability in terms of poverty and ecologically critical areas.

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<sup>13</sup> Presently, there is no guideline for plan or policy preparation. However, the *Secretariat Instructions 2014* of the government of Bangladesh advises the ministries to follow the guidelines of the Ministry of Planning in this respect. Therefore, a legally mandated guideline is necessary to guide the plan, policy and strategy preparation process.

### (iii) *Project Planning*

In respect of project planning, the two key processes of project appraisal and project approval need to be modified. The project appraisal task of different streams<sup>14</sup> at central level can be guided through the existing project processing guidelines of the government with minor modifications. The project cost could be the indicator defining the appraisal authority, irrespective of funding streams and the nature of project. There is also a need to have an option to include experts from outside the government for appraisal of the highly technical projects. Multiple project approval authorities could be involved as presently practiced, such as approval for small projects can be vested to the concerned minister, medium sized projects to the Planning Minister and large projects to the ECNEC headed by the Prime Minister.<sup>15</sup>

In respect of project selection, the rational planning approach needs to include an objective project selection process incorporating a stringent appraisal process including mandatory environmental, climate change and social impact assessments, especially for large projects. The local level planning process needs to have a rational planning process to objectively select and appraise the projects. The incremental planning approach can be followed during project preparation to promote evidence based and locally suitable programme selection in accordance with long term goals of development planning. While climate change related projects have been addressing long term problems, the duration for climate change projects should have flexibility to address long term agendas, especially for the agriculture sector to accommodate agricultural research agendas that usually need longer periods to produce results.

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<sup>14</sup> Government of the People's Republic of Bangladesh, Ministry of Agriculture, *Budget of Ministry of Agriculture* <<http://moa.gov.bd/site/page/b900c488-2b2a-4bee-a98a-14ac5bff9046/কৃষি-মন্ত্রণালয়ের-বাজেট>> 59.

<sup>15</sup> Moreover, the small and medium size climate change projects can follow the existing approval authority at the Ministry of Environment and Forests in coordination with the delegation of authority about national level project approval. The Minister in charge of the Ministry of Environment and Forests can be delegated the similar power to the Planning Minister in respect to approval of medium size climate change projects only. The large climate change projects need to be sent to ECNEC for approval as practiced for other projects. In respect to non-development budget funded projects, the approval authority for medium size projects could be the Minister in charge of Finance. However, approval authority for large projects can be the ECNEC as practiced for development budget funded projects.

(iv) *Project Implementation*

In respect of project implementation, the project document basically indicates how the project will be operated. The operational procedure may vary from project to project. Therefore, rules prepared could have only relevance to some general aspects of project implementation, such as integrity and governance in project management, including procurement, project personnel and maintenance of project assets. The rules should have a reference to existing procurement laws and other relevant rules. The planning procedure can also follow a programmatic approach instead of a discrete project approach for better integration of strategic SD priorities and to avoid duplication. An expenditure plan needs to be introduced for avoiding an expenditure glut.<sup>16</sup>

(v) *Project Monitoring and Evaluation*

In respect of project monitoring and evaluation, the Implementation Monitoring and Evaluation Division should be given a mandate to monitor all development activities of the government irrespective of funding streams. Their existing legal mandate needs to be revised to make it consistent. There should be coordination between the Auditor General's office and Anti-Corruption Commission on monitoring purpose. The IMED needs to be empowered to refer irregularities to the Anti-Corruption Commission and Programming Division and other fund allocating agencies of the government to take necessary action. The civic monitoring and other instruments for local level monitoring need to be included in the allocation of business of the IMED apart from central level result based monitoring.<sup>17</sup> This organisation also needs to be expanded at local level for close monitoring of central projects, as well as to monitor the local level development activities of local governments. The Ministries and its subordinate agencies should also include development activities monitoring in their regular activities and assign specific officers to do this. The evaluation task needs to be clearly included and funded in the projects and plans. The evaluation should also be used for taking follow up projects and evidence based planning. The sectoral assessment also needs to be incorporated as regular business of the government to monitor the progress of the sector against set targets.

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<sup>16</sup> See section E of chapter five of this thesis for detailed discussion.

This proposal is consistent with Indian approaches.

<sup>17</sup>Ibid.



Finally, the capacity of institutions engaged in the planning process needs to be developed along with motivation to address SDA in an integrated manner. The capacity and authority gaps at different levels of government also need to be minimised with a revision of the delegation of power of the government.

*(c) Contextual Justifications for a Framework Law and Implementing Legislation in Bangladesh*

The proposal for enacting a framework law for development planning and implementing legislation is not unusual in Bangladesh. There are laws and rules in respect to budget management, local government's development management, climate change fund management that can be the justification for this framework law.<sup>18</sup> This law is only interpreting the constitutional provisions that are necessary for transposing the vision of the Constitution into reality. The implementing legislation or rules proposed for different parts of development planning frameworks are also not an abrupt change. The existing processes followed by the government, without legislative provisions, are proposed to be included in these rules, with some modifications for effective governance of the planning process. In order to have consistency in planning over the periods and obligatory provisions to follow inclusive, rational and evidence based planning as well as a stringent appraisal process, there is a need to have some direct legislative foundation for the whole process. Participatory and inclusive planning should also not be purely discretionary, legislative frameworks are required for effective promotion of participation as seen in different countries.

This is consistent with the international commitment included in Agenda 21 that explains the regulatory reform needed for the promotion of SD through planning process.<sup>19</sup> FAO has also suggested such a framework law for operationalising the constitutional obligation. Although FAO's approach is limited to food security, this is a prime development goal of the government of Bangladesh and SDA is the most critical element to address food security, poverty alleviation and livelihood improvement of citizens. The justification for a framework law is based on the right to SD for effective transposition of constitutional mandate of

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<sup>18</sup> ইউনিয়ন পরিষদ (উন্নয়ন পরিকল্পনা) বিধিমালা ২০১৩ [Union Parishad (Development Planning) Rules 2013](Bangladesh); অর্থ ও বাজেট ব্যবস্থাপনা আইন ২০০৯ [Finance and Budget Management Act 2009](Bangladesh); দুর্যোগ ব্যবস্থাপনা আইন ২০১২ [Disaster Management Act 2012] (Bangladesh) Act No 34 of 2012; জলবায়ু পরিবর্তন ট্রাস্ট আইন ২০১০ [Climate Change Trust Act 2010] (Bangladesh) Act No 57 of 2010.

<sup>19</sup> *Agenda 21: Programme of Action for Sustainable Development*, UN GAOR, 46<sup>th</sup> sess, Agenda Item 21, UN Doc A/Conf.151/26 (14 June 1992)[8.13]-[8.15], [10.7].

development planning into practice.<sup>20</sup> The National Planning Policy Framework (NPPF) is also an example that is applied in English planning process for promotion of SD.<sup>21</sup> This NPPF is mandatorily followed in the preparation of local and neighbourhood plans, and ‘is a material consideration in planning decisions.’<sup>22</sup> This framework works in coordination with sectoral planning laws and national policy statements for nationally significant projects.<sup>23</sup> The NPPF could be a useful example to promote the legislative framework for sustainable development in Bangladesh.

### *3 Inclusion of Priority Substantive Issues and Direction for Promotional Measures in Development Planning*

- The appropriate assimilation of priority agendas under the broad category of principles of SDA needs to be based on evidence based planning depending on the critical conditions of different regions of the country.<sup>24</sup>
- The agricultural plans must be prepared along with prioritisation so that the projects are prepared based on priorities identified in agricultural plans. Arbitrary selection and departmental power structures should not influence the project selection process. There is also a need to customise the SDGs agreed at the United Nations in 2015 and include them as sustainable development goals in the planning documents of the government, both at central and local level, especially in the context of agriculture.

### *4 Eliminating Inconsistencies in Development Planning*

- Given that the removal of inconsistencies in substantive issues in planning is an urgent issue, the government should consider revisiting different sectoral and national plans as well as local plans in order to make them consistent with each other.

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<sup>20</sup>Food and Agriculture Organization of the United Nations (FAO), *Constitutional and Legal Protection of the Right to Food around the World* (2011)30.

<sup>21</sup> Government of the United Kingdom, Department for Communities and Local Government, *National Planning Policy Framework* (2012)1-3; *The Town and Country Planning (Local Development) (Amendment) Regulations 2008* (England) 2008 No. 1371; *Planning and Compulsory Purchase Act 2004* (England).

<sup>22</sup> Government of the United Kingdom, Department for Communities and Local Government, *National Planning Policy Framework* (2012)1.

<sup>23</sup> Government of the United Kingdom, Department for Communities and Local Government, *National Planning Policy Framework* (2012)1; *National Policy Statement for National Networks* (2014) England.

<sup>24</sup> Government of the People’s Republic of Bangladesh, Planning Commission, *Seventh Five Year Plan* (2016-2020)268-276.

- The first major issue for consistency is agricultural subsidy rationalisation. This issue has largely been avoided in the national plan, though the latest business plan in the agriculture sector identified it as an important agenda. The issue is critical in planning for future interventions, as a dimension of direct subsidies for agricultural inputs will need to be changed to make them consistent with the WTO rules when the country graduates to a middle income country in a few years' time.
- There must be a clear and consistent planning about the future direction for assisting poor farmers through subsidising inputs that also prevent ecological destruction.<sup>25</sup>
- The inconsistency between national plans and budgets needs proper alignment through synchronisation of allocation between medium-term plans and medium-term budgets. The highly ambitious allocation in medium term plans has not yet become a reality, especially for the agriculture sector,<sup>26</sup> and it may not happen in the future.<sup>27</sup> Therefore, the mismatch between the projection of allocation and real investment needs to be adjusted for promoting allocative efficiency.

These reform proposals for inclusion of SD and SDA agendas in plan and policies and making plans and policies consistent can be accomplished in a year or two. The inclusion of agendas in planning documents and their prioritisation only requires the analysis of their present context and identification of future goals in consultation with stakeholders.

Having proposed improvements in the Bangladesh general planning frameworks, the following section will specifically propose some recommendations for the transformation of development planning frameworks to promote SDA. The recommendations will also have central and local level dimensions, as the improvements are necessary at both levels. These proposals are prepared in line with the principles of SDA identified in the fourth chapter, the experiences of other countries and more specifically the Indian experiences as well as good examples in Bangladesh and the researcher's observations.

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<sup>25</sup> For detailed discussion see section G of chapter six and section E of chapter five of this thesis.

<sup>26</sup> Government of the People's Republic of Bangladesh, Planning Commission, *Seventh Five Year Plan (2016-2020)* 258.

<sup>27</sup> Ibid 304,515; Government of the People's Republic of Bangladesh, Finance Division, *Medium Term Budget Framework (2015-2016)* < [http://www.mof.gov.bd/en/budget/15\\_16/mtbf/en/43\\_Ministry%20of%20Agriculture\\_English.pdf](http://www.mof.gov.bd/en/budget/15_16/mtbf/en/43_Ministry%20of%20Agriculture_English.pdf)>.

## *C Specific Recommendations for Accommodating SDA Principles in Development Planning Frameworks*

### *1 Substantive Principles*

#### *(a) Principle 1: Maintenance and Improvement of Eco-integrity, Biological Diversity and Improving Resource Use Efficiency*

SDA needs resource conservation and improvements in conditions for its continued use, the promotional activities have to be based on solid data and evidence. The government should take following measures in this respect.

- Prepare a comprehensive inventory of ecological resources including the status of agricultural land, water resources and biodiversity and update the inventory regularly in a participatory manner.
- Prepare a resource conservation plan for the agriculture sector as well as undertake soil and moisture conservation interventions through location specific in-situ practices through the institutionalisation of regular incentive programmes.<sup>28</sup>

The diversion of prime agricultural land and water bodies for other purpose and halting land degradation need to be addressed primarily through following measures.

- Bringing consistency in the definition of agricultural land based on a standard identified by the Ministry of Agriculture.
- Efficient implementation of the provisions of existing laws to prohibit changing the class of lands and the removal of top soil of agricultural lands for non-agricultural purposes.
- Taking the declaration of ‘no-change of land class’ from land purchasers during the land registration and adopting complementary policies, such as ‘no public utility connection in unapproved structures’.

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<sup>28</sup> For detailed discussion see section E of chapter V and section G and H of chapter VI of this thesis.

- The draft law for agricultural land use needs to be urgently enacted to control diversion as well as effectively use the land zoning approach.<sup>29</sup>
- The appropriate implementation of land reform laws,<sup>30</sup> including tenancy and land leasing, may be effective in land conservation by extending conditional land rights to the poor and the right to lease holdings to sharecroppers to keep the landscape unchanged.
- The acquisition of agricultural lands for development project implementation, and changing the class of agricultural lands in urgent cases, needs to legally require consultation with agriculture offices and farmers' groups at the local level.<sup>31</sup>
- The implementation of different laws relevant to agricultural land<sup>32</sup> has to be complemented with regular local level monitoring.
- Given the command and control policies necessary for effective implementation, there is a need to have strong political motivation, along with incentives for the poor farmers. The government should offer incentives for keeping the landscape unchanged, keeping its natural condition and soil fertility as well as rehabilitating ecosystems.<sup>33</sup>

In respect of water resources conservation and control over the withdrawal of groundwater and keeping the natural flow of water bodies, the policy recommendations include –

- Strict application of the existing laws of water body retention,<sup>34</sup> using the water level and natural water bodies mapping data for proper planning of conservation and

<sup>29</sup> খসড়া কৃষি জমি সুরক্ষা ও ভূমি ব্যবহার আইন ২০১৫ [Draft Agricultural Land Protection and Land Use Act 2015] (Bangladesh).

<sup>30</sup> *The Land Reform Ordinance 1984* (Bangladesh) Ordinance No X of 1984.

<sup>31</sup> খসড়া কৃষি জমি সুরক্ষা ও ভূমি ব্যবহার আইন ২০১৫ [Draft Agricultural Land Protection and Land Use Act 2015] (Bangladesh) art 4, 8, 10.

<sup>32</sup> মহানগরী, বিভাগীয় শহর ও জেলা শহরের পৌর এলাকাসহ দেশের সকল পৌর এলাকার খেলার মাঠ, উন্মুক্ত স্থান, উদ্যান এবং প্রাকৃতিক জলাধার সংরক্ষণ আইন ২০০০ [Conservation of playing field, open space, park and natural water bodies of all municipal areas including large city and cities of Divisions and District Act 2000] (Bangladesh) Act No 36 of 2000; ইট প্রস্তুত ও ভাটা স্থাপন (নিয়ন্ত্রণ) আইন ২০১৩ [Brick Making and Vata Establishment (Control) Act 2013] (Bangladesh) 59 of 2013; Government of Bangladesh, Ministry of Land, *National Land Policy* (2001).

<sup>33</sup> For detailed discussion, see section D 1 and E of chapter V and section H of chapter VI of this thesis.

Common Agriculture Policy provisions in England have similar provisions to incentivise the farmers for keeping landscape unchanged.

<sup>34</sup> মহানগরী, বিভাগীয় শহর ও জেলা শহরের পৌর এলাকাসহ দেশের সকল পৌর এলাকার খেলার মাঠ, উন্মুক্ত স্থান, উদ্যান এবং প্রাকৃতিক জলাধার সংরক্ষণ আইন ২০০০ [Conservation of playing field, open space, park and natural water bodies of all municipal areas including large city and cities of Divisions and District Act 2000] (Bangladesh) Act No 36 of 2000.

conjunctive use of surface and groundwater, as well as operating incentive mechanisms.<sup>35</sup>

- Fixing the critical threshold for groundwater level in a participatory manner in line with the *Bangladesh Water Act 2013*.
- Linking permanent structures over the natural flow of water, and its direction change, with mandatory environmental impact assessment conditions, and
- The judgement of the Supreme Court of Bangladesh given in *Bangladesh Environmental Lawyers Association (BELA) and others v Metro Makers and Developers Limited (MMDL) and others* in respect to free flow of common water resources in light of public trust doctrine<sup>36</sup> should be adopted by the government in ensuring water resources conservation.

With the poor progress in surface water irrigation,<sup>37</sup> there is also need to promote wider retention of water in critical areas and watershed development through incentives for rehabilitation and retention of private and common water bodies, especially in agricultural fields. The conservation activities, including rainwater conservation, can be incentivised once the conservation schemes are registered for payment.<sup>38</sup>

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<sup>35</sup> বাংলাদেশ পানি আইন ২০১৩ [Bangladesh Water Act 2013] (Bangladesh) Act No 14 of 2013 art 19, 20.

<sup>36</sup> *Metro Maker and Developers Limited and Ors vs Bangladesh Environmental Lawyers' Association (BELA) and Others*, Civil Appeal No. 256 of 2009 with Civil Appeal Nos. 253-255 of 2009 and Civil Petition for Leave to Appeal No. 1689 of 2006.

The doctrine enjoins upon the Government to protect the resources for the enjoyment of the general public rather than to permit their use for private ownership or commercial purposes.

<sup>37</sup> Hamid Miah, 'Agriculture Sector Development Strategy' (Background paper for preparation of the Seventh Five Year Plan of the government of Bangladesh, 2015)7.

<sup>38</sup> See, for detailed discussion, section C of chapter IV of this thesis and see *Regulation (EU) No 1307/2013 of the European Parliament and of the Council of 17 December 2013 establishing rules for direct payments to farmers under support schemes within the framework of the common agricultural policy and repealing Council Regulation (EC) No 637/2008 and Council Regulation (EC) No 73/2009* [2013] OJ L 347 608–670.

This reform can follow the examples of a direct payment to registered farmers from Basic Payment Scheme initiated under Common Agriculture Policy of the European Union in different European countries including England.

In order to improve irrigation efficiency,<sup>39</sup> address salinity and water logging the recommendations include –

- Promotion of adopted modern irrigation methods along with maintenance of an irrigation infrastructure through regular incentives and awareness building programmes.
- The separation of electricity feeders and stricter scheduling of electricity to control the over withdrawal of groundwater.
- Promotion of the varieties improvement research along with integrated water pricing mechanisms and water resources management projects in close coordination with local level institutions of different ministries, such as Ministry of Agriculture, Ministry of Water Resources, Power Division and Local Government Division of the government.

In respect to soil fertility management, the recommendations are as follows:

- Universal distribution of soil health cards by the government along with a soil and moisture conservation programme.
- The lease contract of sharecroppers should contain a soil fertility test and a fertility maintenance clause so that they try to maintain soil fertility to avoid any penalty at the end of lease.
- The irregular soil fertility improvement programmes of the government have to be made regular and integrated with the development activities of the Ministry of Agriculture.<sup>40</sup>

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<sup>39</sup> Government of the People's Republic of Bangladesh, Planning Commission, *Outline Perspective Plan* (2010)56; Mohammad H. Mondal, 'Crop Agriculture of Bangladesh: Challenges and Opportunities' (2010) 35(2) *Bangladesh J. of Agril. Res.* 238 quoting Z. Karim. 'Accelerated Agricultural Growth in Bangladesh' (Paper presented in seminar on Agricultural Research on Development in Bangladesh, Bangladesh Agricultural Research Council, 1997).

<sup>40</sup> For detailed discussion, see sections C and F 1 of chapter IV, sections D1 and E 4 of chapter V and sections G and H of chapter VI of this thesis.

While the overuse of chemical fertiliser has been partly responsible for soil degradation, the government should take following steps:

- Introduce a nutrient-based fertiliser subsidy (NBS) system that could help balance the use of chemical fertiliser.<sup>41</sup> However, this policy has to be complemented with a subsidised organic or bio-fertiliser production and marketing system to make them competitive against low priced chemical fertiliser.
- Promote agro-forestry through incentives as a part of subsidy for ecological protection by the government.<sup>42</sup>
- Control the production and marketing of adulterated fertiliser. The existing law on fertiliser control needs to be revised to empower agriculture officials to directly impose a penalty for an offence in respect to fertiliser adulteration.<sup>43</sup>

In respect of biodiversity conservation, the government interventions should include the following steps:

- Prepare a participatory biodiversity register (PBR) for assimilating traditional ecological knowledge and practices about conservation. The generational transfer of seeds needs to be promoted along with controlling seed quality through amending the existing punitive provisions for adulteration in seeds.
- Introduce direct incentive based in-situ conservation at farmers' level through incorporating this provision in the rules to be prepared for implementation of draft biodiversity law.<sup>44</sup>

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<sup>41</sup> Ibid.

<sup>42</sup> Ibid.

<sup>43</sup> Ibid; সার (নিয়ন্ত্রণ) আদেশ ১৯৯৯ [Fertiliser (control) Order 1999] (Bangladesh) art 8-13.

<sup>44</sup> For detailed discussion, see sections C and F 1 of chapter IV, sections D1 and E 4 of chapter V and sections G and H of chapter VI of this thesis.



In order to reduce the disastrous effects on biodiversity from the use of pesticides, there is a need to take following measures by the government:

- Institutionalise a periodic review of the impact of pesticide use and its residual effects on food and health, and the results need to be disseminated widely.<sup>45</sup>
- Subsidise bio-pesticide and other integrated pest management mechanisms to control the use of chemical pesticides.
- Safe practice has to be promoted for pesticide use so that it does not harm others, while village courts can handle the cases of damage from pesticide use, such as damage to aquaculture due to irresponsible pesticide use.<sup>46</sup>

Given the low or zero allocation of funds for ecological protection, the government should consider establishing a separate fund to support scientific research, technological and educational improvements for ecology protection, either from its own budget or from collecting funds by imposing consumption tax on fine rice and other high value agricultural products. This fund can finance ecosystem rehabilitation programmes.<sup>47</sup> The ecological improvement interventions can also include amending the procurement rules to include provisions for promoting green activities through allocating extra points for energy efficient and eco-friendly activities.

The abovementioned interventions proposed for ecological improvement are mostly medium-term policy agendas that can be implemented in three to five years, except some provisions, such as the introduction of a nutrient based subsidy system and soil fertility improvement programmes that have a long-term orientation. The implementation of these reforms mostly

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<sup>45</sup> Ibid.

<sup>46</sup> The Alternative Dispute Resolution Mechanism at local level can include such adjudication that can compensate the victims in the case of serious damage.

<sup>47</sup> For detailed discussion see section G 3 of chapter 6 of this thesis; The World Bank, *Pairing Agriculture with Technology* (2014) < <http://www.worldbank.org/en/news/feature/2014/06/23/pairing-agriculture-with-technology-in-bangladesh>> This can also mitigate the funding insufficiency in plan periods. This has relevance to funds created under National Agriculture Technology Project (NATP) of the Ministry of Agriculture, Government of the People's Republic of Bangladesh that had been supported by the World Bank.

lies with the central government with direct cooperation from the local governments, farmers' groups, NGOs and other stakeholders needed for their effective implementation. However, leadership has to be at the central government level to promote the reforms nationwide where stewardship is vital for coordination and integration.<sup>48</sup>

*(b) Principle 2: People centric Development for Addressing Poverty, Employment and Livelihoods*

Given the government's continued commitment and adoption of development interventions to address poverty, employment generation as well as the profitability of farming for a livelihood, the critical gaps in promoting people centric development by the government need the following interventions.

- The government assistance to different development interventions needs to be evaluated and aligned to promote SDA.
- Apart from direct poverty alleviation programmes, agricultural development programmes need to be included in the local development activities as well as safety net programmes on a priority basis with increased budgetary allocations. The government can also declare the minimum threshold and specifically identify relevant SDA activities including community based natural resource management in rural works and employment programmes.
- To address profitability concerns, the government's subsidy programmes need to be realigned and continued along with institutionalisation of an organic fertiliser subsidy by fixing the quality standards and credit support to this business.
- Apart from organic fertilisers, the discrete promotional activities for improved chemical fertiliser such as urea super granule need to be institutionalised.<sup>49</sup>

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<sup>48</sup> For detailed discussion see section C of chapter IV, section D and E of chapter V and sections G and H of chapter VI of this thesis.

<sup>49</sup> For detailed discussion see sections E and F 4 of chapter IV, sections D and E of chapter V and sections G and H of chapter VI of this thesis; Government of the People's Republic of Bangladesh, Ministry of Agriculture, *Medium Term Strategy and Business Plan* (2013)18.

- Fertiliser and pesticide testing kits can be supplied to selling points under a subsidy programme as well as to agricultural officials to detect any deficiency in standards.
- While the government provides incentives for integrated pest management and other bio-pest control mechanisms, it should avoid extending any incentives for herbicides for agricultural development activities.<sup>50</sup>
- A flat subsidy for irrigation needs an evaluation to address the declining groundwater levels and promote water efficient irrigation. The subsidy in irrigation can be conditional to the use of modern irrigation methods and high value water saving crop production in drought prone areas so that huge quantities of water are not withdrawn. However, in emergency situations the government subsidy can be directed to all small and marginal farmers for irrigation.

In order to address the resource constraints of farmers, the government should adopt following measures:

- The volume of support to poor farmers for low cost credit needs to be extended on a large scale, especially for sharecroppers and women farmers. The subsidised credit system for agriculture should be a single window credit scheme.
- Regular repayments can be promoted through providing extra discounts on interest rates as well as enhanced credit facilities afterwards. However, there is a need to have an option to completely waive the loans in case of a serious disaster.<sup>51</sup>
- The special subsidised credit also needs to be provided during harvesting periods so that farmers do not face distressed sales due to over production.
- The organic fertiliser, bio-pesticide, organic food production and post-harvest management activities should be promoted through subsidised credit facilities and an exemption from any taxes for at least their introductory period.<sup>52</sup>

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<sup>50</sup> For detailed discussion see sections E and F 4 of chapter IV, sections D and E of chapter V and sections G and H of chapter VI of this thesis.

<sup>51</sup> Ibid.

<sup>52</sup> Ibid; Government of the People's Republic of Bangladesh, Planning Commission, *Fifth Five Year Plan (1997-2002)*160.

In order to support the farmers in exploiting benefits from their outputs the government support should be adjusted in accordance with the following recommendations:

- The output support price provided by the public procurement system needs an overhaul to institutionalise a price stabilization fund for this purpose.
- There is also a need to introduce a prior procurement price declaration system. The public procurement system should use an online procurement system through mobile applications that have been used in sugarcane procurement in Bangladesh, with some adjustments for rice and wheat.
- The local purchase centres can be located at UPs so that farmers need not to carry their products a long distance.
- The administrative committee for this purpose should include agriculture officials and farmers' representatives so that the decisions are disseminated and transparency and accountability is promoted.<sup>53</sup>
- The distressed sales of farmers need to be protected by establishing community food grain banks at the local level. The members of farmers' groups can jointly construct these small grain banks for the short duration preservation of food items. The government can subsidise the construction of these grain banks and institutionalise short duration subsidised credit facilities to these farmers' groups to operate these grain banks.<sup>54</sup>

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This is consistent with the plans proposed in the fifth five year plan of the Government of the People's Republic of Bangladesh.

<sup>53</sup> For detailed discussion see sections E and F 4 of chapter IV, sections D and E of chapter V and sections G and H of chapter VI of this thesis.

<sup>54</sup> For detailed discussion see sections E and F 4 of chapter IV, sections D and E of chapter V and sections G and H of chapter VI of this thesis.

The incentives used as a part of indicative planning also need an overhaul in line with the following recommendations:

- The government incentives provided to farmers require appropriate targeting. While the government uses its database to benefit small and marginal farmers, the beneficiary selection process needs to be participatory and farmers' representatives need to be included in the beneficiary selection process.
- There is a need to have strong monitoring and impact evaluation of these activities. Social audits and citizens' report cards can be useful in this respect to jointly supervise the subsidy distribution mechanism. The citizens' groups can also resort to the whistle blower's law and report to the Anti-Corruption Commission about corruption and help the government promote governance in terms of accountability and prevention of corruption.
- The risk minimising mechanisms need to include insurance provisions to address both disease and weather risks.<sup>55</sup> The government can provide assistance to small and marginal farmers through paying premiums. The premiums paid by the farmers can be converted to savings in a no hazards situation and these could be used as revolving funds for their next scheduled premium payments.

Apart from direct safety net programmes, the government should universally support poor farmers and farmers' groups throughout the country for asset generation and to protect asset erosion through following interventions:

- Farmers need to be supported with subsidies for mechanisation.
- The government can help the small and marginal farmers through providing direct and speedy cash support as rehabilitation assistance to minimize their asset erosion immediately after any disaster. This programme needs to be supported by establishing a special fund for entitlement improvement. The Ministry of Agriculture can adopt this policy through modification of the current policy for rehabilitation assistance.

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<sup>55</sup> Ibid.

- The government can also establish a land bank to intervene in the land market through providing subsidised credits to protect asset erosion of poor farmers.<sup>56</sup> The land bank mechanism practiced in South Africa for providing credit to farmers<sup>57</sup> may be adopted with some modifications in Bangladesh by a new law. The recent initiative of the government of Bangladesh for establishing ‘land banks’ to promote industrialisation by using government owned lands can be remodelled to accommodate this proposal.<sup>58</sup>
- In order to address the unemployment situation the government can promote neighbourhood planning mechanisms as practiced in England to widely promote the provisions for the direct procurement for small works, goods and labour from farmers’ organisations,<sup>59</sup> particularly in vulnerable regions including tribal areas to address the unemployment situation.
- As a part of inducement and integration with markets, the government assistance to social capital formation at the farmers’ level, through training, should include farmers’ rights and responsibilities and the means to use government information systems.
- The agricultural wage also needs to be re-evaluated to ensure consistency with the market situation and the minimum wage rates can be fixed jointly by the farmers’ association, citizens committee, local government and agricultural officials.<sup>60</sup>
- The government should promote building partnerships between farmers and markets by providing information, institutional and infrastructure facilities.
- The government should fix standards and promote certification procedures for organic products through institutional support at the local level. The government can facilitate

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<sup>56</sup> The sporadic assistance programmes need to be institutionalised through adopting special rules and regulations including appropriate targeting mechanisms.

<sup>57</sup> Roger D. Norton, *Agricultural Development Policy Concepts and Experiences* (John Wiley and Sons, 2004)351. The land bank mechanism practiced in Europe since the early 1900s and in other countries such as China and India for urban development and in South Africa for providing credits to farmers.

<sup>58</sup> Staff Reporter, ‘Cabinet Okays draft Industrial Policy 2016’, *The Bideshbanlga 24*(online), 23 March 2016.

<sup>59</sup> *The Public Procurement Rules 2008* (Bangladesh) S R O No 21 of 2008, art 22; *The Neighbourhood Planning (General) Regulations 2012* (England) 2012 No 637.

Moreover, farmers’ groups can be facilitated for using existing provision in respect to small works procurement.

<sup>60</sup> *The Agricultural Labour (Minimum Wages) Ordinance 1984* (Bangladesh) Ordinance XVII of 1984 has to be revised to address the wage discrepancies of farm labourers.

mobile phone and web-based agriculture information services by exempting these services from any taxes, at least some introductory years.<sup>61</sup>

The reform measures proposed above are not exhaustive. The measures are mostly in the form of assistance to farmers, farmers' groups and allied businesses. These reform proposals have relevance to the people centric development through livelihood improvement, poverty alleviation, employment generation and most importantly the profitability of farming. These measures need an integrated effort at different levels. The central government in this case will have to take lead and local governments as well as farmers associations, the private sector and agricultural officials have a major role in advancing the process.<sup>62</sup>

*(c) Principle 3: The Principle of Equity*

Given the huge subsidy in agricultural inputs assisting all farmers, and that direct assistance to farmers are targeted to small and marginal farmers, there are still major issues in equitable resource use as well as in benefit sharing. The following recommendations under this principle will have specific focus on the equitable treatment of farmers.

- Although the percentage of small and marginal farmers that are benefitting from the subsidies for agricultural inputs, such as fertiliser, is more than 80 per cent,<sup>63</sup> the benefits are mainly passed to middle and large farmers who own about half of land.<sup>64</sup> This situation may change with the implementation of sharecroppers and tenants lease contracts and the value of tenancy should be in the form of cash instead of crops. This may improve the situation of equity in benefit sharing.
- While some subsidies are difficult to segregate, such as electricity rebates, this can be minimised with the introduction of separate meters for poor farmers.
- There is also a need to diversify the subsidies to assist the poor farmers as well as supporting the ecological protection goals. There can be more areas of subsidy, such

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<sup>61</sup> For detailed discussion see sections E and F 4 of chapter IV, sections D and E of chapter V and sections G and H of chapter VI of this thesis.

<sup>62</sup> Ibid.

<sup>63</sup> For detailed discussion see section F of chapter I of this thesis.

<sup>64</sup> For detailed discussion see section D, E of chapter V and section H of chapter VI of this thesis.

as a greening payment that can include maintaining soil fertility standards, improvising crops, increasing agro-forestry in drought prone areas, producing grass and supporting community based management of natural resources.

The equity in land resource use has to be promoted through facilitating land rights in the following manner:

- The land rights for women in family properties need to be ensured through the legal transfer of property rights and maintaining a digital land record system.
- The existing public land distribution system operated under the *Khas Land Settlement Policy, 1997* needs to be amended and existing public land distribution system should include promotion of equity through transfer of public lands (khas land) mandatorily in the name of women irrespective of their status. The distribution committees should include local stakeholders including representative of women and farmers' groups, followed by the social monitoring of land use to limit the diversion.
- The public land distribution can be a participatory process and conditional on improving the environmental and ecological conditions of the land and subsidies can be offered for greening this land and using a portion of them as a water retention structure or permanent grass land.
- The transfer of these public lands should be digital, along with non-transferable conditions and credit facilities to address asset erosion problems.
- The proposed land banks approach, discussed above, may also be effective in promoting the equitable use of public lands.<sup>65</sup> The land use needs to be monitored with the help of farmers' groups and local governments.<sup>66</sup>
- The law relating to the rights of sharecroppers needs to be amended for the effective implementation through mandatory registration in presence of representatives of

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<sup>65</sup> For detailed discussion see section D, E of chapter V and section H of chapter VI of this thesis.

<sup>66</sup> Ibid.



farmer groups, at no cost.<sup>67</sup> The monitoring of the sharecroppers' contract can be facilitated by the farmers groups.

The inequity in financial resource use needs to be addressed through following interventions by the government:

- Block credit allocation and facilitating enhanced access especially for women, small and marginal farmers as well as sharecroppers and tribal farmers at a comparatively low cost. Credit facilities to these farmers can be made available with the introduction of low interest bearing credit cards with fewer formalities.
- The loans to these disadvantaged groups can be administered without any processing fee and they need to offer additional deductions in interest rates on timely repayment.
- The crop insurance can be tied to these low cost credit lines and other safety net assistances to the farming communities.
- In order to encourage the private banks to lend to these disadvantaged groups, the government can also give tax waivers on the profit of these low interest bearing credit lines of the private commercial banks.<sup>68</sup>
- The central bank's existing relending terms also need to be flexible in respect of agricultural credits.

The existing provision for extending the support price for agricultural outputs needs to be made more equitable through giving priority to small, marginal and women farmers. The union level purchase can only be extended to these farmers so that others cannot exploit the benefits inequitably.<sup>69</sup>

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<sup>67</sup> Md. Abdul Alim, 'Land Management in Bangladesh with reference to Khas Land: Need for Reform' (2009)14 *Drake Journal of Agricultural Law* 252.

<sup>68</sup> Government of the People's Republic of Bangladesh, Planning Commission, *Sixth Five Year Plan* (2011-2015)187. The government has to address implementation deficit in this respect.

<sup>69</sup> For detailed discussion see section C of chapter IV, sections D, E of chapter V and section H of chapter six of this thesis.

The government recognition of farmers groups can facilitate promotion of equity through giving these groups the opportunity to have their voice heard. These groups have to be given options to represent the farmers in different subsidy and safety net distribution programmes so that targeting does not suffer from inappropriate selection. The government can implement this reform proposal through incorporating this provision in government's incentive and safety net distribution policies and procedures.

In respect to bringing equity in wages, the government can take following steps:

- Convert all development programmes into cash payments and the wage difference issues can be resolved locally through village courts.
- The development programmes can also facilitate women's participation in employment through allocating a minimum percentage to women labourers in rural works and rehabilitation activities.
- Women farmers need to be helped with a special safety net programmes, such as day care facilities for their children along with special allowances during pregnancy and lactation period.
- The government should also emphasise implementing the existing minimum wage law and it can be amended for promoting equal wages between men and women.<sup>70</sup>
- As about half of the agricultural labour force is women, there is a need to promote subsidised mechanisation that suits women labourers.<sup>71</sup>

The progress achieved in the reduction of consumption inequality between poor and rich needs to be continued with some additional mechanisms to change the consumption volume or patterns of rich people. The government can impose surcharges on fine rice, aromatic rice and other luxury items in agriculture to equate the consumption spending of rich and poor. The funds collected from these surcharges can be used for safety net assistances for the poor farmers in vulnerable areas to improve their consumption spending.

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<sup>70</sup> For detailed discussion see section D, E of chapter five and section H of chapter six of this thesis; *The Agricultural Labour (Minimum Wages) Ordinance 1984* (Bangladesh) Ordinance XVII of 1984.

It needs to be amended or a separate law needs to be enacted for fair work rights of farmers.

<sup>71</sup> The subsidy for mechanisation needs to be institutionalised against limited project based approach. There must have specific provisions for women farmers and farming labourers as their participation in agriculture has already crossed 40 per cent of total work force in agriculture.

The improvement in the rights and roles of tribal people has to be included as a priority in the current and future agricultural development policies and plans. Tribal peoples' unsustainable production systems need to be addressed through direct assistance to poor and vulnerable tribal people, so that they shift to modern and less environment damaging production system.

The government should emphasise that a regional equitable balance in investment in agriculture, such as vulnerable areas should receive more investment in infrastructure and research. The climate vulnerable areas such as coastal districts and drought prone areas should receive special assistance.<sup>72</sup>

The infrastructure projects in the agriculture sector need to consider intra generational as well as intergenerational equity agendas. For example, a rubber dam project for water conservation should consider water availability at lower stream of rubber dam along with the siltation problem in the river bed in upstream that can cause flooding in the long run.

These proposals for promoting equity cover the major areas of intervention. The promotion of these measures is primarily the responsibility of central government. However, the implementation will need strong participation and cooperation from the local level stakeholders including farmers, government officials, the private sector and local government institutions. Local institutions and conflict resolution processes will be critical to implementation and flexible adjustment of interventions to local conditions.

#### *(d) Principle 4: The Precautionary Principle*

The precautionary measures in the agriculture sectoral development are critical for effective promotion of SDA. The researcher has proposed the following recommendations in the light of international practices, good examples in other countries and the domestic situation.

- The agricultural development projects need to be undertaken in light of real time data of ecological conditions.

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<sup>72</sup> For detailed discussion see sections D, E of chapter V and section H of chapter VI of this thesis.

- The government should declare thresholds for ecological integrity that need to be widely disseminated for appropriate actions at the farmers' end.
- There is a need to monitor soil moisture, nutrients and pollution along with underground water levels and disseminate the findings to assist the farmers in adopting sustainable farming practices.

As a part of precautionary measures, the agriculture sector should adopt some mandatory assessments, early warning systems and projections in decision making processes as discussed below.

- There should be a strategic impact assessment (SIA) for this sector to consider the wider environmental, social and economic impacts of different types of interventions. SIA uses a comprehensive approach for early identification of cumulative effects of interventions in light of SD principles. The SIA can also create a basis for environmental impact assessment throughout the project.
- For large, environmentally sensitive and infrastructure development projects there should be a mandatory EIA.<sup>73</sup> The Ministry of Environment and Forests can revise the existing impact assessment guidelines to make it compatible with SIA and EIA.
- In addition to EIA, social impact assessments are also necessary to institutionalise in large infrastructure building and biotechnology improvement projects, including release of genetically modified crops.
- The EIA has to be applied during the preparation of projects as well as following up their progress. Cumulative environmental impact assessments can be introduced for vulnerable regions, along with climate change impact assessments and categorising the government departments under the environmental performance index (EPI) for allocating funds to different agencies.<sup>74</sup>

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<sup>73</sup> Ibid.

<sup>74</sup> Ibid.

- The early warning, or forecasting, systems for risks to agricultural production have to be institutionalised as regular business of Ministry of Agriculture and its agencies to minimise the risks of disaster, combating pest attacks and predicting diseases. Apart from plant protection, the farmers also need to be made aware of domestic and international price fluctuations of food prices. This will help them make decisions about production choice.
- Apart from the rationalisation of subsidies in chemical fertilisers and irrigation, based on the results of resource status assessments and its regular updating, the progress in use of IPM and organic manure needs to be monitored by social audits and citizen's committees. The pesticides packaging has to be reoriented to include their advantages and disadvantages in local languages to control the over use of pesticides.
- There should be a future projection of food demand in light of population growth, availability of critical inputs such as land and water and changing consumption patterns of people. The government's plans need to be consistent in addressing future climate change scenarios and the risks of natural hazards as well as potential trade restrictions of different countries during a food crisis.<sup>75</sup>

The judiciary can address justice to future generations when there are government declared thresholds for ecological integrity. The observations and judgements of the Supreme Court of Bangladesh in favour of SD and precautionary measures in decision making have been encouraging.<sup>76</sup> The judiciary in Bangladesh can also take the opportunity in any future environmental cases to directly declare the SD principles, and more particularly the precautionary principle, as part of the law of Bangladesh. This is possible if the constitutional provisions<sup>77</sup> are broadly interpreted and the judgements of the Bangladesh Supreme Court are taken as precedents and Indian courts are taken as guidance.<sup>78</sup>

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<sup>75</sup> Ibid; Special Correspondent, 'Riots, instability spread as food prices skyrocket', CNN(online),14 April 2008.

<sup>76</sup> *Bangladesh Environmental Lawyers Association (BELA) v Government of Bangladesh and others* Writ Petition No 4958 of 2009 [Judgment on January 14, 2010]; *Dr Mohiuddin Farooque v Bangladesh and others* 17 BLD (AD) (1997) 1; *Dr Mohiuddin Farooque v Bangladesh and others* 48 DLR (HCD) (1996) 438.

<sup>77</sup> *Constitution of the People's Republic of Bangladesh* art 14, 15, 16, 18(1), 18A, 19, 21(1), 32.

<sup>78</sup> For detailed discussion see section D, E of chapter five and section H of chapter six of this thesis.

The application of the precautionary principle is critical in the context of preventing further degradation in ecological integrity as well as saving vulnerable groups from the erosion of their capacity to withstand shocks. The reform measures proposed have direct relevance to SDA planning for taking appropriate precautionary measures in potentially damaging activities. The precautionary principle has to be promoted by the government and particularly included in legislation by the government and implemented in coordination with stakeholders at the local and national levels.

## *2 Procedural Principles*

### *(a) Principle 1: Integration across Scales and Disciplines*

The most critical steps in promoting SDA in Bangladesh would be facilitating the integration of agricultural development planning and relevant interventions in government and non-governmental sectors. The researcher proposes the following recommendation to effectively promote integration principles in SDA planning in Bangladesh.

- The ecological protection activities need to be integrated with livelihood development and group based cultivation could be promoted as an integrated approach for agricultural development.
- For successful implementation, farmers' group focused planning needs to be integrated in sectoral, national and local levels of agricultural planning through institutionalisation of groups by registering them and facilitating their participation in the planning process.<sup>79</sup>
- There is a strong need to integrate central and local level planning through the framework law proposed in this study. The integration needs to be followed up to identify bottlenecks and remedies in implementation of agricultural development activities for better outcomes of agricultural interventions at local level.

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<sup>79</sup>For detailed discussion see section B 1, D and E of chapter V and section G and H of chapter VI of this thesis.

- Apart from the involvement of local government in the central plan preparation process, they also need to be involved in departmental project preparation and implementation, monitoring and evaluation. The NGO activities need to be aligned with government activities, especially in the areas of credit, awareness building and facilitation of community participation.<sup>80</sup>
- There is an urgent need for the integration of development budget and plan allocation as well as medium-term budgetary frameworks. There must be an integration mechanism in budget preparation processes for addressing farmers' concern for improvement of their livelihoods.
- The programmes under revenue budget and the climate change projects under special budgets need to be integrated with the development budget to avoid overlapping and exploring integrated efforts in addressing similar concerns under different budgets.<sup>81</sup>

In respect to integration of precautionary measures the researcher suggests following approaches to adopt by the government.

- The assessment instruments in the appraisal procedure, such as EIA, SIA, cumulative impact assessment, social impact assessments and climate change impact assessments, need to be integrated for necessary identification of remedial measures.
- There is also a need to blend local, national and global level knowledge along with traditional and frontier technologies in conservation, biodiversity protection and planning and management of resources. The innovation in this regard should be promoted through national recognition as well as through incentives.<sup>82</sup>

There is a need to have integration among agriculture, fisheries and livestock and water resources sector projects as well as promotional activities of the environment department. Apart from an inter-ministerial coordination committee at central level, the local level integration among different sectoral departments, local government institutions, NGOs and

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<sup>80</sup> For detailed discussion see section D, E of chapter V and section G and H of chapter VI of this thesis.

<sup>81</sup> For detailed discussion see section B 2, D and E of chapter V and section G and H of chapter VI of this thesis.

<sup>82</sup> For detailed discussion see section E of chapter V and section G and H of chapter VI of this thesis.

farmer groups needs to be promoted through integrated efforts at local level committees and facilitated by the proposed framework law.

In order to promote integration between climate change and disaster planning the following measures can be taken.

- Climate change projects need to be undertaken in coordination between different departments, such as agriculture, environment, water resources and disaster management to avoid overlapping. The mitigation and adaptation projects need to be integrated so that there is coordinated progress in addressing climate change threats.
- Disaster risk reduction plans, such as insurance mechanisms, need to be integrated with the promotion of production.

Finally, there must be integration among policy, plans and laws for better implementation. The implementation also needs low cost and accessible judicial remedies in the case of violation of poor farmers' rights of equitable benefit sharing.<sup>83</sup>

These integration interventions are not exhaustive but they provide illustrations of the road to pursue an integrated approach. The leadership in this case is critical for trade-offs among the interests of different stakeholders. The role of Ministry of Agriculture in coordinating the activities of its sub-ordinate agencies is critical while the Planning Commission coordinates this integration task for better alignment among activities of agriculture and other sectors of the economy for effective promotion of sustainable development in the agriculture sector.

#### *(b) Principle 2: The Principle of Good Governance*

The discussion on recommendation about the good governance principle will be primarily limited to governance mechanisms related to interventions in SDA planning as well as its effective implementation in respect to responsiveness, accountability, transparency and prevention of corruption. Some agendas for the improvement of governance have been

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<sup>83</sup> For detailed discussion see section C of chapter IV, sections D, E of chapter V and sections G and H of chapter VI of this thesis.



stated under general development planning improvements in the earlier part of this chapter. This section highlights some more specific agendas where improvements are necessary.

- The existing planning procedure, of the government needs to be revised to include guidance about the interaction between ‘bottom up’ and ‘top down’ planning process.
- There is also need to promote harmonisation between the government’s and donors’ development procedures. The local consultative groups (LCG), comprising the representatives of the government and donors in the agriculture and rural development sectors, need to be effectively consulted through regular periodic interaction for the appropriate harmonisation between donors’ and government’s agendas for SDA.
- The global goals of SDA need to be customised into a national system in consultation with donors, trading partners as well as domestic stakeholders, including farmers’ associations and particularly political parties to translate the political vision in the plans and strategies. Planning institutions can facilitate the consensus building process through building partnership with political parties, the media, citizens’ groups as well as business groups.<sup>84</sup>

The responsiveness of the government can be facilitated through following interventions by the government.

- Ensure a citizen’s right to receive time bound services from the government agencies, including the Ministry of Agriculture and its sub-ordinate agencies, by enacting a comprehensive law about right to citizen services.<sup>85</sup> Government initiated instruments for better service delivery such as a citizen’s charter, annual performance agreements, a national integrity strategy, and grievance redress mechanisms can be

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<sup>84</sup> Abul Hossain Ahmed Bhuiyan, Aminul Haque Faraizi and Jim McAllister, ‘Planning for the deployment of development in Bangladesh’ (2008)8(3) *Progress in Development Studies* 239.

<sup>85</sup>S. K. Agarwal, *Right to Public Service: A Guide* (Transparency International India, 2014)34; Yamini Aiyar and Michael Walton, *Rights, Accountability and Citizenship: Examining India’s Emerging Welfare State, Accountability Initiative* (Centre for Policy Research, 2014)23-35; Government of India, Governance Knowledge Centre, ‘Right to Public Service in Bihar’ (Case Study: Right to Service Act in Bihar, 2011).

pursued in an integrated manner under this law. This law should include incentives and penalty provisions, along with clear demarcations of responsibility.<sup>86</sup>

- There is a need to promote good examples for the expanded use of ICT and social media as well as innovations in service delivery.<sup>87</sup> A development innovation team can be established in the Planning Commission in coordination with the Governance Innovation Unit of the Prime Minister's Office to collate and advise government agencies about replication of innovative models in the planning process of different agencies.<sup>88</sup>

In respect to accountability of the government in development planning process the researcher's recommendations are as follows:

- While a framework law will guide the development planning process, the subsequent rules and guidelines can address the accountability of officials involved in planning process.
- The activities of officials have to be followed through strong monitoring mechanisms of their own institutions, both at the central and local level. A natural resource monitoring system needs to be established at the Ministry of Agriculture and its subordinate agencies at local level involving agriculture related stakeholders, particularly farmers' groups and local governments.
- For project monitoring, monitoring mechanisms in the government should be streamlined. The Ministry of Agriculture and its agencies should specifically institutionalise monitoring systems by establishing a joint and civic monitoring mechanism that includes the farmers' groups and other local stakeholders.

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<sup>86</sup> For detailed discussion see sections D, E of chapter V and section F of chapter VI of this thesis.

<sup>87</sup> For detailed discussion see sections D, E of chapter V and section G and H of chapter VI of this thesis.

Community based sustainable agricultural practices in India and the community driven project implementation in rural development and disaster management sector in Bangladesh.

<sup>88</sup> For detailed discussion see sections D, E of chapter V and section G and H of chapter VI of this thesis; Government of the People's Republic of Bangladesh, Prime Minister's Office, *Governance Innovation Unit* <<http://giu.portal.gov.bd/>>.

- The IMED needs to be decentralised for effective monitoring of project activities. This organisation can have a special projects monitoring unit for technical and large projects along with a general unit for results based monitoring in coordination with the project monitoring system adopted at the Prime Minister's Office.<sup>89</sup>
- The evaluation of programmes should be mandatory to identify the impacts of government interventions and determining factors for the impacts as well as decision making for subsequent development interventions.
- Given the hierarchy in bureaucracy and coordination gaps between different departments causes an accountability gap at local level, this may be minimized through sector wide coordination committees. The inclusion of stakeholders such as farmers groups, agri-business associations, citizen and environmental groups on these committees would facilitate the accountability process.
- The transparency measures, through mandatory information dissemination about development interventions, beneficiary selection criteria and beneficiary list disclosure, could also enhance the accountability of the development planning process.
- The role of parliament members in local level planning processes needs to be adjusted through their participation only in medium term plan preparation for asserting national priority at local level. However, they should not have any authority over project management issues, such as project selection and implementation at the local level.

In order to ensure transparency and accountability in development activities implementation the following measures can be taken.

- The agricultural projects need to be prepared in detail. There is a need to promote pre-investment planning and necessary budget needs to be allocated for this purpose.

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<sup>89</sup>Government of the People's Republic of Bangladesh, Prime Minister's Office, *ProMos User Manual* < <http://promos.e-service.gov.bd/>>.

- The information communication system and GIS based information need to be adopted to streamline the formulation of plans, appraisals, and the monitoring of planned development activities.
- The government should prepare a comprehensive database to facilitate the benefit distribution process along with biometrics based digital transfer mechanisms.
- Project audit reports should be part of the mandatory disclosure, at least for use by the relevant offices including the Anti-corruption Commission, IMED, the Planning Commission and the Prime Minister's Office to reduce the chances of corruption.
- An expenditure restructuring plan may facilitate avoiding an expenditure glut in the last quarter of the fiscal year.<sup>90</sup>
- Apart from retention of key officials for longer periods in plan and project management, there is a need to improve the capacity of government officials and farmers' groups for effective implementation of development agendas of the government.<sup>91</sup>

The government should also enhance anti-corruption initiatives and some of the measures in this respect could be as follows.

- The agriculture sector should declare its integrity and sectoral anticorruption strategy and specific plans for reducing any leakage in direct subsidies, incentives and safety net assistances distribution incorporating the existing mechanisms, such as the use of farmers' cards and bank accounts for transferring government assistance to eligible farmers.
- The anti-corruption organisation can have a special unit for development integrity and it can be linked to IMED and audit departments to get updates about any malpractice in the development process.

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<sup>90</sup> For detailed discussion see sections D, E of chapter V and sections G and H of chapter VI of this thesis .

<sup>91</sup> Ibid.

- Corruption in service delivery also needs to be addressed through institutionalising social auditing mechanisms in development activities.<sup>92</sup>
- The whistle blower's law needs to be widely used in direct subsidy and input distribution mechanisms where officials inside the implementing agencies can inform the higher authorities about corruption or irregularities.
- Apart from extending opportunities to farmers' groups to compete for local level project implementation, the relaxation of the experience of private contractors in small procurement activities needs to be re-examined as it may facilitate corruption.
- The validated media news about corruption, leakage and malpractice should be considered as acceptable activities under the broadcasting policy of the government.

Given there are many laws which are ineffective, and many have had difficulties in addressing the present problems, there is an urgent need to evaluate the rights based legislative provisions and amend them to incorporate SDA principles in the legislation. Apart from land rights, the biodiversity and farmers' rights need to be protected through the adoption of a law to prevent any misappropriation of the benefit sharing potential of biodiversity.<sup>93</sup> Long delays in court processes need to be addressed through improving the management capacity of the justice sector,<sup>94</sup> and expeditious investigation by the environment department of the government. In order to facilitate the time bound case disposal, especially the civil cases that deal with land rights issues, need to be categorised and the less complicated cases can be sent to the alternate dispute resolution (ADR) processes for quick disposal.

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<sup>92</sup> দুর্নীতি দমন কমিশন আইন ২০০৪ [The Anti-Corruption Commission Act, 2004] (Bangladesh) Act No 5 of 2004; Government of the People's Republic of Bangladesh, Anti-Corruption Commission, 'Annual Report' (Report, Anti-Corruption Commission of Bangladesh, 2014)38.

<sup>93</sup> For detailed discussion see section C of chapter IV, section D, E of chapter V and section G and H of chapter VI of this thesis; Transparency International Bangladesh, *Land Management and Services in Bangladesh: Governance Challenges and Way-forward* (2015) 30-31, 39.

There is a reference to protection of farmers' right through legislative provisions in the seventh five year plan; however that is not consistently included as a priority interventions in the plan.

<sup>94</sup> Chief Justice of Bangladesh Mr Surendra Kumar Sinha, 'Contribution of the Judiciary of Bangladesh in Strengthening Rule of Law and Democracy' (Speech delivered at Gujrat National Law University, India, 5 October 2015) <[www.supremecourt.gov.bd/resources/contents/Speech\\_by\\_HCJ\\_SK\\_Sinha\\_GNLU.pdf](http://www.supremecourt.gov.bd/resources/contents/Speech_by_HCJ_SK_Sinha_GNLU.pdf)>

The governance agenda is not only limited to the procedural aspects of planning, the reforms in the governance of SDA planning, proposed above, include issues relevant to planning as well as legislative and service delivery mechanisms, anti-corruption, responsiveness and accountability mechanisms. The initiatives are to be taken mostly by the government. However, collaboration between the government and stakeholders, such as the private sector, communities and more particularly farmers' groups, civil society and watchdogs is critical. The use of information communication systems and media including social media can also facilitate the whole process. All of these reforms depend on the commitment of the government to improve the governance situation for the promotion of SDA in Bangladesh.

*(c) Principle 3: Right to Participative Process and Access to Information and Justice*

The promotion of SDA will receive momentum with the active participation of citizens in the development process once their rights to participation, information and access to justice are facilitated. This research has identified the following interventions for effective promotion of this principle.

- In order to promote citizen participation in the early stages of different phases of the development planning process, the community participation (substantive and procedural rights of citizens in decision making process) needs to be included in the proposed framework law and in the subsequent implementing legislation as a particular agenda. The planning commission can oversee the synchronisation of citizen participation in the central and local planning processes.<sup>95</sup>
- The most important areas for participation in development planning would be plan and project preparation, project implementation, monitoring and evaluation. These processes at both central and local levels should mandatorily include citizens through deliberative, and in some cases, collaborative hearings and disseminating the results and follow up measures from time to time. The participation of poor people needs to be facilitated with a transparent remuneration package as this process takes time from their livelihood activities.<sup>96</sup>

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<sup>95</sup> For detailed discussion see section C of chapter IV, sections D, E of chapter V and sections G and H of chapter VI of this thesis.

<sup>96</sup> Ibid.

- The local nature of the agriculture sector requires establishing partnerships between the government and the agriculture relevant stakeholders, such as farmers, agricultural entrepreneurs, and organic fertiliser producers for sharing development visions as well as assisting implementation of development activities.
- The institutionalisation of the partnership process can adopt available approaches followed in participatory rural development as well as disaster management projects in Bangladesh. It can also explore the options for implementing local development works by communities, especially by the farmers' groups, after their registration with the government departments as local service providers.
- The partnership can be extended to information dissemination tasks, promoting early warning systems in agricultural pest and disease attacks as well as climate change threats management.<sup>97</sup>
- The government should review the constitution of different committees at local level to include farmers' groups and representatives of other stakeholders, such as agricultural NGOs, and environmental groups in these committees.

In respect to the right to information, the recommendations are as follows:

- The *Right to Information Act 2009* needs to incorporate voluntary disclosure provisions for local government institutions and private sector.
- The mandatory disclosure of environment-related information should be included in this right to information law to promote safe practices in the production process.<sup>98</sup>
- The voluntary disclosure should at least be updated at regular intervals.

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<sup>97</sup> Ibid.

<sup>98</sup> Ibid.

- Given there is limited information about development interventions in ministry and its agencies' website, the information about a project's objectives, its potential beneficiaries and their selection procedures need to be items for voluntary disclosure.
- Community radio and social media can be widely used for wider and faster dissemination of information.

A citizen's right to access to justice can be facilitated through the establishment of special courts in critical industrial districts for effective and expeditious disposal of cases relating to environmental protection and conservation of natural resources. The right to justice could be extended by relaxing the formal petition submission requirements in public interest litigation. The court costs in public interest litigation can be reduced for poor people and a part of the safety net budget for legal aid services can be especially earmarked for small and marginal farmers to access justice. ADR mechanisms can be used at the local level together with the operation of Village Courts to ensure the rights of farmers in government benefit sharing, wage discrimination and land rights issues.<sup>99</sup>The principles of SDA should apply to ADR as well as judicial forums.

The interventions proposed above in respect of facilitating the right to participative process, the right to information and access to justice have both a local and national orientation. Many of them need to be pursued at the local level, though legislative amendments and introduction of new laws are the tasks of central government. The critical issue remains the commitment of the government in promoting these agendas and minimising the elite domination in the participation process as well as using information for development purposes. The judiciary in this case can also take the opportunity to play a facilitative role when judging development related cases through explaining the rights of poor people in light of the constitution of Bangladesh as well as the international commitments of the country to universal norms.

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<sup>99</sup> Ibid.



## D Challenges in Implementation of Reform Proposals and Potential Remedies

The recommendations proposed in the previous sections are relevant to both the central and local level planning process to accommodate the SDA principles in planning frameworks. This compatibility has been examined based on SDA principles and its internalisation status in Bangladesh. The reform agendas proposed can mostly be implemented in the medium term however some need longer periods such as subsidy rationalisation, revitalisation of soil fertility through ecological improvement and stopping water mining. Some reforms, such as the assessment of natural resources status, preparing resource conservation plans and the introduction and amendment of legislative provisions can be implemented in the short term, within two to three years. However, the major challenge for these reform proposals is to effectively integrate and implement them in a coordinated manner in the socio-economic and political situation in Bangladesh. The following discussion presents some of these critical challenges and proposes potential measures to address them.

The first challenge would be that the government may not be interested to provide any legal mandate to the development planning frameworks, as that may restrict the political influence of the government in the planning process. This challenge can be negated with the justification that the constitution of Bangladesh promotes planned development and there are examples of legislative mandates for budget management, climate change fund management as well as local level development management in Bangladesh. So, a framework law could coordinate the public sector development activities management in the context of the global consensus to promote SD through development planning processes and to follow examples of different countries for planning precedents.<sup>100</sup> The framework law proposed in this thesis should not be diluted with a central level ‘top down’ planning approach as the planning

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<sup>100</sup> See, eg, The Scottish Parliament, *Comparison of the planning systems in the four UK countries* (SPICe Briefing 13/35 19 June 2013); Stephan Schmidt and Ralph Buehler, ‘The Planning Process in US and Germany’(2007) *International Planning Studies* 55-75; *Climate Change Act 2008* (UK) c27; *Common Agricultural Policy Basic Payment and Support Schemes Regulations 2014*(England); *Food, Agriculture, Conservation, and Trade Act of 1990*, KF 1692.A 31 Public Law 101-624, Title XVI, Subtitle A, Section 1603, The USA (1990); *Growth and Infrastructure Act 2013* (UK) 2013 c 27; *Infrastructure Act 2015* (UK) 2015 c 7; *Localism Act 2011* (UK) c 20; Government of the England, Rural Payment Agency, *Basic Payment Scheme (BPS) in England: Rules for 2016* (2015) <<https://www.gov.uk/guidance/the-basic-payment-scheme-bps-rules-for-2016>>; *Planning Act 2008* (UK) c 29; *Planning and Compulsory Purchase Act 2004* (England) c 5

The equality of opportunity and an ‘individual right to self-development’ vision of Germany were manifested through different planning laws and intervention efforts include the provision of infrastructure, financial incentives, tax benefits and other agendas. The legislative provisions in England also promote sustainable development planning and a mandatory national planning policy framework is used to promote sustainable development along with other planning legislation.

policy framework will promote the effective management of public sector investment through this law in line with neo-liberal institutional improvement, governance and inclusive principles.

The second challenge would be to promote an inclusive development planning approach in the absence of an explicit plan from the government about its implementation. The implementation of a participation agenda requires time and cost. Therefore, the government may not promote mandatory community participation as that will legally bind the government to follow the procedure. Rather, selected citizens' limited participation may receive priority, as seen in the case of local level planning in different studies undertaken by researchers. This researcher proposes to implement this reform agenda in phases to address the capacity gaps and to change the mindset of political elites and bureaucracies using the incremental planning approach. Another difficult task for government would be to reduce the supremacy of parliament members in local level planning. Given these political elites' demands for participation in their jurisdiction's development cannot be completely ignored, trade-offs can be arranged through reorientation of special development funds for each constituency and implementing locally desirable projects through regular planning frameworks.

The proposal for prioritisation of development activities may also not be well-received by the government as it may reduce the arbitrary selection power of political heads of the ministries. This problem can be resolved to some extent through adopting a programmatic approach and fixing internal priorities in programmes.

The proposal to apply unique appraisal procedures for different funding streams may face challenges because of the need for quick appraisals. However, in order to streamline government's development activities and for effective integration, the government of Bangladesh has few alternatives other than to follow a coordinated approach in development planning.

There are challenges that the government may not be interested in rationalising and changing the chemical fertiliser subsidy regime, from product based to nutrient based subsidy, due to the potential risk of losing political popularity and operational complexity concerns. However, the government has enough reasons to implement a nutrient based fertiliser subsidy (NBS)

mechanism in the context of recent changes in farmers' behaviour in fertiliser use after price adjustment. The concerns about rising trends in subsidy volume, over use of fertiliser by the farmers due to low price and soil fertility decline could also be reasons behind adoption of a NBS for fertiliser subsidy. The vision of the government for becoming a middle income country by 2021 is also a reason to change the nature of subsidy as the government may have to adjust its agricultural subsidy policy to comply with World Trade Organisation (WTO) rules' once it graduates to a middle income country group.

The promotion of local level procurement through farmers' groups may face difficulties due to elite domination. This challenge can be managed through social audits as well as providing credit facilities for farmers' groups. The promotion of land rights for women in public land distribution would be difficult in the present male dominated social context. However, if the public lands are transferred into the name of women, irrespective of their marital status, then this approach may be more likely to succeed.

The most critical challenge for SDA promotion would be the integration of different agendas and the integration of local and central level activities. While local level priorities differ from national priorities in many cases, the integration may face an implementation deficit. However, this can be mitigated through the promotion of local level priority setting in the light of national goals.

Apart from the integration of development programmes operated under a non-development budget, the integration of climate change projects with national processes will face obstacles due to separate fund management procedures. These problems need to be resolved through recognizing this decentralised planning option and guide the fund management ministries to integrate efforts under the proposed framework law. However, the integration of sub-sectoral activities in broad agriculture as well as water resources and forestry may face difficulties in implementation because of the separation of businesses under different ministries. A coordinating role for inter-sectoral integration needs to be given to one of the divisions of the Planning Commission under direct supervision of head of the Bangladesh Planning Commission, the Prime Minister, to address the coordination deficit.

While the government's plan for enacting a civil service law has been pending for many years, the proposal of enacting a law for service delivery may also face a similar situation.

However, the government could find the introduction of this right to service law feasible through integrating existing instruments, such as the citizen charter, APA, and the integrity strategy used to ensure accountability and responsiveness of the government.

Given the limited number of courts and judges presiding over a large volume of civil cases, it would be difficult for the judiciary to speed up the process to ensure justice to citizens. This challenge needs a bold step from the judiciary to classify the cases and sending the relatively less complicated cases to the ADR mechanisms as well as Village Courts. The proposal to waive the formal requirements for submitting the public interest litigation may not receive approval in fear of a flood of cases. However, the pro-active role of courts, as seen in India, in extending waivers to formal writ submission requirements in the case of public interest litigation can be examples for Bangladesh judiciary to adopt such practices. Given the absence of direct reference to SD, and its principles, in the Constitution of Bangladesh, the court can take the opportunity to explain the different articles of the Constitution that support the SD principles. In reference to previous judgements of the Appellate Division of the Supreme Court of Bangladesh, the judgements of Indian Supreme Court and international commitments of the government of Bangladesh, the Supreme Court of Bangladesh can take the opportunity in any future environmental cases to declare SD principles as the development approach of the country, and more particularly for agriculture, when food security and the livelihood of millions of people depend on it.

The challenges in internalisation of reform proposals for the transformation of the planning process discussed above include major critical issues. There are some other important issues such as the government's incapacity to promote some reform proposals, including the introduction of an eco-improvement fund, green payments and the introduction of contributory crop insurance programmes, due to budget constraints. However, these issues should be addressed to pursue the promotion of SDA effectively. International assistance, in the form of finance for environmental improvement, technological development and capacity building can support Bangladesh in this respect. The commitment provided by the developed countries in different international declarations, and most recently in climate change agreement and sustainable development goals, can be the basis to explore funding from donors. However, the capacity to absorb funds, as well as integrity of fund management, has also to be improved for better utilization of foreign aid.

### *E Recommendations for Further Research*

This research concentrates on principles of SDA and reviews the competence of development planning frameworks in Bangladesh. It has specifically concentrated on the agriculture sector and agriculture has been synonymously used for the crop agriculture subsector of the broader agriculture sector in Bangladesh. Although other sub-sectors of agriculture, such as fisheries, livestock and forestry, have relevance to overall agricultural improvement, the researcher has focused on the dominant sub-sector of broad agriculture in order to address the time limitations. Therefore, there is a scope for other researchers to examine the promotion of the SDA principles in other sub-sectors of agriculture.

This research has considered development planning as an accepted process mandated by the international community as well as a national level mandate through constitutional provisions. However, this research has not tried to justify the impact of utilising this process for real progress of SDA. The impact of development planning for SDA could therefore be another agenda for research.

This research does not have relevance to urban planning or statutory planning agendas. The urbanisation process has relevance to agricultural development as food is provided to urban areas from rural areas and rural poverty alleviation and employment have a direct link to the urbanization process. The relationship between urbanisation, planning and SDA could be a further research agenda.

### *F Conclusion*

With the international consensus on sustainable development in the form of SDGs and its internalisation in domestic planning frameworks, the government of Bangladesh now has the challenge to promote the agriculture sector in a sustainable manner through its development planning frameworks. The sixth chapter of this thesis has identified the major challenges Bangladesh may face in promoting SDA having regard to the SDA principles designed in light of SD and planning principles, climate change principles and SDA practices in different countries. This chapter has recommended some proposals to address these challenges in Bangladesh. They have been discussed primarily under the seven principles of SDA developed in earlier chapters, though some recommendations have been added at the

beginning of this chapter on reform of general planning frameworks. As agricultural planning is conducted under national and local level planning frameworks, these recommendations are necessary for the appropriate synchronisation of agricultural planning frameworks with the general guidelines of planning.

There are several types of recommendations proposed for implementation. Some of them are legislative in nature, that need the introduction of new laws and the revision of existing laws. These laws, in association with their subsequent rules and guidelines, can facilitate appropriate planning approaches and procedures, inclusivity and better service delivery. There are also some policy recommendations that need to be adopted for effective promotion of suggested reform agendas in substantive and procedural aspects of development planning frameworks in Bangladesh. The recommendations also include some proposals for the judiciary to promote governance and access to justice. It is also suggested that the judiciary can take the opportunity to explain and refer to the provisions of Bangladesh Constitution, as well as Indian examples, in any future environmental cases in order to promote SD principles that would promote SDA in Bangladesh. These recommendations have been proposed in light of planning ideologies suggested internationally,<sup>101</sup> regulatory provisions suggested by international institutions such as FAO and regulatory provisions incorporated in different country practices.<sup>102</sup>

Given the declining ecological conditions in Bangladesh, this research has recommended some specific proposals based on domestic conditions and successful interventions undertaken in different countries for conservation of resources and their efficient use.<sup>103</sup> These resources include land and soil, water and biodiversity. Poverty alleviation, livelihood improvement and employment agendas have been proposed to be promoted through the use of incentives and the facilitation of the rights of farmers. The re-alignment of subsidies, the inclusion of organic fertiliser under a subsidy regime, safety net measures and access to markets and credits are major agendas apart from risk-minimising insurance mechanisms. The reform to the equity agenda has been considered under the rights based approach where vulnerable groups have been proposed for inclusion in targeted assistance programmes. The reform in the precautionary approach mostly concentrates on the effective implementation of

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<sup>101</sup> See discussion in page 94 to 119 and 321 to 322 of this thesis on planning ideologies and researcher's views about adopting specific planning theories for promotion of SDA in Bangladesh.

<sup>102</sup> See discussion in page 323 to 324 of this thesis.

<sup>103</sup> See discussion in section C of chapter 4 and section E 4 of chapter 5.

different appraisal instruments. Moreover, the court's role is also discussed and this research suggests a pro-active role from the judiciary in promoting SD and SDA principles. The judiciary can also promote the SDA agenda through an expeditious judicial process. It can also take the opportunity to declare the SD principles as the development principles of the country through an explanation of the constitutional provisions relevant to the right to development, environmental improvement and socio-economic development of the country. The recognition of SD principles will promote the SDA principles, as most of the SDA principles are derived from SD principles. This is also relevant to international commitment in respect of promotion of SD and examples of promotion of different principles of SD in other countries.<sup>104</sup>

The critical agenda for SDA promotion through the planning process is integration. The scale and agenda of integration has been proposed along with minimising the gaps in segregated climate change and agricultural planning. The governance agenda includes reform proposals for responsiveness and accountability through service delivery laws, integrated anti-corruption measures through coordinated efforts of monitoring, auditing and anti-corruption agencies. The promotion of institutional innovation and e-governance are also included in the list of reforms. Some of these reform proposals have been adopted from good examples of India that have similarities with Bangladesh in promoting governance and other agendas.<sup>105</sup>

Finally, the right to participation has been proposed through the integration of this right in the framework law proposed for the development planning frameworks as well as building partnerships among stakeholders. The reform proposal includes the revision of the right to information law to include local government institutions and the private sector as well as environmental information disclosure. The partnership between farmers' groups and government agencies is also proposed to promote community participation in public procurement. The right to justice is also proposed to be promoted through an extension of waiver to formal writ submission requirements in the case of public interest litigation. This study also proposed to extensively promote village court and ADR process for ensuring farmers' rights issues at local level. These reform proposals also have reference to good initiatives in India that have resulted good progress towards promotion of SD.<sup>106</sup>

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<sup>104</sup>See discussion in section C and D of chapter 2 and section C of chapter 4.

<sup>105</sup>See discussion in section D 2 (a),(b) and E 4(e),(f) of chapter 5.

<sup>106</sup>See discussion in section D 2 (a),(b),(c) and E 4(e),(f), (g) of chapter 5.

The challenges for these recommendations are the difficulties of effective implementation. The deficit in implementation efforts identified in different studies may push the SDA planning in the backyard.<sup>107</sup> Another challenge includes the persuasiveness of these recommendations. The government may pick and choose the recommendations that suit the government's priority.<sup>108</sup> This may hinder the promotion of integrated SDA planning. The third challenge is to reach a political consensus on different dimensions of SDA principles applicable to the circumstances in Bangladesh. Given the positive role and commitment of the government in promoting some agendas of SDA, such as assistance for nutrient regenerating crop cultivation, solar irrigation and subsidy distribution through bank accounts, the pro-development group of the ruling party may also push back the whole agenda of SDA and they may prefer 'grow now, clean up later' approach. Insufficient financial and technical assistances from the donors and their reluctance to support the reforms initiatives for promoting SDA approach at country level may also push back this agenda.

In such a context, the success of these reforms of the national and local planning approach depends on the government's commitment as well as the cooperation from local and national stakeholders and donors' assistance. Political commitment will play a major role in advancing the transformational proposals as past reform agendas in the early periods of development planning failed due to a low commitment at the political level, despite the commitment of the head of government.<sup>109</sup> The bureaucracy also needs to be on board to institutionalise the reforms, as the bureaucracy may delay the whole process despite the presence of political commitment. Therefore, a strong political will and motivation is necessary to advance the reform process. In such a situation, apart from acquiring the government's commitment, the planning institutions may need to develop alliances with domestic power structures and donors to improve the frameworks of development planning in Bangladesh.<sup>110</sup>

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<sup>107</sup> See section G of chapter VI of this thesis.

<sup>108</sup> For example, the Ministry of Agriculture has promoted research on transgenic crops (Bt Brinjal) against criticisms of civil society, however, this ministry has not adopted any crop insurance programme to address the vulnerability of poor farmers.

<sup>109</sup> See section B 1(b) of chapter VI of this thesis.

<sup>110</sup> Stephen M Wheeler, *Planning for Sustainability: Creating Liveable, Equitable and Ecological Communities* (Routledge, 2<sup>nd</sup> ed, 2013)103-104.



## CHAPTER VIII

### CONCLUSION

Development planning is a process of change that generates perceived benefits and it is not the panacea for all aspects of sustainable development (SD) or sustainable development of agriculture (SDA). However, it is a mechanism used by different countries as an instrument for an interventionist approach, along with different market mechanisms and legislative provisions, for development purposes, including agricultural development. The promotion of development planning at different international forums to advance SD agendas by the states has justified its application by mainstreaming the different principles suggested in these forums. With the UN consensus for promoting sustainable development goals (SDGs), the SD principles have received further recognition and now the principles are to be applied through customising the SDGs as appropriate to the circumstances of individual countries.

Agriculture, as a fundamental instrument for sustainable development in the twenty first century, can work in conjunction with other sectors to produce faster growth, reduce poverty, and sustain the environment and it is more competitive than other sectors in addressing poverty alleviation. This agriculture sector, as synonymously used with the crop sector in this research, has been supported worldwide by the states through direct assistance as well as development programmes, policy measures and legislative provisions. The real crux of the assistance in different states is that they consider it critical to their food security and the livelihoods of the people engaged in this sector and environmental improvement.

The development of the agriculture sector to be consistent with SD principle needs to maintain ecological integrity for continuous food production, along with economic improvement and social development of people engaged in this sector. The governance agenda is critical to effectively promote these integrated agendas along with farmers' rights to participation in decision making process. With the adoption of the SDGs at the UN, these goals received a definite shape for promotion at country level. Now, states around the world should find ways for internalising the sustainable development goals, including sustainable agriculture goals, in their development planning frameworks.

Bangladesh, as a developing country practicing development planning, has always given agricultural development priority. While development planning has a mandate from the Constitution, it also includes agricultural development as a key factor for rural development. The interventionist approach of the country has been quite visible in the field of agricultural development, even after the adoption of neo-liberal ideologies in economic principles. The state role has not lessened after the liberalisation of the economy, rather more interventions are adopted in different forms.

Bangladesh has experienced exemplary growth in agriculture in last four and a half decades. Government assistance has played major a role behind this growth, though this assistance has also produced some natural resource degradation. Productivity in agriculture has probably reached a plateau and productivity improvement now demands some forms of technological advance as well as appropriate management of development activities of the government in accordance with SD approaches. This requires a competent state mechanism to coordinate the integrated approach to SDA. The coordination of different SDA agendas and promotion of them in an integrated manner, along with the improvement of governance to create an enabling environment demands direct state interventions as well as market mechanisms to promote competitiveness. The state mechanism to coordinate these development activities is development planning, which has been practiced in Bangladesh since the pre-independence period.

Given that the competence of the development planning frameworks is critical to the promotion of SDA, the adequacy of SD planning frameworks in Bangladesh needs to be examined in a holistic manner. There are some discrete studies exploring the planning process that concentrate on a few aspects of SD, such as community participation and ecological improvement. A study conducted by the Ministry of Agriculture, a decade ago, to examine the policy options for agricultural development in light of some agendas of sustainable development, concentrated on ecological improvements and profitability issues. It did not consider development planning process that had direct relevance to promotional measures for SDA. This study also lacked any direction in respect of different SDA principles, such as participation, the precautionary principle and any rights-based agendas, such as equity, the right to information and access to justice. Moreover, the integration issue has not been studied when it is the critical agenda for pursuing SDA as an integrated

approach. These knowledge gaps are needed to be filled to promote the SDA through development planning frameworks in Bangladesh. This research has undertaken these tasks through studying the development planning frameworks in a comprehensive manner and recommending transformational changes to address the critical gaps.

The research has replied to the question about the necessary transformation of development planning frameworks for the effective development of SDA mainstreaming as a country driven planning process in Bangladesh. In doing so, it has adopted a policy research design and used comparative methods to identify evaluative criteria in the form of some SDA principles. It aims to examine the compatibility of development planning frameworks of Bangladesh with the identified principles. The SDA principles also applied to examine other country approaches to consider their potential replication in Bangladesh.

This research has systematically studied the dominant sustainable development (SD) approaches and principles, planning approaches and principles as well as SDA approaches and principles to finally identify a competent and appropriate set of SDA principles.

This discussion also included the principles and approaches being followed to address the impacts of climate change, when climate change is a unique threat to SD, and more particularly to SDA. This thesis has identified the following eight integrated substantive and procedural principles of SD as the standard for the promotion of this approach that are also consistent to climate change principles.

- (a) The principle of conservation and sustainable management of natural resources;
- (b) The principle of right to development and equity;
- (c) The principle of common but differentiated responsibilities;
- (d) The precautionary principle;
- (e) The polluter pays principle;
- (f) The principle of integration;
- (g) The principle of good governance; and
- (h) The principle of public participation and access to information and justice.

Given the relevance of development planning frameworks to promote SDA, this research has examined the globally dominant approaches to planning and their relevance to SD promotion. This review has found that dominant planning approaches, such as communicative planning, rational planning and incremental planning are relevant for addressing SD agendas. This study has also found that most of the SD principles are relevant to the planning principles suggested for SD promotion. It is suggested that two SD principles, the polluter pays principle and common but differentiated responsibilities, should not be prioritized considering the unique supportive role of agriculture in domestic and local contexts. Nevertheless, the principle of planning mandates and adaptive decision making is suggested for promoting SD in light of the internationally acknowledged role of planning and consensus about regulatory promotion of sustainable development.

This research, with these two approaches in mind, has reviewed the SDA approach suggested by different scholars and institutions, particularly in the context of climate change. The study reveals that the SDA approach is not only about agricultural production in a sustainable manner, but it has grown up within the SD paradigm. This approach, a combination of economic, social, fiscal, institutional and environmental sustainability requires appropriate governance structures, including the justice system. The agendas in SDA need to be pursued in an integrated manner and through an inclusive process ensuring equity and justice for present and future generations.

This research also examines the SDA principles proposed by scholars and international institutions, including the FAO, to consider their relevance with SD and development planning principles. After the review of all these approaches and principles, the researcher has identified seven SDA principles, as a set of major principles that can be used to guide and evaluate development planning frameworks of a country. The examples of sustainable agricultural practices of different countries have also been considered in preparation of this set of principles. The identified principles are as follows:

- (a) Maintenance and improvement of eco-integrity, biological diversity and improving resource use efficiency;
- (b) People centric development for addressing poverty, employment and livelihoods;
- (c) The principle of equity;

- (d) The precautionary principle;
- (e) Integration across scales and disciplines;
- (f) The principle of good governance; and
- (g) The right to participative processes and access to information and justice.

These principles are interrelated and need to be pursued in an integrated manner. Two important principles of SD, common but differentiated responsibilities and the polluter pays principle, have not been included as principles for SDA because of unique nature of agriculture. However, they can be supported by planning frameworks through adding motivational, educational and demonstrative activities.

In addition to discrete policy planning examples of SDA in different countries, this research has explicitly examined the Indian agricultural development planning approach in light of the identified SDA principle to learn the ways of internalisation of SDA approach and principles in a similar developing country to Bangladesh. The reasons behind the selection of Indian planning frameworks are the similarities in agriculture, development planning process, climate change agenda and legal frameworks between Bangladesh and India. The lessons from different country practices and Indian planning frameworks are used to frame the recommendations for the Bangladesh development planning frameworks.

The experience of India and other countries supports state mandated policy planning interventions for the promotion of SDA. The state driven development activities need to be operated under legislative frameworks. Apart from addressing profitability concerns of the agriculture sector, there is a need to promote eco-centric agriculture with direct assistance from the government. The climate change issue in agriculture in developing countries has to be addressed primarily through adaptation, though mitigation should also be priority, especially in the areas of irrigation, fertiliser and pesticide use. Cooperation and funding from developed countries is needed when developing countries suffer from a lack of capacity, technology and finances.

The experiences of India and other countries also suggest that people centric development has to be directed to alleviate poverty and generate employment as well as to promote equity. However, the interventions require a detailed appraisal of programmes including environmental and climate change impact assessments. Governance in operation of

development activities is critical for promoting accountability and responsiveness in the government as well as preventing corruption and distorted adoption of development agendas. The inclusivity in the planning approach is a key to advancing the agenda in association with stakeholders and particularly farmers. The group approach is suggested for the promotion of the participation agenda considering the capacity gaps, time and cost of involvement as well as creating social capital and strengthening the bargaining power of vulnerable groups. The Indian experience suggests that the judiciary can also advance the agenda through relaxing the standing requirements and acknowledging the SD as a development priority and the precautionary principle as part of law of a country. Finally, integration is necessary to coordinate the whole agenda of SDA to pursue it in a holistic manner through strong government leadership with the cooperation from political elites as well as the private sector.

With these suggestions in mind, this study has reviewed the Bangladesh development planning frameworks. Moreover, the legislative and judicial issues are also examined as the planning process is not practiced in isolation and it has direct relevance to the governance frameworks including the judiciary. These issues have been examined to find the gaps in the planning frameworks and its associated determining factors.

The brief review of the Bangladesh development planning frameworks and its associated issues, including legislative and judicial interventions, have revealed that, although the planning approach has embraced an inclusive approach as its ideology, there are gaps in translating this approach and the latest SD planning approach is not yet internalised in the planning process in Bangladesh. There are also gaps in mandating the planning process and the procedural frameworks mostly suffer from lack of appropriate legislative mandates. The planning agenda suffers from inconsistency in prioritisation and weak implementation.

There is a large mismatch in projection of allocation and real investment that hinders consistent programming and budgeting. The environmental appraisal process is usually bypassed and there is a gap in integration of local and national level planning as well as national planning and climate change planning. Monitoring and evaluation is weak, as well as non-participatory, and is not integrated with accountability, responsiveness and anti-corruption initiatives. There are gaps in the integration of interventions at different scales and gaps in substantive issues that are critical to effective promotion of SDA in Bangladesh.

Many of the substantive aspects of SDA have been included in the plans and policies. However, there are many dimensions that have not been addressed, such as resource conservation planning, subsidy rationalisation, adjustments in safety net programmes, promotion of land rights, universal application of some forms of precautionary measures, equitable benefit sharing from credit and subsidies. Some other agendas have been included as priority areas, but they lack definite implementation plans such as the participation of women in the development process, the promotion of organic fertiliser, and support for farmers through a price stabilisation mechanism and land use planning.

The governance process suffers from incomplete and insufficient interventions and the right to participation is not realised due to poor promotion and elite domination. The legislative mandate for the right to information is yet to receive momentum, while anti-corruption initiatives are not usually linked to development activities' integrity issues. Although the responsiveness of the government has been promoted through some institutional measures, such as implementation of citizen's charter, these institutional measures are not integrated and not justiciable as the rights of citizens in receiving public services. The judiciary in Bangladesh has extended the opportunity of citizens to access justice by widening the scope of the right to standing, though formal requirement for submission of the writ petition is still a drawback to promoting access to justice for the poor. Legal aid to the poor has started, but its scope is limited and it does not support environmental litigation. The judiciary has acknowledged the SD approach as a feasible approach for development, but it has not yet promoted SD and the principles of SD including sustainable development of agriculture for livelihood security and ensuring equity of poor farmers.

Given that these gaps are limiting the effective promotion of SDA in Bangladesh, this research has proposed some recommendations in light of country's Constitutional obligations, identified and developed principles of SDA, examples of other country practices, the Indian example and some domestic best practices. The recommendations are not exhaustive and are mostly implementable in the medium term of three to five years. However, some recommendations may need a longer period for effective institutionalisation, while many of them can be internalised in one to three years.

The shortcomings in the development planning frameworks can be mitigated through some measures, including policy and legislative promotion. The policy recommendations for adjustment in planning ideologies include two proposals. Firstly, the indicative planning approach being followed by the government needs to be evaluated to realign the structure, volume and governance of incentives for promotion of SD and SDA. Secondly, in order to promote inclusive planning approach, the government should incorporate three planning ideologies: communicative, rational and incremental (CRI) approaches in an integrated manner along with some aspects of other planning approaches to promote people centric, rational and evidence based development planning process.

This study proposes a legislative mandate for the development planning process in Bangladesh for effective transformation of constitutional provisions for development. A framework law for coordinating the whole development planning process is proposed in having regard to FAO's recommendation about promotion of right to food and the English planning frameworks. This framework law does not intend to change the planning process and institutions. It is proposed to streamline different funding streams under a national framework, give legislative recognition to planning institutions and processes and to integrate the national and local level planning process in accordance with the Constitution of Bangladesh.

This proposal of enacting a framework law is consistent with international consensus expressed through *Agenda 21* and domestic laws for the management of budget, climate change funds and disaster management. This framework law will give broad guidelines for development activities implementation under different streams of funding in the government of Bangladesh. It will promote the features of rational planning, incremental planning and communicative planning in development planning frameworks, irrespective of funding streams. The adoption of the community participation approach in the development planning process is proposed to be included in the framework law, as a part of communicative planning and to promote inclusivity in the planning process, which is consistent with the latest planning approach at the global level and SDA principles and practices in developing and developed countries.



The framework law is proposed to be followed by separate implementing legislation for operationalisation of broad guidelines in different parts of development planning. Implementing legislation can address the gaps, or procedural deficits, as well as the application of appropriate appraisal mechanisms for taking precautionary measures in development activities. Implementing legislation is not a new proposal rather this thesis proposes to shape the existing procedural aspects of development planning in a legislative format with some modifications.

Another law is proposed to be enacted for the right to public services. Given there are already some domestic measures, such as a citizen charter, APA and grievance redress mechanisms for the promotion of service delivery, they can be bundled together and modified to appropriately promote a responsive and accountable government. This proposal for the right to service law is consistent with good legislative practices of different states of India.

This research has also recommended updating some laws and policies, such as the Khas Land Settlement Policy, the local government's development rules, the right to information law and the minimum agricultural wage law. The government needs to stringently implement some laws relevant to water resources management, land reforms and land use.

The researcher has proposed to eliminate inconsistencies in the plans, programing and budgeting. The study proposed a number of reform issues in the substantive and procedural principles application in accordance with the identified SDA proposals. The researcher proposes among others to prepare and update a comprehensive inventory of ecological resources and a natural resources conservation plan. The government needs to control land and water bodies' conversion to maintain ecosystems. There is also proposal for conservation and conjunctive use of surface and groundwater, and universal use of soil health cards through incentives. The government also needs to introduce a nutrient-based fertiliser subsidy (NBS) system along with subsidising organic or bio-fertiliser and agro-forestry and promote safe practice for fertiliser and pesticide use. The proposal includes establishing a separate fund for research and development of ecological protection mechanisms.

There are proposals for attaching priorities to agricultural development activities in safety net programmes, rural works and special employment programmes. Subsidies need to be evaluated, realigned and continued with institutionalisation of subsidies for eco-efficient farming. The volume of low cost credit for poor farmers needs to be extended along with incentives for regular repayments. The output support price provided by the public procurement system needs well managed price stabilization fund. The government also needs to take measures for appropriate targeting of incentives and social audits to jointly supervise the subsidy distribution mechanism for promoting governance. There is a need to assist the poor for asset generation through promoting land rights as well as subsidising mechanisation. The risk minimising mechanisms, along with early warning systems, are also needed to mitigate asset erosion of poor farmers. The responsibility at government level also includes assisting farmers to explore benefits from trading as well as having a guaranteed income.

The proposal for promotion of equity includes an effective benefit sharing mechanism, facilitation of land rights for women and land lease rights of sharecroppers. There is a need to have a block credit allocation for facilitating enhanced access to credit to poor farmers, especially for women, small and marginal farmers at a comparatively low cost. The researcher also proposes to institutionally recognise the farmers groups for their active participation in development process. There should be child care facilities and special allowances for women agricultural labourers during their pregnancy and lactation period to support their participation in agriculture. The government should also promote subsidized mechanisation that suits women labourers. There is a need to promote regional equitable balance in investment in agriculture and the infrastructure projects in the agriculture sector need to consider intra generational as well as intergenerational equity before their implementation.

The interventions under the precautionary principle include adoption of different appraisal tools including SIA at the strategic level and EIA at project level. Cumulative environmental impact assessments are necessary along with climate change impact assessments. There is also a need to declare thresholds for ecological integrity and monitor the changes in critical level of natural resources. The government should also prepare a long term plan for food security in light of population growth, availability of critical inputs and changing consumption patterns of people.

Apart from different interventions, the most critical issue in the promotion of SDA is that these recommendations need to be considered as integrated agendas, even when pursued by the government through different agencies at different levels. This needs bureaucratic efforts, stakeholders' cooperation and integration mechanisms. However, political commitment, both at national and local level is the key to advancing the process. The governance agendas are also critical in order to minimise the implementation deficit and to promote detailed planning, social and institutional monitoring and effective institutional evaluation.

The right to participation needs to be promoted at different levels depending on the nature of interventions. The *Right to Information Act 2009* of Bangladesh should also include mandatory disclosure of environmental information of private sector and grassroots level local governments. This right to information mechanism needs to be used as an instrument for improving governance, not just as an information sharing process. The right to justice is proposed to be improved through the waiver of the formal requirements for submitting public interest litigation in the High Court, promotion of ADR mechanisms and village courts and creating provision of legal aid to the poor for their rights based agendas.

The recommendations also suggest that the judiciary in Bangladesh can take the opportunity to declare the SD principles as the development principles of the state following the constitutional provisions in Bangladesh, the judgements of Supreme Courts of Bangladesh and India. It is argued that the recognition of SD principles by the judiciary will promote the SDA principles. It will be then obligatory for the government to follow the SD principles in different sectors, and more particularly in agriculture sector, that is critical to future food security and livelihood of millions of poor farmers.

The recommendations by the researcher in this thesis need an integrated effort from the executive, the judiciary and the legislative organs of the state. They also need effective coordination among stakeholders. Some reform agendas, such as new law introduction, amendment of existing laws or draft laws, subsidy rationalisation as well as promotion of community participation, may not be well received by the government as that may reduce the political supremacy over the development interventions. There are some issues, such as low cost credit for women and other disadvantaged groups, farmers groups' participation as implementers in local level development works; the promotion of ADR mechanisms at the local level that may also face difficulties in implementation due to continuation of elite

domination and political reluctance. The bureaucracy may also establish a nexus with political elites to keep the existing process running. Nevertheless, the strong commitment of the government can advance the agenda as has been seen in assistance to subsidies and other safety net programmes in Bangladesh.

The commitment of the government of Bangladesh to promote SDGs and more particularly sustainable development of agriculture also requires international support, especially from developed countries and international financial institutions. This support should be extended in the form of financial assistance for development activities, especially for climate change adaptation to agriculture, research and extension of improved crop varieties and mechanisation. The financial assistance should come in the form of grant and low cost credit and needs to be supplemented with assistance for technological improvement as well as technical assistance in the areas of research, marketing and governance. The international assistance should also be extended for capacity building to explore benefits from international trading mechanisms. The developed countries and international financial institutions now need to keep their international promise and assist Bangladesh to promote sustainable development of agriculture as a part of worldwide promotion of the SDGs.

This thesis has sought a strong principled foundation for reform based on SD and SDA. The major focus has been the development of SDA principles to guide a developing state such as Bangladesh in evolving consistent and appropriate development planning approaches. With this guidance, and other developing nation examples, the thesis provides recommendations for future legal and institutional reform based SDA in Bangladesh.

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## D Treaties/Conventions/Declarations and other International Consensus

### 1 International Treaty

*Convention concerning Indigenous and Tribal Peoples in Independent Countries* adoption 27 Jun 1989, C169 (entered into force 05 Sep 1991)

*Convention for the Protection of the Ozone Layer*, concluded 22 March 1985 TIAS No. 11,097; 1513 UNTS 323; 26 ILM 1529 (1987) (entered into force 22 September 1988)

*Convention on Biological Diversity*, opened for signature 5 June 1992, 1760 UNTS 79 (entered into force 29 December 1993)

*Convention on Environmental Impact Assessment in a Transboundary Context*, opened for signature 25 February 1991, 1989 UNTS 309 (entered into force 10 September 1997)

*Convention on the Law of the Non-Navigational Uses of International Watercourses*, G.A. Res. 51/229, U.N. GAOR, 51<sup>st</sup> sess., 99<sup>th</sup> plen mtg., UN Doc A/RES/51/229 (21 May 1997)

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*International Covenant on Economic, Social and Cultural Rights*, opened for signature 19 December 1966, 993 UNTS 3 (entered into force 3 January 1976) art 11

*Kyoto Protocol to the United Nations Framework Convention on Climate Change*, concluded 11 December 1997 UN Doc FCCC/CP/1997/7/Add.1, Dec. 10, 1997; 37 ILM 22 (1998) (entered into force 16 February 2005)

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*United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa*, opened for signature 14 October 1994, 1954 UNTS 3 (entered into force 26 December 1996)

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*Brussels Declaration, Programme of Action*, GA Res 191/12, UN GAOR, UN Doc A/CONF.191/12 (2 July 2001)

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*Copenhagen Declaration on Social Development*, United Nations, Department of Economic and Social Affairs, A/CONF.166/9 (19 April 1995)

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*Declaration of the World Summit on Food Security*, WSFS 2009/2 (November 2009)

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*International Development Strategy for the Second United Nations Development Decade*, GA Res 25/2626, UN GAOR, 25<sup>th</sup> sess, 1883<sup>rd</sup> plen mtg, Agenda Item 42, UN Doc A/RES/25/2626(24 October 1970)

*International Development Strategy for the Third United Nations Development Decade*, GA Res 35/56, UN GAOR, 35<sup>th</sup> sess, 83<sup>rd</sup> plen mtg, Agenda Item 61 a, UN Doc A/RES/35/56(5 December 1980)

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*Sendai Framework for Disaster Risk Reduction 2015-2030*, Third United Nations World Conference on Disaster Risk Reduction Sendai, Japan, 14-18 March 2015, Agenda item 11, Adoption of the final outcomes of the Conference III(h)IV(27)

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