

Medium Term Strategy and Business Plan



**Ministry of Agriculture
Government of the People's Republic of Bangladesh**

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ABBREVIATIONS

ADB	Asian Development Bank
ADP	Annual Development Programme
ADPRC	ADP Review Committee
AEZ	Agro-Ecological Zone
AIS	Agricultural Information Services
ATI	Agricultural Training Institutes
BADC	Bangladesh Agricultural Development Corporation
BANHRDB	Bangladesh Applied Nutrition and HRD Board
BARI	Bangladesh Agricultural Research Institute
BARC	Bangladesh Agricultural Research Council
BARD	Bangladesh Academy for Rural Development
BBS	Bangladesh Bureau of Statistics
BC	Budget Circular
BEPZA	Bangladesh Export Processing Zones Authority
BHWDB	Bangladesh Haors and Wetland Development Board
BINA	Bangladesh Institute of Nuclear Agriculture
BJMA	Bangladesh Jute Mills Association
BJRI	Bangladesh Jute Research Institute
BMB	Budget Management Branch
BMC	Budget Management Committee
BMD	Bangladesh Meteorological Department
BMDA	Barind Multipurpose Development Authority
BMRC	Budget Monitoring and Resource Committee
BRRI	Bangladesh Rice Research Institute
BSRI	Bangladesh Sugarcane Research Institute
BWG	Budget Working Group
CAO	Chief Accounts Officer
CCA	Climate Change Adaptation
CDB	Cotton Development Board
CFW	Cash for Work
CGA	Controller General of Accounts
CHT	Chittagong Hill Tract
CIP	Country Investment Plan
CPTU	Central Procurement Technical Unit
DAE	Department of Agricultural Extension

DAM	Department of Agricultural Marketing
DLS	Department of Livestock Services
DMC	Disaster Management Committees
DMTBF	Deepening Medium Term Budget Framework
DOF	Department of Fisheries
DPEC	Departmental Project Evaluation Committee
DPP	Development Project Proforma/Proposal
DPR	Detailed Project Report
EAD	External Affairs Division
EC/ NEC	Executive Committee of the National Economic Council
EEC	European Economic Community
ERD	Economic Relations Division
EU	European Union
FABA	Foreign Aid Budget Accounts
FAO	Food and Agriculture organization
FD	Finance Division
FDI	Foreign Direct Investment
FFW	Food for Work
FM	Finance Minister
GAP	Gap Analysis Program
GED	General Economics Division
GFS	Government Finance Statistics
GoB	Government of Bangladesh
HIES	Household Income and Expenditure Survey
HIPC	Highly Indebted Poor Country
HPN	Health, Population and Nutrition
HR	Human Resources
HYV	High Yielding Variety
iBAS	Integrated Budget and Accounting System
IBRD	International Bank for Reconstruction and Development
ICOR	Incremental Capital Output Ratio
IDB	Islamic Development Bank
ICT	Information and Communication Technology
IDDP	Intensive Dairy Development Program
IFC	International Finance Corporation
IMED	Implementation, Monitoring & Evaluation Division
IMF	International Monetary Fund

IPM	Integrated Pest Management
IRD	Internal Resources Division
IRRI	International Rice Research Institute
IT	Information Technology
KPI	Key Performance Indicators
LFS	Labor Force Survey
LMs	Line Ministries
M&E	Monitoring & Evaluation
MBF	Ministry Budget Frameworks
MDG	Millennium Development Goals
MEW	Macroeconomic Wing
MFI	Micro Finance Institutions
MIC	Middle Income Country
MIS	Management Information System
MOA	Ministry of Agriculture
MOF	Ministry of Finance
MOU	Memorandum of Understanding
MTBF	Medium Term Budget Framework
MTSBP	Medium Term Strategy and Business Plan
MW	Mega Watt
NAP	National Agriculture Policy
NEC	National Economic Council
NEP	National Education Policy
NGO	Nongovernment Organization
NIPMP	National Integrated Pest Management Policy
NSAPR	National Strategy for Accelerated Poverty Reduction
NSP	National Seed Policy
OECD	Organization for Economic Development and Cooperation
PC	Planning Commission
PD	Programming Division
PEC	Program Evaluation Committee
PEST	Political-Economic-Social-Technology Analysis
PFDS	Public Food Distribution System
PM	Prime Minister
PPP	Purchasing Power Parity
PW/C	Planning Wing/ Cell
PWD	Public Works Department

RADP	Revised Annual Development Programme
R&D	Research and Development
RTPP	Revised Technical Assistance Project Proforma
SCA	Seed Certification Agency
SD	Sector Division
SEZ	Special Economic Zone
SP	Strategic Plan
SPEMP	Strengthening Public Expenditure Management Programme
SRDI	Soil Resources Development Institute
SRI	System of Rice Intensification
SFYP	Sixth Five Year Plan (2011-2015)
SMEs	Small and Medium Enterprises
SWOT	Strength-Weakness-Opportunities-Threats Analysis
SWAp	Sector Wide Approach
TA	Technical Assistance
TPP	Technical Assistance Project Proforma/Proposal
TYRIP	Three Year Rolling Investment Plan
USG	Urea Super Granules
VAT	Value Added Tax
VDP	Village Development Party
VGD	Vulnerable Development Program
VTE	Vocational and Technical Education
WARPO	Water Resources Planning Organization
WB	World Bank
WMIP	Water Management Improvement Project
WTO	World Trade Organization

Message



The Government has decided to prepare Medium Term Strategy and Business Plan (MTSBP) for strategic Ministries. I am delighted that the MTSBP for the Ministry of Agriculture has been prepared, covering the five-year period 2012-2013 to 2016-2017.

In the environment of major structural change in the economy, agriculture today contributes about one-fifth of Gross Domestic Product (GDP) and provides employment to 48 percent of the labor force; 70 percent of the rural population directly or indirectly depends on agriculture for their livelihood. It remains the main source of raw material for the agro-based industry.

Bangladesh has made significant stride in food production. A food-deficit country is now recognized for surplus in major staples but, we have no room for complacency. It would be our endeavor to explore areas to increase agricultural production and productivity. MTSBP is a step in this direction.

In order to enhance the efficiency and effectiveness of government expenditure, Agriculture Ministry has been preparing its annual budget under the Medium Term Budget Framework since FY 2005-2006. The process has established linkages between budget allocations and national and Ministry level policies, strategies and priorities. I believe the MTSBP would deepen the Medium Term Budgeting process by identifying appropriate programs, projects and activities and the related outcomes, outputs, physical inputs and financial resources.

The MTSBP has documented the strengths, weaknesses, opportunities and threats as well as major challenges and development issues in agriculture. It analyses the mission, vision, strategic objectives and core values of Agriculture Ministry and the programs, projects, activities and resource requirement to achieve them. It enables us to understand whether resources are being allocated in consistent with the policies and priorities of the Ministry, besides paving the way for further research on issues related to agricultural planning and development in our country.

I extend my sincere thanks to the Secretary of the Ministry of Agriculture for his guidance in preparing the MTSBP, and to the national and international consultants engaged in this project for sharing their experience. The co-operation of the Finance Division, Ministry of Finance, the Departments and Agencies under the Agriculture Ministry, and its officers have enriched the document. I thank all of them.

Begum Matia Chowdhury

Message



I am delighted to learn that the Ministry of Agriculture has completed preparation of Medium Term Strategy and Business Plan (MTSBP) as a part of Deepening Medium Term Budget Framework process. I am particularly happy to learn that the Ministry of Agriculture is the first amongst the Government Ministries/Division to have been chosen for preparing this document.

The importance of the Agriculture sector in our social and economic advancement can't be over emphasized. It is one of the major contributor of our GDP and still responsible for creating nearly half of employment opportunities in rural Bangladesh. From food security and nutritional point of view, this sector ranked second to none. The Agriculture sector will continue to play pivotal role in stabilization of Bangladesh's socio-economic development progression. MTSBP should play an important role for sustaining development outcome of the sector by ensuring optimal use of available resources.

Participatory process establishes ownership and credibility of such medium term strategic document, and facilitates its implementation. The MTSBP for the Agriculture sector has been prepared in broad participation and active support of all stakeholders directly involved in the development and management of the Agriculture sector. It has set an example how easily a complex process of planning and budgeting instruments can be put in best use to achieve our national development goals. I must recognize that involving wider stakeholders in its preparation would have been ideal; but time constraint didn't permit us to consult with the wider group.

Let me take this opportunity to offer my sincere thanks for the valuable contribution of all the members of the "Technical Committees" in preparation of this milestone document. My colleagues in the Ministry of Agriculture, particularly the Policy Planning, Budget, Planning and Seed Wing, have worked diligently and relentlessly with the NARS and other agencies in bringing out this document. I must also thank the Ministry of Finance and DMTBF technical personnel for their guidance and invaluable support in finalizing the MTSBP.

I hope that the MTSBP will help to guide the Government and our valued development partners in identifying specific projects/ programs and investment requirement for the agriculture sector in the medium term. It will also help improving efficacy of public investment in Agriculture sector in order to achieve our overarching national goal of eradicating poverty and hunger from Bangladesh.

Any comments and suggestion for improvement of the document will be highly appreciated.

Dr. S M Nazmul Islam

Executive Summary

Role of Agriculture in Bangladesh Economy

In Bangladesh, as in all developing countries, agriculture¹ plays a critical role in ensuring food security. It is a special sector as it has a universal role for providing food, a basic need for the survival of mankind. It also nurtures deeply cherished traditions, cultural heritage and social stability over time. But, agriculture sector is subject to high degree of risks caused by weather shocks, natural disaster and volatility of international prices of food and fertilizers. All these factors make medium and long term strategic business planning for agriculture all the more important given its sensitivity and implication in socio-economic progression of the developing countries. It is a very difficult as well and demands prudent and coherent thought process.

Bangladesh with the seventh largest population size in the world and very high population density is basically an agrarian economy. Despite a declining trend of its share in overall gross domestic product (GDP) from 31.2 percent in 1985-86 to about 20 percent in 2010-11 mainly due to rapid expansion of industry and service sectors, agriculture remains the major source of income for the rural poor in Bangladesh. About 70 percent of the rural population and 48 percent of total labor force depend on agriculture and related farm and non-farm activities for their livelihood. Improvement in agricultural sector performance and sustaining its growth are critical from food security point of view as well as for reduction of rural poverty and unemployment.

Recent Progress of Agriculture in Bangladesh

Despite natural hazards, agriculture performance in the recent past has been satisfactory with significant acceleration of the growth rates in all sub-sectors. During the last decade (2000-2010) agriculture registered an average growth rate of 3.6 percent per annum supported by a growth rate 3.5 percent by crops and horticulture, 3.1 percent by animal husbandry, 5.1 percent by forestry and 3 percent by fishery. Growth rates of crops and fishery have been volatile as these sub-sectors are affected most by weather shocks and natural disasters.

Constraints for Agriculture Development

Major constraints for agriculture development include the following:

- (a) Shrinking arable land
- (b) Declining soil health
- (c) Wide yield gap and regional variation of crop yields
- (d) Inadequate marketing facilities and post-harvest management
- (e) Impact of climate change and natural disaster

¹ As per definitions under the United Nations System of National Accounts (UN-SNA), agriculture sector comprises crops, horticulture, floriculture, animal husbandry, fishing and forestry.

- (f) Imbalance use and inadequate availability of quality agricultural inputs
- (g) Lack of adequate resources for agriculture development
- (h) Inadequate price support policies
- (i) Fragmentation of land and small farm size
- (j) Insufficient investment for flood control and irrigation
- (k) Inadequate access to institutional agricultural credit

Supportive Measures for Agriculture and Food Security

Major supportive measures and incentives provided by the government to agricultural producers and consumers include the following:

- (a) Formulating 'National Agriculture Policy, 2013', Country Investment Plan (CIP) and other important policies, acts, laws, ordinance, rules and guidelines for agriculture development
- (b) Prices for important agricultural inputs, including fertilizer are subsidized
- (c) Production, preservation and distribution of quality seeds for various crops
- (d) Setting floor price (procurement prices) for crop production
- (e) Ensure access to agriculture credits at lower interest rate with simple procedure
- (f) Establishment of marketing clubs and growth centers for agriculture
- (g) Establishment of assemble centre for agricultural commodities and formation of co-operative based marketing groups/association
- (h) Expand the agribusiness, processing and value addition activities
- (i) Develop effective value and supply chain linkage for different agricultural commodities
- (j) Conduct training for capacity development
- (k) Delivery of extension services for agriculture
- (l) Public distribution of food grains at subsidized prices
- (m) Agreement on establishment of 'SAARC Seed Bank'
- (n) Introduction of E-agriculture program
- (o) Master plan for developing agriculture across the coastal zone
- (p) Increasing public storage capacity and maintaining buffer stocks

Major Development Issues and Challenges for Bangladesh Agriculture

Major development issues and challenges facing Bangladesh agriculture include the following:

First is the issue of augmenting investment in agriculture and rural infrastructure.

Second, given the vicissitudes caused by weather shocks, there is an urgent need to bring more area under irrigation.

Third, appropriate measures are required to gradually move away from the subsidy-based regime to a more productive and competitive agriculture system.

Fourth, to reduce dependence on imports of food items like pulses, edible oils etc.

Fifth, agricultural diversification and commercialization is called for to increase farm income and of agricultural laborers for faster reduction of rural poverty.

Sixth, propelling growth of non-cereal food products to address the issue of unbalanced diet, particularly of the poor.

Seventh, adoption of appropriate policies to dampen effect on agricultural prices arising out of volatility of international prices of food items and fertilizers.

Eighth, appropriate strategies to meet the growing demand for food as a result of population growth and rapid urbanization.

Vision, Mission and Core Values

The Ministry of Agriculture has a Vision to achieve self-sufficiency in food grains production and a Mission to ensure food security for all citizens by increasing production and productivity in crop sector. They have the requisite core values and are guided by the desirable principles to achieve the stated Vision and Mission.

Performance Indicators

The Ministry of Agriculture is primarily concerned with the development of crops within agriculture sector. MBF deals with key performance indicators (KPI) which are indicators of outputs/outcomes resulting from the projects/programs/activities because in budgeting we are interested to judge the performance of given expenditure, irrespective of the composition of physical inputs. But, in MTSBP we are also interested in examining the availability and utilization of inputs and to judge their productivity and efficiency. Besides, in many cases it may be difficult to judge the value for money in terms of output and outcomes unless we examine the quantity and quality of the physical inputs used for implementation of projects and programs. So in the medium term strategy and business plan, Key Performance Indicators (KPIs) also include inputs and intermediate outputs which are used for production of outputs.

Programs/Projects/Activities

The Technical Committee considered all feasible programs/projects/activities to achieve the specified outputs/outcomes of the Ministry of Agriculture. It may be reiterated here that the Ministry Budget Framework (MBF) prepared as a part of the medium term budgeting provides yearly allocations of expenditure for all approved and unapproved projects/ programs/ activities for the budget year and four forward years on the basis of ministry wise financial ceilings provided by the Finance Division. But the MTSBP is prepared without any formal ceilings on expenditure, although realistic resource levels are kept in view. The MTSBP considers approved and anticipated projects/ programs/activities for establishing an effective linkage between the strategic policy objectives and a realistic expenditure plan for the Agriculture Ministry and its subordinate agencies. Particularly, the Technical Committee has conceived all feasible projects/

programs which could be implemented by the Agencies/Departments. However, a participative approach by all the Departments/Agencies under the Ministry and a combination of top-down and bottom-up approach were adopted to finalize the lists of projects and programs in the MTSBP.

As in the case of preparation of the MTSBP, programs/projects are graded as "Top priority (TP)", "Medium Priority (MP)" and "Low Priority (LP)". While discussing sources of financing and implementation of projects/ programs, the Technical Committee explored various policy options such as (a) Private Sector & NGO Participation; (b) Public-Private Partnership (PPP) and (c) Activities to be implemented by the Government.

Financing Needs

Past trends of developmental, non-developmental and overall budget for the Ministry of Agriculture during 2007-08 to 2011-12 indicate that despite very good absorption capacity and budget implementation records by the Ministry, the share of the MOA has shown a declining trend in overall development budget, non-development budget, recurrent budget, capital budget and total budget of the government. This may be due to higher needs for material production sectors such as energy and power, and services sector such as education and health. The ratio of MOA expenditure in total government revenue, overall GDP and crop sector GDP has also remained stagnant over the years. However, on considering the strategic importance of the MOA for ensuring food security and also for poverty alleviation, Finance Division may consider higher allocation for MOA.

As per the MTSBP, projected expenditures of the Ministry of Agriculture are expected to rise from Taka 10009 crore (amounting to 9.75% of Crops GDP) in 2012-13 to Taka 13364 crore (amounting to 9.52% of Crops GDP) in 2015-16 and Taka 12783 crore (amounting to 8.2% of Crops GDP) in 2016-17.

Annual Performance Plan

The MTSBP provides details of dominant performance indicators and their yearly targets for each Department and Agencies under the Ministry. These KPIs for inputs and outputs will be monitored and evaluated and necessary reports will be prepared to judge financial and physical compliance, efficiency and effectiveness of projects/programs and to take corrective measures during the planning horizon.

Procurement Plan

The MTSBP also provides detailed procurement plans for quality seeds, fertilizers and machinery and equipment for minor irrigation.

Monitoring and Evaluation

Monitoring and Evaluation and reporting form an integral part of an effective Medium Term Strategic Business Planning and performance based budgeting. Plan becomes successful and the value for money is realized only when the proposed targets for outcomes/ outputs are achieved.

MTSBP discusses in detail the monitoring and evaluation methodology, techniques and institutional set-up in the Ministry. In addition to the normal monitoring and evaluation of projects implementation by the ADP Review Committee chaired by the Minister and the Implementation Monitoring and Evaluation Division (IMED) of the Ministry of Planning, it is necessary to monitor and evaluate the trends of Key Performance Indicators (KPIs) for both Outputs and Inputs and other performance parameters indicated for projects/programs being implemented by the agencies and departments in order to judge the efficiency and effectiveness² of the projects/programs/activities. For these activities, it is necessary to strengthen the M&E cells in the Secretariat and Agencies/Departments and to upgrade the needed ICT infrastructure and inter-linkages.

Concluding observation

The Medium Term Strategy and Business Plan and the Annual Performance Plans are living documents and may have to be reviewed/modified/updated at periodic intervals in order to take care of dynamics of the change in internal and external economic environment and major policy changes and consistent with new policy by the government to make them realistic, operational and effective. In general such reviews and modifications are made after three years. It may be mentioned that a soft version of the MTSBP will be posted on the Website of the Ministry of Agriculture. As and when necessary this document may be reviewed/modified/updated accordingly.

² There are three types of evaluation depending on evaluating the actual inputs, outputs and outcomes in relation to planned/budgeted inputs, outputs and outcomes. While comparison of actual inputs with planned inputs (both financial and physical) determines (financial/ physical) compliance, comparison of actual outputs with planned outputs determines the efficiency of a project, and comparison of actual outcomes with planned outcomes determines the effectiveness of a project.

Background, Scope and Outline

1.1 Background, Scope and Objectives

Background

The government of Bangladesh introduced Medium Term Budget Framework (MTBF) in FY2005-06 for institutionalising linkage between policies, strategies and budget in order to link more effectively intra- and inter-sector budget allocations with government's priorities for the medium term and to have a focus on outputs and outcomes rather than inputs and activities. Ministry of Agriculture was one of four line ministries selected for piloting MTBF on the basis of its strategic importance in poverty reduction and economic development of Bangladesh. Significant progress on MTBF has been made since then and by the fiscal year 2011-12, the MTBF has been rolled out to all ministries, divisions and other institutions in Bangladesh.

As a part of a wider project being executed by the Finance Division for strengthening and deepening MTBF in line ministries, it has been decided to prepare Medium Term Strategy and Business Plans (MTSBP) for ten major ministries. Considering the importance and contribution of agriculture sector in Bangladesh economy, the Ministry of Agriculture has been selected first among all strategic ministries for piloting the MTSBP.



Scope and Objectives

The Medium Term Strategy and Business Plan (MTSBP) for the Ministry of Agriculture is a comprehensive plan for the Ministry and all Agencies and Departments for five years (2012-2016). It is a combination of a Medium Term Strategy and Business Plan and Annual Performance Plan for the Ministry, and form the basis for the preparation of the subsequent Ministry Budget Frameworks (MBF) and the Annual Demand for Grants.

The focus, scope and objectives of the Medium Term Strategy and Business Plan and the Annual Performance Plan are summarized below:

A. Medium Term Strategy and Business Plan (MTSBP)

Purpose: MTSBP sets out the ministry's vision, mission, strategic goals, policies, programs/projects/activities for a five-year period, as mandated under the Allocation of Business. For preparation of MTSBP, no explicit resource ceiling have been set, though, there may be implicit ceilings on financing depending on constraints of other inputs such as manpower, ICT, capacity building, infrastructure facilities, etc.

Focus: The Strategy and Business Plan focuses on strategic outcomes and objectives for the Ministry of Agriculture and its Agencies in entirety, and specifies programs/projects/activities to achieve these identified objectives.

Linked: MTSBP has been prepared in a manner consistent with the Sixth Five Year Plan (2011-2015), Perspective Plan (2010-2021), Vision 2021, Millennium Development Goals, policy documents, Citizens' Charter, and the MBF documents of the Ministry of Agriculture.

Timeframe: It covers a period of five years from 2012 to 2016, coinciding with the last four years of the Sixth Five Year Plan (2011-2015) and an additional year as the terminal year.

Updating: MTSBP is a living document and therefore may be reviewed and modified during the five-year period. However, in general, such reviews and modifications are made after three years and limited to changes in underlying policy framework or significant changes in internal and external environment. Besides, as and when necessary, this document may be reviewed/modified/updated accordingly.

B. Annual Performance Plan

Purpose: Annual Performance Plan specifies the performance indicators and targets for projects/programs/activities for the MTSBP period.

Focus: It focuses on strict time schedules to implement budgeted programs/projects/activities and to monitor the associated performance indicators and targets.

Linked: It is linked to the Strategic Plan, the Annual Demand for Grants and the MBF. In-year monitoring of the Annual Performance Plan may be conducted through special surveys and the preparation of quarterly and annual performance reports.

Timeframe: The Annual Performance Plan covers the MTSBP period.

Updating: In general, in-year changes to the plan should not be done on routine basis. Rather, it may be done sparingly and judiciously on the basis significant changes in strategies, policies or resources under the MTBF due to unforeseen events, natural disasters or external developments affecting the agriculture sector.

1.2 Outline of the Medium Term Strategy and Business Plan

Following this chapter on Background, Scope and Outline, the Medium Term Strategy and Business Plan for the Ministry of Agriculture comprises five additional chapters as per the *Contents* and *Operational Guidelines*³ for the preparation of MTSBP for Line Ministries and Divisions.

Chapter-2 on Situational Assessment discusses the role and current state of agriculture in Bangladesh, organizational structure and functions of the Ministry of Agriculture, political-economic-social-technological (PEST) context, Strengths-Weakness-Opportunities-Threats (SWOT) Analysis and multi-stakeholders' analysis.

Chapter-3 deals with legal mandate, major issues and development challenges, policy and regulatory framework, main aspects of Citizens Charter, and interrelations of MTSBP with national Sixth Five Year Plan, Perspective Plan and Vision 2021.

Chapter-4 identifies strategic objectives and linkages between strategic objectives and major policy documents of the Ministry of Agriculture, Key performance indicators of the Ministry on the basis of Vision, Mission, Core Values/Driving Principles, and makes an analysis of past trends of key performance indicators (KPIs). It makes year-wise projections of key performance indicators for the planning period on the basis of standard statistical and econometric techniques. This chapter also describes projection of major food grain requirements for food security during the planning horizon.

Chapter-5 specifies programs/projects and activities, estimates financing needs for implementation of these programs/projects and indicates sources of financing.

Chapter-6 provides the Annual Performance Plans for the Secretariat and all Agencies and Departments under the Ministry of Agriculture.

Chapter-7 identifies existing monitoring and evaluation system and proposed M & E mechanism and technique of the Annual Performance Plan.

Chapters are supported by essential Annexes on data base and methodology. The MTSBP ends with selected references on the subject. Annex 1 indicates the composition of Technical Committee to prepare MTSBP, Annex 2 indicates the Area and Production of Crops, Annex 3 provides the trend of Agricultural inputs and outputs during the last decade (2000-2010), Annex 4 provides methodology for the projections of input and output/outcome KPIs for the medium term planning horizon (2012-2016), Annex 5 presents Ministry level medium term strategy, Annex 6 presents the Department/Agency wise cost estimates of projects while Annex 7 provides Department/Agency wise Annual Performance Plans.

³ Finance Division (2012) *An Operational Guide to Prepare Medium Term Strategic Business Plans (MTSBP) For Line Ministries/Division*, pp.1-42, Strengthening Public Expenditure Management Program, Deepening Medium Term Budgeting Framework and Financial Accountability Project, Ministry of Finance, Government of Bangladesh, April 2012.



Situational Assessment

2.1 Role of Agriculture in Bangladesh Economy

In Bangladesh, as in all low income developing countries, agriculture is a very special sector for various reasons, particularly the following:

First, agriculture has a universal role for providing food, a basic need linked to the survival of mankind. It has also a strategic role of political importance, particularly in times of internal and external threats, conflicts and civil war.

Second, it is linked to deeply cherished traditions and a special way of life of the rural and ethnic communities over many years. It seeks to nurture cultural heritage, social stability and the preservation of the natural environment.

Third, most important from a development perspective, three quarters of the world's poor still depend on agriculture for employment of last resort.

Fourth, Agriculture growth is subject to uncertainty and risks caused by weather shocks, natural disaster, and highly volatile international prices of food products. In addition the peril of Climate Change is feared to adversely affect the agricultural production most.

All these factors make strategic planning and choices of policies and programs for agriculture very important and highly sensitive. For a poor and developing country like Bangladesh with large and growing population and high population density, the issues related to food security, nutrition, employment generation, poverty reduction, rural development and overall social welfare need to be examined comprehensively before formulating a medium term strategic plan for agriculture.

2.2 Rank of Bangladesh Agriculture in the World

Agricultural sector (comprising crops and horticulture, animal husbandry, forestry and fishing) is a prime sector to raise income of the people, improve food security and reduce poverty in Bangladesh. It is also an important sector to meet the Vision 2021 objectives and to achieve the Millennium Development Goals (MDG) targets "*to halve the proportion of poor and those who suffer from hunger by 2015.*" Agriculture contributes about one fifth to overall GDP of Bangladesh, employs 48 percent of labor force and is the major source of livelihood for 70 percent of rural people.

Relative position of Bangladesh in the world in terms of various parameters relating to agriculture sector is presented in Table 2.1. It may be observed from this table that, in the world, Bangladesh ranks *first* in terms of arable land as a percentage of land area, and agricultural raw materials imports as percentage of total merchandise imports; *fifth* in terms of rice production (currently Bangladesh ranks fourth after China, Indonesia and

Japan), rice consumption and area under rice production; 15th in irrigated land as percentage of crop land; 16th in terms of arable land, 12th in cotton imports, 15th in cotton use and 39th in cotton production; 20th in fertilizer use; 18th in banana production, 14th in terms of land under cereal production, and 12th in terms of mango production. In farm employment Bangladesh ranks 2nd in terms of workers per hectare. But, the land yields are very low. It ranks 14 (out of 23 countries) in terms rice yield and 17th (out of 26 countries) in terms of wheat.

Table 2.1: Ranks of Various Parameters Relating to Bangladesh Agriculture in the World

Items	Value	Rank out of Countries
Total Area ('000 sq.km)	144	[99th of 248]
Population (million) in 2011	150.5	[7 th of 240]
GDP PPP adjusted (US\$ Billion) in 2010	259	[46 th of 227]
GDP per capita (US dollar) in 2010	700	[187 of 213]
Agricultural machinery (Number of tractors)	5,530	[101st of 190]
Agricultural machinery (number of tractors per 100 hectares of arable land)	6.94	[164th of 188]
Agricultural raw materials exports (percentage of merchandise exports)	1.94 %	[61st of 154]
Agricultural raw materials imports (percentage of merchandise imports)	8.81 %	[1st of 155]
Agriculture GDP at 2000 US\$ (per capita)	US\$92.5	[104th of 164]
Agriculture GDP at current US\$ (per \$ GDP)	US\$193.2 per \$1,000 of GDP	[46th of 182]
Agriculture GDP at current US\$ (per capita)	US\$81.8	[123rd of 182]
Arable and permanent cropland	8.48 million hectares	[30th of 148]
Arable land as % of land area	61.11 % of land area	[1st of 199]
Arable land	7.96million hectares	[16th of 199]
Area under Rice	10.9million hectares	[5th of 23]
Area under Wheat	0.57million hectares	[25th of 26]
Banana production	624.7 thousand metric tons	[18th of 48]
Cereal production	111 thousand metric tons	[71st of 149]
Cereal production growth	23%	[49th of 149]
Cotton imports	1,025 thousand bales	[12th of 109]
Cotton production	129 thousand bales	[39th of 109]
Cotton stocks	183 thousand bales	[25th of 109]
Cotton use	1,100 thousand bales	[15th of 109]
Crop production index	104.9 %	[108th of 182]
Fertilizer consumption per hectare of land	1,780.17 g/ha of arable land	[34th of 169]

Fertilizer consumption	1.42million metric tons	[20th of 169]
Food production index	104.6 %	[105th of 182]
Grains - Rice consumption	26.4 million metric tons	[5th of 17]
Grains - Rice imports	500 thousand metric tons	[16th of 38]
Grains - Rice production	26 million metric tons	[5th of 16]
Production of Wheat	1.25 million metric tons	[27th of 26]
Grains -Wheat imports	1.3 million metric tons	[19th of 43]
Irrigated land (% of cropland)	56.12 %	[15th of 164]
Agriculture labor as % of total labor force	54.7%	[44th of 149]
Land under cereal production (hectares)	11.782 million hectares	[14th of 176]
Livestock production index	102.6 %	[107th of 181]
Mango (Area of High 12 Producers)a	51,000 hectares	[12th of 12]
Meat production growth	72%	[34th of 149]
Permanent cropland (% of land area)	3.53 % of land area	[17th of 187]
cropland	345,000 hectares	[56th of 181]
Pesticide use(per hectare)	0.4 kg	[31st of 45]
Root and tuber production	1.93 million metric tons	[42nd of 149]
Root and tuber production growth	12%	[64th of 149]
Tractor concentration	0.7	[121st of 147]
Tractors(Number)	5,530	[94th of 147]
Agriculture value added - annual % growth	2.21 %	[79th of 164]
value added at constant 2000 US\$	13.11billion at 2000 US\$	[20th of 164]
value added at current US\$	11.6 billion US\$	[23rd of 172]
value added per worker (constant 2000 US\$)	323 constant 2000 US\$	[125th of 163]
Workers per hectare	4.6	[2nd of 148]
Yield of Rice(tons per hectare)	3.6	[14th of 23]
Yield of Wheat(tons per hectare)	2.21	[17th of 26]

Source: <http://www.nationmaster.com> on the basis of the primary sources: viz.

- a. FAO, United Nations;
- b. World Development Indicators, World Bank,
- c. World Resources Institute;
- d. Production Estimates & Crop Assessment Division, FAS, USDA;
- e. Agri-Food Business Development Centre;
- c. United States Department of Agriculture.

Table 2.2 and 2.3 presents selected indices for agriculture in Bangladesh compared to those in the member countries of the South Asian Association for Regional Cooperation (SAARC)⁴ and some other developing economies in Asia (viz. Cambodia, China, Indonesia, Malaysia, Myanmar, Philippines and Thailand). Among the SAARC member countries, Bangladesh ranks first in terms of agriculture land (also arable land) as percentage of total land, and cereal yield and fertilizer use per hectare. But per capita land holding is the second lowest.

Table 2.2: Comparative Role of Agriculture in Bangladesh, SAARC and Selected Asian Economies - I

Country name	Agriculture value added as % GDP	Irrigated land as % of total agri. land	Agriculture land as % of total Land	Crop area as % of total land area	Arable land as % of total land
	2010	2009	2009	2010	2009
SAARC					
Afghanistan	30	4.8	58.1	0.2	11.9
Bangladesh	19	56.1	70.3	7.5	61.1
Bhutan	19	6.8	13.2	0.7	2.0
India	19	35.1	60.5	3.9	53.1
Maldives	3		26.7	10.0	13.3
Nepal	36	27.7	29.6	0.8	16.7
Pakistan	21	73.9	34.1	1.1	26.5
Sri Lanka	13		41.6	15.5	19.1
Other Asia					
Cambodia	36		31.5	0.9	22.1
China	10		56.2	1.5	11.8
Indonesia	15		29.6	10.5	13.0
Malaysia	11		24.0	17.6	5.5
Myanmar	36		19.0	1.7	16.9
Philippines	12		40.1	16.9	18.1
Thailand	12		38.7	7.2	29.9

⁴ The South Asian Association for Regional Cooperation (SAARC) is an organization of South Asian nations, founded in December 1985 and dedicated to economic, technological, social, and cultural development emphasizing collective self-reliance. Sri Lanka, Bhutan, India, Maldives, Nepal, Pakistan, and Bangladesh are its seven founding members, and Afghanistan joined the organization in 2005.

Table 2.3: Comparative Role of Agriculture in Bangladesh, SAARC and Selected Asian Economies - II

Country name	Arable land per person (hectare)	Cereal yield (kg per hectare)	Agriculture employment as % of total employment	Rural population as % of total population	Fertilizer consumption- kg per hectare
	2009	2010	2009	2010	2009
SAARC					
Afghanistan	0.23	1,908		75	
Bangladesh	0.05	4,144	60	72	281.7
Bhutan	0.11	2,177	65	63	31.9
India	0.13	2,537		70	167.8
Maldives	0.01	2,000		60	97.5
Nepal	0.08	2,295		82	1.4
Pakistan	0.12	2,592		63	217.2
Sri Lanka	0.06	3,974	33	85	257.9
Other Asia					
Cambodia	0.28	3,108		77	7.1
China	0.08	5,521		55	488.4
Indonesia	0.10	4,876	40	46	181.4
Malaysia	0.06	3,800	14	28	769.8
Myanmar	0.23	3,989		66	5.4
Philippines	0.06	3,232	35	34	140.5
Thailand	0.22	2,938	42	66	125.1
Japan	0.03	5852	4	33	235.1
Korea	0.03	6196	7	18	388.8
Vietnam	0.07	5161		71	402.3

Source: World Development Indicators, 2011.

2.3 Current State of Agriculture in Bangladesh

Agriculture performance in the recent past had been satisfactory. During the last decade (2000-2010) agriculture registered an average growth rate of 3.6 percent per annum supported by a growth rate 3.5 percent by crops and horticulture, 4.1 percent by animal husbandry, 5.1 percent by forestry and 3 percent by fishery (Table 2.4). Growth rates of crops and fishery have been volatile as these sub-sectors are affected most by weather shocks and natural disasters. However, during the last five years there was significant acceleration of the growth rates in all sub-sectors. Thanks to favorable weather, effective management in distribution of inputs and better access to credit and extension services, agriculture recorded a strong growth of 5.1 percent in 2010-11 on a high of 5.3 percent achieved in 2009-10.

Estimated Growth Rate for 2011-12

Prospects of agricultural production in FY2011-12 are fairly good. Favorable monsoon, continued fiscal incentives and other support for agriculture is expected to contribute favorably in agricultural production in FY2011-12. However, growth rate in overall agricultural production has been estimated to be 2.53 percent (significantly down from 5.13 percent achieved in FY2010-11); the deceleration of agricultural growth is basically due to marginal growth rate of 0.94 percent by the crop sector (significantly lower than 5.65 percent achieved in FY2010-11).

Overall GDP growth rate in FY2011-12 is expected to be 6.32 percent aided by a growth of 2.53 percent in agriculture, 9.47 percent in industry and 6.06 percent in services. Presently, agriculture accounts for about 20 per cent of the GDP and provides livelihoods to 48 per cent of the total population in Bangladesh.

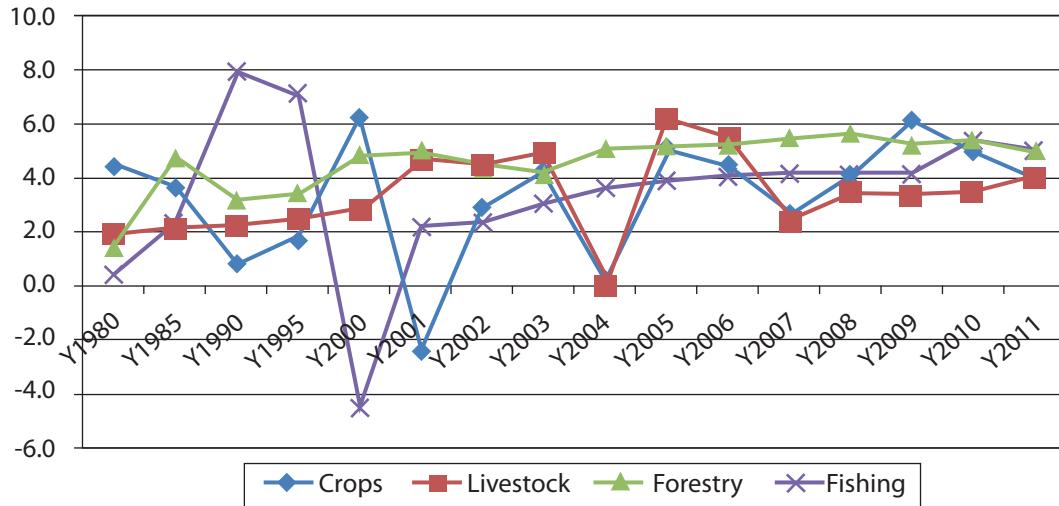
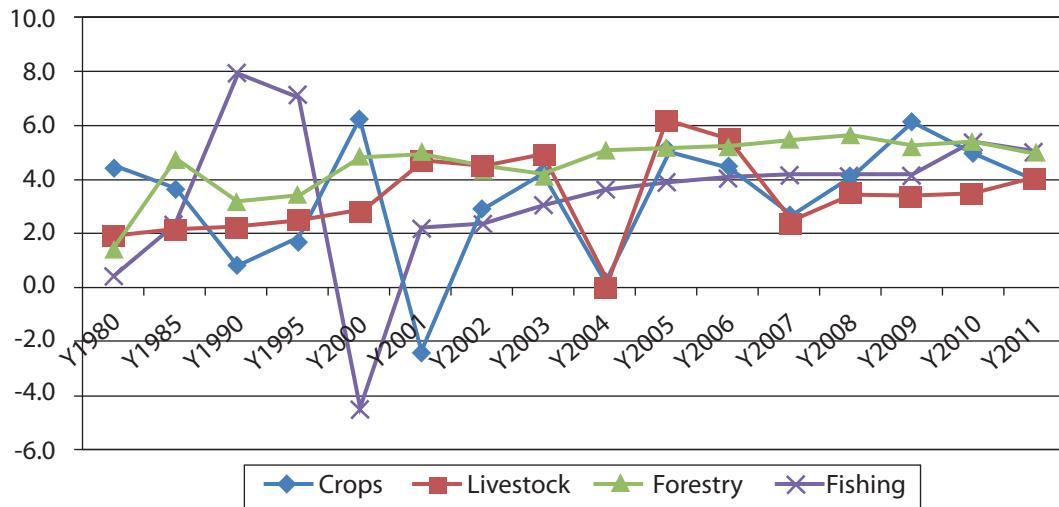
Table 2.4: Trends of Annual Real GDP Growth Rates and Share in Overall GDP of Agriculture (in percentage)

Year	Real GDP Growth Rates (percent)					Shares in Overall GDP (percent)				
	AGR	Crops	LiveSt	Forestry	Fishing	AGR	Crops	LiveSt	Forestry	Fishing
FY1981	3.3	4.5	2.0	1.4	0.4	30.9	23.5	3.5	1.2	2.7
FY1986	3.3	3.6	2.1	4.8	2.3	31.2	22.3	3.9	1.8	3.2
FY1991	2.2	0.8	2.3	3.2	7.9	29.5	20.2	3.7	2.0	3.6
FY1996	3.1	1.7	2.5	3.5	7.1	24.6	14.4	3.2	1.9	5.1
FY2001	3.1	6.2	2.8	4.9	-4.5	23.3	13.5	2.7	1.8	5.3
FY2002	0.0	-2.4	4.7	4.9	2.2	21.9	12.4	2.6	1.8	5.1
FY2003	3.1	2.9	4.5	4.4	2.3	21.0	12.0	2.5	1.8	4.7
FY2004	4.1	4.3	5.0	4.2	3.1	17.8	11.7	2.4	1.7	4.4
FY2005	2.2	0.2	7.2	5.1	3.7	19.3	11.2	2.3	1.6	4.2
FY2006	4.9	5.0	6.2	5.2	3.9	18.9	11.1	2.4	1.5	3.9
FY2007	4.6	4.4	5.5	5.2	4.1	19.3	11.5	2.4	1.5	3.9
FY2008	3.2	2.7	2.4	5.5	4.2	19.0	11.5	2.3	1.4	3.8
FY2009	4.1	4.0	3.5	5.7	4.2	18.7	11.3	2.4	1.4	3.7
FY2010	5.3	6.1	3.4	5.2	4.2	18.6	11.2	2.4	1.3	3.6
FY2011	5.1	5.7	3.5	5.4	5.4	18.4	11.1	2.4	1.3	3.6
FY2012	2.5	0.9	4.0	5.0	5.0	18.3	11.1	2.4	1.2	3.5
2001-12	3.6	3.5	4.1	5.1	3.0	19.6	11.7	2.4	1.6	4.2
CV (%)	43	74	29	9	89	9	6	5	12	14

Notes: 1. CV stands for coefficient of variation = $100 \times \text{Standard Deviation}/\text{Arithmetic Mean}$.

2. FY2012 stands for fiscal year July 2011 to June 2012. Other years have similar interpretation.

Source: Bangladesh Bureau of Statistics.

Figure 2.1: Trends of Annual Growth Rates of Agricultural Value Added (in %)**Figure 2.2: Shares of Agriculture Sub-sectors in Overall GDP (in percentage)**

Composition of Agriculture Value Added

Among the agriculture sub-sectors, in recent years (FY2011-12) the crops had the largest share (11.1 percent) in overall GDP followed by fishing (3.5 percent), livestock (2.4 percent) and forestry (1.2 percent) in the order mentioned (Table-2.4). However, as mentioned earlier, the growth rates of crops and fishing and so of agriculture had been highly volatile or unstable over the years. Within agriculture, crops have the dominant share (60%) followed by fishing (22%), livestock (12%) and forestry (8%) in agricultural value added (Table 2.5).



Table 2.5: Shares of Sub-sectors within Agriculture GDP (in %)

Year	Crops	Livestock	Forestry	Fishing	Total AGR
FY1981	76.1	11.2	4.0	8.8	100.0
FY1986	71.4	12.5	5.7	10.4	100.0
FY1991	68.5	12.4	6.9	12.2	100.0
FY1996	58.6	13.1	7.5	20.9	100.0
FY2001	57.8	11.7	7.9	22.7	100.0
FY2002	56.6	11.9	8.3	23.2	100.0
FY2003	57.1	11.9	8.4	22.6	100.0
FY2004	57.9	11.8	8.4	22.0	100.0
FY2005	57.9	12.1	8.4	21.6	100.0
FY2006	58.8	12.5	8.0	20.6	100.0
FY2007	59.7	12.3	7.8	20.2	100.0
FY2008	60.6	12.1	7.5	19.8	100.0
FY2009	60.4	12.6	7.4	19.6	100.0
FY2010	60.4	13.0	7.2	19.4	100.0
FY2011	60.3	13.0	7.1	19.6	100.0
FY2012	57.4	14.2	8.2	20.2	100.0
Ave.2001-12	59.5	12.3	8.0	21.5	100.0
CV (%)	4	4	8	9	0

Notes: 1. CV stands for coefficient of variation = $100 \times \text{Standard Deviation}/\text{Arithmetic Mean}$.

2. FY2012 stands for fiscal year July 2011 to June 2012. Other years have similar interpretation.

Source: Bangladesh Bureau of Statistics.

Within crops during 2009-10, paddy had the dominant share (65.9 percent) followed by vegetables (10.2%), fruits (5.9%), spices (4.8%), beverages (2.7%) and fibers (2.5%) while oilseeds (1.8%), sugarcane (1.5%), pulses (1.3%) and wheat (1.2%) had marginal shares in overall crop value added (Table 2.6). The country depend highly on imports of edible oils, pulses and sugar to meet domestic demand and faces high international prices of food items, which are major sources of domestic inflation.

Source: Table 4.05, page 108, 2009 National Accounts, Bangladesh Bureau of Statistics, August 2010.



Table 2.6: Weights of Value Added of Crops in 2009-10

	Crops	Value added (Billion Taka)		Share in total value added (In percentage to total)	
		Current prices	Fixed prices	Current prices	Fixed prices
A	Major Crops	452.22	258.43	67.48	69.16
A.1	Paddy	427.09	246.10	63.73	65.86
A.2	Wheat	8.91	4.45	1.33	1.19
A.3	Oth. cereals	16.22	7.88	2.42	2.11
B	Minor Crops	217.93	115.24	32.5	30.84
B.1	Beverages	21.91	10.24	3.27	2.74
B.2	Fibres	18.30	9.45	2.73	2.53
B.3	Fruits	52.74	21.90	7.87	5.86
B.4	Oliseeds	9.85	6.65	1.47	1.78
B.5	Pulses	7.71	4.75	1.15	1.27
B.6	Spices	33.04	17.75	4.93	4.75
B.7	Sugarcane	8.64	5.68	1.29	1.52
B.8	Vegetables	64.54	38.23	9.63	10.23
B.9	Other crops	1.21	0.60	0.18	0.16
Total		670.15	373.67	100.0	100.0

Productivity and Growth

The general agricultural sectors are Rice crops, Jute, Cotton, Sugarcane, Flower, Sericulture, Horticulture, Fisheries, Vegetables, Livestock, Soil Development, Seed development and distribution. Nuclear Agriculture has brought a new dynamic change in the agricultural sector of Bangladesh.

Bangladesh has realized significant productivity-led growth in agriculture in the course of last three decades. Production of rice, the major staple, increased nearly four-fold since 1972 and reached 34.88 million tons in 2011-12 making Bangladesh almost self-sufficient in food grain. The MTBF target is to reach the production level of 35.50 million tons by 2015-16. The crop intensity has increased from 148 to 181 percent. Increase in rice production has been possible largely through increase in yield from 1.05 to 2.2 tons per hectare. Adoption of HYV, saline tolerant and short duration variety of seeds, application of minor irrigation, fertilizer, development of market infrastructure, input subsidy assisted in enhancing output of crop agriculture.



Source: Bangladesh Bureau of Statistics.

Table 2.7: Food grains Production (in Lakh metric tons)

Food grains	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Aus	18.51	18.32	15.00	17.45	15.12	15.07	18.95	17.09	21.33	23.33	23.70
Aman	111.15	115.21	98.20	108.10	108.41	96.62	116.13	133.07	127.91	127.98	133.00
Boro	122.22	128.37	138.37	139.75	149.65	177.62	178.09	183.41	186.17	187.59	187.60
Total Rice	251.88	261.90	251.57	265.53	273.18	289.31	313.17	322..57	335.41	337.97	344.30
Wheat	15.07	12.53	9.76	7.35	7.25	8.44	8.44	9.69	9.72	9.95	10.36
Maize	1.75	2.41	3.56	5.22	8.99	13.46	7.30	8.87	15.52	19.54	20.42
Total	268.70	276.44	264.89	277.87	289.42	311.21	328.96	341.13	360.65	348.85	375.08

Diversification of Agriculture

Over the years, agriculture sector has undergone rapid diversification, particularly in the fishery, livestock and poultry sectors. The contribution of fisheries and livestock in agriculture GDP has averaged 21.5 percent and 12.3 percent respectively during the decade 2001-2010 owing to changing dietary preferences and domestic demand for high-value food products, and tapping of the lucrative export market by the producers. Inland fishery experienced higher growth largely due to the cultivation and export of shrimp.

Agriculture Exports

Agricultural exports increased at an average annual rate of 5 percent in the recent past and accounted for about 10 percent of the total exports. Shrimp exports— the country's second largest export item after readymade garments— accounted for nearly 5 percent of total export value.

In the fiscal year 2009-10, Bangladesh earned US\$ 687.5 million by exporting agricultural products which was 4.24 percent of total export earning amounting to US\$16.205 billion. In addition to the exports of main agricultural commodities such as, raw jute, jute goods, tea, frozen foods, the Government has taken a slew of measures to increase exports of non-traditional agricultural commodities.

Agriculture Imports

Two prolonged floods and cyclones in 2007 caused 1.1 million tons shortfall of domestic food production causing unusual rise in food imports and exposing the nation to high international food prices. In 2008, grain imports increased to 3.4 million tons worth US\$ 2.9 billion, which accounted for 17 per cent of total exports earnings in the year. This created upward pressure on the trade deficit. Domestic price of rice and wheat increased by over 60 percent between December 2007 and August 2008.

During FY2009-10, the total import of food grain was 3.45 million metric tonnes (rice 0.087 million metric tonnes, wheat 3.36 million metric tonnes), whereas import in FY 2008-09 was 3.013 million metric tonnes (0.603 million metric tonnes of rice and 2.41 million metric tonnes wheat).

Agriculture Employment

Despite a declining trend of its share in overall gross domestic product (GDP) from 31.2 percent in 1985-85 to 19.6 percent in 2009-10 mainly due to rapid expansion of services and industry sectors, agriculture remains the main source of income for the rural poor in Bangladesh. About 70 percent of the rural population and 48 percent of total labor force (Table 2.8) depend directly or indirectly on agriculture and related farm and non-farm activities for their livelihood. Agriculture has strong forward and backward linkages with other sectors and is a major source of supply of raw materials for the growing agro-based industries and nonfarm rural economies. Besides, agricultural productions are the largest source of market for a variety of consumer goods, including consumer durables. Hence, improvement in agricultural sector performance and sustaining its growth rate are critical for reduction of rural poverty and unemployment. A World Bank study indicates that the agriculture growth is, on average, twice as effective in reducing poverty as non-agricultural growth.

Table 2.8: Sectoral Distribution of Employment (in percentage to total)

Year	1974	1981	1985	1986	1989	1991	1996	2000	2001	2003	2006	2010
Agriculture	78.0	61.0	57.8	57.2	56.6	53.0	48.8	50.8	51.0	51.8	48.1	47.0
Industry	8.0	8.7	9.4	10.1	10.1	10.0	10.1	9.9	10.0	10.0	11.1	18.0
Services	14.0	30.3	32.8	32.7	33.3	37.0	41.1	39.3	39.0	38.2	40.8	35.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Labor Force Surveys, Bangladesh Bureau of Statistics.

Like other poor agrarian economies, Bangladesh suffers from what is known as the problem of “disguised unemployment” and “seasonal unemployment” in agriculture and informal services, where people are temporarily employed with low hours, low wages and low productivity. About 78 percent of the labor force is engaged in informal sector activities (agriculture and informal services).

Agricultural Credit

With a view to ensuring food security and improving the socio-economic condition of the country, agricultural credit programs are in operation for disbursement of rural and agriculture credits through State-owned Commercial Banks (SCBs) and specialized banks including the private and the foreign banks operating in Bangladesh. SCBs and agricultural banks are also carrying out micro-credit interventions for poverty alleviation. During FY2008-09, credit disbursement stood at Tk.9,284 crore against the target of Tk 9,379 crore. A target of credit disbursement through Bangladesh *Krishi* Bank, Rajshahi *Krishi Unnayan* Bank, four SCBs, Bangladesh Rural Development Board (BRDB) and Bangladesh *Shilpo* Bank, the private and foreign commercial banks was set at Tk. 11,512 crore for FY2009-10, out of which, Tk.11,117 crore was disbursed amounting to 96.6 percent of the target. The overall situation relating to agricultural credit during FY2002-03 to FY2009-10 is presented in Table 2.9.

Table 2.9: Agricultural Credit Disbursement, Recovery and Outstanding Balance

Fiscal Year	Target	Disbursement	Recovery	Balance
2002-03	3560.53	3278.37	3516.31	11913.35
2003-04	4378.94	4048.41	3135.32	12705.95
2004-05	5537.91	4956.78	3171.15	14039.84
2005-06	5892.21	5496.21	4164.35	15376.79
2006-07	6351.30	5292.51	4676.00	14582.56
2007-08	8308.55	8580.66	6003.70	17822.50
2008-09	9379.23	9284.46	8377.62	19598.15
2009-2010	11512.30	11116.88	10112.75	22588.58

Source: Bangladesh Bank.

Fertilizer

Fertilizer is one of the most important agricultural inputs, and availability and optimal use of chemical fertilizers is critical for boosting yields and sustaining soil quality. Fertilizers used in Bangladesh are mainly urea, triple super phosphate (TSP) and muriate of potash (MOP) and Di Ammonium Phosphate (DAP). The increased cultivation of High-yielding variety (HYV) crops and expanding irrigation facilities led to about four times increase in the consumption of fertilizer in Bangladesh from 870,000 tons in 1980 to 3.44 million tons in 2009-10. Bangladesh meets only part of its total fertilizer needs from domestic production and depends largely on imports.

Fertilizer markets continue to be subjected to numerous government intervention. While the retail sales have been privatized, production and distribution of fertilizer at the wholesale level continues to be dominated by the public sector. The government plays a major role in importing heavily subsidized fertilizer – urea and non-urea. While import and distribution of non-urea such as TSP, MOP and DAP fertilizers are mostly done by private sector entities and partly by the public sector i.e. Bangladesh Agriculture Development Corporation, imports of urea fertilizers are entirely done by the public sector i.e. Bangladesh Chemical Industries Corporation. Urea, which provides nitrogen – a key nutrient for soils, accounts for more than three-fourth of fertilizer use. Subsidy for urea creates nutrients imbalance in fertilizer use by the farmers. In addition to explicit budgetary subsidies, domestic urea production is cross-subsidized through discounted purchase of natural gas – the most important raw material in urea production – from the state-owned gas utility BOGMC.

Encouraging use of “Guti Urea” (USG) and organic fertilizers are good option for optimal use of urea which can help reduce fiscal burden arising from the import of urea from the international market. Optimal use of fertilizer plays a key role in boosting yields, sustaining soil quality. It also has the potential to lower the government subsidy on fertilizer.

Seed

Availability of quality seed is an essential ingredient for increasing agricultural production. Since independence, Bangladesh’s remarkable success in tripling cereal production from

under 11 million MT to over 35 million MT, particularly rice, is largely attributed to the availability of quality inputs including seed. Major driver of crop production have been development and diffusion of improved varieties of seeds. Over three-fourth of the area under rice is now cropped with improved varieties of seeds developed by Bangladesh Rice Research Institute (BRRI) and Bangladesh Institute of Nuclear Agriculture (BINA). Gradual adoption of these improved varieties by replacing low-yielding traditional varieties has contributed to increase in yield, reduction in unit cost of production, and increase in profitability in farming. The NARS and the DAE have and will continue to carry out program for training and support services for adoption and development of improved seed varieties.

Public sector now accounts for about 20 percent of supply stream of seed. Re-energizing BADC's capacity to produce quality seed from foundation seed to breeder seed played a crucial role in augmenting public sector's contribution to make available standard and quality seeds to the farmers. BADC, in accordance with the seed policy of 1993, is now mainly focused on the production of seeds of paddy, wheat, potato, and jute in their seed farms. BADC produces foundation seeds from breeder seed of cereal crops in its 23 farms, jute seeds in 2 farms, vegetable potato seeds in 2 farms, and pulse and oil seeds in 3 farms. It also engages farmers to multiply seed on contract basis. Introduction of contract seed growers has a strong ramification. The country's SFYP emphasizes that production program of all other crops beyond foundation seed will be done by contract growers.

According to the "Seed Policy" the public sector efforts will be supplemented by developing and encouraging private sector growers.

Irrigation

Further increase in crop production and bringing additional land under crop area or conversion of non-crop area under cultivation depends on expansion of irrigation facilities and more effective water management, particularly expansion of irrigation infrastructure like power pumps, shallow tube well, deep tube well and floating pumps based ground-water irrigation. Public intervention (through development projects) in increasing irrigated land hinges on optimal mix of use of underground and surface water in an integrated and planned manner in order to increase cropping intensity, diversification and yield in an environment friendly method. Farmers are encouraged and motivated for efficient water-use management. The efficacy of new technology of AWD (Alternate Wetting and Drying) is being demonstrated to the farmers and received better response from them. The technological process has been supported by public and private investment for infrastructure for irrigation, flood control and drainage, because the optimum exploitation of the yield potential of improved varieties depend on good water control. The area irrigated has expanded rapidly since 1989 with the liberalization in the import of diesel engines and reduction in import duties and withdrawal of restrictions on standardization of irrigation equipment.

Conservation of ground water and its use to reduce pressure on underground water on environmental consideration like global warming, climate change, and reduction of water flow to our part of the international rivers from the upper riparian countries would receive major attention. The Government has undertaken many projects to build over-ground and buried pipe irrigation canals in order to install power driven pumps, and to prevent wastage of irrigation water. Excavating/re-excavating canals, building of dams in mountain stream and rubber dams would continue to receive due attention.

Following expansion of irrigation facilities and more effective water management, 206000 hectares were added annually between 1978-92, more than double the expansion of the past. As a result of these conscious decisions the irrigation coverage increased from 53.65 lakh hectares in FY2004-05 to 56.90 lakh hectares in FY2009-10. Current estimates suggest that during the next two decades, 15,000-20,000 hectares per year could be brought under irrigation, making it a major source of prospective agricultural growth.

Agriculture Subsidies

Agriculture subsidy played an important role in fostering agricultural production in Bangladesh and helped small and marginal farmers' to continue to engage in production of food grain. It also helps to realize dual objectives of the Government to stabilize input and food grain prices. Unrestrained subsidy, however, not only creates fiscal burden but also artificially depresses market price of food grain. Experience suggests that investment in research, extension, irrigation and marketing infrastructure yields better result in the long run than providing unrestrained subsidy. This warrants in-depth policy review regarding subsidy regime.

As given in the following table (Table 2.10), agriculture subsidy in Bangladesh accounts for 0.77 percent of GDP, 4.3 percent of overall budgetary expenditure, 6.1 percent of total revenue and 75.6 percent of total budget for the Ministry of Agriculture during 2011-12. However, it may be observed from the table that the neighboring India provides much more agriculture subsidy as a percentage of GDP or overall budget or total revenue, although it is more or less the same in terms of the total budget for the Ministry of Agriculture.

From the statistics given in the following table and graph (Figure 2.3), it can be observed

Table 2.10: Share of Agriculture subsidy (in percentage)

Fiscal Year	Agriculture subsidy as % of GDP at current market prices	Agriculture subsidy as % of Total Budget	Agriculture subsidy as % of Total Revenue	Agriculture subsidy as % of Agriculture Ministry Budget
2007-08	0.73	4.2	6.4	64.0
2008-09	0.94	6.2	8.4	75.7
2009-10	0.72	4.5	6.2	73.9
2010-11	0.72	4.4	6.0	67.6
2011-12	0.77	4.3	6.1	75.6
<i>Information for India</i>				
2012-13	1.32	8.4	13.4	74.6

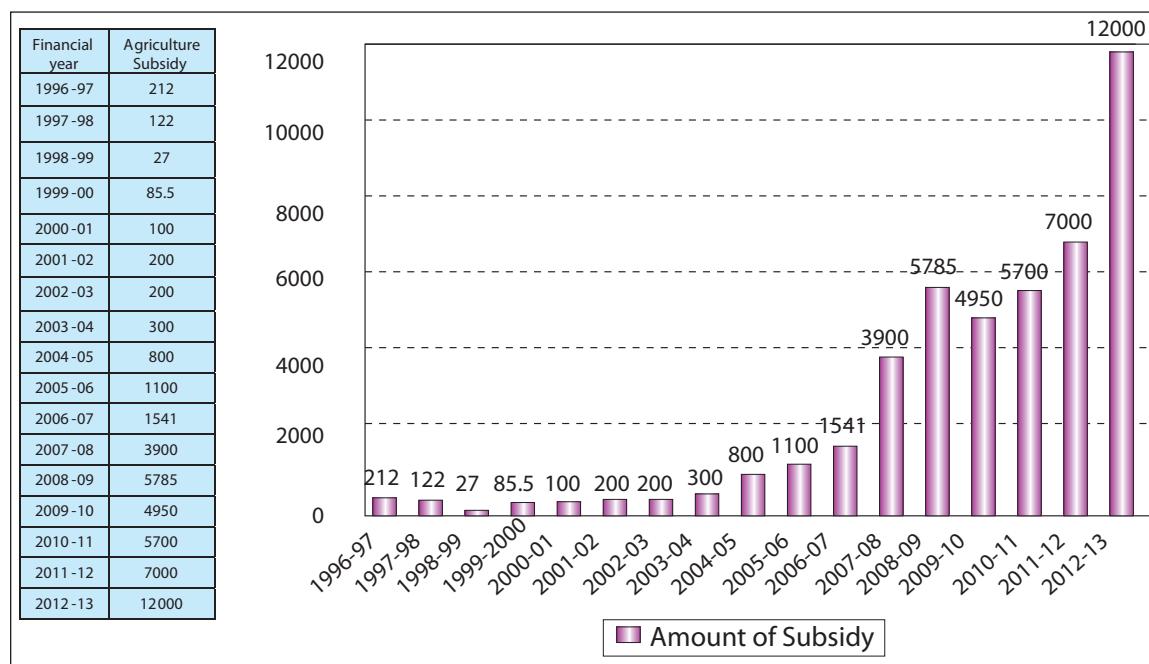
Source: a. Finance Division, Ministry of Finance, Government of Bangladesh; and

b. Union Budget for 2012-13, Ministry of Finance, Government of India.

that agriculture subsidy in FY2000-01 amounted to 100 crore taka, which increased 70 times to 7000 crore taka in FY2011-12 and it has been increased substantially at 12000 crore taka in FY2012-13.

Increased prices for important agricultural inputs in the international market, such as urea and non-urea fertilizer, electricity and diesel for tube wells and irrigation pumps are subsidized either at the retail or the wholesale level. Although these subsidies reduce agriculture production costs, improve farm profitability, encourage production, improve food security and bring down food prices, they also put a substantial financial burden on budgetary resources.

Figure 2.3: Budget allocation for Agriculture Subsidy from 1996-97 to 2012-13



Source: Finance Division.

Increasing subsidies resulted in lower public investments in agriculture research and development, extension services and water and irrigation infrastructure. Investment in these sectors decreased from 5.2 percent of total expenditures in 2004 to 2.7 percent in 2007. Expenditure on research and development at only 0.3 percent of agricultural GDP is very low compared to 0.62 percent for other developing countries and 2.80 percent for developed countries.⁵ In the event of crises and natural disasters subsidy plays an important role to prevent production shock. The increase in subsidy should not be at the expense of investment in Research and Development which is crucial to sustain and enhancement of agricultural production.

Unusual increase and volatile international price of imported agricultural inputs, such as urea and non-urea fertilizer, raw material for fertilizer, electricity and diesel necessitated providing agricultural subsidy to sustain production and safeguard farmers' interest.

⁵ Bangladesh Public Expenditure and Institutional Review - Towards a better quality of public expenditure, June-2010 by World Bank.

Box-2.1

Pros and Cons of Agriculture Subsidies

1. Agriculture subsidies help in increasing agriculture production and keeping food prices and food inflation under control in short and medium term.
2. However, any subsidies lead to irrational and non-optimal allocation of resources among sectors.
3. Agriculture subsidies, in the long run, reduce economic efficiency in agriculture, reduce farmers' profit margin, distort competitiveness in international trade and reduce investments in agriculture, particularly for R&D, extension services and infrastructure development. However, carefully targeted subsidies tend to result in improved overall economic efficiency and increased social welfare by providing safety nets to the poor.

International Practices, WTO and Agriculture Subsidies

As a member of WTO Bangladesh has some rights and obligations in terms of participating in international trade. Among the WTO agreements some like Agreement on Agriculture (AoA), Agreement on Application of Sanitary and Phytosanitary Measures have direct relevance to agricultural production, input and output pricing, supporting agriculture and agricultural trade. Being a LDC country, AoA of the WTO provide some unique opportunity to assist our farmers and traders in the form of support/subsidy. Under the current provision of AoA, being a LDC, Bangladesh can give support/subsidy amounting upto 10% of its total monetary value of agricultural output, which is de



minimis level. Bangladesh's current level of support/subsidy to agriculture is within this *de minimis* level. The major challenge is how to continue support/subsidy to agriculture within the WTO system to protect the interests of our farmers and making our agriculture economically efficient and globally competitive in the long run. A regime without farm subsidies will be an ideal one, provided it is accepted in all countries in the world. But the present situation is far away from the ideal one. Developed countries, by increasing their farm subsidies by quantum jumps are distorting global agricultural prices. Due to lack of financial resources, Bangladesh like other developing countries cannot match the developed ones in rendering high levels of agricultural subsidies. In such a situation, the good option would be optimally target agricultural subsidies and gradual withdrawn of subsidy to agriculture and diverting the money to agriculture research, extension and market infrastructure.

Box-2.2

International Practices of Agriculture Subsidies

- Agricultural subsidies of developed countries are many times their external aid. Total agriculture support in European Union (EU) amounts to about US\$100 billion.
- An average cow in the EU received a subsidy of \$2.2 a day in 2005 compared with 767 million poor in the Asia and Pacific accounting for 21% of their population living on an income less than \$1 per day and 48% earning less than \$2 per day.
- In 2002 US cotton producers received a subsidy of \$2.9 billion which was more than entire GDP of Lao PDR or of Cambodia.
- Agriculture sector support (subsidies to farmers and consumers and government R&D contributions) as percentage of GDP is just 0.12% for Australia in 2010, compared with OECD average of 0.85%.
- In 2010, New Zealand farmers received the lowest level of subsidies with 1% of their farm income generated by government support, compared to OECD average of 20%.
- Australia ranked second lowest with 3.2% of farm income derived from government support, and Norway had the highest level at 60%.
- Agriculture accounts for less than 10% of external trade and less than 5% of GDP and employment in these countries.
- But, Bangladesh is basically rural based agrarian economy and agriculture contributes 20 percent of GDP.

International Examples of Targeted Subsidies

- Farmers Card in India,
- Food Stamps in Sri Lanka,
- BPL (Below the Poverty Line) Ration cards and Food for Works Program in India,
- Proposed Fertilizer Coupons replacing untargeted fertilizer subsidy in India,
- Proposed Smart Cards with fixed amount to purchase mix of items (food, fertilizers, medicine, kerosene, diesel) in India
- Cash Transfer to small and marginal farmers and vulnerable section of people (conditional or unconditional) in Latin America

Box-2.3**World Trade Organization and Agriculture Subsidies**

WTO distinguishes three kinds of agriculture subsidies as indicated below:

- **Amber Box:** Trade-distorting subsidies- product-specific support (direct support and administered prices), and non-specific support (insurance and subsidies for capital and inputs). Subsidies in this category are mandated to be reduced and eventually eliminated under the WTO regime.
- **Blue Box:** Subsidy directly linked to historical production (acreage support that limits production by imposing production quotas or requiring farmers to use a part of their land for specific crops). Blue Box support is not subject to WTO reduction commitments.
- **Green Box:** Decoupled support paid directly to farmers regardless of current production or prices. These include support for environmental programs, R&D, pest control, extension and infrastructure provisions, buffer stock for food security, domestic food aid for poverty reduction and employment programs, relief from natural disasters, and government income insurance and income safety-net programs.
- **Green Box support is expected to cause little or no trade distortion and is not subject to WTO reduction commitments.**

2.4 Major Constraints for Agriculture Development in Bangladesh

Shrinking arable land: Bangladesh is one of the world's most densely populated countries and has limited scope for area expansion, as most of the arable land has already been brought under cultivation. Arable land is contracting 1 percent per year due to pressure of increased population, urbanization, industrial and service sector development, human settlement, building of infrastructure, river erosion and most importantly, as a consequence of fallout of climate and environmental change. The loss indeed is very alarming and needs to be addressed immediately. Due to this reason, vertical integration in production system is the main option for increasing agricultural production prospect of Bangladesh in coming years.

Declining soil health: Soil is the greatest resource of Bangladesh. Over the last 2-3 decades, enormous pressure has been exerted on the soil resource to produce more food for its vast population. Intensification of agricultural land use has increased remarkably, along with increasing use of modern crop varieties, which in turn has resulted in deterioration of soil health. Many soil health related problems have been identified which hinder crop production. The problems are depletion of organic matter and soil fertility, nutrient deficiency, soil salinity, soil acidity, high soil erosion, degraded rice soils, sandy soils, drought, drainage impedance, and water logging. These problems have arisen largely due to irrational human interventions. Appropriate actions are needed to solve the soil health related problems.

Wide yield gap and regional variation of crop yields: The country is suffering from low yields per hectare, low quality of both agricultural inputs and products, volatility in production over time and regions, and wide disparities of productivity over regions and crops. Future growth of agriculture will largely depend on raising yield of major food grains, as average yield rates in Bangladesh are low in comparison with other countries

in the region. Flood, cyclone, drought, salinity coupled with regional production variations and prices instability add to the miseries and threaten sustainability of crop agriculture growth.

Inadequate marketing facilities and post-harvest management: In the existing agricultural marketing system of Bangladesh there are many middlemen active in different stages of marketing chain that deprives farmers of receiving due price for their produce. On the other hand the consumers invariably end up paying extra price. To ensure justice to both producers and consumers in a competitive environment, it becomes imperative to reduce the number of middlemen from the marketing chain by forming rural cooperatives and connecting producers with the rural and urban markets directly. In recent years there have been some efforts to develop horticulture and floriculture. This process needs to be facilitated by the creation of critical infrastructure for cold storage, refrigerated transportation, improved processing, packaging and quality control for crop based agriculture products.

Impact of Climate change and natural disaster: The country is affected frequently by flood, drought, cyclone and salinity due to climate change. As a result, soil fertility, crop productivity and food security would be seriously threatened. In Bangladesh, about 1 million ha of the coastal region is saline. But very few varieties are available for combating salinity. Drought affects annually 2.5 million ha in *kharif* and 1.2 million ha in dry season. *Kharif* drought affects *aman* rice severely. According to the Intergovernmental Panel on Climate Change (IPCC, 2001), costal area of Bangladesh may go under saline water by 2050. Due to the rise in temperature, crop production will be reduced by 30%. Climate change, especially temperature rise would decrease the boro rice by 55-62% and wheat by 61% by 2050 in Bangladesh (New Age, 2008). Sufficient varieties of crops and appropriate technologies are not available to cope with the adverse impact of climate change.

Imbalance use and inadequate availability of quality agricultural inputs: As arable land area is shrinking due to urbanization and environmental pressures, judicious use of agricultural inputs, mainly High-yielding and hybrid seed varieties, fertilizer, and irrigation, has crucial role in increasing cropping intensity and yield. Excessive fertilizer is used without proper analysis of the soil quality. Again, wastage of water in irrigation is often seen. Conservation of rain water during monsoon is virtually non-existent that could be utilized for irrigating crops during dry season. Studies show that irrigation with surface water instead of underground water might reduce the vulnerability to hazards of climate change. Timely and appropriate measures for pests and diseases management are also important. But the technologies resistant to pest and diseases are still very limited. In terms of the use of high quality seeds, we are still lacking behind. Farmers are using low quality seed that is considered to be one of the major constraints to crop productivity.

Lack of adequate resources for agriculture development: Agriculture sector requires more public and private investment as other sectors in services and infrastructure. The emerging areas in agriculture like horticulture, floriculture, organic farming, genetic engineering, food storage facilities, agro-based industries, branding and packaging and financial derivatives have high potentials of growth. Development of rural infrastructure, rural extension services, agro-based and food processing industries are essential for generating higher employment and reducing poverty in both rural and urban areas.

Inadequate price support policies: A distinct bias in agricultural price support policies in favor of rice distorted cropping pattern and input usage. Crop production is highly dependent on procurement prices announced by the government. A shift from minimum support price system to developing efficient agriculture product markets is essential for crop diversification and broad-based agricultural development.

Fragmentation of land and Small Farm Size: As is the case elsewhere in Asia, the sector is dominated by smallholders with an average farm size of only 0.68 ha and more than half of all farms are smaller than 0.4 ha.

Insufficient investment for flood control and irrigation: Given the geomorphological environment— with large parts of the country's productive agricultural land being flood-prone— Bangladesh has traditionally invested heavily in water control and irrigation infrastructure, in particular flood control and drainage projects, which continue to absorb about half of the development budget.

Inadequate access to institutional agricultural credit: About 90% farmers of Bangladesh are small and marginal (owner of below 2.5 acres of land). They are very often constrained by finance and thus cannot afford high cost for production and other production related management cost. The availability of bank credits to agriculture and agro-based industries, favorable terms of conditions for credit is essential to attract investment in agriculture.

2.5 Government Measures to Support Agriculture

Government continued to provide fiscal, monetary and other measures to boost agriculture production. While the state-controlled distribution system for agricultural inputs gradually dismantled and the sector opened up for private sector participation, the government continues to play a major role, with numerous market interventions still existing on the production side. Major supportive measures and incentives provided by the government to agricultural producers and consumers include the following:

- a. Prices for important agricultural inputs, such as electricity and diesel for tube wells and irrigation pumps, and fertilizer are still subsidized either at the retail or the wholesale level. These subsidies are intended to reduce farming production costs, improve farm profitability and encourage production increases at the margin. This will, in turn, improve food security and bring down food prices.
- b. Formulating '*National Agriculture Policy, 2013*' and other important policies, acts, laws, ordinance, rules, guidelines for agriculture development
- c. Distribution of hybrid-rice seeds,
- d. Uninterrupted electricity supply for irrigation at subsidized rates,
- e. Higher procurement prices for agriculture production;
- f. Better access to agriculture credits, farmers-friendly agricultural credit policy and helping farmers to open bank accounts with Tk10 only,
- g. The establishment of marketing clubs and growth centers for marketing agriculture products;

- h. Better delivery of extension services for agriculture;
- i. Public distribution of food grains at subsidized prices through monetized and non-monetized channels, including open market sales, fair price cards, feeding and development of vulnerable groups and food-for-work programs in both rural and urban areas in order to minimize the hardship of the vulnerable and working groups from the higher cost of living due to rising food prices.
- j. Encourage Public Private Partnership (PPP) to enhance the supportive measures for agriculture and food security.
- k. Strengthen campaign to change food habits through spreading awareness of nutritional food values among people.
- l. Train farmers to use balanced inputs.
- m. Develop coordination between government and farmers for proper utilization of khas land.
- n. Develop satellite based awareness system to inform farmers regularly about upcoming flood, cyclone, storm etc.
- o. Develop farmers database and farmers agro-input assistance cards.
- p. Enhanced agricultural rehab grants to victims of natural calamities.
- q. Support to accelerated mechanization of agriculture.
- r. Encourage surface water irrigation agreement on establishment of 'SAARC Seed Bank'.
- s. Introduction of E-agriculture program.
- t. Produce a master plan for developing agriculture across the coastal zone.
- u. Increasing public storage capacity and building buffer stocks.
- v. Establishment of marketing clubs and growth centers for agriculture.
- w. Establishment of assemble centre for agricultural commodities and formation of co-operative based marketing groups/association.
- x. Expand the agribusiness, processing and value addition activities.
- y. Develop effective value and supply chain linkage for different agricultural commodities.
- z. Conduct training for capacity development.

2.6 PEST (Political-Economic-Social-Technological) Context

Physiography of Bangladesh and Agro-Ecological Zones (AEZs)

Bangladesh forms the largest delta in the world stretching from near the foot-hills of the Himalayan mountains in the north to the Bay of Bengal in the south. Agriculture production

is highly influenced by the land use pattern, agro ecology, soil physiographic and climatic factors of a country. According to the variations of these factors and agricultural potential, the total land area has been classified into 30 agro ecological zones which are grouped into 20 major physiographic zones.⁶

Except the hilly regions in the north-east and south-east and some areas of high land in the northern part, the country consists of plain and fertile land. A network of rivers with a total length of about 24140 kilometers exist in the country, of which the Padma, the Jamuna, the Teesta, the Brahmaputra, the Surma, the Meghna and the Karnaphuli are important ones. The alluvial soil is continuously enriched by heavy silts deposited by rivers during the rainy season.

Bangladesh is mainly an agricultural country. Agriculture is the single largest producing sector of the economy and it contributes 20.24% to the total Gross Domestic Product (GDP) of the country. This sector also accommodates 48.1% of the labor force. GDP growth rate of Bangladesh overwhelmingly depends on the performance of the agriculture sector. Due to natural calamities like flood, cyclone, drought, loss of production in both food and cash crops are almost a regular phenomenon. Yet in recent years, there has been a substantial increase in food grain production.

Agricultural holding in Bangladesh is generally small but use of modern machinery and equipment is gradually increasing. Rice, jute, sugarcane, potato, pulses, wheat, tea and tobacco are the principal crops of Bangladesh. Crop diversification programme, credit supply, extension work and research and subsidized input distribution policies pursued by the government have yielded positive results. The country is now on the threshold of attaining self-sufficiency in food grain production.

Political Context

Any strategic business plan cannot ignore the political economy and aspirations of the people. Bangladesh is a country of the People's Republic with multi-party parliamentary democracy, free press, wide spread media and independent judiciary. Therefore, a medium term plan for the economy or any sector needs to be based on general political consensus for its sustainability over time. Any policy reforms cannot be implemented or successful unless the government is able to take the people along. An effective medium term plan must represent win-win situation for all the stakeholders involved in the development process. If all the people of Bangladesh are well educated, trained and healthy and live longer, they can participate more in the development process, can contribute more to development and also can gain more from economic development.

Social Context

Bangladesh has achieved significant progress in economic and social development in the last decade. It recorded almost 6 percent economic growth annually during 2000-2010 with low inflation, stability of domestic debt, remarkable reduction in the poverty ratio and significant improvement in social indicators, such as life expectancy, fertility control, child mortality, literacy and enrollment rates, which, in many cases, exceed other countries in the region and outside (World Bank, 2011).

⁶ For details of Agro-Ecological Zones (AEZs), see Chapter-1 on Introduction in 2009 Yearbook of Agricultural Statistics of Bangladesh, published by the Bangladesh Bureau of Statistics (BBS).

"Sustained economic growth and public spending in key priority areas have contributed to the impressive social outcomes observed over the years. The country has outperformed most low-income countries on achievement of social indicators. Sustained expenditures on education and health in partnership with the NGO community helped to increase gross primary school enrollment from 72 percent in 1980 to 91 percent in 2010. Bangladesh has already attained the Millennium Development Goal of eliminating gender disparity in primary and secondary school enrollment. With the sharp decline in infant mortality from 92 per 1,000 live births in 1991 to 41 in 2010, and in child mortality from 146 per 1,000 in 1991 to 54 in 2010, Bangladesh is set to achieve the targeted two-thirds reduction in these indicators from 1991 levels by 2015. Maternal Mortality reduced from 574 per 100,000 live births in 1991 to 194 in 2010. Sustained investments in roads and rural infrastructure have established one of the most extensive road networks in a developing country with significant social and economic benefits. Food security has improved markedly, even for the very poor; extreme poverty fell by 29.6 percent from 25 percent of the population in 2005 to 17.6 percent in 2010. At the same time, there has been steady fall in income poverty with the people below the poverty line declining from 59 percent in 1991 to 31.5 percent in 2010" (SFYP 2011).



Demographic Profile

Bangladesh with an estimated population of about 152 million is presently Asia's fifth and the World's eighth most populous country. Even though the population growth rate has fallen from 3% per annum during the first five year plan (1973-78) to presently about 1.3% p.a. (BBS, 2009), the number of population is expected to grow by another 40% by mid-century, to about 200 million, and finally stabilize around 240 million several decades later. The rural population (about 73% of the total population) is projected to remain around 140 million by 2025, mainly due to rural to urban migration while the urban population will continue to be increasing. The urban population currently constitutes one-third slum and two-third non-slum population; however the slums are growing at twice the rate (5% p.a.) of the overall urban growth rate (2.5% p.a.) implying that the slums will account for a rapidly increasing proportion of urban dwellers.

Identifying massive increase in population as an obstacle to economic growth, the Government formulated the National Population Policy, which seeks to reduce fertility to replacement level (TFR 2.2) by 2015. This requires a further TFR decline of 0.5 children per couple. However at replacement level the country will still be adding about two million people annually. An increased population size will have greater demand for agricultural products to maintain food security. Investments in non-farm sector and in rural areas are required to stem the migration of people from rural to urban areas and

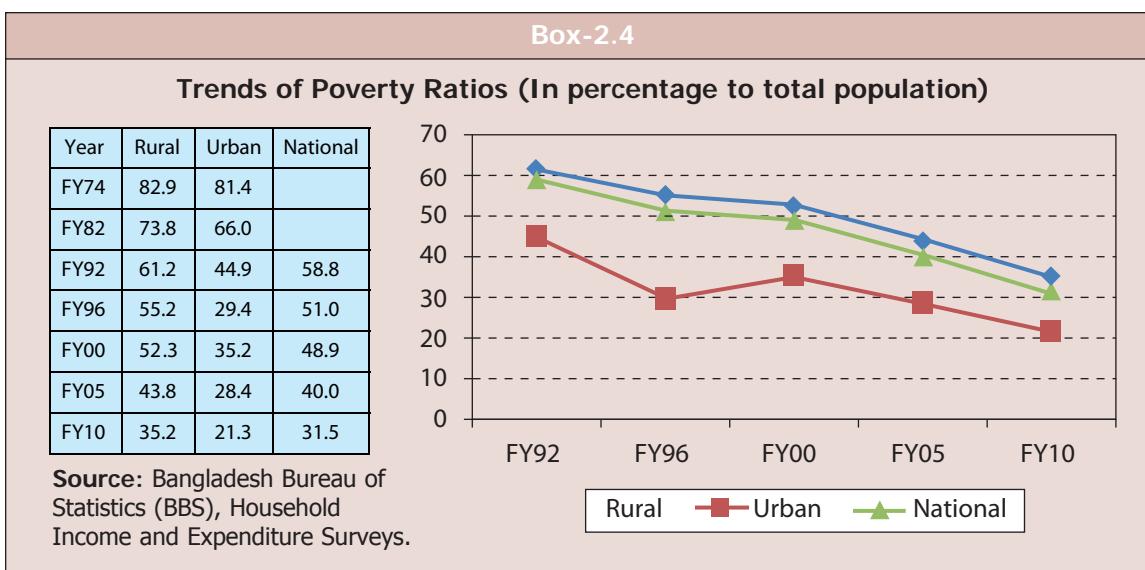
Table 2.11: Population Projections for the Years 2011 to 2051

Year	Scenario-A			Scenario-B			Average		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
2006	73.0	68.8	141.8	73.1	68.9	142	73.1	68.9	141.9
2011	77.9	73.6	151.4	78.7	74.4	153.1	78.3	74.0	152.3
2016	82.7	78.3	161	84	79.6	163.6	83.4	79.0	162.3
2021	88.1	83.7	171.7	89.4	84.9	174.3	88.8	84.3	173.0
2026	93.4	88.9	182.2	94.7	90.2	184.9	94.1	89.6	183.6
2031	98.1	93.5	191.6	99.7	35	194.7	98.9	64.3	193.2
2036	102.1	97.5	199.5	104	99.3	203.3	103.1	98.4	201.4
2041	105.6	100.9	206.5	107.9	103.1	211	106.8	102.0	208.8
2046	108.9	104	212.9	111.5	106.3	217.8	110.2	105.2	215.4
2051	112	106.7	218.6	114.7	109.2	223.9	113.4	108.0	221.3

creating unsustainable pressures on services and utilities on urban dwellers including sanitation and water supply for urban slums.

Poverty Ratio

As per the Sixth Five Year Plan (Vol-1, page-13) "Poverty is the single most important socio-economic policy challenge for Bangladesh. It has been striving for a long time to reduce the incidence of poverty and to improve the living standards of its millions of impoverished citizens. Bangladesh has made substantial progress in reducing poverty, where the percent of population living below the poverty line went down from more than 80 percent in early 1970s to 31.5 percent in FY2010". Other measures of poverty, such as poverty gap ratio and squared poverty gap show long-term trends similar to those for poverty ratio or headcount ratio. The decline in poverty ratio is the result of sustained economic growth over the past two decades, particularly the growth of manufacturing



and services sectors contributed by the double-digit growth of export-oriented ready-made garment (RMG) enterprises. The remarkable growth in the inflow of remittances also helped reduce poverty by supporting the expansion of construction and services sectors and by providing a strong safety net.

Rural poverty ratios had been always higher than urban poverty ratios. In 1974, rural poverty ratio at 82.9 percent was marginally higher than urban poverty ratio at 81.4 percent. However, over the years the differences widened. The rural poverty ratio declined by 47.7 percentage points during the period 1974 to 2010 while urban poverty ratios declined by 60 percentage points during the same period. So we need more focus on reduction of rural poverty.

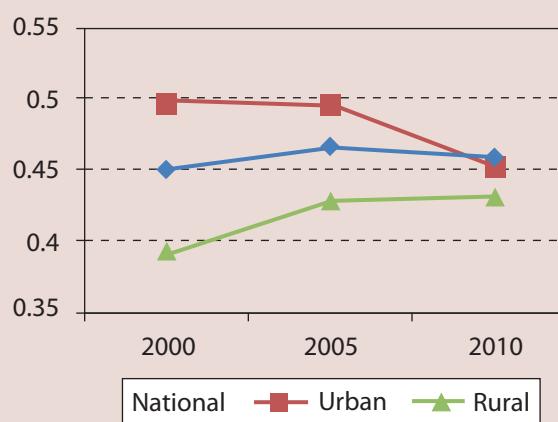
Income and Expenditure Inequality

There is considerable concern in Bangladesh about the growing income inequality. Successive Household Income and Expenditure Surveys (HIES) indicate that the distribution of income is much more unequal than the distribution of consumption. Income inequality as measured by the Gini coefficient for the distribution of income increased substantially during the 1980s and the 1990s. While Gini inequality ratio increased from 0.451 in 2000 to 0.467 in 2005, it declined to 0.458 in 2010. The reduction was mainly due to reduction of inequality in urban areas, while rural income inequality continued to have increasing trend during 2000-2010. Measures of expenditure inequality, which is a more reliable measure of inequality in view of the reporting bias in income data in HIES, shows similar trends of inequality over time. Indeed, expenditure inequalities are much lower than income inequalities.

Box-2.5

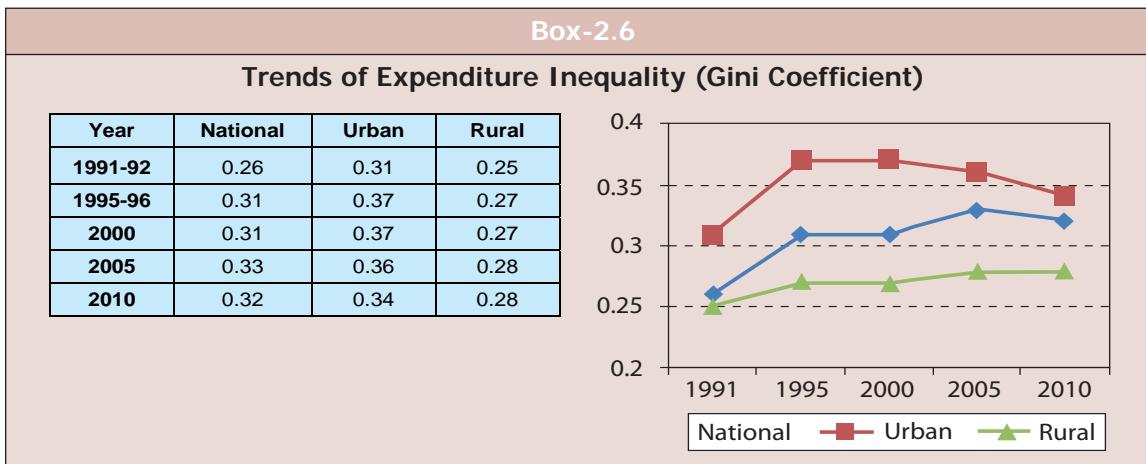
Trends of Income Inequality (Gini Coefficient)

Year	National	Urban	Rural
2000	0.451	0.497	0.393
2005	0.467	0.497	0.428
2010	0.458	0.452	0.431



Macroeconomic Context

Despite the global financial crisis since 2008 and frequent natural disaster at home, Bangladesh has achieved an average real GDP growth rate of nearly 6 percent per year during 2000-2010 supported by a growth rate of 3.6 percent by agriculture, 7.5 percent by industry and 6.1 percent by services. In the fiscal year 2011-12, the country is expected to achieve 6.2 percent real GDP growth aided by a growth rate of 2.5 percent in agriculture, 9.5 percent in industry and 6.1 percent in services.



Sixth Five Year Plan (2011-2015) Targets

The Sixth Five Year Plan (2011-2015) has set a target of 7 per cent for real GDP growth rate in FY2012, which is projected to accelerate to 8 percent by FY2015 in an attempt to transform Bangladesh into a middle income group country by 2021.

Agriculture sector, accounting for 20 percent of the aggregate GDP of the economy, will continue to play an important role in achieving the overall growth target for the Sixth

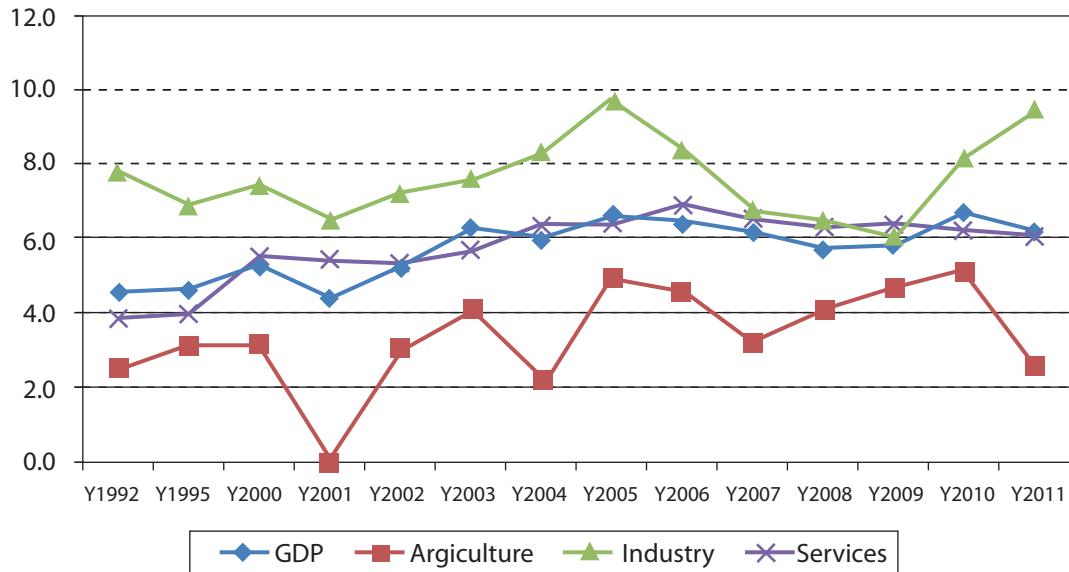
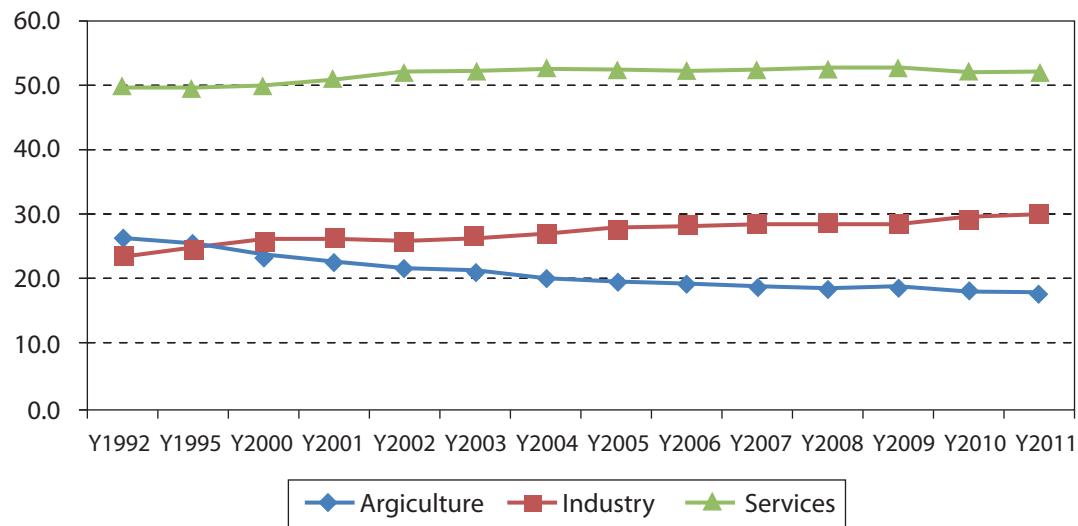
Table 2.12: Trends of sectoral growth rates and shares since 1992 (in percent)

Year	Real GDP Growth Rates (percent)				Shares in Overall GDP (percent)			
	GDP	Agriculture	Industry	Services	GDP	Agriculture	Industry	Services
FY1993	4.6	2.5	7.8	3.9	100	26.2	23.8	49.9
FY1996	4.6	3.1	6.9	4.0	100	25.7	24.9	49.5
FY2001	5.3	3.1	7.5	5.5	100	24.1	25.9	50.0
FY2002	4.4	0.0	6.5	5.4	100	22.7	26.4	50.9
FY2003	5.3	3.1	7.3	5.4	100	21.8	26.3	52.0
FY2004	6.3	4.1	7.6	5.7	100	21.0	26.6	52.4
FY2005	6.0	2.2	8.3	6.4	100	20.1	27.2	52.6
FY2006	6.6	4.9	9.7	6.4	100	19.6	27.9	52.5
FY2007	6.4	4.6	8.4	6.9	100	19.2	28.4	52.4
FY2008	6.2	3.2	6.8	6.5	100	19.0	28.5	52.5
FY2009	5.7	4.1	6.5	6.3	100	18.7	28.7	52.6
FY2010	5.8	4.7	6.0	6.4	100	18.8	28.5	52.6
FY2011	6.7	5.1	8.2	6.2	100	18.3	29.6	52.1
FY2012	6.2	2.5	9.5	6.1	100	17.9	30.1	52.0
Average 2001-12	5.9	3.6	7.5	6.1	100	20.3	27.6	52.0
CV (%)	12	42	14	8	-	9	4	2

Notes: 1. CV stands for coefficient of variation = $100 \times \text{Standard Deviation}/\text{Arithmetic Mean}$

2. FY2012 stands for fiscal year July 2011 to June 2012. Other years have similar interpretation

Source: Bangladesh Bureau of Statistics.

Figure 2.4: Trends of Sector Growth Rates in 1992-2011 (In percent per annum)**Figure 2.5: Trends of Sector Shares in Overall GDP in 1992-2011 (In percent per annum)**

Plan. Assuming no monsoon failures and no external shocks that might have adverse impact on agriculture sector, its growth rate is projected to average around 4.4 percent per year (Table 2.13), which is an exceptionally good performance when compared with the past.

Table 2.13: Macroeconomic Scenario of Sixth Five Year Plan

Macro indicators	FY2010 Actual	FY2011 Estimated	FY2012 Projected	FY2013 Projected	FY2014 Projected	FY2015 Projected
1. Real GDP growth rate (%)	6.1	6.7	7.0	7.2	7.6	8.0
a) Agriculture growth rate (%)	5.2	5.0	4.5	4.4	4.3	4.3
b) Industry growth rate (%)	6.6	9.2	9.6	9.9	10.5	11.5
c) Services growth rate (%)	6.5	6.6	6.8	7.1	7.3	7.8
2. Gross domestic investment as % of GDP (%)	24.4	24.7	26.8	29.6	31.0	32.5
3. National savings as % of GDP	30.0	28.4	26.7	29.4	30.7	32.1
4. CPI inflation rate (%)	7.3	8.0	7.5	7.0	6.5	6.0

Source: FY 2012-15 SFYP projections.

The projected agriculture sector growth is based on the continued emphasis on agricultural productivity and diversification supported by input subsidies, farm credits and expenditures on rural infrastructure development. As the feasibility of arable land expansion is limited, much of the additional growth in agriculture would originate from infusion of new technology, variety of crops and rise in factor productivity. The country's SFYP envisioned a factor productivity gain of 10 percent. In order to increase the food

Table 2.14: Projection of Agriculture Growth Rates and Shares in GDP During the Sixth Five Year Plan

	FY10	FY11	FY12	FY13	FY14	FY15
	(As % of Change)					
Agriculture	5.2	5.0	4.5	4.4	4.3	4.3
Of Which:						
Cereal Crops	5.8	5.4	5.0	4.8	4.7	4.7
Commercial Crops	5.0	5.2	5.5	5.4	5.3	5.3
Livestock-Poultry-fishing	5.9	6.5	3.4	3.3	3.2	3.2
Forestry	5.0	5.3	4.4	4.3	4.2	4.2
Other Agriculture	2.4	2.3	1.7	1.7	1.7	1.7
	Share as % of Total GDP					
Agriculture	18.6	18.4	17.7	16.9	16.2	15.5
Of Which:						
Cereal Crops	6.4	6.3	6.0	5.7	5.4	5.1
Commercial Crops	4.8	4.7	4.5	4.4	4.3	4.2
Livestock-Poultry-fishing	3.3	3.3	3.2	3.0	2.9	2.8
Forestry	1.4	1.4	1.4	1.3	1.2	1.1
Other Agriculture	2.7	2.7	2.6	2.5	2.4	2.3

Source: FY10-11, BBS and FY12-15 SFYP Projections

production, enhance access to food and ensure nutrition, the Government has formulated a *Country Investment Plan (CIP) for food security and agriculture development* based on the *National Food Policy and its Plan of Action*, to be implemented within the framework of the SFYP.

Inflation and Rural wage

In general, food inflation has been significantly higher than non-food inflation (with exception of 2012), and the rate of increase of agriculture wages has been lower than that for industrial wages. Agricultural real wages grew by only 0.3 percent annually between 1980 and 2009 as compared with 2.6 percent in manufacturing and 0.6 percent in services. Although the gap between the average real wages in manufacturing and agriculture reflects to some extent the productivity gap, the existence of large and unorganized labor force in agriculture is one of the major factors for low agriculture wages.

Agriculture Labor

As discussed earlier, agriculture sector is characterized by seasonal and disguised unemployment. In order to boost employment in the non-agricultural sector, the manufacturing sector along with construction and organized services will be the engines

Table 2.15: Nominal Wage Rate Indices (Base 1969-70=100)

Year	General	Manufacturing	Construction	Agriculture
1995-96	1900	2064	1754	1738
2000-01	2489	2832	2356	2141
2008-09	5026	6128	4311	4274

Table 2.16: Yearly Average Consumer Price Index (CPI): Base 1995-96 =100

Year	National			Urban			Rural		
	General	Food	Non-food	General	Food	Non-food	General	Food	Non-food
1995-96	100	100	100	100	100	100	100	100	100
2000-01	127	130	122	126	133	119	127	129	124
2009-10	222	241	197	217	252	183	223	235	202

of high growth. Accelerated growth in manufacturing, construction and services sectors projected under the Sixth Five Year Plan is expected to create 10.4 million new jobs in these sectors, which would help to absorb all new entrants in the job market (about 9.2 million) and also to shift sizable numbers of workers (about 1.2 million) from the agriculture sector. Those who will be left with agriculture will receive higher wages with planned program of crop diversification and commercialization of agriculture. The changing pattern of projected employment is shown in Table 2.17.

Table 2.17: Projected Pattern of Employment (million)

Sector	FY10	FY11	FY12	FY13	FY14	FY15
Agriculture	23.2	23	22.8	22.6	22.3	22
Manufacturing	6.1	6.7	7.4	8.0	8.7	9.7
Construction	1.9	2.1	2.3	2.5	2.7	2.9
Services	21.2	22.3	23.2	24.6	25.8	27
Total employment	52.4	54.1	55.8	57.6	59.5	61.6
Employment Growth (%)	4.0	3.2	3.1	3.3	3.2	3.2
Additional Employment		1.7	1.7	1.8	1.9	1.9
Unemployment Rate (%)	4.0	4.1	4.0	4.0	4.0	3.7
Labor Force	54.5	56.2	58	59.9	61.8	63.7

2.7 SWOT (Strengths, Weakness, Opportunities and Threats) Analysis

'Strengths' indicate internal favorable factors and 'Weakness' refers to internal unfavorable factors, while 'Opportunities' refer to external favorable factors and 'Threats' refer to external unfavorable factors for an agency. SWOT analysis sets the stage for preparation of a Strategic Business Plan for a Line Ministry. It helps to identify the strategic objectives and strategies to fulfill the vision, mission and goals of a budgetary agency.

Strengths and Weaknesses relating to a ministry organization and its business areas are identified in terms of internal resources such as manpower, skill, money, information and communications technology; the Acts and regulatory framework under which a LM works; management, research and development facilities, production, value added, investment and employment etc. of the business areas under the charge of the LM.

Opportunities and Threats are identified in terms of external factors such as political, economic, social, cultural and demographic environment; external assistance by donors, external collaboration, international treaties and global public policies, terms of trade, exchange rate, world prices, external trade, smuggling, immoral and illegal trade of goods and services related to the business areas of the ministry.

A SWOT analysis helps to identify the strategies to be adopted for the medium term planning. Basic purpose is to identify strategies that depend on internal strengths and try to take advantage of external opportunities. At the same time strategies are framed to tackle weakness by desired capacity building and to face threats and contingent liabilities by appropriate measures.



Table 2.18: SWOT (Strengths-Weakness-Opportunities-Threats) Analysis for Agriculture

Internal Factors Under control of the Ministry of Agriculture	Strengths	<ul style="list-style-type: none"> (i) Agriculture generates 20% of GDP and employs 48% of labor force (ii) Significant extension systems for farm technology (iii) Experts and scientists are available for agricultural R&D (iv) Wide networks of Agricultural input providers (v) Potentials for utilization of hilly areas for farming (vi) Scope for crop diversification and expansion of hybrid technology (vii) Scope for Higher output of value added agricultural products (viii) Water is available for irrigation (ix) A facilitative institutional and regulatory framework exists
	Weaknesses	<ul style="list-style-type: none"> (i) Weak Agricultural marketing system and High post-harvest loss (ii) Limited Access to institutional agricultural credit (iii) Low efficiency of input use (water, fertilizer, pesticides) (iv) Inadequate technology to meet export market requirement (v) Inadequate infrastructural facilities for advanced agricultural science (vi) Less coordination among public and private universities for R&D (vii) Insufficient Use of ICT in extension system (viii) Inadequate support for farmers/ entrepreneurs training, (ix) Inadequate supply of quality inputs (e.g. fertilizer, seed). (x) Internal resources are fragmented and functions are duplicative. (xi) Climate change fallout
External Factors Not Under control of the Ministry of Agriculture	Opportunities	<ul style="list-style-type: none"> (a) Favorable agro-climate throughout the year for crop production. (b) Export potentials for High-value crops to upstream & ethnic markets. (c) Donors' support for agriculture and irrigation. (d) Private sectors participation in seed and other input management (e) High world food prices provide significant incentives to farmers. (f) Export markets for horticulture, floriculture& agro-based products. (g) Scope of exports of poultry and fisheries products. (h) Substantial inflows of remittances by the Bangladeshis living abroad. (i) Scope for developing rural based and cultural tourism.

2.8 Multi-Stakeholders' Analysis

The business scope of the Ministry of Agriculture is wide and ranges from crop development to agro-based industries with the help of various projects and agencies in the field of research and development, agriculture extension services, agricultural engineering and agro-economics. This ministry also addresses a large number of stakeholders in the country.

Stakeholders can be grouped under two broad groups viz. *primary* and *secondary* stakeholders. Primary stakeholders are those who are affected directly by the activities of the Ministry either in a positive or negative way and secondary stakeholders are those who are engaged in an intermediary role with the goods and services produced/ delivered by the Ministry.

Stakeholders can also be categorized according to their roles (such as contributor, implementer or beneficiary) on the delivery of goods and services. Identification of stakeholders helps us assess what the stakeholders want from the ministry, what are their particular interests and what are the potential impacts of the Medium Term Strategy and Business Plan (MTSBP) on the interest groups.⁷ Table 2.19 provides the Stakeholders Analysis for the Ministry of Agriculture.

Table-2.19: Stakeholders Analysis for the Ministry of Agriculture

Major Stakeholders (Priorities of interest)	Power		Stakes	
	Roles and Functions	How can stakeholders block the Ministry of Agriculture?	What the Ministry of Agriculture want from stakeholders?	How the Ministry of Agriculture can help stakeholders?
Finance Division (High)	Allocation of adequate resources	Inadequate budget, non-release of funds	Adequate financial resources	Timely, effective and efficient implementation of projects, proper audit and accounting
ERD(High)	Mobilization of adequate external resources	Inadequate external resources	Adequate external resources for financing projects needing foreign exchange	Timely, effective, efficient and transparent utilization of external resources
IMED(High)	Timely monitoring of implementation of projects	Delays in preparing monitoring reports	Timely preparation of monitoring reports	Providing necessary data and information
BBS(High)	Conducting surveys and proving relevant information for budgeting and result based monitoring	Delays in surveys and providing inadequate data and information	Conducting surveys and statistical analysis in time	Proving full cooperation for designing and conducting statistical surveys

Contd.

⁷ During Mid-term review, we have plan to conduct a workshop engaging major stakeholders (Planning Commission, concerned Ministries/Divisions, NGO's, Media, civil society, local Govt. institutions, local administration, Agricultural exporters, Agricultural Research Institutes/Agriculture Scientists, Agro-based industries, Bank and other Financial institutions etc.)

Programming Division(High)	Approval of the Annual Development Program (ADP) and Revised Annual Development Program (RADP)including inclusion of new Development Project proposal for ADP/RADP	Delay in finalization of ADP and RADP	Timely publication of ADP and RADP	Timely, effective and efficient review and finalization of ADP and RADP
Sector Divisions of the Planning Commission (High)	Approval of development projects	Non-approval or delays in approval of projects	Sufficient development finance and timely approval of projects	Timely, effective and efficient implementation of projects, accountability, transparency
Donors and Development Partners (Medium to High)	Providing adequate external resources	Unreasonable conditionality for disbursement	Timely and adequate disbursement of funds	Proper utilization of funds,transparency, proper monitoring, auditing, accounting, reporting
Ministries of Fisheries & Animal Resource, Environment and Forest, Water Resources, Disaster Management and Relief Division, Food Division, RuralDevelopment and Co-operative Division, Ministry of Land(Medium to High)	Convergence of policies and programs under cross-cutting issues. Efficiency and effectiveness of delivery of public goods and services under the cross-cutting issues	Narrow sectoral interests can block or hamper crops growth, leakage of funds allocated for cross-cutting and sector-wide projects and programs	Convergence for more inclusive growth. Timely delivery of public goods and services under the cross-cutting issues	Timely, effective and efficient implementation of agriculture projects. Timely monitoring and evaluation, accountability, transparency
Farmers, agriculture labor and rural households (Medium to High)	Providing full cooperation for supply of labor and other inputs, social audit	Misuse of agriculture subsidies and other government support	Proper utilization of public resources and government support, efficient social audit	Timely supply of quality seeds, adequate Agriculture credits, efficient extension services and marketing networks
Agricultural Research Institutes/ Agriculture Scientists (Medium to High)	Capacity development for R&D, provision of training	Too much focus on basic and non-commercial research, devoid of practical uses	Commercializing research and developing efficient technology	Provision of adequate funds for R&D

Contd.

Producers and importers of fertilizers (High)	Supply of fertilizers to farmers at affordable prices	Inefficient distribution channels	Adequate supply of fertilizers in right mix and quality	Providing adequate subsidies
Producers and importers of seed (High)	Supply of seeds to farmers	Inefficient distribution channels and adulterated seeds of low quality	Adequate and timely supply of quality seeds at affordable price	Providing adequate subsidies and creating a level playing field for both public and private sectors, declaring seed industry as a thrust sector, liberalization of seed import and extending seed certification service
Agro-based industries (Medium to High)	Developing agro-based and food-processing industries and developing backward and forward linkages	Practicing monopolistic practices and cartels	Fair trade and production practices	Creating enabling environment for development and growth of agro-based industries
NGOs (Low to Medium)	Spreading of awareness, implanting some projects	Fictitious NGOs, Spreading misinformation	Awareness generation, Social audit	Financial resources and creating enabling environment
Bank and other Financial institutions (Medium to High)	Providing agriculture credits	High lending rates, non-disbursement of approved loans	Adequate agriculture credits	Strengthening financial rules and regulations
Media (Medium to High)	Spreading of awareness, providing knowledge of agriculture activities	Spreading misinformation	Awareness generation, Social audit	Financial support and creating enabling environment
Agricultural exporters (Medium to High)	Facilitating exports of agriculture goods and agro-based products	Unfair trade practices	Efficient export services	Creating enabling environment for exports of agro-based products
Transport organizations (Low to medium)	Providing adequate transport services at reasonable freight rates	Charging exorbitant freight rates	Adequate transport services at reasonable freight rates	Creating enabling environment for public and private transport
Political leaders (High)	Political support for government policies and programs	Opposition to much needed policies and programs because of political ideology	Support for government policies and programs	Timely implementation of major projects and highlighting positive impact on development and poverty reduction
Civil Societies (Medium to High)	Build awareness for food security	Misuse of subsidies and other government support	Generating public awareness for food security	Supply of food grains at reasonable prices

Organizational Structure, Functions, Legal Mandate, Development Issues and Challenges

3.1 Organizational Structure of the Ministry of Agriculture

The Ministry of Agriculture is a major spending ministry accounting for 5.7 percent of total budget allocation during 2011-12. The Ministry with about 55+ officials comprises seven wings as indicated below:

1. Administration and Input Wing
2. Policy Planning and Coordination Wing
3. Planning Wing
4. Audit Wing
5. Extension Wing
6. Research Wing and
7. Seed Wing

The MOA is led by a Minister supported by a Secretary, two Additional Secretaries, seven Joint Secretaries, a Joint Chief and a number of Deputy Secretaries/Chiefs, Sr. Assistant Secretaries/Chiefs and Assistant Secretaries/Chiefs (ref. MOA Organogram).



Departments and Agencies

There are 15 Departments/Agencies (listed below and shown in the Flow Chart) working under the administrative control of the Ministry of Agriculture. They have various responsibilities such as production and development of paddy and wheat to ensure food security; increased production of high value crops like maize, pulse, oil seed, vegetables and fruits; development of High Yielding Varieties (HYV) of cash crops such as Jute, Kenaf and Mesta and Cotton; marketing, research, extension and provision of inputs such as irrigation, quality seeds, fertilizer, pesticides and insecticides. Ministry of Agriculture has the primary responsibility for formulation of policies, strategies and programs for these subjects, while their implementation rests with the following departments and agencies working under the MOA.

1. Department of Agricultural Extension (DAE)
2. Bangladesh Agricultural Development Corporation (BADC)
3. Barind Multipurpose Development Authority (BMDA)
4. Bangladesh Agricultural Research Council (BARC)
5. Bangladesh Agriculture Research Institute (BARI)
6. Bangladesh Rice Research Institute (BRRI)
7. Bangladesh Jute Research Institute (BJRI)
8. Bangladesh Sugarcane Research Institute (BSRI)
9. Bangladesh Institute of Nuclear Agriculture (BINA)
10. Seed Certification Agency (SCA)
11. Cotton Development Board (CDB)
12. Bangladesh Institute of Research and Training on Applied Nutrition (BIRTAN)
13. Agricultural Information Service (AIS)
14. Department of Agricultural Marketing (DAM)
15. Soil Resources Development Institute (SRDI)

Department of Agricultural Extension (DAE) is the largest agency of the Agriculture Ministry that supports the farmers through application, demonstration and dissemination of modern technologies developed by research organizations and its adoption. The agricultural development in Bangladesh has been largely led by an effective Agricultural Extension Services. It is also entrusted with the responsibility to organize the farmers and setting up farmers field schools for dissemination of best agricultural practices.

Bangladesh Agricultural Development Corporation (BADC) is responsible for timely supply of agricultural inputs (seeds, fertilizer and irrigation) to the farmers. In addition, the BADC provides mechanical equipment (tractors, harvesters and other accessories as well as irrigation equipment) to the farmers. It plays a vital role in expanding irrigated area throughout Bangladesh by different projects/programmes. However, its core task is multiplication, production and supply of High-yielding varieties of seeds. It has as many as 32 Seed Multiplication Farms and 75 Contract Growers Zones

for this purpose. Seeds are mechanically processed in 52 Seed Processing Centers in and around the seed production zones. These seeds are distributed through 100 sales centers of BADC to the farmers throughout Bangladesh.

Barind Multipurpose Development Authority(BMDA) is created directly under the Ministry of Agriculture (MOA) for catering the agricultural development need of difficult terrain of the so-called Barind Tract areas, which spread over greater Rajshahi, Dinajpur, Rangpur and Bogra District, where the soil is hard and red, and unfavorable for cultivation due mainly to water scarcity. This specialized agency has been entrusted with responsibility to introduce agricultural innovations to make the area productive by adopting modern technology for irrigation, plantation, seed multiplication, storage, and rain water harvesting.

Bangladesh Agricultural Research Council (BARC) is an apex body of National Agricultural Research System (NARS) that is entrusted to ensure coordination of research activities among 12 NARS institutes and its dissemination. It is also responsible for Human Resource Development (HRD) of the different agriculture research institutions.

Bangladesh Agricultural Research Institute (BARI) is the largest multi-crop research institute conducting research on a large number of crops, such as cereals (except rice) tubers, pulses, oilseeds, vegetables, fruits, spices, flowers, etc. BARI also conducts research on non-commodity areas, such as soil and crop management, disease and insect management, irrigation and water management, development of farm machinery, improvement of cropping and farming system research, post-harvest handling and processing, and socio-economic studies related to production, marketing, and consumption. It has so far developed a total of 835 improved technologies including 393 improved varieties of different crops and 442 production technologies.

Bangladesh Institute of Nuclear Agriculture (BINA) conducts advanced research for development of crops through adopting modern technology. It has already developed 37 improved varieties of different crops and seeds for large-scale cultivation with the help of radiation techniques. It has also developed shorter duration crop (BINA 7) that can be harvested in 105-110 days instead of 145-150 days.

Seed Certification Agency (SCA) has been performing its role for certification of all breeder, foundation and certified seeds of four notified crops – Rice, Wheat, Jute and Potato from both public and private sectors. It coordinates the variety evaluation and release mechanism for notified crops, carries out post-market quality control through inspection and testing and enforces the provisions of seed legislation.

Cotton Development Board (CDB) has been established under the Ministry of Agriculture to introduce and promote cotton cultivation in Bangladesh.

Bangladesh Institute of Research and Training on Applied Nutrition (BIRTAN): Its mandate is to develop human resources of various government and non-governmental organizations in food based nutrition through short training courses, advocacy meetings, symposium, workshops and mass media support.

Agriculture Information Service (AIS) established in Ministry of Agriculture in 1961 plays a significant role in disseminating best agricultural practices among all the stakeholders, particularly among farmers, by providing mass media support through radio, television, documentary film and print media specially poster, folder, leaflet, booklet, newsletter, magazine, banner, festoon. Besides, the organization has success-

fully implemented various ICT interventions in Agriculture (e-krishi). The organization's promotional activities include reaching the grass root level farmers through mobile van and organization of cultural program to promote best practices.

Department of Agricultural Marketing (DAM) of the Ministry of Agriculture is a key organ of the agricultural system of Bangladesh that helps farmers by providing access to market places to sell their produce and supply them with price information. It has undertaken an e-government initiative for utilizing Information and Communications Technology (ICT) power to develop and disseminate critical Agricultural Market Information to farmers, traders, government, development agencies and other stakeholders.

Bangladesh Rice Research Institute (BRRI) is exclusively working for the research and development of cereal products through radical change in rice production system, replacement of the low-yielding traditional varieties and age old production practices of rice by high-yielding varieties and improved production technologies.

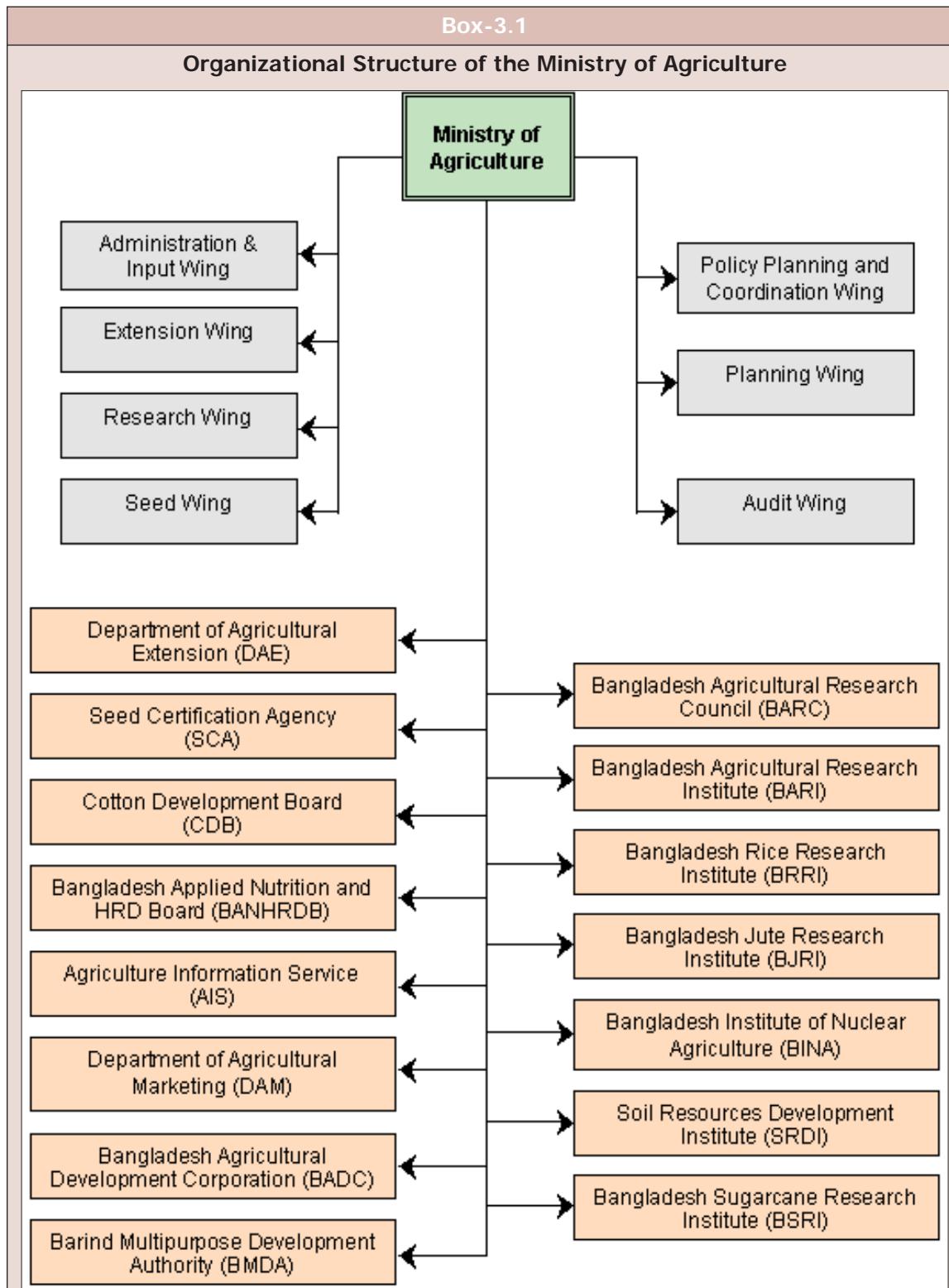
Bangladesh Jute Research Institute (BJRI) is responsible for developing improved variety of jute, "kenaf" and "mesta" and its improved fiber and seed production technology, nutrient management, pest management and distribution among the farmers, and providing training to farmers, extension officers and field workers to disseminate the evolved technologies. Besides, BJRI is responsible for diversified jute products from sole jute and blending it with other natural and synthetic fiber. It also provides training to weavers/small entrepreneurs for making jute goods.

Bangladesh Sugarcane Research Institute (BSRI) is responsible for innovation and expansion of production technologies for high yielding varieties of sugarcane and other different sweetening crops/plants, training for extension workers and farmers involved in sugarcane cultivation, and organizing training program including higher education for agricultural scientists and farm workers.

Soil Resource Development Institute (SRDI) established under the Ministry of Agriculture is responsible for conducting detailed and semi-detailed soil survey, soil health condition, distribution of soil kits including distribution of soil guide and manual to ensure rational and optimal use of soil resource in the country.

Organizational Structure of the MOA for performing its functions and responsibilities is presented in the following Flow Chart and the Organogram.

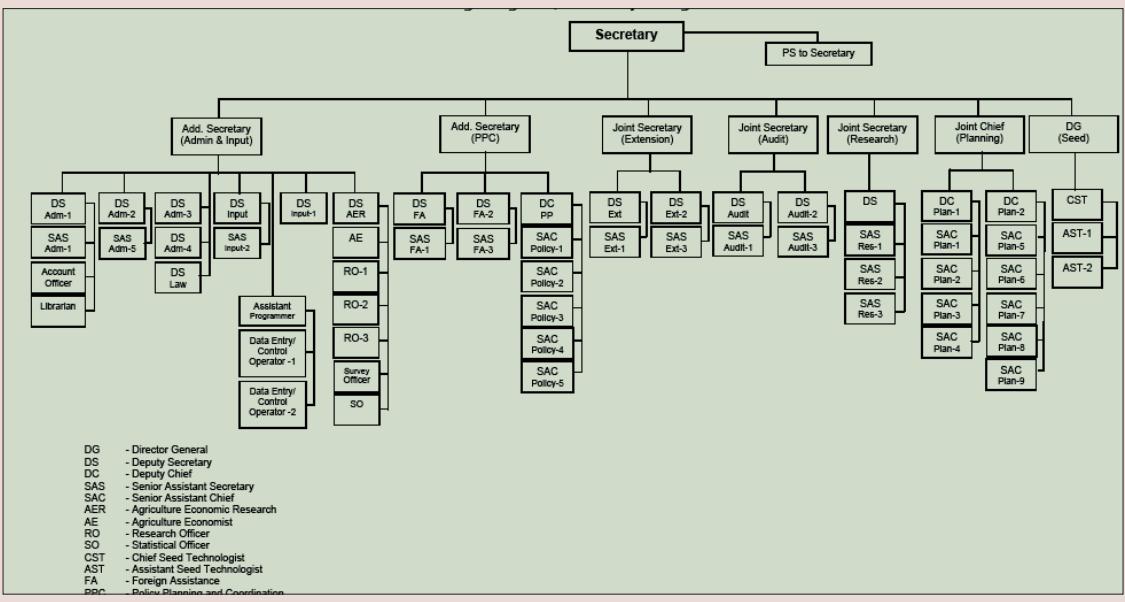




Source: Ministry of Agriculture.

Box 3.2

Organogram of the Ministry of Agriculture



Source: Ministry of Agriculture

3.2 Functions of the Ministry of Agriculture

Functions of the Ministry of Agriculture as per the Allocation of Business⁸ are reproduced in BOX 3.3 below:

Box 3.3

Functions of the Ministry of Agriculture

1. Agricultural research and education.
 2. Agricultural extension and training.
 3. Soil survey.
 4. Specifications of agricultural implements and machineries.
 5. Communication with International Organizations.
 6. Development of crops, viz, cotton, tobacco, vegetables and fruits, wheat etc.
 7. Marketing of agricultural products.
 8. Agricultural credit and taccavi loan.
 9. Agricultural assistance and rehabilitation.
 10. Agriculturist associations and agricultural co-operatives.
 11. Planning Cell – preparation, evaluation, preservation, supply of seeds/fertilizers/insecticides.
 12. Agricultural inputs viz, procurement, installation, management and maintenance of tube-wells and power-pumps.
 13. Production and preservation of seeds.

Contd

⁸ Government of People's Republic of Bangladesh (2010) Allocation of business among the different ministries and divisions (schedule I of the Rules of Business 1996) (Revised up to June 2010). Cabinet Division.

Box 3.3

14. Survey for irrigational purpose.
15. Import, management and maintenance of agricultural implements and machineries.
16. Preservation of crops.
17. Secretariat administration including financial matters.
18. Administration and control of subordinate offices and organizations under this Ministry.
19. Administration of B.C.S. (Agriculture).
20. Liaison with International Organizations and matters relating to treaties and agreements with other countries and world bodies relating to subjects allotted to this Ministry.
21. All laws on subjects allotted to this Ministry.
22. Inquires and statistics on any of the subjects allotted to this Ministry.
23. Fees in respect of any of the subjects allotted to this Ministry except fees taken in courts.

Source: Allocation of business among the different ministries and divisions (schedule I of the Rules of Business 1996) (Revised up to June 2010), Cabinet Division.

3.3 Legal Mandate and Citizens Charter

Box 3.4 presents a list of major Acts, Law, Charter of Citizens, Ordinances, Major Notifications, Long Term Policy Documents, Rules, Resolution and Reports of Committees etc. affecting the functions of the Ministry of Agriculture.

Box 3.4

List of Acts, Law, Rules, Ordinance, Notification, Long Term Policy, Resolution and Committees, Charter of Citizens of the Ministry of Agriculture

1. Acts/Ordinances

- 1.1 The Destructive Insects and Pests Act, 1914
- 1.2 Bangladesh Rice Research Institute (BRRI) Act, 1973
- 1.3 The Seeds (Amendment) Act, 2005
- 1.4 Fertilizer Management (Amendment) Act, 2009
- 1.5 Bangladesh Agricultural Research Council (BARC) Law 14 August, 1996
- 1.6 Bangladesh Agricultural Development Corporation (BADC) Ordinance 1961
- 1.7 The Pesticides Ordinances 1971
- 1.8 Cotton Development Board (CDB) Ordinance 1972
- 1.9 Seed Certification Agency (CDA) Ordinance 1972
- 1.10 Bangladesh Agricultural Research Institute (BARI) Ordinance 1976
- 1.11 The Seed Ordinance 1977
- 1.12 The Bangladesh Jute Research Institute Act, 1974
- 1.13 The Bangladesh Jute Research Institute Ordinance 1983
- 1.14 The Bangladesh Jute Research Institute (Amendment) Act, 1996
- 1.15 Bangladesh Nuclear Agriculture Institute Ordinance 1984
- 1.16 The Bangabandhu National Agriculture Award Fund Ordinance 1976
- 1.17 Fertilizer Management Ordinance amendment ordinance 2008

(cont.).

Box 3.4

- 1.18 The Bangabandhu National Agriculture Award Fund Ordinance 1976
 - 1.19 Fertilizer Management Ordinance amendment ordinance 2008
 - 1.20 'East Bengal (Food Stuff) Price Control & Anti Hoarding Order, 1953
 - 1.21 Agricultural Market Regulation Act,1964 (Amended in 1984)
 - 1.22 Agricultural Marketing and Business Law 2011
- 2. Rules**
- 2.1 Destructive Insects and Pest Rules, 1966
 - 2.2 Dept. of Agro. Extension (DAE) Technical & Non-Technical Staff Recruitment Rules, 1985
 - 2.3 The Pesticides Rules, 1985
 - 2.4 The Seed Rules, 1998
 - 2.5 Fertilizer Management Rules 2007
 - 2.6 National Agriculture Award Rules 2009
- 3. Long Term Policies**
- 3.1 National Agriculture Policy, 2013
 - 3.2 National Integrated Pest Management Policy, 2002
 - 3.3 The National Seed Policy, 1993
 - 3.4 Integrated Small scale Irrigation Policy, 2011
 - 3.5 Crop variety and Technology Development Policy, 2010
 - 3.6 Policy for the determination of irrigation charge rate 2009
 - 3.7 National Jute Policy, 2002
 - 3.8 New Agricultural Extension Policy, 1996
- 4. Gazette Notification**
- 4.1 Soil Research Institute (SRI): Bangladesh Gazette Notification, October 1983
 - 4.2 Establishment of Seed Certification Agency gazette, January 1974
 - 4.3 Evaluation and registration procedures for Hybrid Rice varieties, December 2003
- 5. MOA Resolution**
- 5.1 Bangladesh Applied Nutrition & Human Resources Development Board
- 6. Reports of the Committees**
- 6.1 Parliamentary Standing Committee
 - 6.2 National Fertilizer Distribution Committee
 - 6.3 National Fertilizer Standardization Committee
 - 6.4 National Seed Board
 - 6.5 Fertilizer Management for Port
 - 6.6 Pesticide Technical Advisory Committee

Source: Ministry of Agriculture

Citizens Charter

Ministry of Agriculture has well-defined Citizens Charter which clearly indicates the ministry's functions and responsibilities, officers in charge of wide range of public services and duties, time limits for final execution of respective responsibilities and procedures for redress of grievances and complaints. Services and duties include not only services for government staff (such as pensions, advances, postings, transfers, promotions, regularization, government procurement, implementation of policies and programs, external trade of agricultural goods, contribution to international organizations, donor's funds, foreign tours, education and assignments, approval of projects and programs, sanctions and disbursements, staff car, accommodation, residential telephone etc.), but also various services to the farmers and general people (such as distribution of fertilizers, seeds, national awards for agriculture, fixation of prices etc.).

3.4 Policy and Regulatory Framework

Achieving self-sufficiency in food grains, in particular rice production has been the overriding objective of agricultural policies in Bangladesh. However, sustainable food security, production of economic and high value crops, development of agro-based industry, meeting nutrition demand of the nation, creation of employment opportunities, development of rural economy, alleviation of poverty, enhancement of agricultural exports etc. remain other major objectives of agricultural policies (Table 3.1).

Table 3.1: Synthesis of Agriculture Ministry Policies

Existing Agriculture Ministry Policy Documents	Major Issues
National Agriculture Policy, 2013	<p>Objective: Create an enabling environment for sustainable growth in agriculture for reducing poverty and ensuring food security through increased production and employment opportunity.</p> <p>Program areas: NAP identifies 9 program areas where actions or policies might be undertaken i.e. Research and Development, Agricultural Extension, Seeds and Planting materials, Fertilizer management, Irrigation, mechanization in Agriculture, Agricultural marketing, Women in Agriculture, Human Resource Development</p>
New Agricultural Extension Policy	<p>Objective: (i) Attainment of self-sufficiency in food grain and increase production of other nutritional crops, (ii) Ensuring sustainable agricultural growth through more efficient and balanced usage of land, water and other resources, (iii) Increasing foreign exchange earnings through agricultural exports, (iv) introducing high value cash crops, (v) Improving quality and availability of seeds (vi) Reducing environmental degradation, (vii) Increasing fish, livestock and forestry production, and (viii) Conserving and developing forest resources.</p> <p>Program areas: The NAEP lists 11 Program areas, called components. These components include efficient extension support to all categories of farmers, decentralization, demand-led extension, working with groups of all kinds, strengthened extension-research linkage, training of extension personnel, appropriate extension methodology, integrated extension activities, coordinate extension activities, and integrated environmental support.</p>

Cont.

Existing Agriculture Ministry Policy Documents	Major Issues
National Integrated Pest Management Policy 2002	<p>Objective: Enable farmers to grow healthy crops and thereby increase their income on a sustainable basis while improving the environment and community health.</p> <p>Program areas: Maintaining ecological balance, Executing appropriate actions on pesticides, Operating an effective system for implementing the national IPM program, developing human resources as the core of IPM, conducting research on IPM.</p>
The National Seed Policy, 1993	<p>Objective: The overall objective of the National Seed Policy is to make the best quality seeds of improved varieties conveniently and efficiently available to farmers with a view to increasing crop production, farmer's productivity, per capita farm income and export earnings. To achieve the objective, the main strategies are: Strengthening the institutional capability of the public and private sector entities and promoting their balanced development by providing equitable opportunities from breeding to marketing of seeds and strengthening seed certification and quality control to ensure availability of quality seeds to farmers.</p>
Small scale Irrigation Policy	<p>Program areas: Small scale Irrigation Policy identifies 17 program areas where actions or policies might be undertaken i.e. ensure the availability and effective use of irrigation water, expansion of irrigation coverage, reduction of irrigation cost through effective irrigation management, priority to surface water in irrigation works, test the quality of soil and water and determine the availability of irrigation water, increase crop production by using on farm water management technology, increase cropping intensity and crop production through effective irrigation management system, increase crop production through supplementary irrigation and assist the farmers to avail supplementary irrigation during drought season, development of rural economy and alleviation of poverty through encouraging poor, disadvantaged and unemployed young male and female, increase awareness of the farmers about irrigation technology, provide necessary training and technological assistance to promote irrigation skills and repair and maintenance of irrigation machineries, accelerate research in improved irrigation machineries, monitoring of surface water and appropriate irrigation management strategies, ensure optimum utilization of limited water resources through use of modern technologies such as remote sensing, geographical information system and modeling, preparation and regular updating of ground water zoning map on the basis of the quality of ground water level, create region wise (coastal, hill, char, haor, etc.) irrigation system suitable for crops, encourage the use of surface water in areas where it is available, fix irrigation charge considering the kind of machineries and infrastructure, soil quality and crop pattern.</p>
Policy for the Innovation of climate resilience and short duration variety of crops and technologies	<p>Program areas: Policy for the Innovation of climate resilience and short duration variety of crops and technologies identifies 6 program areas where actions or policies might be undertaken i.e., Innovation of salinity tolerant High yielding variety and appropriate technologies, Innovation of drought tolerant High yielding variety and appropriate technologies, Innovation of heat tolerant High yielding variety and appropriate technologies, Innovation of flash flood, water-logging and submergence tolerant High yielding variety and appropriate technologies, Innovation of short duration High yielding variety and appropriate technologies, Innovation of low input responsive/nutrient efficient High yielding variety and appropriate technologies.</p>

Contd.

Existing Agriculture Ministry Policy Documents	Major Issues
Policy for the determination of irrigation charge rate 2009	Objective: Throughout Bangladesh, deep or shallow tube-well, along with other irrigation machinery is needed in the <i>Aush/Boro/Aman</i> season for the purpose of irrigation; an acceptable irrigation charge rate is appropriate and necessary.
National Jute Policy	The NJP is concerned with three <i>specific issues</i> -production of raw jute, development of a commercially viable jute industry sector in the country and promote the export market for both jute and jute products. The report has <i>focused on the following program areas</i> : problems of jute sector, commodity-oriented jute production, improvement of the jute rotting system, improvement of the quality of jute goods, accelerate advertising activities to promote the use of jute goods in both domestic and international market.

3.5 Interrelations of Policies of the Ministry of Agriculture with National Planning and Policies

The policies of the Ministry of Agriculture have been formulated in consistency with the macroeconomic policies indicated under the national level documents such as Vision 2021 and Sixth Five Year Plan (2011-2015), and also the United Nations documents such as Millennium Development Goals. The preparation of MTSBP has been aligned with the strategies, policies and programs indicated in the Sixth Five Year Plan (2011-2015), Vision 2021 and Millennium Development Goals (MDG).

Crop Sector Related Vision 2021

Vision 2021 is a perspective plan to build Bangladesh a middle income and technology based country by 2021. The salient features of the perspective plans related to agriculture sector stand as follows:

2013: Self-Sufficiency in food.

2021: Contribution of agriculture, industry and service sector to GDP will stand at 15, 40 and 45 percent respectively in place of 22, 28 and 50 percent respectively in 2007.

2021: Labor in agriculture comes down to 30% of the country's total from 48% at present.

2021: 85% of the population have standard nutritional food.

2021: Poor people ensured a minimum of 2122 kilo calories of food, per capita, per day.

SFYP Objectives for Crop Sub-Sector

Agriculture plays an important role in achieving economic and social progress in Bangladesh. It is still considered as the lifeline of our economy as 70 percent of rural population directly or indirectly depends on agriculture for their livelihood. The agriculture sector absorbs nearly half of country's labor force and contributes 19 percent

to Bangladesh's gross domestic product. Agriculture, particularly cereals, is the principal source of energy and nutrition intake for the vast majority of our population, particularly rural population. Therefore, the level of farm production and prices are key determinants of poverty and human welfare in Bangladesh. Experts believe that the remarkable progress made by Bangladesh in the field of economic and social development can be largely attributed to the success of agricultural sector. A tripling of agricultural production in three decades, from under 10.0 million tons in the 1970s to 33 million tons in 2010, has reduced the enormous pressure on the national coffer, releasing fiscal resources for critical infrastructure and for human resource development such as education, and health services. Agriculture also contributes significantly to export earnings of (Bangladesh) and its outputs are used as an important source of raw materials for many industries. Rapid growth in agriculture will therefore contribute to the overall economic growth of Bangladesh, which in turn will expand national capacity to create employment opportunities, especially for the poor and public investment in physical and human capital formation, creating a virtuous development cycle.

Acceleration of the rate of growth in agriculture to 3.0 percent per annum and above in the new millennium has propelled our GDP growth to over 6 percent in real terms in recent years. In a normal year, Bangladesh is now self-sufficient in rice production. Notwithstanding the remarkable achievement registered by the agricultural sector in food grain production, Bangladesh has been facing persistent challenges in achieving food security for the vast majority of the poor estimated to be around 47 million. Apart from natural disasters, fluctuations of input prices create instability in food grain production and prices. This is further exacerbated by volatility in basic food grain prices in the international market. Sudden increases of the price of staples such as rice and flour reduce the purchasing power of the poor. Since almost half of the rural poor depends on the agriculture sector for employment, the growth of this sector and favorable terms of trade for agricultural commodities are critical for increasing incomes of the poor and to expand their capacity to purchase food. As in many developing countries, Bangladesh tries to maintain a delicate balance between the interests of producers and consumers in food grain prices.

Given the land scarcity and rapidly increasing population, Bangladesh has no alternative but to go for vertical integration in the agricultural production system in pursuit of the higher production frontier. Encouraging agricultural growth requires various policies ranging from applying new technologies and extension services to ensuring access to resources by the small and marginal farmers. Availability of quality inputs and their efficient uses are also vital for increasing food grain production and help maintain soil health. Development of marketing infrastructure and diversification of agriculture into higher value products are pre-requisites for raising farm income. Therefore, it is imperative that the public sector plays a pro-active role in delivering key public goods in agriculture, particularly in improving the ability of farmers to adopt new technologies and appropriate mix of incentives to pursue profitable operations. Particular attention would be given to develop and adopt technologies and improved agricultural practices in ecologically vulnerable areas of the southern belt, saline prone areas and flood and drought prone locations. In recognition to women's contributions to farm activities and agricultural growth (pre- and post-harvest activities, field crop production) special measures would be taken to increase women's participation in these areas. The main

objective of the plan will be to extend the concept of food security well beyond that of basic food grain availability, to make available enough varied and nutritious food and by providing well compensated employment thus ensuring economic access to food by all, particularly for the rural poor. Diversification, commercialization and mechanization of agriculture will also receive greater attention.

In addition to these broad targets, the Sixth Five Year Plan (2011-2015)⁹ has indicated the following basic objectives of agriculture in Bangladesh.

- To attain self-sufficiency in food grain production;
- To increase productivity and real income of farming families in rural areas;
- To ensure equal wage for men and women labor at agriculture;
- To encourage export of vegetables and fruits;
- To promote modern farm practices in drought, submergence, saline prone areas;
- To encourage research on proper use of genetically modified technology in farms;
- To gradually shift HYV, irrigation-fed Boro rice production to the Southern areas;
- To utilize irrigated north-eastern uplands for wheat, maize, corn, horticulture;
- To emphasize on yield gap reduction for Aus and Aman crops;
- To strengthen farming /cropping system based technology transfer;
- To increase production of jute by improving jute variety and retting system;
- To include oil crops and spices for increased production;
- To encourage research and extension for the promotion of pulses crop;
- To bring coastal and hilly areas under intensive cultivation;
- To ensure efficient and balanced utilization of land, water and other resources;
- To encourage comparatively large farm to graduate into commercial farming;
- To promote the use of modern technologies with the help of ICT;
- To form cooperatives and special growth center only for the actual growers;
- To strengthen agricultural mechanization for enhancing production;
- To develop crop zoning market based agriculture on the basis of AEZ.
- To restore germplasm specially for minor fruits;
- To develop community based seed production, storage, and dissemination system;
- To strengthen decentralized knowledge based extension system.

MDG Strategies for Crop Sector: The Millennium Development Goals has indicated 5 goals for Bangladesh in which the following goal is related to crop sub-sector.

GOAL-1: Eradicate Extreme poverty and hunger

Target-2: Halve between 1990 and 2015, the proportion of people who suffer from hunger.

⁹ For detailed discussion on challenges and issues, consult Chapter-1 on Strategy for Raising Farm Productivity and Agricultural Growth (pp.1-49) in Part-2 of the Sixth Five Year Plan (2011-2015), published by the General Economic Division, Planning Commission, Government of the People's Republic of Bangladesh, December 2011.

3.6 Major Development Issues and Challenges

Promoting more rapid agriculture growth is important not only to achieve higher economic growth, but also to lift large number of rural households out of the poverty and unemployment trap. Here are various issues that need to be addressed for development of agriculture production.

First is the issue of augmenting investment in agriculture which contributes only 20% of GDP but accounts for 48% of employment and supports nearly two-third of population. The importance of agriculture in the economic, social and political fabric of Bangladesh goes well beyond what is indicated by its contribution to the economy.

While agriculture has diversified from food grains into areas such as fruits and vegetables, floriculture, dairy and poultry, there is considerable loss of output due to inadequate storage and transport facilities and lack of sufficient food processing capacities. More public and private investment on these post-harvest activities is required not only to increase value addition in agriculture but also to improve linkages among agricultural development, rural industrialization and development of agro-processing and agro-based industries. It would help in poverty reduction and employment generation, particularly in the rural areas, which is the home of almost 75 per cent of poor households in Bangladesh.

Second: Given the vicissitudes caused by weather shocks, especially deficiency in rainfall, there is an urgent need to bring more area under irrigation, which can be regarded as a priority area for agriculture investment.

Third: Appropriate measures are required to move gradually away from the subsidy-based regime to a more productive and internationally competitive agriculture system. Many economists believe that it may be more productive to develop rural infrastructure



rather than providing subsidies on food, fertilizers, power and fuel which are generally open ended and non-targeted. Although in a poor country like Bangladesh it may not be feasible to abolish all these subsidies in the short and even in the medium term, it is necessary to make these subsidies targeted so that the benefits reach the weaker and vulnerable sections of the society, such as small and marginal farmers, farm labor and urban poor. However, considering the administrative and monitoring costs, targeting of all subsidies to directly benefit the poor is a challenging task for the government.

Fourth: Agricultural diversification and commercialization is of paramount importance to increase farm income and to guarantee higher wages for the agricultural laborers for rural poverty reduction.

Fifth: Despite the progress made during the last two decades, Bangladesh is a net importer of both rice and wheat and is yet to achieve self-sufficiency in food production. It is also a net importer of pulses, edible oils, spices, fruits, sugar, milk and milk products. The total import bill now accounts for over one-fifth of the export earnings of the country. The Sixth Plan emphasizes for import substitution of these crops through promotion of crop diversification.

Sixth: Volatility of international prices and fluctuation in production of food items often triggers import demands creating pressure on foreign exchange. Production of import substitute crop agriculture item need to be strategically emphasized. In the recent past, high international prices of food had serious impact on the food security in Bangladesh. The Sixth Plan emphasizes at reducing the dependence on imports for basic necessities such as rice, pulses, oils and sugar to overcome nutritional imbalance and to reduce high inflation of food prices in the domestic market.

Seventh: Though intake of food and non-food item has increased over the years, significant gap continues between intake of quality food and non-food item and recommended level. The per capita intake of rice increased over time and reached 477 gm per person per day for rural area and 389 gm for urban area. The intake of potato and vegetables also increased over time and reached 250 gm per person per day, close to the norm for achieving balanced nutrition. But, the intakes of quality food items such as pulses, oils, fish and livestock products remain much below the level recommended by nutritionists for achieving balanced nutrition. In addition, prices of pulses, oils, fish and meat increased at a faster rate than that of rice, indicating growing demand-supply imbalance for non-cereal food items. The Sixth Plan emphasizes on faster growth of non-cereal food products to address the issue of unbalanced diet. Such a situation renders diversification of food production and improvement of its quality important.

Eighth: Continued decrease of crop area largely due to urbanization and population growth, loss of soil fertility, detrimental effects of climate change, fragmentation of agricultural land holdings, management of irrigation water in the back drop of continued depletion of ground water level, degradation of land are some of the other major challenges that Bangladesh crop agriculture is facing. As mentioned earlier, most of the arable land has been brought under crop production, and crop intensities have shown an increasing trend. Further increase of crop production will depend on increasing yields for various crops. In order to meet the growing demand for food as a result of growing population and urbanization, production of cereal must increase by over 3 Lakh tons per year. The Sixth Plan has recommended multi-pronged objectives, strategy and policies to tackle this issue.

In addition to these broad challenges, the Sixth Five Year Plan (2011-2015) has identified a number of development issues for the agriculture sector as indicated in BOX 3.5. A World Bank Report entitled "*Bangladesh Public Expenditure and Institutional Review-Towards a Better Quality of Public Expenditure*" has also identified a set of development challenges faced by Bangladesh Agriculture. These are reproduced in BOX 3.6.

Box 3.5

Major Development Issues of Bangladesh Agriculture

- (a) Dominance of cereal food production: National Agriculture Policy 2013, National Agriculture Policy Plan of Action 2004, APB and other major crop sector policy documents mainly focus on food production.
- (b) Inadequate progress with diversification and commercialization;
- (c) Lack of modernization of soil and water tests;
- (d) Lack of modern form of production-contract farming and value chain;
- (e) Absence of effective linkages among farm and non-farm sectors;
- (f) Absence of modern technologies to co-opt with climate change;
- (g) Unstable market prices of agricultural products, which act as a barrier for farmers to select crop-mix for cultivation in the following season/year,
- (h) Very little stress to agro-based industrialization,
- (i) Depletion of soil health/ soil fertility,
- (j) Depletion of underground water table,
- (k) Unwise development of infrastructures (dams, roads, etc.) blocking drainage,
- (l) Non-zonal based cultivation and lack of development of market chain,
- (m) Overlapping of irrigation units with less command area, causing huge loss of underground water and resulting in depletion of ground water table.
- (n) Overdose of chemical fertilizer by the farmer is a threat to soil health.

Source: Sixth Five Year Plan, Part-2.

Box 3.6

Major Challenges of Bangladesh Agriculture

- (a) "Despite agricultural growth rates averaging 3.7% during 2000-2010, markedly higher than during previous decades, the challenges remain substantial."
- (b) "Gains in food security at both the national and household level are frequently threatened by the occurrence of supply and price shocks caused by natural disasters."
- (c) "The impact of frequent natural disasters is compounded by the widespread prevalence of under-nutrition and malnutrition."
- (d) "Beyond the short term, significant increases in agricultural productivity are required for food supply to keep pace with rising demand. Population and income growth continue to put upward pressure on food demand."
- (e) "Being one of the world's most densely populated countries, there is little scope for area expansion. Future growth will continue to rely on raising yield on major food grains, but yield growth of most crops- including rice- has been stagnating."
- (f) "Undersupply and underutilization of agricultural inputs, including High-yielding crop seeds, fertilizer, and irrigation contribute to wide gaps between the potential and the realized yields for all crops in the country."

Source: "*Bangladesh Public Expenditure and Institutional Review – Towards a Better Quality of Public Expenditure*" Volume II, World Bank, June 2010.

3.7 Inter-ministry and Intra-Ministry Cross-Cutting Issues and Coordination

The Bangladesh Country Investment Plan (CIP) for agriculture, food security and nutrition, prepared jointly by various ministries and divisions and endorsed by the Government of Bangladesh on 14 June 2010 provides a good example of inter- and intra-ministry linkages as regards coherent set of priority investment programs to improve food security and nutrition in an integrated manner. It is a comprehensive plan and aims to: "(i) plan and invest resources in a coordinated way; (ii) increase convergence and alignment of budget and external sources of funding, and; (iii) to mobilize additional resources. Proposed investments relate to strengthening physical, institutional and human capacities in the field of agriculture, water management, fisheries, livestock, agricultural marketing, food management, safety nets, nutrition and food safety".

The CIP builds on the solid foundation of the existing policies, strategies and plans in support of food security. In particular, the CIP is based on Accelerated Poverty Reduction II (December 2009), Draft Perspective Plan (2010-2021), Draft Sixth Five Year Plan (2010-2015), the National Food Policy (NFP 2006), 26 areas of intervention contained in the NFP-Plan of Action (PoA 2008-2009), sectoral policy documents¹⁰ and the 2010 monitoring report of the NFP-PoA¹¹. Table 3.2 summarizes the programs included under the CIP.

The detailed sub-programs and the concerned implementing agencies are summarized in the table 3.2. It may be observed from this table that the Ministry of Agriculture and various Agencies under it are directly involved with the implementation of a number of programs/sub-programs.

¹⁰ Sector policy documents include the national seed policy, flood action plan, national extension policy, livestock sector road map (2006), the fisheries sector road map (2006), the national disaster management plan (2007-2015) and the Bangladesh Climate Change Strategy and Action Plan (2009).

¹¹ The preparation of the NFP-PoA was very inclusive, and the result of joint efforts by the following line Ministries/ Divisions:

1. Ministry of Agriculture
2. Ministry of Chittagong Hill Tracts Affairs
3. Ministry of Environment and Forests
4. Ministry of Finance
5. Ministry of Fisheries and Livestock
6. Ministry of Food and Disaster Management (Food Division and DMR Division)
7. Ministry of Health and Family Welfare
8. Ministry of Industries
9. Ministry of Local Government, Rural Development and Cooperatives
10. Ministry of Land
11. Ministry of Social Welfare
12. Ministry of Water Resources
13. Ministry of Women and Children Affairs

This effort was carried out in close consultation with private sector representatives, civil society organizations, NGOs, farmer groups and organizations, representatives from research and academia and the Bangladesh Development Partners viz. FAO, USAID and the EU who have been providing capacity building and technical support to the Government over the years.

Table-3.2 Programs and Sub-Programs of the Country Investment Plan for Agriculture, Food Security and Nutrition

Programs	Sub-Programs	Main Institutions and Development Partners (DPs) involved
Integrated research and extension to develop and propagate sustainable responses to climate change	<ul style="list-style-type: none"> 1. enhance research to adapt to climate change 2. Develop Community Based Learning and Experimentation practices (expand the FFS programmes) 3. Promote Sustainable agriculture practices (conservation agriculture, integrated pest management or integrated crop management) 	BARC, DAE BADC, ASPS, NATP, IFAD, FAO, DANIDA DFID, ADB, BWDB
Improved Water Management and Infrastructure for Irrigation Purposes	<ul style="list-style-type: none"> 1. Improve Water management at farm level (capacity building for water users, rehabilitation of infrastructure); 2. Surface Irrigation in the South; reduce deep well pumping in the north; 3. Protection infrastructure rehabilitation against sea intrusion 4. Gorai River dredging to increase water flow to the south 	MoWR, BWDB MoLG MoA, BADC WB, ADB, IFAD Dutch Coop.
Supply and Sustainable Use of Agricultural Inputs.	<ul style="list-style-type: none"> 1. Partnerships (BADC, private sector) for improved /stress tolerant seed multiplications 2. Building capacities for seed quality, testing and certification 3. Improved and More rational use and quality control of fertilizers 	BADC, Private Sector, NATP FAO, DANIDA
Fishery Development Programme	<ul style="list-style-type: none"> 1. Restore some of the inland open water fisheries 2. Develop small scale inland aquaculture 3. Provide quality enhancement and certification for shrimp culture 	MoFL FAO, JICA, IFAD WB, DANIDA
Livestock Development Programme	<ul style="list-style-type: none"> 1. Strengthening animal health services 2. Capacity building and training at herder level and feed processing 3. Cattle and buffalo genetic improvement activities 	MoLF ADB, DANIDA WB, FAO, IFAD
Access to markets, improved agricultural value added, increased non farm incomes	<ul style="list-style-type: none"> 1. Improvement of rural roads and markets 2. Group marketing and training at community level 3. Private Storage, value chain facilitation, information provision 4. Assist the development of off farm activities and rural businesses 	MoA, MoFL IFAD, DANIDA ADB, IDB
Capacity Strengthening for Food Policy and CIP Formulation, Implementation and Monitoring	<ul style="list-style-type: none"> 1. Strengthening and expanding capacity to implement, monitor and coordinate NFP-PoA; 2. Strengthening the capacity to formulate, implement, monitor and coordinate the CIP programmes 	Food division, MoFDM, FPMU, DGoF, USAID, EU, FAO
Enhance Public Food Management Systems	<ul style="list-style-type: none"> 1. Enhance efficiency of Public Management Systems (improve operational procedure; adopt ICT and computerization and develop operation research) 2. Build capacities of MoFDM and Directorate of food to manage the food system 3. Increase and modernize public storage and handling facilities 4. Strengthen capacity of quality control of food and food stuffs 	Food Division, MoFDM, DGoF, EU, WFP DFID
Development of an integrated multi year safety net programme.	<ul style="list-style-type: none"> 1. Formulate a new comprehensive safety net programmes, streamlining the existing safety net programmes and enhancing their impacts; 2. Re-design, streamline safety net programmes in partnership with relevant stakeholders 3. Improve institutional capacity to effectively operate SSNPs 	MoFDM WFP, EU
Community based nutrition activities through livelihood approaches	<ul style="list-style-type: none"> 1. Build on and complement the National Nutrition Programme (NNP) 2. process to assist rural communities to develop their own nutrition activities, through a livelihood approach, complemented by health oriented awareness campaigns 3. Support to develop gardens, small animals, behaviour changes, etc. 4. Link long term with immediate treatment of acute malnutrition 	MoHFW, MoA, MoFL, MoFDM EU, WB FAO, UNICEF
Orient Food and Nutrition Programmes through data	<ul style="list-style-type: none"> 1. Update food consumption survey, food composition tables 2. work out updated nutrition messages and build capacities 	Food Division/FPMU, MoH, INFIS, EU, WFP, UNICEF, FAO
Food Safety and Quality Improvement	<ul style="list-style-type: none"> 1. Improve surveillance system of food borne illnesses 2. Enhance capacities and laboratories for food control and safety 	Food Division/DGoF FPMU, MoH NFSAC, EU, WHO, FAO

Source: Bangladesh Country Investment Plan- A Road Map towards investment in agriculture, food security and nutrition.

Strategic Objectives and Ministry Level Performance Indicators

4.1 Vision, Mission, Core Values/Driving Principles of the Ministry of Agriculture

Vision

Achieving food security for all

Mission

Ensure food security by increasing production, productivity in the crop sector, improving marketing system as well as diversification of crops and encouraging production of more nutritious crops.



Core Values/ Guiding Principles

Attitude: Our team is professional, reliable, committed and fully dedicated.

Drive: We are driven by principles to maintain high standards of performance and to deliver excellent services for all stakeholders.

Fairness: We act with objectivity, honesty, empathy, impartiality, accountability and transparency.

Focus: Our focus is to achieve agricultural development and food security for all.

Learning: We have open mind to learning and sharing knowledge and information.

Teamwork: We cooperate with one another and our partners to achieve our goals.

4.2 Medium Term Strategic Objectives and Desirable Actions

Major Strategic objectives for the Crop Sub-sector

The Sixth Plan describes crop sub-sector Strategic Objectives in detail. From overall perspective, we can indicate following major Strategic Objectives for the Crop Sub-sector:

- i. Create enabling environment for agricultural development
- ii. Enhance production and productivity of crops
- iii. Enhance accessibility of affordable inputs and credit to farmers
- iv. Enhance land productivity and promote sustainable land use and environmental conservation
- v. Promote market access and product development for crops

Desirable Actions

Notwithstanding short-term policy support contributing to higher crop production, accelerated growth in agriculture in the medium term will depend on a number of policy actions by the government, as indicated in Table 4.1.



Table 4.1 Major Strategic Objectives and Desirable Actions of the Ministry of Agriculture

Major Strategic Objectives	Desirable Actions
1. Create enabling environment for agricultural development	<ul style="list-style-type: none"> • Review, develop and harmonize various agriculture policies; • Review, develop and harmonize legal and regulatory framework; • Advocate fiscal, monetary and other incentives for agriculture; • Advocate appropriate trade and tariff policies consistent with WTO regime • Strengthen public-private partnership in agriculture, • Mainstream poverty reduction and gender issues in agriculture; • Augment public investment in R&D for accelerating technological progress in agriculture; • Improve access to information and use of ICT for agriculture development; • Strengthen linkages among research institutions, extension services and their commercial applications by the farmers, NGOs and local government bodies; • Strengthen client-orientation by decentralizing program development to the upazila level;
2. Enhance production and productivity of crops	<ul style="list-style-type: none"> • Enhance adaptive research and development activities and effective research-extension linkages for agriculture development • Review and strengthen agricultural extension system and services; • Increase coverage of cultivable land under high yielding varieties and hybrid; • Raise cropping intensity by spread of short duration and hybrid multiple cropping; • Enhance rice production and yields through a breeding strategy focusing on grain quality, shorter maturity and hybrid and/or super rice; • Pursue balanced development of cereal and other crops; • Reduction of pre-harvest and post-harvest crop losses; • Targeted food security programmes; • Crop-specific development programs • Increasing awareness about food value and nutrition through publications, meetings and workshops • Strengthen Monitoring and Evaluation system
3. Enhance accessibility of affordable inputs and credit to farmers	<ul style="list-style-type: none"> • Supply adequate quantity of quality inputs at affordable prices • Enhance production of quality seeds of different crops in both public and private sector and strengthen seed monitoring and evaluation activities • Production, certification and distribution of breeder, foundation and truthfully level seeds tolerant to salinity, drought and water submergence • Ensure supply of quality fertilizers and pesticides at reasonable prices • Ensure access to agriculture credits at affordable interest rates • Expansion of minor irrigation coverage by encouraging optimal use of surface water • Increasing the area of arable land by reducing water logging and submergence • Procurement of irrigation machinery and increasing its availability

Contd.

Major Strategic Objectives	Desirable Actions
4. Enhance land productivity and promote sustainable land use and environmental conservation	<ul style="list-style-type: none"> • Efficient management of water resources • Appropriate land-use policy and regulation to high agricultural land diversion; • Promote mechanized farming • Promote agriculture in coastal areas and hilly terrains • Application of contemporary science and technology to tackle environmental degradation, soil erosion, climate change, etc. • Identification and classification of soil and land resources through soil survey • Extension of soil test facilities to Upazila and Union level • Popularize the use of organic fertilizer, green fertilizer and microbe fertilizer among the farmers
5. Promote market access and product development for crops	<ul style="list-style-type: none"> • Provide market information • Promote market development by strengthening cold storage facilities, transportation system and supply chains for crops • Announcement of appropriate procurement prices for food grains • Development and maintenance of market infrastructure • Providing technological support and technical assistance to agricultural entrepreneurs • Co-ordination with relevant Government department and private sector to expand market reach for agricultural commodities • Exploit potential for diversification into higher-value crops for domestic and external markets • Improve marketing linkages and information networking • Commercialize agriculture production by encouraging forward linkages with agro-based industries

4.3 Linking Strategies with Policies

Table 4.2 Linkages between strategic objectives and major policy documents of the Ministry of Agriculture

Major Strategic Objectives	Policy Document
1. Create enabling environment for agricultural development	<ul style="list-style-type: none"> • All Acts, Policies, Rules and Regulations • Fiscal regime and other government support for agriculture
2. Enhance production and productivity of crops	<ul style="list-style-type: none"> • National Agriculture Policy, • New Agricultural Extension Policy, • National Integrated Pest Management Policy, • The National Seed Policy of Bangladesh, • Small scale Irrigation Policy, • Policy for the Innovation of climate resilience and short duration variety crops and technologies, • Policy for the determination of irrigation charge rate, • National Jute Policy

Contd.

Major Strategic Objectives	Desirable Actions
3. Enhance accessibility to affordable input and credit to farmers	<ul style="list-style-type: none"> • National Agriculture Policy, • New Agricultural Extension Policy, • The National Seed Policy of Bangladesh, • Small scale Irrigation Policy, • Policy for the innovation of climate resilience and short duration variety crops and technologies, • Policy for the determination of irrigation charge rate
4. Enhance land productivity and promote sustainable land use and environmental conservation	<ul style="list-style-type: none"> • National Agriculture Policy, • New Agricultural Extension Policy, • Policy for the innovation of climate resilience and short duration variety crops and technologies
5. Promote market access and product development for crops	<ul style="list-style-type: none"> • National Agriculture Policy, • New Agricultural Extension Policy, • The National Seed Policy of Bangladesh, • Small scale Irrigation Policy, • Policy for the innovation of climate resilience and short duration variety crops and technologies, • Policy for the determination of irrigation charge rate

A combined table indicating the linkages among Strategic objectives, relevant policy documents, desirable actions and related Departments/Agencies to implement those actions are shown in Annex-5. This would facilitate the preparation of Ministry Budget Framework (MBF).

4.4 Ministry-level Performance Indicators

The Ministry of Agriculture is primarily concerned with the development of crops within agriculture sector. The Ministry's MBF identifies the following performance indicators as a result of implementation of the specified activities related to the medium term objectives. (Box 4.1)

Box 4.1

Key Performance Indicators of the Ministry of Agriculture

1. Innovation of technologies and improved varieties of crops
2. Expansion of soil sample testing facilities
3. Expansion of minor irrigation facilities on arable land
4. **Production of crops:** (a) Rice, (b) Wheat, (c) Pulses and (d) Oil seed
5. **Production of cash crops:** a) Jute, b) Cotton, c) Sugarcane, d) Potato, e) Spices and f) Maize

Detail year-wise target of Key Performance Indicators in MBF of the Ministry of Agriculture is shown in Annex 4 (Table A4.7).

The aforementioned KPIs (Box 4.1) have been selected by the Ministry of Agriculture to attain ministries strategic objectives over long run. An in-depth analysis of the KPIs

reveals that among five KPIs, expansion of soil sample testing facilities is directly related to realize two strategic objectives of the Ministry namely (i) Enhance production and productivity of crops and (ii) Enhance land productivity and promote sustainable land use and environmental conservation. Another important KPI such as expansion of minor irrigation facilities on arable land is also appropriately aligned with Ministries strategic objectives i.e., enhance production and productivity of crops and accessibility to affordable inputs and credit to farmers. Other than these two KPIs, the remaining three KPIs such as, Innovation of technologies and improved varieties of crops, production of crops: (a) Rice, (b) Wheat, (c) Pulse and (d) Oil seed and production of cash crops: (a) Jute, (b) Cotton, (c) Sugarcane, (d) Potato, (e) Spices and (f) Maize is being reorganized/rationalized in the following manner to establish clear linkages to achieve strategic objectives of the Ministry over long run.

1. Coverage of areas under improved varieties of crops and technologies (Unit of measurement will be % of total arable land)
2. Coverage of major crop production against demand
3. Coverage of agricultural market information

4.5 Past Trends of Key Performance Indicators (KPIs)

The Ministry Budget Framework (MBF) deals with Key Performance Indicators (KPI) which are indicators of outputs/outcomes resulting from the projects/programs/activities because in budgeting we are interested to judge the performance of given expenditure i.e. the value for money, irrespective of the composition of physical inputs to produce these outputs. But, in medium term planning we are also interested in examining the availability, quality, delivery and utilization of inputs and to judge their productivity and efficiency.¹² Therefore, the Key Performance Indicators (KPIs) in the Medium Term Strategic Planning include not only the outputs but also the major inputs to produce these outputs and whose delivery falls under the responsibility of the Ministry of Agriculture. Major inputs for crop production include the following:

- a. Total and net cropped area
- b. Irrigation
- c. Fertilizers
- d. Pesticides and insecticides
- e. Quality seeds for rice, wheat, pulses, edible oils, jute, potato etc.

Table 4.3 indicates that the total cropped area and net cropped area have remained more or less invariant since 2000-01 and there is very little scope to enhance these areas. Therefore, agriculture growth in future will depend on the availability and quality of other inputs for agriculture production such as irrigation, quality seeds, fertilizers, pesticides and agriculture credits.

¹² The PFM Guidelines issued by the Asian Development Bank, World Bank and OECD prescribe that for medium term strategic planning the key performance indicators may include suitable indicators for inputs, intermediate outputs, outputs and outcomes. For detailed discussion, consult the following documents: (1) Chap-15, *Strengthening Performance in Public Expenditure Management*, pp.1-32, in *Managing Government Expenditure*, by Salvatore Schiavo-Campo and Daniel Tommasi, the ADB, April 1999. (2) Annex D: *Performance Indicators for Public Financial Management*, pp.136-143, in *Public Expenditure Management Handbook*, pp.1-193, World Bank, Washington D.C., June 1998. (c) pp.136-138, pp.365-367 and pp.463-465 in *Managing Public Expenditure- A Reference Book for Transition Countries*, ed. Richard Allen and Daniel Tommasi, OECD, 2001.

Table 4.3 Trends of Total and Net Cropped Area

Year	Forest	Not available for cultivation	Cultivable Waste	Current Fallows	Net cropped area	Area sown more than once	Total cropped area
1989 -90	4703	7783	863	2686	20633	14117	34750
1990 -91	4693	7958	1442	2379	20198	14482	34680
1991 -92	4674	9885	1532	862	19716	14405	34121
1992 -93	4674	10137	1512	928	19418	14438	33856
1993 -94	4674	10355	1566	984	19090	14225	3331
1994 -95	4861	10128	1547	1000	19133	14280	33413
1995 -96	5317	9788	1314	969	19281	14110	33391
1996 -97	5329	9681	1295	963	19401	14688	34089
1997 -98	5572	9268	1241	898	19690	15210	34810
1998 -99	5572	9141	1100	1115	19741	14752	34493
1999 -00	6490	8435	781	862	20101	15166	35267
2000 -01	6490	8427	794	987	19970	15365	35335
2001 -02	6365	8676	799	1005	19824	15252	35076
2002 -03	6418	8685	764	957	19845	15281	35126
2003 -04	6418	8697	736	957	19843	15286	35129
2004 -05	6420	8724	663	1157	19703	15142	34845
2005 -06	6420	8802	640	1518	19289	14655	33944
2006 -07	6420	8835	634	1514	19266	14656	33922
2007 -08	6420	8872	596	1598	19187	15093	34280
2008 -09	6420	8835	572	1171	19621	15993	35614

Source: Prepared on the basis of primary data given in various issues of Agriculture Statistics, B.B.S.

Annex Tables A2.1 to A2.3 presents trends of indices of area and production of various crops. It may be observed from these tables that in recent years there had been declining trend of cultivated areas under Aus rice, wheat, pulses, sugarcane, fibers and fruits, whereas there is increasing trend of areas under Aman and Boro rice, maize, oil seeds, spices and condiments. Areas under vegetable production have remained more or less invariant over time.

Table 4.4 presents long term trends of Crops GDP at constant (1995-96) market prices and selected agricultural inputs (such as cropped area, irrigated area, pesticides, fertilizer use, quality seeds and agricultural credits) since 1990-91. The Pearson log-linear correlation coefficients between crop (and also horticulture) GDP and agricultural inputs are very high. The high value of the correlation coefficients indicates that these inputs exert significant favorable impact on the production of crops.

Pearson Correlations Coefficients between Crop GDP and Agriculture Inputs						
Between	Area	Irrigated	Pesticides	Fertilizer	Seeds	Credits
Crops GDP	0.669	0.961	0.960	0.763	0.917	0.951

Table 4.4: Long Term Trends of Crops GDP at Constant prices and Selected Agricultural Inputs during 1990-91 to 2010-11

Year	Crops GDP	Cropped Area	Irrigated Area	Pesticides	Fertilizer Use	Seeds	Credits
	Taka	Acres	% of total Area	'000 tons	Tons	Tons	Taka
1990 -91	243.2	34.7	21.58	7.15	2.11	27.95	5.96
1991 -92	245.9	34.1	23.40	7.45	2.29	28.89	7.95
1992 -93	248.3	33.9	23.75	7.66	2.32	27.82	8.42
1993 -94	244.2	33.3	24.40	7.85	2.22	21.59	11.00
1994 -95	235.8	33.4	25.36	9.22	2.64	29.44	14.90
1995 -96	239.9	33.4	26.30	11.22	3.02	37.11	14.82
1996 -97	255.4	34.1	26.59	11.37	3.04	34.47	15.17
1997 -98	258.1	34.8	26.76	11.61	2.62	27.87	16.43
1998 -99	266.1	34.5	28.22	14.34	2.82	34.02	30.06
1999 -00	287.7	35.3	31.60	15.63	2.83	29.48	28.51
2000 -01	305.5	35.3	31.54	15.40	2.89	36.27	30.20
2001 -02	298.2	35.1	33.82	17.39	3.29	37.15	29.55
2002 -03	306.8	35.1	33.91	18.08	3.30	33.96	32.78
2003 -04	319.9	35.1	33.98	22.12	3.36	38.31	40.48
2004 -05	320.3	34.8	38.05	25.47	3.76	45.13	49.57
2005 -06	336.4	33.9	39.46	31.52	3.68	55.60	54.96
2006 -07	351.3	33.9	40.07	37.71	3.55	76.12	52.93
2007 -08	360.7	34.3	41.86	48.69	4.09	74.13	85.81
2008 -09	375.2	35.6	41.31	45.17	3.01	91.79	92.84
2009 -10	398.2	35.8	39.32	42.24	3.13	103.57	111.17
2010 -11	419.7	36.1	50.99	43.55	3.82	130.94	121.84

Source: Primary data given in various issues of Agriculture Statistics, B.B.S.

We have also fitted exponential time trends and statistical equations showing relations between crop GDP and various inputs. The detailed results are given in Annex Table A3.1, which indicate that the crop-GDP has very high correlation and significant elasticity's with most of the agriculture inputs and outputs. The exponential time trends for area, production and yields for various crops indicate increasing trends except for areas and production for Aus and Aman rice, wheat, pulses, oilseeds and sugarcane. The coefficient of variation (CV) for most of the variables is very high. This implies that the areas, production and yields for various crops are unstable over time due to uncertainties and risks caused by unfavorable monsoons and natural disasters.

4.6 Projections of Key Performance Indicators (KPIs)

Ministry Budget Framework (MBF) for the years 2012-13 to 2016-17 prepared by the Agriculture Ministry provides the projections of major outputs within the resource constraints provided by the Finance Division for preparing the MBF. However, there are no projections for inputs, which form an integral component of MTSBP. Here we have adopted the standard statistical techniques on the basis of time series data for the projection of both input KPIs and output KPIs which are consistent with the Sixth Five Year Plan. The methodology, data base and the projections are discussed in detail in Annex A4.1 to A4.6. The projections are summarized here in Table 4.5.

Table 4.5: Projections of KPIs of the Ministry of Agriculture (Production in million metric tonnes)

Items	2010-2011	2011-12	P*2012-2013	P*2013-2014	P*2014-2015	P*2015-2016	P*2016-2017	Ave GR
Aus Rice Prod	2.13	2.13	2.13	2.13	2.13	2.13	2.13	-0.02
Aman Rice Prod	12.79	12.91	13.02	13.14	13.26	13.38	13.50	0.91
Boro Rice Prod	18.62	18.99	19.37	19.76	20.15	20.55	20.97	2.00
Total Rice Prod	33.54	34.03	34.53	35.03	35.54	36.07	36.60	1.46
Wheat Prod	0.97	0.99	1.01	1.03	1.05	1.07	1.09	2.00
Pulses Prod	0.23	0.24	0.24	0.25	0.25	0.26	0.26	2.00
Oilseeds Prod	0.84	0.90	0.97	1.04	1.12	1.20	1.29	7.40
Spices Prod	1.47	1.61	1.76	1.92	2.09	2.28	2.49	9.18
Sugarcane Prod	4.67	4.81	4.96	5.10	5.26	5.41	5.58	3.00
Jute Prod	1.52	1.57	1.62	1.68	1.73	1.79	1.85	3.31
Potato Prod	8.33	9.12	9.99	10.94	11.98	13.12	14.37	9.51
Maize Prod	1.00	1.12	1.26	1.41	1.58	1.77	1.98	12.00
Input KPIs (Area in '000 Acres, seeds and fertilizers in '000 tons and credits in lakh taka)								
Aus Rice Area	2750	2680	2612	2546	2481	2418	2357	-2.54
Aman Rice Area	13951	13907	13862	13818	13775	13731	13687	-0.32
Boro Rice Area	11788	12068	12355	12648	12949	13257	13572	2.38
Rice Area	28489	28655	28829	29012	29204	29405	29615	0.65
Wheat Area	923	932	942	951	960	970	980	1.00
Pulses Area	627	633	640	646	652	659	666	1.00
Oilseeds Area	1300	1330	1361	1393	1425	1458	1492	2.32
Spices Area	850	875	901	928	956	984	1013	2.97
Sugarcane Area	287	293	299	305	311	317	323	2.00
Jute Area	1751	1781	1811	1842	1873	1905	1938	1.70
Potato Area	1137	1207	1281	1360	1443	1532	1626	6.15
Maize Area	425	459	496	535	578	624	674	8.00
Agri Credits	12184	13884	15821	18028	20543	23408	26674	13.95

Contd.

Items	2010-2011	2011-12	P*2012-2013	P*2013-2014	P*2014-2015	P*2015-2016	P*2016-2017	Ave GR
Urea	2253	2266	2279	2291	2304	2318	2331	0.57
TSP	435	425	415	405	396	386	377	-2.35
MOP	365	378	391	404	418	432	447	3.45
Gypsum	105	103	101	100	98	96	95	-1.73
Fertilizer	3817	3852	3888	3924	3960	3997	4034	0.93
Aus paddy Seed	49	42	36	30	26	22	19	-14.82
Aman Seed	139	153	168	185	203	224	246	10.01
Boro paddy Seed	118	123	127	132	138	143	148	3.90
Total Paddy seed	306	322	339	357	375	395	416	5.27
Wheat Seed	39	41	43	44	46	48	50	4.03

Note: P*= Projection

The projections presented in Table 4.5 are based on the following set of assumptions:

1. There will be no major monsoon failures or no internal or external shocks during the planning period which might have adverse impact on agriculture.
2. The Government will continue to pursue the existing favorable policy package for agriculture.
3. Past trends and pattern of crop production and areas under cultivation of various crops will continue in future.

It may be observed from Table 4.5 that the projected KPIs for some of the outputs (such as rice and wheat) are significantly different from those projected under the MBF for the Budget 2012-13 presented in Annex Table A4.7. The differences are due to the following reasons:

- a. Coverage and definitions of crops are different as our analysis is based on the data obtained from the Bangladesh Bureau of Statistics.
- b. Our projections are consistent with the Sixth Five Year Plan target of about 5 percent growth rate for the crops and horticulture sub-sector within agriculture.
- c. As MBF projections are made within MTBF expenditure ceilings for the Agriculture Ministry, there is no guarantee that the Sixth Plan targets will be realized either for the crops sub-sector or for the overall agriculture sector.

4.7 Foodgrains Requirements for Food Security

As indicated earlier the Medium Term Strategy and Business Plan of the Ministry of Agriculture has been prepared with a Mission "to ensure food security for all" embedded in the Vision "to achieve self-sufficiency in food production". In a globalised economy with free trade and movement of goods, services, capital and manpower, self-sufficiency in the agriculture sector means that the sector should be able to finance imports of food-grains and other raw materials and machinery with the help of foreign exchange generated by

the exports of the sector. Food security means that the domestic production of food grains should be sufficient to meet the domestic demand for food grains without any resort to imports.

So we need to estimate and project demand for foodgrains to ensure food security for all. As per international best practices for demand projections for food grains, total requirements for food grains consist of two parts- direct demand and indirect demand. Direct demand for food grains implies human demand for food grains for basic needs of calories for survival and getting energy for works. Indirect demand for food grains consists of requirements for seeds, pre-harvest and post-harvest loss, transit loss, feeds for animal husbandry, poultry and fishery, requirements by hotels, restaurants, bakeries and food processing and agro-based industries.

Table 4.6 indicates the average per capita per day food (grams) and calorie intake of a citizen of Bangladesh during 2010 as per the "Household Income and Expenditure Survey, 2010" conducted by the Bangladesh Bureau of Statistics (BBS). According to this survey, the average per capita consumption of cereals amounted to 463.9 grams per day. Another survey conducted by the Bangladesh Institute of Development Studies (BIDS) in 2011 indicated that the average consumption of food grains was 501.26 grams per day per person.

Table-4.6 Average per capita per day food (grams) and calorie intake of A citizen of Bangladesh, 2010

Food Item	Grams	Percentage	Kilo calorie	Percentage
Cereals (Rice, wheat, others)	463.9	46.4	1617.2	69.7
Potato	70.3	7.0	68.2	2.9
Vegetables	166.1	16.6	89.1	3.8
Pulses	14.3	1.4	50.2	2.2
Milk/milk products	33.7	3.4	27.4	1.2
Edible oil	20.5	2.1	184.1	7.9
Meat/Poultry/Eggs	26.2	2.6	33.8	1.5
Fish	49.5	5.0	66.1	2.9
Condiments/ Spices	66.0	6.6	67.9	2.9
Fruits	44.7	4.5	31.1	1.3
Sugar	8.1	0.8	33.5	1.4
Miscellaneous*	36.5	3.6	49.9	2.2
Total	1000.0	100.0	2318.3	100.0

Source: Household Income and Expenditure Survey, 2010.

Note: * includes tea, soft drinks, bread, biscuits, betel nuts, betel leaves, etc.

Projections of Food Grains Demand

On the basis of basic data and information collected from the Department of Agricultural Extension (DAE), Bangladesh Bureau of Statistics (BBS) and Bangladesh Institute of Development Studies (BIDS) we estimate food grains requirements during 2001-2011

and project food grains demand for the period 2012-2016. These results are given in Table 4.7. These estimates and projections are based on the following assumptions:

- i. Direct food grain demand is calculated @501.26 gm per day per head (as per BIDS Study, 2011).
- ii. Indirect demand includes seed, wastage, feed for animal husbandry, fisheries and poultry, and requirements by the food processing industries, hotels, restaurants, bakeries, which together is assumed to be 14.5 percent of gross food grains output (as per BIDS study 2011).
- iii. Buffer stocks are assumed to be 3 million tonnes w.e.f. 2011-12.

It may be observed from the table 4.7 that complete food security will be reached by 2015. However, if we ignore the need for building a minimum level of buffer stock to take care of adverse impact of unfavorable monsoons and natural disasters, the country is already on the verge of attaining food security for all.

Table 4.7: Food grain Production and Requirement (2000-01 to 2016-17)

(thousand metric tons)

Year	Mid-Year Population (Million)	Direct Demand	Indirect Demand	Buffer Stock	Food grains total Demand	Production				Import/Aid (Rice+wheat)	Availability	Gap
						Rice	Wheat	Maize	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13
2000-01	132	24059	3902	0	27961	25085	1673	149	26907	1554	28461	1554
2001-02	133	24416	3781	0	28197	24300	1606	172	26078	1799	27877	1799
2002-03	135	24700	3896	0	28596	25188	1507	175	26870	3221	30091	3221
2003-04	136	24919	4014	0	28933	26190	1253	241	27684	2799	30483	2799
2004-05	138	25258	3841	0	29099	25157	976	356	26489	3375	29864	3375
2005-06	139	25450	4032	0	29482	26553	735	522	27810	2459	30269	2459
2006-07	142	25980	4197	0	30177	27318	725	899	28942	2420	31362	2420
2007-08	144	26346	4513	0	30859	28931	844	1346	31121	3457	34578	3457
2008-09	146	26712	4769	0	31481	31317	844	730	32891	3013	35904	3013
2009-10	148	27078	4946	0	32024	32257	969	887	34113	3454	37567	3454
2010-11	150	27444	5229	0	32673	33541	972	1552	36065	5313	41378	5313
2011-12	152	27812	5111	3000	35923	34030	982	236	35248	1855	37103	1855
2012-13	154	28222	5215	3000	36437	34526	992	450	35968	469	36437	469
Projected										Imports		
2013-14	157	28633	5319	3000	36952	35031	1001	650	36682	270	36952	270
2014-15	159	29045	5409	3000	37454	35544	1011	750	37305	149	37454	149
2015-16	161	29457	5501	3000	37958	36067	1022	850	37939	19	37958	19
2016-17	163	29872	5594	3000	38466	36598	1032	950	38580	-114	38466	-114

Source of Basic Data: Bangladesh Bureau of Statistics (BBS) and Department of Agricultural Extension (DAE).

Alternative Projections of Food Grains Demand

An attempt was made to estimate demand separately for each of major cereals viz. rice, wheat, potato and pulses. The projections and the underlying assumptions are given in Tables 4.8A to 4.8D. The projections from two sources differ for some crops but lead to the same conclusion that Bangladesh is on the verge of attaining complete food security in near future.

Table 4.8 A: Projected Demand for Rice in next five years

(lakh metric tons)

Uses	2011 -12	2012 -13	2013 -14	2014 -15	2015 -16	2016 -17
1. Human consumption	227	231	234	237	240	243
2. Post -harvest lost (assumed to be 5% of gross production)	16.8	16.9	17.0	17.0	17.1	17.2
3. Food processing industry (assumed to be 1% of gross production)	3.35	3.37	3.39	3.40	3.40	3.40
4. Seeds and wastage, feed, private stocking (assumed to be 12% of gross production)	40.2	40.5	41.0	41.5	42.0	42.0
5. Buffer stock by government	12.5	13	13.5	14.0	14.5	15.0
6. Total demand	299.8	304.8	308.9	312.9	317.0	320.6

Table 4.8 B: Projected Demand for Wheat in next five years

(lakh metric tons)

Uses	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
1. Human consumption	14.2	14.4	14.6	14.8	15.0	15.2
2. Food processing industry (assumed to be 25 lakh ton per annum)	25.0	25.0	25.0	25.0	25.0	25.0
3. Seeds and wastage, feed, private stocking (assumed to be about 12% of gross production)	1.2	1.2	1.2	1.2	1.2	1.2
4. Buffer stock by government	-	-	-	-	-	-
5. Total demand	40.4	40.6	40.8	41.0	41.2	41.4

Table 4.8 C: Projected Demand for Potato in next five years

(lakh metric tons)

Uses	2011 -12	2012 -13	2013 -14	2014 -15	2015 -16	2016 -17
1. Human consumption	38.4	39.0	39.5	40.0	40.6	41.1
2. Post-harvest lost (assumed to be around 20% of gross production)	16.7	16.7	16.7	16.7	16.7	16.7
3. Food processing industry (assumed to be 10% of gross production)	8.2	8.2	8.2	8.2	8.2	8.2
4. Seeds and wastage, feed, private stocking	8.0	8.3	8.5	8.6	8.6	8.6
5. Total demand	71.3	72.2	72.9	73.5	74.1	74.5

Table 4.8 D: Projected Demand for Pulses in next five years

(lakh metric tons)

Uses	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
1. Human consumption	7.8	7.9	8.0	8.1	8.3	8.4
2. Food processing industry (assumed to be 1% of gross production)	0.02	0.02	0.02	0.02	0.02	0.02
3. Seeds and wastage, feed, private stocking (assumed to be 12% of gross production)	0.3	0.3	0.3	0.3	0.3	0.3
4. Buffer stock by government	-	-	-	-	-	-
5. Total demand	8.1	8.2	8.3	8.4	8.6	8.7



Programs/Projects and Financing Needs

5.1 Identification of Programs/Projects/Activities and Linkages with Policies

The Ministry Budget Framework (MBF) prepared as a part of medium term budgeting provides yearly allocations of expenditure for all approved and unapproved projects/programs/activities for the budget year and four forward years. But the allocations are made on the basis of Ministry/Division wise financial ceilings provided by the Finance Division on the basis of anticipated resources to be available over the medium term.

However, the basic objective of the Medium Term Strategy and Business Plan is to consider all desirable programs/projects/activities of the Ministry of Agriculture over the planning horizon in order to achieve the stated strategic objectives. So in the MTSBP we have considered both approved and anticipated projects/programs/activities for establishing an effective linkage between the policy documents and a realistic expenditure plan for the Ministry of Agriculture and its subordinate departments and agencies. Particularly efforts have been made to conceive all feasible projects and programs which could be implemented by the Agencies/Departments.



Ideas and concepts of project/programs originate from many sources like the Ministry/Division, Development Partners, implementing agencies, sector Divisions of the Planning Commission and monitoring and implementation reports by the IMED etc. All such concepts have been examined thoroughly before identifying the desired programs/projects. But, the main responsibility of subsequent preparation of detailed program/project proposals through the standard DPP and RDPP for Development Projects and TPP and RTPP for Technical Assistance Projects, as prescribed by the Planning Commission¹³, will remain with the implementing Ministries/Divisions/Agencies.

List of on-going and proposed programs/projects/activities are shown separately in the Annex-6 (on-going projects are in tables A6.1.1 to A6.1.15, listed expected projects in tables A6.2.1 to A6.2.11 and priority area wise projects are in A6.3.1 to A6.3.6). Strategy and business plan by any Line Ministry/Division should assist the Medium Term Budget process by the Finance Division. To do so, new programs/projects/activities which are either being conceived or in the pipelines are also shown in the medium term strategy and business plan. Subsequently detailed pre-feasibility studies and cost-benefit analysis as per established procedures and formats set out by the Planning Commission will be prepared for their usual appraisal by the Line Ministry, Planning Commission and the ECNEC before these are included in the budget for a particular year during the planning period. Therefore, the proposed total expenditures for all projects/programs/activities (including unapproved ones) may exceed the MTBF expenditure ceilings set out by the Finance Division in order to allow for strategic assessments and selections of projects/programs by the Line Ministries/Divisions. Finance Division and the Planning Commission subsequently can select the projects/programs according to their priority set out in the MTSBP and within the budget ceiling during the budget process. However, efforts have been made and due care has been taken to make the planned expenditures realistic and implementable by the ministry and its agencies. In fact, the yearly MTSBP expenditures are more or less comparable to the planned development expenditures projected under the Sixth Five Year Plan (2011-2015).

In order to identify and specify the projects and programs over time, a Technical Committee comprising the heads of all Departments and Agencies and representatives of the budget and planning wings was formed by the Ministry/Division with the head of the Policy Planning Wing as convenor. A combination of top-down and bottom-up approach was adopted to finalize the lists of projects and programs included in the MTSBP. Initially certain guidelines were discussed by the Technical Committee and the Agencies and Departments were encouraged to come up with the list of appropriate and desirable projects and programs which would best satisfy their stated strategic objectives. These were further discussed in the meetings of the Technical Committee and modifications were suggested. The top-down and bottom-up consultations moved back and forth until a convergence was reached and proposals were approved by all the members of the Technical Committee.

¹³ It is well known that the Planning Commission (PC) prepares and circulates procedures and general guidelines for preparation, appraisal and approval of projects (see Project Preparation, Processing, Approval and Revision Procedures for Public Sector, pp.1-90, Planning Commission, Government of the People's Republic of Bangladesh, 2008). Line Ministries and Divisions are required to submit project proposals in the prescribed format of Development Project Proforma/Proposal (DPP) and Revised DPP (RDPP) for Development Projects, and Technical Project Proforma/Proposal (TPP) and Revised TPP (RTPP) for Technical Assistance Projects funded by the donors.

These tables also provide information on the starting and completion years of projects/programs, total project cost, dominant strategic objectives, major activities, dominant outputs and sources of funding.

5.2 Prioritization of Programs/Projects

At present, under MTBF system, Ministry Budget Framework (MBF) for Ministry/Division provide information of on-going and expected projects/programs for the budget year and four forward years. However, all these projects/programs are regarded as priority projects/programs and prepared within the ceiling set by the Finance Division. For the preparation of MTSBP, no such explicit ceiling has been set, though, there may be implicit ceiling on financing depending on constraints of other inputs such as manpower, ICT, capacity building, etc. In the MTSBP, programs/projects are graded as "High priority (HP)", "Medium Priority (MP)" and "Low Priority (LP)".

In determining the priorities of projects and programs included in the MTSBP, due considerations were given to National and Ministry/Division level Policy, Planning documents, Vision, Mission, strategic objectives of concerned Ministry/Division. The priorities were also guided by the standard guidelines issued by the Planning Commission for inclusion of projects for the Annual Development Programme (ADP) and guidelines of the Finance Division for inclusion of programs. These guidelines clearly indicate priority areas which include a variety of factors such poverty alleviation, employment generation, training-based human resource development, rural livelihood programs, development of backward areas, development of SMEs, infrastructure development, ICT and digitization, environment-friendly projects, rehabilitation of damages caused by natural calamities, agro-based industries, self-employment, rural development, food security, nutrition, empowerment of women, expansion of exports, water management, expansion of irrigation, etc.



As indicated earlier all the proposals and priorities put forward by the Agencies and Departments were extensively debated and discussed in the Ministry level Technical Committee meetings and unanimous decisions were taken in the meeting. Annex 6 indicates priorities of all projects included under the MTSBP and probable year of starting of those projects during MTSBP period which will be helpful to match between resource allocation given by the Finance Division and Ministries demand for resources to implement those projects.

5.3 Policy Choices for Implementation of Programs/Projects/Activities and Sources of Financing

While discussing sources of financing and implementation of projects/programs, the Technical Committee explored various policy options such as the following:

- Private Sector & NGO Participation
- Public-Private Partnership (PPP)¹⁴
- Activities to be implemented by the Government
- Activities to be implemented by the Donor agencies or Development partners

It may be observed from tables in Annex-6 that all the projects/programs/activities will be financed and implemented by the government and Donor agencies or Development partners. However, private and NGO participation will be explored for implementation of some of the projects/programs in order to achieve better efficiency and effectiveness of projects and to share costs and risks involved in execution of projects/programs/activities.

5.4 Annual Business Plan for Projects (Department/Agency wise Medium Term Costing of Development Projects)

Annex 6 indicate year-wise expenditures for all projects/programs included under the MTSBP for the period 2012-2013 to 2016-2017 (On-going projects cost are shown in tables A6.1.1 to A6.1.15, listed expected projects cost in tables from A6.2.1 to A6.2.11 and priority area wise projects cost are shown in A6.3.1 to A6.3.6). Project wise activities and dominant outputs are also presented in these tables.

5.5 Trends of Agriculture Ministry Budget, Actual Expenditure and Medium Term Costing of Development and Non-development Expenditure

Before discussing the projected expenditures for the MTSBP period, it is interesting to observe the trends of developmental, non-developmental and overall budget for the Ministry of Agriculture during the past five years from 2007-08 to 2011-12 as given in Tables 5.1 and 5.2. It is observed that total Budget allocation, both Development and Non-Development of MOA increased during the past five years from 2007-08 to 2011-12 (Table 5.2). It may also be observed that despite very good absorption capacity and budget implementation records by the Ministry of Agriculture, the share of the MOA has shown a declining trend in overall development budget, non-development budget,

¹⁴ It may be mentioned here that there are detailed guidelines on "POLICY AND STRATEGY FOR PUBLIC-PRIVATE PARTNERSHIP (PPP), 2010" issued by the government on August 2, 2010. These guidelines clearly indicate the objectives, basic concepts, applicability, sectoral coverage, eligibility of the private sector, investment size, types of financial participation by the private sector, linked components, incentives to private sector, institutional framework, composition of Public-Private Partnership Advisory Council (PPPAC), roles of the LMs/ FD/ Planning Commission, methods and procedures for formulation, appraisal and approval of projects, exit policy, disclosure of information, investment targets under the Five Year Plan, and procedures and methods for small and large projects under public-private partnership.

recurrent budget, capital budget and total budget of the government (Table 5.1). This may be due to higher needs for other sectors such as energy, power, education and health. The ratio of MOA expenditure in total government revenue, overall GDP and crop sector GDP has also remain stagnant over the years (Table 5.1). However, on considering the strategic importance of the MOA for ensuring food security and also for poverty alleviation, Finance Division may consider higher allocation for MOA.

Table 5.1: Share of Agriculture Ministry budget during 2007-2011

Fiscal Year	MOA Budget as % of total Budget	MOA Development Budget as % of total Development Budget	MOA Non-Development Budget as % of total Non-Development Budget	MOA Recurrent Budget as % of total Recurrent Budget	MOA Capital Budget as % of total capital Budget	MOA Budget as % of total Revenue	MOA Budget as % of GDP	MOA Budget as % of Crops GDP
2007-08	6.52	3.21	7.61	8.90	2.59	10.08	1.12	10.07
2008-09	8.12	3.20	9.82	10.34	2.21	11.05	1.24	11.37
2009-10	6.06	3.19	7.11	7.63	2.61	8.42	0.96	8.89
2010-11	6.49	2.80	7.96	8.79	1.90	8.86	1.06	9.90
2011-12	5.74	2.41	6.93	8.30	1.28	8.06	1.01	10.01

Source: iBAS, Finance Division.

Table 5.2: Ministry of Agriculture budget and actual expenditure during 2007-2011
(taka crore)

Year	Non-Development		Development		Total		Actual as % of Budget		
	Budget	Actual	Budget	Actual	Budget	Actual	Non-Dev	Dev.	Total
2007-08	5359	5343	748	735	6107	6078	99.70	98.26	99.53
2008-09	6875	6259	775	724	7650	6983	91.04	93.42	91.28
2009-10	5760	6452	944	905	6704	7357	112.01	95.87	109.74
2010-11	7397	7417	1042	1025	8439	8442	100.27	98.37	100.04
2011-12	8243	8767	1022	998	9265	9764	106.36	97.65	105.40

Source: iBAS, Finance Division.

Agency-wise projected development and non-developmental expenditures per year over the planning horizon (2012-13 to 2016-17) are presented in Tables 5.4 and 5.5 respectively. The results are summarized in Table-5.3 which indicates that projected expenditures of the Ministry of Agriculture are expected to rise from Taka 9777.9 crore (amounting to 9.52% of Crops GDP) in 2012-13 to Taka 13978 crore (amounting to 9.95% of Crops GDP) in 2015-16 and Taka 15382.2 crore (amounting to 9.87% of Crops GDP) in 2016-17.

Table 5.3: Total Non-Development and Development Costs over the Medium Term

Items	Year wise costing (Taka Crore)				
	2012-13	2013-14	2014-15	2015-16	2016-17
Non-Development	8476 ¹⁵	93998	10025	10757	11517
Development	1301.9	2046	2606	3221	3865.2
Total expenditure	9777.9	11445	12631	13978	15382.2
Memorandum Items:					
GDP at current prices	1041356	1187534	1356694	1548227	1764504
Crops GDP at current prices	102684	113979	126517	140434	155882
Total Exp as % of GDP	0.94	0.96	0.93	0.90	0.87
Total Exp as % of Crops GDP	9.52	10.041	9.98	9.95	9.87

Table 5.4: Department/Agency wise Medium Term costing of Development Projects

Executing Agency	Project Status	Total Project cost (Tk in Crore)	Expenditure upto June 2012(Tk in Crore)	Year wise Project cost (Tk in Crore)				
				2012-13	2013-14	2014-15	2015-16	2016-17
Ministry of Agriculture	Ongoing Projects	173.6	26.9	56.2	55.6	25.0	10.0	0.0
	Expected Projects ¹⁶	10.0	0.0	1.0	2.0	2.0	2.0	3.0
	Subtotal	183.6	26.9	57.2	57.6	27.0	12.0	3.0
DAE	Ongoing Projects	1711.0	557.1	323.3	326.5	201.8	186.3	116.1
	Expected Projects	2242.9	0.0	16.0	114.5	400.0	649.4	1063.0
	Subtotal	3953.9	557.1	339.3	441.1	601.8	835.6	1179.1
BADC	Ongoing Projects	2580.1	873.7	391.2	552.4	481.3	233.4	47.9
	Expected Projects	2529.3	0.0	16.0	173.4	467.6	704.0	1168.3
	Subtotal	5109.4	873.7	407.2	725.8	949.0	937.4	1216.2
BARI	Ongoing Projects	427.8	91.7	93.6	92.1	86.2	64.3	0.0
	Expected Projects	505.2	0.0	4.0	35.7	62.4	135.3	267.8
	Subtotal	933.0	91.7	97.6	127.8	148.6	199.5	267.8
BRRI	Ongoing Projects	166.9	41.0	43.3	32.5	28.8	18.9	2.4
	Expected Projects	251.4	0.0	2.0	17.4	51.0	80.0	101.0
	Subtotal	418.3	41.0	45.3	49.9	79.8	98.9	103.4
BARC	Ongoing Projects	279.4	113.9	77.6	87.9	0.0	0.0	0.0
	Expected Projects	48.8	0.0	2.0	2.0	6.1	12.8	25.8

(contd.)

¹⁵ Non-development projections are made on the basis of FY2011-12 revised Budget allocation (Taka 8243 crore) and FY2012-13 original Budget (Taka 7675 crore). Subsequently, in the revised budget for FY2012-13, the amount of allocation increased to Taka 13732 crore. This significant increase in budget provision is due mainly to quantum jump in agriculture subsidy. Non-Development expenditure except subsidy remains almost stable over the year. As agriculture subsidy constitute a major portion (Taka 12000 crore in FY12-13) of non-development expenditure, the future years cost estimates have been made in this document may differ in the subsequent years due to variation of input prices (mainly fertilizer) in the international market. Given that the MTSBP is a living document and likely to undergo revision in the third year, any change/ or actual allocation will be reflected in the revised document.

¹⁶ Expected project cost comprises both listed expected project cost (Annex 6.2.1 to A6.2.11) and priority area wise expected project cost (Annex 6.3.1 to Annex 6.3.6)

Executing Agency	Project Status	Total Project cost (Tk in Crore)	Expenditure upto June 2012(Tk in Crore)	Year wise Project cost (Tk in Crore)				
				2012-13	2013-14	2014-15	2015-16	2016-17
	Subtotal	328.2	113.9	79.6	89.9	6.1	12.8	25.8
DAM	Ongoing Projects	32.4	4.2	15.5	7.0	5.4	0.3	0.0
	Expected Projects	452.8	0.0	2.0	21.7	60.5	132.1	236.5
	Subtotal	485.2	4.2	17.5	28.7	66.0	132.3	236.5
SCA	Ongoing Projects	6.0	1.5	0.8	1.8	1.0	0.9	0.0
	Expected Projects	212.8	0.0	0.0	13.0	40.0	90.0	69.8
	Subtotal	218.8	1.5	0.8	14.8	41.0	90.9	69.8
SRDI	Ongoing Projects	138.3	53.6	15.7	16.4	31.6	20.7	0.4
	Expected Projects	91.5	0.0	1.0	7.5	12.6	25.0	45.3
	Subtotal	229.8	53.6	16.7	24.0	44.2	45.7	45.7
AIS	Ongoing Projects	45.6	16.9	7.5	12.4	8.8	0.0	0.0
	Expected Projects	91.2	0.0	1.0	8.3	16.8	25.0	40.2
	Subtotal	136.8	16.9	8.5	20.6	25.7	25.0	40.2
BSRI	Ongoing Projects	29.1	8.7	8.4	10.1	1.9	0.0	0.0
	Expected Projects	186.4	0.0	2.0	15.0	30.1	56.4	82.9
	Subtotal	215.5	8.7	10.4	25.1	32.0	56.4	82.9
BMDA	Ongoing Projects	1471.6	472.5	156.0	256.3	245.0	307.3	34.5
	Expected Projects	695.8	0.0	6.0	60.0	130.2	200.0	299.7
	Subtotal	2167.4	472.5	162.0	316.3	375.2	507.3	334.2
BJRI	Ongoing Projects	118.2	32.0	20.0	15.0	18.0	20.0	13.2
	Expected Projects	212.8	0.0	1.0	16.0	50.5	62.8	82.6
	Subtotal	331.0	32.0	21.0	31.0	68.5	82.8	95.8
CDB	Ongoing Projects	14.1	1.8	4.9	6.0	1.4	0.0	0.0
	Expected Projects	120.0	0.0	2.0	15.0	30.0	50.0	23.0
	Subtotal	134.1	1.8	6.9	21.0	31.4	50.0	23.0
BINA	Ongoing Projects	112.9	40.0	25.0	35.0	13.0	0.0	0.0
	Expected Projects	241.8	0.0	2.0	12.5	56.9	74.4	95.9
	Subtotal	354.7	40.0	27.0	47.5	69.8	74.4	95.9
BIRTAN	Ongoing Projects	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Expected Projects	176.00	0.00	5.00	25.00	40.00	60.00	46.00
	Subtotal	176.00	0.00	5.00	25.00	40.00	60.00	46.00
A. Total Ongoing Projects		7307.0	2335.5	1238.9	1506.9	1149.3	861.9	214.5
B. Total Expected Projects (Listed+Priority Area)*		8068.6	-	63.0	539.1	1456.7	2359.1	3650.7
Grand Total (A+B)		15375.7	2335.5	1301.9	2046.0	2606.0	3221.0	3865.2
Memorandum Item								
MOA Development Resource Allocation in SFYP				1563	2046	2606	3221	

Align Lines

* Listed expected projects and Priority area base expected projects are selected on the basis of Sixth Five Year plan and Ministry policy documents

Table 5.5: Department/Agency wise Medium Term Non-Development Costs

(Tk. Crore)

Executive agency/ Operation unit/programs	Year wise costing				
	2012-13	2013-14	2014-15	2015-16	2016-17
Operation Unit: Secretariat	6839	7258	7838	8465	9143
Approved/ expected program	0	400	400	400	400
Total	6839	7658	8238	8865	9543
DAE: Operation unit	28	28	0	28	28
Field services division	77	79	82	84	86
Plant Protection department	10	10	11	11	11
Cash crop division-tobacco and jute	2	2	2	2	2
Food crops divisions	25	26	26	27	28
Agricultural education and training	20	21	22	22	23
Upazilla agriculture office	534	548	567	586	606
Approved/ expected program	20	0	0	0	0
Total	715	714	709	760	784
BADC: Operation unit	262	279	301	325	351
Approved/ expected program	143	0	0	0	0
Total	405	279	301	325	351
BARI: Operation unit	143	152	164	177	191
Approved/ expected program	1	0	0	0	0
Total	144	152	164	177	191
BRRI: Operation unit	38	40	44	47	51
Approved/ expecd program	3	0	0	0	0
Total	41	40	44	47	51
BJRI: Operation unit	20	22	23	25	27
Approved/ expected program	1	0	0	0	0
Total	21	22	23	25	27
BINA: Operation unit	14	15	16	17	19
Approved/ expected program	1	0	0	0	0
Total	15	15	16	17	19
BSRI: Operation unit	15	16	17	18	20
Approved/ expected program	0	0	0	0	0
Total	15	16	17	18	20
BMDA: Operation unit	0	0	0	0	0
Approved/ expected program	0	0	0	0	0
Total	0	0	0	0	0
BARC: Operation unit	13	14	15	16	18

Contd.

Executive agency/ Operation unit/programs	Year wise costing				
	2012-13	2013-14	2014-15	2015-16	2016-17
BARC: Operation unit	13	14	15	16	18
Approved/ expecd program	0	0	0	0	0
Total	13	14	15	16	18
CDB: Operation unit	24	26	28	30	33
Approved/ expected program	0	0	0	0	0
Total	25	26	28	30	33
SCA: Operation unit	7	7	8	9	9
Approved/ expected program	1	0	0	0	0
Total	8	7	8	9	9
AIS: Operation unit	7	8	9	9	10
Approved/ expected program	0	0	0	0	0
Total	7	8	9	9	10
DAM: Operation unit	12	13	14	15	16
Approved/ expected program	2	0	0	0	0
Total	14	13	14	15	16
SRDI: Operation Unit	21	22	24	26	28
Approved/ expected program	5	0	0	0	0
Total	25	22	24	26	28
BIRTAN: Operation Unit	14	15	16	17	18
Approved/ expected program	0	0	0	0	0
Total	14	15	16	17	18
Total operation unit (A)	8301	8999	9625	10357	11117
Total Programs (B)	175	400	400	400	400
Grand Total (A+B)	8476	9399	10025	10757	11517





Annual Performance Plan

6.1 Agency/Department wise Dominant Performance Parameters for Programs/Projects/Activities with Baseline and Yearly Targets for Five Years

The dominant performance parameters for programs/projects/activities of the Ministry of Agriculture are presented in the Tables Annex A7.1 to A7.16. This draws heavily from the Ministry Budget Framework of the Ministry. However, there is a major change as compared with the MBF. As the MBF basically deals with outputs and outcomes as a result of the implementation of projects/programs, and the Secretariat does not implement any project, it is generally reported in the MBF that the Secretariat does not have any outcomes/outputs. However, budgetary practices in the OECD countries indicate that the policy and other documents published by the Secretariat can be regarded as their outputs.

Activities and Outputs of the Secretariat

The following published documents¹⁷ are regarded as outputs of the Secretariat and are indicated in Annex Table A7.1 with exact time schedules for their preparation and publication within the planning horizon:

1. Any published documents on Action/Operational/Business Plan, Budget, Statistics Yearbook, Annual Report, Policy documents, Reports of Working Groups, Expert Committees etc.
2. Any planned amendments of existing Acts, Laws and Regulations etc.
3. Any planned new Acts, Laws etc.
4. Any projects/programs relating to capacity building, training, data management, MIS, conducting surveys etc.

6.2 Broad Procurement Plan for Five Years

Central Procurement Technical Unit (CPTU) in the IMED has made significant progress in introduction of procurement manual, guidelines, rules and regulations. Procurement plan presentation formats are appended with DPP/RDPP/TPP/RTPP. There are also various Rules and regulations for procurement planning. These procedures and guidelines are followed strictly by the MOA while preparing project proposals for approval by the Planning Commission and ECNEC. However, DPP annual phasing of project cost may not have direct links with actual development budget allocation due to time and cost over-

¹⁷ In Output Budgeting in OECD countries, these documents are regarded as outputs because these are available for public discussion, debate, analysis, research leading to value addition and general social welfare. Some of these documents are also presented to the Parliament.

runs as a result of project appraisal or delays in disbursement of donors' funds. In most cases, actual budget provision is less than the amount shown in the DPP. Consequently, project/programme implementation falls behind target. Lack of required resources, change of priority etc. may be some of the other reasons for insufficient provision. DPP phasing of actual implementation of project may also be another factor affecting implementation because in most of the cases the DPP phasing of project costs, although done on the basis of rigorous feasibility analysis, becomes outdated by the time the actual implementation of the project is initiated by the agencies/departments.

The procurement plans for irrigation machinery and equipment, fertilizer and seeds are presented in Tables 6.1 to 6.3.

Table 6.1: Year-wise projection and costing of irrigation machineries and other equipments (in Taka Lakh)

Serial no.	Description of irrigation machineries	Year-wise requirement and costing					
		2012 -13		2013 -14		2014 -15	
		Number required	costing	Number required	costing	Number required	costing
1	2	3	4	5	6	7	8
1	Engine, electric motor, pump (5 -Q, 2 -Q and 1 -Q power)	893	4050	910	4131	928	4214
2	Establishment of Force Mode Tubewell	175	4900	200	5600	150	4200
3	Operations of irrigation machineries through solar power	7	140	15	300	30	600
4	Establishment of floating Pump	0	2200	0	1894	30	2100
5	Collection of Submersible Pump and other equipments	315	280	350	269	450	346
6	Establishment of structure for irrigation water distribution system (in k.m)	900	7500	1500	11670	1500	11670
7	Establishment of Rubber Dam	2	2000	2	2000	3	6500
8	Total yearly cost		21070		25864		29630
9	Relevant equipments(10%)	211		259		296	
	Grand Total		21281		26123		29926

Contd.

Requirement for irrigation machineries

Serial no.	Description of irrigation machineries	Year -wise requirement and costing				Total	
		2015 -16		2016 -17		Number required	costing
		Number required	costing	Number required	costing		
1	2	9	10	11	12	13	14
1	Engine, electric motor, pump (5 -Q, 2-Q and 1-Q power)	881	4002	807	3666	4410	20063
2	Establishment of forcemodeTubewell	150	4200	200	5600	875	24500
3	Operationalize of irrigation machineries through solar power	50	1000	100	2000	202	4040
4	Establishment of floating Pump	50	3500	70	4900	150	14594
5	Collection of submursic Pump and other equipments	450	346	235	181	1800	1423
6	Establishment of structure for irrigation water distribution system (in k.m)	2000	15560	2500	19450	8400	65850
7	Establishment of Rabar Dam	4	6000	4	6000	15	22500
8	Total yearly cost		34609		41797		152970
9	Relevant equipments(10%)	346		418		1530	
	Grand Total		34955		42215		154500

Table 6.2: Demand and use of different Fertilizer from 2010-11 to 2011-12 and Projections for the years 2012-13 to 2014-15

(in lakh metric tons)

Name of the fertilizer	2010 -11		2011 -12		2012 -13		2013 -14*		2014 -15*	
	Demand	Use	Demand	Use	Demand	Use	Demand	Use	Demand	Use
UREA	28.31	26.57	30.00	22.96	25.00	-	24.50	-	24.00	-
TSP	7.14	5.96	7.90	6.78	7.00	-	6.50	-	6.00	-
MOP	5.50	4.97	7.80	6.13	8.70	-	9.00	-	9.25	-
DAP	4.45	3.53	7.08	4.09	6.00	-	6.50	-	7.00	-

Table 6.3 Plan for seed production/procurement and costing from 2012-13 to 2016-17

Serial no.	Name of the seed crop	Amount of land (lakh hectare)	Agronomic requirement (metric ton)	Production/procurement in 2012-13				2013-14				2014-15				2015-16			
				Amount required (Metric ton)	Price per KG (Taka)	Total price (lakh taka)	Amount required (Metric ton)	Price per KG (Taka)	Total price (lakh taka)	Amount required (Metric ton)	Price per KG (Taka)	Total price (lakh taka)	Amount required (Metric ton)	Price per KG (Taka)	Total price (lakh taka)	Amount required (Metric ton)	Price per KG (Taka)	Total price (lakh taka)	
1	Aush(Ufshi)	6.00	15000	1095	25	274	1350	27	365	1350	28	378	1485	30	446	1800	32	576	
2	Aman(Ufshi)	36.15	90375	22150	25	5538	40660	27	10978	45187	28	12652	45187	30	13556	45500	32	14560	
3	Boro (Ufshi)	37.50	93750	58495	27	15794	66000	29	19140	68000	29	19720	68000	32	21760	68500	34	23290	
	Boro (Hybrid)	10.00	15000	1505	165	2483	5000	170	8500	5000	175	8750	5000	180	9000	5000	185	9250	
	Total paddy seed	89.65	214125	83245		24088	113010		38983	119537		41500	119672		44762	120800		47676	
4	Wheat seed	4.25	63750	18000	28	5040	30000	30	9000	31000	32	9920	31000	34	10540	31500	36	11340	
5	Maize seed	1.80	6250	340	65	221	2000	70	1400	2200	75	1650	2200	80	1760	2200	85	1870	
	Total cereal seed	95.70	284125	101585		29349	145010		49383	152737		53070	152872		57062	154500		60886	
6	Potato seed	4.25	600000	23118	18	4161	28000	20	5600	36000	22	7920	36000	25	9000	38000	27	10260	
7	Lentil seed	6.58	23184	1800	75	1350	2510	80	2008	2510	85	2134	2775	90	2498	3150	95	2992.5	
8	Oil seed	7.36	17578	1700	70	1190	2265	75	1699	2265	80	1812	2500	85	2125	2900	90	2610	
9	Paddy seed	4.50	4000	1318	75	989	1850	80	1480	2000	80	1600	2000	85	1700	2100	90	1890	
10	Vegetable seed	7.50	2822	119	300	357	142	320	454	152	330	502	152	340	517	160	350	560	
11	Spices seed	4.78	155463	70	650	455	1000	680	6800	1100	700	7700	1100	720	7920	1100	740	8140	
	Grand total	130.67	1087172	129710		37851	180777		67424	196764		74737	197399		80821	201910		87339	

Monitoring and Evaluation Mechanism and Methodology

7.1 Monitoring and Evaluation System and Mechanism

Monitoring, Evaluation, Reviewing and Reporting form an integral part of an effective Medium Term Strategic Business Planning and performance based budgeting. Plan becomes successful and the value for money is realized only when the proposed targets for outcomes/ outputs are achieved in time and within expenditure limits. Monitoring and Evaluation (M&E) involves collection of relevant data and preparing evaluation reports on regular basis. The reports are presented to the policy makers and budget officers at all levels for review, and to take appropriate policy measures which can be used to update MTSBP and to prepare next year's budget.

Existing Monitoring and Evaluation Mechanism

Ongoing development projects and programs for the Ministry are monitored and evaluated by the Ministry on regular basis. Monitoring has two parts: internal monitoring and external monitoring. Internal monitoring is the responsibility of the administrative ministry/division which holds monthly Annual Development Plan (ADP) Review Meeting to monitor the financial and physical progress of development projects included in the



ADP prepared by the Planning Commission and under implementation by the Ministry. All concerned officials of the ministry and representatives of the Finance Division (FD), Economic Relations Division (ERD), Implementation Monitoring and Evaluation Division (IMED) and Planning Commission (PC) are represented in the ADP Review Committee (ADPRC). Agriculture Minister chairs such review meetings. Apart from financial and physical progress, different issues facing the project implementation and time and cost overruns are discussed in the review meeting. The Planning Wing performs as the secretariat of the ADPRC and prepares the working paper. In most cases, the administration division, budget and planning wings, and the concerned agencies are well represented in the ADP review meetings.

As part of the internal M & E, a committee headed by additional secretary (Administration and Input Management) has been formed by the Ministry. The members of this committee are officials of the Ministry. They visit ongoing Projects/Programs regularly and submit report to the monitoring and reporting section of the Ministry. The reports mainly deal with the progress of the implementation of projects/programs, constraints in implementation and recommend measures to resolve these constraints. Every month the above mentioned Committee holds a meeting and discusses important issues, constraints and measures to tackle time and cost over-runs.

External monitoring and evaluation of the development projects/programmes included in the ADP is the responsibility of the Implementation Monitoring and Evaluation Division (IMED) of the Ministry of Planning. IMED prepares monthly, quarterly and annual monitoring and evaluation reports on the basis of data and information sent by concerned Division/Agency in standard formats during the implementation of the projects, and submits these reports to the Executive Committee of the National Economic Council (ECNEC), concerned Line Ministries and other parties. Where ever possible, IMED seeks to explain the constraints in implementation and reasons for time and cost overruns so that corrective measures can be taken in time. As a part of the external monitoring and evaluation of projects and programs, the Economic Adviser's Wing in the Finance Division also regularly visit ongoing programmes and submit reports to the relevant Ministry/Division, Monitoring and Evaluation Division (IMED) of the Ministry of Planning and Finance Division.

Proposed M & E Mechanism of the Annual Performance Plans

In addition to the normal Monitoring and Evaluation (M&E) of projects financial and physical implementation for the purpose of IMED Monitoring and Evaluation as described above, it is desirable to monitor and evaluate the trends of Key Performance Indicators (KPIs) and Inputs of the Ministry and Outputs and other performance parameters indicated for projects/programs/activities being implemented by the Agencies and Departments in order to judge the efficiency and effectiveness¹⁸ of the projects/programs/activities and the value for money. In case of Ministry level Key Performance indicators (KPI's), it is necessary to conduct independent study by third party such as Bangladesh Bureau of Statistics, Food Division (FPMU unit), IFRI, FAO, IRRI, BIDS and

¹⁸ There are three types of evaluation depending on evaluating the actual inputs, outputs and outcomes in relation to planned/budgeted inputs, outputs and outcomes. While comparison of actual inputs with planned inputs (both financial and physical) determines (financial/ physical) compliance, comparison of actual outputs with planned outputs determines the efficiency of a project, and comparison of actual outcomes with planned outcomes determines the effectiveness of a project.

other relevant organizations. For these activities, it is necessary to strengthen the M&E cells in the Secretariat and Agencies/Departments and to upgrade the needed Information and Communications Technology (ICT) infrastructure in Ministries/Divisions/Agencies/ Departments and their on-line inter-linkages. Particularly, the following support services will be strengthened for the M & E of the MTSBP and MTBF. All these responsibilities should be dealt by the Budget Management Branch or Budget Management Wing of the Ministry.

M & E Support Services

Strengthening M&E Structures in the Budget Management Branch (BMB): M & E of the KPIs, outputs, inputs contained in the MTSBP is critical for the realization of the targets set in the Medium Term Budgeting. MOA will strengthen the existing M & E Cell in the Budget Management Branch for developing necessary structures and systems to support monitoring and evaluation of the Medium Term Strategy and Business Plan. The M&E Cell will be given full responsibility to coordinate and undertake all M&E activities in the Ministry.

Establish a comprehensive database: A comprehensive data-base management system is key to an efficient and effective M&E Framework, as timely availability of reliable data and quality statistics are important for performance-based medium term planning and budgeting and effective policy formulation. The Ministry and its supporting Agencies/Departments in collaboration with the Bangladesh Bureau of Statistics (BBS) would strengthen the institutional set-up and mechanism for designing and conducting appropriate surveys for collection of necessary and reliable data and information in time. The capacity for data collection, data warehousing and retrieval, collation, analysis and dissemination will be enhanced to ensure cross-validation, ownership and legitimacy of all data. In fact, an effective Management Information System (MIS) and online connections with other departments/agencies will be established and strengthened for M&E.

Preparation and Approval of M&E Reports: Initially an Annual M & E Report on the past trends and performance of all KPIs, output, input and other Performance Indicators will be prepared by the Ministry. M & E Reports will be reviewed and approved by appropriate authority.

Preparation of annual M&E Report: Hard copies of the Annual M & E Report would be sent to the Finance Division and the Planning Commission. Annual M & E Reports will be put on Ministry website for information of the general public, researchers and all stakeholders.

7.2 Monitoring and Evaluation Technique¹⁹

Evaluation Methodology

Performance indicators for outputs/outcomes developed for the Ministry and each Department/Agency will be made available to the concerned authorities in charge of the

¹⁹ It may be mentioned clearly that the methodology proposed here on the basis of the guidelines for preparation of MTSBP has not been discussed with all the stakeholders. So this methodology is purely for discussion purpose and creating awareness for the evaluation methodology and technique. It is expected that as the preparation of MTSBP and the system of M & E of the MTSBP evolve over time, methodology for M & E will be reviewed and refined.

implementation of the Strategy and Business Plan and for monitoring and evaluation of results. At the end of the year, achievements of targets will be reviewed and appropriate scores given for individual performance indicators. Table-7.1 presents a very simple methodology²⁰ for determination of scores of the individual Key Performance Indicators.

Table 7.1 Proposed Marks (Scores) for Input/Output/Outcomes KPIs for M&E

Actual Achievement of Output/ Outcome/ KPI	Score
(a) If the actual achievement of the output/outcome KPI equals 100 per cent or more of the planned output/outcome KPI.	100
(b) If the actual achievement of the output/outcome KPI falls below the planned/budgeted target of the output/ outcome/ KPI.	100 <i>multiplied by the Actual Output/ Outcome KPI divided by the Targeted Output/ Outcome KPI</i>

After calculating scores for individual KPI as indicated in Table 7.1, performance of KPIs can be rated by the Ministry as per the rating system²¹ indicated in Table 7.2.

Table 7.2: Rating of KPIs on the Basis of Scores

Rating of Agency/ Department/ Secretariat/ Ministry	Range of Score (in percentage)
(a) Excellent	80-100
(b) Very Good	70-79
(c) Good	60-69
(d) Average	50 - 59
(e) Poor	Less than 50

7.3 Concluding Observation

At the end, it may be mentioned that a soft version of the MTSBP will be posted on the Website of the Ministry of Agriculture. The MTSBP and the Annual Performance Plans are living documents and may have to be reviewed/modified/updated at periodic intervals in order to take care of the dynamics of the change in domestic and international economic environment and the policy change of the government. In general, the review and modification may be made after three years and confined to change in underlying policy framework or significant change in internal and external environment. The change in the MTSBP as a result can be effected by issuing an amendment to the existing plan. Besides, as and when necessary this document may be reviewed/modified/updated accordingly.

²⁰ It may be mentioned here that the proposed evaluation methodology is not rigid or mandatory and it is being shown purely for illustrative purpose. The methodology could be refined as the works on M & E progress over time.

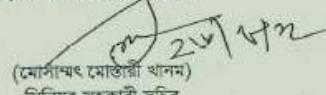
²¹ Like the proposed evaluation methodology for determination of scores/marks outlined earlier, the proposed rating system is not rigid or mandatory for any Ministry or Division. These techniques are being indicated purely for illustrative purpose. The rating methodology could be refined as the works on M & E progress over time.



Annexes

Annex-1

Composition of Technical Committee to prepare MTSBP

<u>কৃষ্ণ সমুদ্ধি</u>	গণপ্রজাতন্ত্রী বাংলাদেশ সরকার কৃষি মন্ত্রণালয় প্রশাসন-৪ অধিশাখা	তারিখ : ২৬/০৬/২০১৭ খ্রিষ্টাব্দ ১১/০৬/১৪১৯ বঙ্গাব্দ
নং- ১২.০২২.০২০.০০.০০.৫৮.২০১২- ৬১৯		
বিষয় : ৪ কৃষি মন্ত্রণালয়ের জন্য "মধ্যমেয়াদী কৌশলগত বিজ্ঞেন প্র্যান" এর বিষয়ে কমিটি গঠন প্রসঙ্গে।		
উপর্যুক্ত বিষয়ে কৃষি মন্ত্রণালয়ের জন্য "Medium Term Strategic Business Plan (MTSBP)" এর খসড়া তৈরিকরণের জন্য কৃষি মন্ত্রণালয়ের অভিযোগ সচিব (পিপিসি) মহোদয়কে আবাস্থক করে এতদ্বারা নিম্নবর্ণিত কমিটি গঠন করার করা হলো।		
১. অভিযোগ সচিব (পিপিসি), কৃষি মন্ত্রণালয়	আবাস্থক	
২. মুখ্য-প্রধান (পরিকল্পনা), কৃষি মন্ত্রণালয়	সদস্য	
৩. বাংলাদেশ কৃষি উন্নয়ন কর্পোরেশন এর প্রতিনিধি	সদস্য	
৪. বাংলাদেশ কৃষি গবেষণা কাউন্সিল এর প্রতিনিধি	সদস্য	
৫. কৃষি সম্প্রসারণ অধিদপ্তর এর প্রতিনিধি	সদস্য	
৬. বাংলাদেশ পাউ গবেষণা ইনসিটিউট এর প্রতিনিধি	সদস্য	
৭. বাংলাদেশ কৃষি গবেষণা ইনসিটিউট এর প্রতিনিধি	সদস্য	
৮. বাংলাদেশ ধান গবেষণা ইনসিটিউট এর প্রতিনিধি	সদস্য	
৯. বাংলাদেশ পরমাণু কৃষি গবেষণা ইনসিটিউট এর প্রতিনিধি	সদস্য	
১০. বাংলাদেশ ইকু গবেষণা ইনসিটিউট এর প্রতিনিধি	সদস্য	
১১. বরেন্দ্র বহুমুখী উন্নয়ন কর্তৃপক্ষ এর প্রতিনিধি	সদস্য	
১২. বাংলাদেশ ফলিত পুষ্টি ও মানব সম্পদ উন্নয়ন বোর্ড এর প্রতিনিধি	সদস্য	
১৩. কৃষি বিপণন অধিদপ্তর এর প্রতিনিধি	সদস্য	
১৪. ভুলা উন্নয়ন বোর্ড এর প্রতিনিধি	সদস্য	
১৫. কৃষি তথ্য সর্কিস এর প্রতিনিধি	সদস্য	
১৬. মুক্তিকা সম্পদ উন্নয়ন ইনসিটিউট এর প্রতিনিধি	সদস্য	
১৭. বীজ প্রত্যয়ন এজেন্সী এর প্রতিনিধি	সদস্য	
১৮. মুখ্য-সচিব, প্রশাসন-৪ (বাণিজে) অধিশাখা, কৃষি মন্ত্রণালয়	সদস্য সচিব	
কমিটির কার্যপরিব্রাজন :		
কমিটি আগন্তু ১ মাসের মধ্যে খসড়া "Medium Term Strategic Business Plan (MTSBP)" তৈরি করবে। Strengthening and deepening MTBF in line Ministries এর সংশ্লিষ্ট কমন্সালটেন্ট উক্ত কমিটিকে সার্বিক সহযোগীতা প্রদান করবেন।		
 (মোস্তাফা মোতাবেক খান)		সিনিয়র সহকারী সচিব
		ফোন : ৯১৬৫০৮১
ই-মেইল : moabudget@yahoo.com		
বিতরণ কার্যালয় (ভেজে তার অন্যান্যারে নয়) :		
১. মুখ্য-প্রধান (পরিকল্পনা), কৃষি মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা।	উক্ত কমিটিতে একজন উপর্যুক্ত প্রতিনিধির নাম, টেলিফোন ও মোবাইল নথর প্রেস কমান জন্য অনুরোধ করা।	
২. চেয়ারম্যান, বাংলাদেশ কৃষি উন্নয়ন কর্পোরেশন, ৮৯-৫১, মাতিহাল বাণিজ্যিক এলাকা, ঢাকা।		
৩. নির্বাচী চেয়ারম্যান, বাংলাদেশ কৃষি গবেষণা ইনসিটিউট, ফার্মগেট, ঢাকা-১২১৫।		
৪. মহাপরিচালক, কৃষি সম্প্রসারণ অধিদপ্তর, খামারবাড়ী, ফার্মগেট, ঢাকা।		
৫. মহাপরিচালক, বাংলাদেশ কৃষি গবেষণা ইনসিটিউট, গাজীপুর।		
৬. মহাপরিচালক, বাংলাদেশ ধান গবেষণা ইনসিটিউট, গাজীপুর।		
৭. মহাপরিচালক, বাংলাদেশ পরমাণু কৃষি গবেষণা ইনসিটিউট, হয়মনসিংহ।		
৮. মহাপরিচালক, বাংলাদেশ পাউ গবেষণা ইনসিটিউট, শেরে বাংলা নগর, ঢাকা।		
৯. মহাপরিচালক, বাংলাদেশ ইকু গবেষণা ইনসিটিউট, ইকুরন্ড, পাবনা।		
১০. মহাপরিচালক, বাংলাদেশ কর্তৃপক্ষ, রাজশাহী।		
১১. নির্বাচী পরিচালক, বাংলাদেশ ফলিত পুষ্টি ও মানব সম্পদ উন্নয়ন বোর্ড (বাফমাউন্ড), শেরে বাংলা নগর, ঢাকা।		
১২. পরিচালক, কৃষি বিপণন অধিদপ্তর, খামারবাড়ী, ফার্মগেট, ঢাকা।		
১৩. নির্বাচী পরিচালক, ভুলা উন্নয়ন বোর্ড, খামার বাড়ী, ফার্মগেট, ঢাকা।		
১৪. পরিচালক, কৃষি তথ্য সর্কিস, খামারবাড়ী, ফার্মগেট, ঢাকা।		
১৫. পরিচালক, মুক্তিকা সম্পদ উন্নয়ন ইনসিটিউট, কৃষি খামার সড়ক, ঢাকা-১২১৫।		
১৬. পরিচালক, বীজ প্রত্যয়ন এজেন্সী, গাজীপুর।		
অনুলিপি :		
১. সচিব মহোদয়ের একান্ত সচিব, কৃষি মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা।		
২. অভিযোগ সচিব (পিপিসি) মহোদয়ের ব্যক্তিগত কর্মকর্তা, কৃষি মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা।		

Annex-2

Table A 2.1: Indices of Area and Production of Crops (Base: 1984-85 = 100)

Crops	Area					Production				
	2005-06	2006-07	2007-08	2008-09	2009-10	2005-06	2006-07	2007-08	2008-09	2009-2010
CEREALS										
Aus	35	31	31	36	33	63	54	54	68	61
Aman	95	95	88	96	99	136	137	122	144	154
Boro	258	270	293	299	299	357	383	454	456	462
Wheat	71	59	57	58	56	50	50	58	58	62
Potato	-	310	361	357	391	-	446	522	454	684
Jute	59	62	65	62	62	90	96	80	92	100
Barley/Jab	04	4	2	2	03	09	6	04	3	03
Jower	25	11	5	12	12	43	19	9	3	28
Bazra	02	2	-	2	02	1.01	2	-	4	04
Maize	2609	399	5932	3404	4030	15949	3999	41177	22313	27137
Cheena & Kaon	25	24	6	4	04	24	20	6	5	05
Other Cereals	17	13	8	3	02	15	6	2	2	02
PULSES										
Gram	12	12	9	8	07	12	12	9	8	07
Arhar	25	21	17	13	11	19	27	21	16	14
Masur	58	59	31	30	33	70	71	44	37	43
Motor	42	35	33	32	28	52	44	41	44	37
Mung	37	41	40	36	39	48	53	59	51	58
Mashkalai	31	31	32	33	43	32	33	38	40	52
Khesari	52	41	39	35	35	59	45	39	42	45
Gari Kalai	-	-	3	2	02	-	-	5	4	04
Other Pulses	19	19	23	28	30	27	21	30	39	48
OIL SEEDS										
Til	36	42	39	38	42	85	63	58	62	70
Rape & Mustard	56	55	61	61	45	64	66	80	71	53
Ground nut	105	120	111	111	120	120	145	140	147	169
Linseed	20	21	18	17	16	23	22	21	19	19
Castor	40	40	29	-	-	120	120	81	-	-
Coconut	29	16	8	9	08	392	424	402	381	485
Soyabean	-	-	-	-	-	-	-	-	-	-
Other Oil Seeds	337	311	235	159	71	572	469	306	230	112
SPICES & CONDIMENTS										
Chillies	198	196	131	124	121	347	344	263	244	244
Onion	339	378	368	316	345	546	636	632	523	620
Garlic	209	305	265	270	292	257	443	363	388	412
Turmeric	136	143	152	-	151	314	373	443	442	398
Ginger	129	134	151	151	145	144	160	194	183	189
Coriander	179	191	258	216	242	251	274	290	302	355
Other Spices & Condiments (Temporary)	-	-	-	-	-	-	21	73	-	-
Other Spices & Condiments (Permanent)	-	-	-	-	-	-	-	-	-	-

Source: Agriculture Statistics Yearbook 2011, Bangladesh Bureau of Statistics.

Table A 2.2: Indices of Area and Production of Crops (Base: 1984-85 = 100)

Crops	Area					Production				
	2005-06	2006-07	2007-08	2008-09	2009-10	2005-06	2006-07	2007-08	2008-09	2009-2010
SUGARS CROPS										
Sugarcane	93	92	79	77	72	80	84	72	76	65
Datepalm (Juice)	40	-	-	-	-	107	-	-	-	-
Datepalm(Fruits)	-	-	-	-	-	-	-	-	-	-
Palmyrapalm(Juice)	1901	44	31	-	-	136	267	102	-	-
Palmyrapalm(Fruits)					-					-
Green Palm (Talelshah)	-	-	-	-	-	-	-	-	-	-
Ripe Tal	-	-	-	-	-	-	-	-	-	-
FIBRES										
Cotton	83	81	72	59	78	62	63	53	42	54
Sunhemp	02	1	4	04	03	06	2	2	03	06
Other Fibres (Shimul)	-	-	-	-	-	-	-	-	-	-
DRUGS & NARCOTICS										
Tea	118	118	121	122	124	153	154	156	157	158
Tobacco	61	59	56	58	74	86	79	82	82	112
Betel nut	72	66	60	49	44	912	950	1110	1138	1013
Betel Leaves	130	132	139	141	143	157	163	158	169	148
Other Drugs & Nurcotics	02	2	1	1	01	08	8	5	5	03
FRUITS (TEMPORARY)										
Banana	138	145	132	132	133	132	145	127	121	119
Pineapple	129	128	-	119	120	193	181	160	174	178
Water Melon	45	48	40	130	136	38	35	165	162	175
Bangi	-	-	-	-	-	-	-	-	-	-
FRUITS (Permanent)										
Mango	57	64	70	69	71	393	471	494	509	644
Jack Fruit	411	45	45	41	46	325	418	441	440	454
Papaya	34	33	59	33	34	386	351	380	475	413
Litchi	48	49	67	46	49	1082	432	434	549	645
Ber	47	18	19	47	46	1084	960	1018	1071	1132
Guava	169	161	174	172	146	39	1129	1127	1197	1353
Orange	30	21	46	48	41	39	41	73	97	125
Pomelo	45	35	27	21	17	746	746	697	770	805
Lime & Lemon	88	89	77	84	97	726	599	837	881	856
Tetul	-	-	-	-	-	-	-	-	-	-
Jamarul	-	-	-	-	-	-	-	-	-	-
Green Coconut	-	-	-	-	-	-	-	-	-	-
Wood apple	-	-	-	-	-	-	-	-	-	-
Back Berry	-	-	-	-	-	-	-	-	-	-
Kamrangia	-	-	-	-	-	-	-	-	-	-
Jalpai	-	-	-	-	-	-	-	-	-	-
Amra	-	-	-	-	-	-	-	-	-	-
Other Fruits	08	7	2	02	02	55	44	41	49	65
Other Citrus Fruits	20	14	5	05	04	207	189	172	173	223

Source: Agriculture Statistics Yearbook 2011, Bangladesh Bureau of Statistics.

Table A 2.3: Indices of Area and Production of Crops (Base: 1984-85 = 100)

Crops	Area					Production				
	2005-06	2006-07	2007-08	2008-09	2009-10	2005-06	2006-07	2007-08	2008-09	2009-2010
Winter Vegetables										
Rabi Brinjal	177	163	166	161	163	184	187	181	180	182
Rabi Pumpkin	208	225	236	241	255	245	208	280	303	325
Cauliflower	202	198	212	216	223	229	230	259	254	265
Cabbage	196	202	215	219	221	276	286	331	322	345
Water gourd	200	207	214	221	223	221	236	253	265	270
Tomato	197	203	206	212	249	183	191	200	210	265
Radish	155	157	171	165	168	174	179	202	195	197
Beans	228	246	248	259	264	241	272	272	290	291
carrot	-	-	-	-	-	-	-	-	-	-
Palong sak	248	259	271	279	284	265	277	320	311	328
Lalsak	-	-	-	-	-	-	-	-	-	-
Other Winter Vegetables	85	85	83	82	85	66	70	71	70	74
SUMMER VEGETABLES										
Kharif Pumpkin	231	246	270	285	284	311	361	384	431	432
Kharif Brinjal	216	197	203	200	199	222	213	236	238	240
Patal	276	288	295	301	303	331	370	381	392	423
Lady's finger	342	364	380	393	396	440	511	509	535	560
Jhinga	223	227	242	247	249	212	228	256	259	275
Karala	234	237	256	262	267	253	268	309	313	323
Arum	246	231	249	268	279	261	268	308	358	384
Chalkumra	158	198	236	258	275	184	226	268	292	319
Cucumber	243	257	275	275	291	248	284	321	384	482
Pui sak	395	434	484	329	514	458	537	570	648	687
Chichinga	247	276	296	311	322	260	271	298	323	336
Danta	281	315	350	253	358	343	424	461	381	494
Barbati	257	274	281	287	37	292	331	354	487	378
Kakarol	-	-	-	-	-	-	-	-	-	-
Green Banana	-	-	-	-	-	-	-	-	-	-
Dundal	-	-	-	-	-	-	-	-	-	-
Kachur Lati	-	-	-	-	-	-	-	-	-	-
Shagna	-	-	-	-	-	-	-	-	-	-
Katcha Papya	-	-	-	-	-	-	-	-	-	-
Other Summer Vegetables	-	-	260	272	260	-	-	361	322	297
OTHER FOOD										
Sweet Potato	55	55	51	51	51	45	45	45	45	45
Flower Groups:	-	-	-	-	-	-	-	-	-	-
Fose Flwr	-	-	-	-	-	-	-	-	-	-
Marry gold	-	-	-	-	-	-	-	-	-	-
Others Flwr	-	-	-	-	-	-	-	-	-	-
OTHER NON-FOOD										
Fooder	211	218	201	339	247	316	316	243	383	378
Mulberry	162	31	39	34	32	192	590	638	590	537

N.B. a) In the year 2005-06 data are collected in new forms.

b) Permanent fruits crops acreage covers area under garden.

c) Permanent fruits crops production covers production inside garden as well as outside garden.

Annex-3

3.1 Past Trends of Agricultural Inputs and Outputs

We have fitted the following two relations for area, production and yields of major agricultural crops:

$$\text{Log } (Y_{it}) = \alpha + \beta T \quad (1)$$

$$\text{Log } (Y_{it}) = \alpha + \beta \text{ Log } (\text{Crop GDP}_t) \quad (2)$$

Where Y_{it} stands for area/ production/ yield of a variable in year T and Crop GDP_t stands crop and horticulture GDP at constant prices in year T. Equation (1) is the exponential time trends for various variables. Equation (2) is the standard log-linear equation relating a variable with the crop GDP. In fact, the regression coefficient ' β ' in Equation (2) yields the elasticity of a variable with respect to the crop and horticulture GDP, since

$$\beta = d\text{Log } (Y_{it}) / d\text{Log } (\text{Crop GDP}_t)$$

The fitted regression coefficients α and β are presented in Table A3.1. The results indicate that the crop-GDP has very high correlation and the elasticities of most of the agriculture inputs and outputs are statistically significant. The exponential time trends for area, production and yields for various crops indicate increasing trends except for areas and production for Aus and Aman rice, wheat, pulses, oilseeds and sugarcane. The coefficient of variation for most of the variables is very high. This implies that the areas, production and yields for various crops are unstable overtime due to uncertainties and risks caused by unfavorable monsoons and natural disasters.

Table A 3.1: Regression Results of Exponential Time Trends and Log-Linear Regression Equations for Area, Production and Yields of Crops

Items	Ln(Yt)= + T			Ln(Yt)= + Ln(GDP)			Average Annual Growth Rate	CV (%)
			R			R		
AusArea	8.41	-0.03	-0.69	11.63	-0.64	-0.57	-1.3	-703
AusProd	7.47	0.00	-0.01	6.61	0.15	0.15	2.9	519
AusYield	5.97	0.03	0.93	1.89	0.79	0.95	3.9	170
AmanArea	9.58	0.00	-0.28	9.78	-0.05	-0.13	0.0	-64026
AmanProd	9.13	0.01	0.37	7.12	0.38	0.51	2.4	405
AmanYield	6.46	0.01	0.71	4.25	0.42	0.82	2.2	261
BoroArea	8.71	0.03	0.97	4.53	0.81	0.96	2.5	99
BoroProd	8.58	0.05	0.97	0.69	1.53	0.96	5.0	110
BoroYield	6.77	0.02	0.97	3.07	0.72	0.95	2.4	131
Rice Area	10.07	0.01	0.60	8.88	0.22	0.72	0.7	364
RiceProd	9.62	0.03	0.94	4.57	0.97	0.98	3.5	113
RiceYield	6.45	0.02	0.98	2.60	0.74	0.99	2.8	93
WheatArea	8.79	-0.08	-0.96	21.05	-2.38	-0.92	-6.9	-85
WheatProd	8.29	-0.07	-0.76	16.85	-1.69	-0.64	-4.8	-268

Cont.

Items	Ln(Yt)= + T			Ln(Yt)= + Ln(GDP)			Average Annual Growth Rate	CV (%)
			R			R		
WheatYield	6.41	0.02	0.35	2.71	0.69	0.50	2.1	569
TobacoArea	3.82	0.03	0.62	-1.47	1.00	0.73	4.7	249
TobacoProd	2.80	0.05	0.71	-5.87	1.65	0.81	8.7	192
TobacoYield	5.89	0.02	0.83	2.50	0.65	0.89	3.5	183
PulseArea	8.29	-0.08	-0.93	20.27	-2.32	-0.90	-5.5	-168
PulseProd	6.82	-0.06	-0.90	15.80	-1.75	-0.87	-4.1	-214
PulsesYield	5.43	0.02	0.96	2.45	0.58	0.94	1.7	226
OilseedArea	6.90	-0.01	-0.42	7.48	-0.13	-0.24	-1.6	-314
OilseedProd	5.10	0.03	0.90	-0.37	1.05	0.94	0.5	2441
OilseedYield	5.11	0.04	0.93	-0.94	1.18	0.89	1.9	464
SpiceArea	6.72	-0.02	-0.45	9.22	-0.51	-0.33	0.4	4331
SpiceProd	3.98	0.14	0.94	-16.05	3.90	0.89	13.5	124
SpiceYield	4.17	0.16	0.89	-18.36	4.41	0.81	18.7	232
SugarcaneArea	6.66	-0.04	-0.93	12.99	-1.22	-0.96	-3.3	-145
SugarcaneProd	9.47	-0.04	-0.93	16.04	-1.27	-0.95	-3.2	-244
SugarcaneYield	9.72	0.00	-0.15	9.96	-0.05	-0.14	0.1	7299
JuteArea	6.66	0.02	0.36	2.86	0.71	0.50	6.7	324
JuteProd	6.13	0.03	0.58	-0.25	1.20	0.71	8.6	238
JuteYield	6.37	0.02	0.78	3.80	0.49	0.81	2.1	328
PotatoArea	5.31	0.07	0.97	-5.41	2.07	0.96	6.3	148
PotaHighrod	6.52	0.10	0.95	-8.79	2.96	0.95	11.8	182
PotatoYield	8.12	0.03	0.80	3.53	0.88	0.81	4.5	297
Disbursed	5.69	0.15	0.98	-17.26	4.44	0.97	15.2	118
Recovery	5.75	0.14	0.92	-17.02	4.37	0.97	14.5	106
Oustanding	8.08	0.08	0.97	-4.43	2.41	0.98	8.5	85
Urea	7.61	0.01	0.40	7.02	0.13	0.22	0.6	989
TSP	6.36	-0.02	-0.37	9.72	-0.66	-0.33	9.3	336
MOP	4.80	0.03	0.35	0.84	0.79	0.27	14.8	329
Gypsum	5.08	-0.02	-0.26	8.67	-0.67	-0.33	2.1	2176
Fertilizer	7.96	0.01	0.31	7.02	0.19	0.21	2.4	542
AusSeed	4.25	0.09	0.89	-7.23	2.26	0.78	5.7	361
AmanSeed	6.43	0.13	0.96	-13.09	3.79	0.93	10.0	239
BoroSeed	6.56	0.16	0.94	-17.77	4.73	0.89	17.1	150
WheatSeed	9.15	0.02	0.54	4.63	0.85	0.64	10.3	321
PotatoSeed	7.80	0.06	0.96	-1.99	1.89	0.97	6.5	129
MustardSeed	4.16	0.09	0.80	-10.28	2.78	0.82	10.8	241
Seeds	9.00	0.10	0.93	-5.57	2.82	0.91	10.1	137
CropsGDP	5.20	0.03	0.97	0.00	1.00	1.00	3.2	80.1

Note: CV stands for coefficient of variation.

Source: Estimated by authors on the basis of data for the period 2000-01 to 2010-11 obtained from the Bangladesh Bureau of Statistics (BBS).

Annex-4

A 4.1 Methodology for the projections of KPIs for the LMs

Key Performance Indicators (KPIs) for both inputs and outputs are projected on the basis of the historical growth rates²² adjusted for large variations, if any. However, only individual items (say aus, aman, rabi rice) are projected by this method, while the aggregate (i.e. total rice) is estimated on the basis of balance equations to satisfy consistency among various variables and general equilibrium within the system.

Historical Growth Rates: The methodology used is the standard time series analysis to estimate historical growth rates on the basis of three time trend growth rates as described below.

a. Least-squares time trend growth rate (TRGR)

This method is used by the IMF to forecast the country growth rates for their World Economic Outlook (WEO) published twice in a year, wherever there is past data for at least 9 years to permit a reliable calculation. The least-squares growth rate, r , is estimated by fitting a linear regression trend line to the logarithmic annual values of the variable in the relevant period. The regression equation takes the form

$$\ln Y_t = a + bt$$

which is equivalent to the following compound growth equation,

$$Y_t = Y_0 (1 + r)^t$$

In this equation, Y is the variable, t is time, r is the trend growth rate, \ln is the natural logarithm, and $a = \log Y_0$ and $b = \ln(1 + r)$ are the parameters to be estimated. If b^* is the least squares estimate of b , the average annual growth rate, r , is obtained as

$$r = [\exp(b^*) - 1] \text{ and is multiplied by 100 to express it as a percentage.}$$

The calculated growth rate is an average rate that is representative of the growth of available observations over the entire period. It does not necessarily match the actual growth rate between any two years.

b. Exponential growth rate (EXPGR)

The exponential growth rate between two points in time for a variable is calculated from the following equation

$$r = \ln(Y_n / Y_1) / (n-1) \text{ and is multiplied by 100 to express it as a percentage.}$$

Where Y_n and Y_1 are the last and first observation in the period, n is the number of observations in the period, and \ln is the natural logarithm operator. This growth rate is

²² This is the standard method used in statistics and econometrics for projecting a variable on the basis of past time series data. Experiences indicate that when the time trend is a good fit, the observed growth rate provides a very good estimate for the future growth rate.

based on a model of continuous and exponential growth between two points in time. It does not take into account the intermediate values of the series.

c. Average of Annual Growth rates (AVEGR)

Average Annual Growth Rate (μ) = $\Sigma GR_i/n$

$GR_i = 100 * (Y_i / Y_{i-1} - 1)$ for $i = 1, 2, \dots n$ for the past n years.

$CV = 100 * SD/\mu$

$SD^2 = \Sigma (GR_i - \mu)^2/n$

Where GR_i stands for growth rate for the i -th year, CV for coefficient of variation and SD for standard deviation.

A 4.2 Year wise projections of KPIs for the planning horizon

After estimating these three kinds of growth rates, projected growth rate (PGR) for any KPI for the planning period is assumed to be equal to the minimum of the three historical growth rates.

PGR = Minimum (EXPGR, TRGR, AVEGR)

Thus KPI_{it} for the t -th year is projected by the following formula:

$$KPI_{it} = KPI_{2009} (1+0.01*PGR)^t$$

This method of projection is based on the following set of assumptions:

1. There will be no major monsoon failures or no internal or external shocks during the planning period which might have adverse impact on agriculture.
2. The Government will continue to pursue the existing favorable policy package for agriculture.
3. Past trends and pattern of crop production and areas under cultivation of various crops will continue in future.

Projected KPIs for various crops under these assumptions and the methodology are presented in the Tables A4.1 to A4.6. It may be noticed that the projected KPIs for some of the outputs (such as rice and wheat) are significantly different from those projected under the MBF for the Budget 2012-13 presented in Table A4.7. The differences are due to the following reasons:

- a. Coverage and definitions of crops are different as our analysis is based on the data obtained from the Bangladesh Bureau of Statistics.
- b. Our projections are consistent with the Sixth Five Year Plan target of about 5 percent growth rate for the crops and horticulture subsector within agriculture.
- c. As MBF projections are made within MTBF expenditure ceilings for the Agriculture Ministry, there is no guarantee that the Sixth Plan targets will be realised either for the crops sub-sector or for the overall agriculture sector.

Table A 4.1: Past Trends (2001-2010) and Projections of Key Performance Indicators for 2011-2016

(Area in '000 Acres, Production in '000 M Tons and Yield in Kg per Acre)

Items	Aus Area	Aus Prod	Aus Yield	Aman Area	Aman Prod	Aman Yield	Boro Area	Boro Prod	Boro Yield
2000-01	3274	1916	585	14110	11249	797	9295	11920	1282
2001-02	3069	1808	589	13955	10726	769	9319	11766	1263
2002-03	3073	1850	602	14041	11115	792	9501	12222	1286
2003-04	2971	1832	617	14030	11521	821	9745	12837	1317
2004-05	2532	1500	592	13047	9820	753	10042	13837	1378
2005-06	2556	1745	683	13416	10810	806	10047	13975	1391
2006-07	2238	1512	676	13382	10841	810	10496	14965	1426
2007-08	2270	1507	664	12474	9662	775	11385	17762	1560
2008-09	2633	1895	720	13585	11613	855	11654	17809	1528
2009-10	2432	1709	703	13993	12207	872	11811	18341	1553
2010-11	2750	2133	776	13951	12792	917	11788	18617	1579
Ln(Yt)= + T									
	8.41	7.47	5.97	9.58	9.13	6.46	8.71	8.58	6.77
	-0.03	0.00	0.03	0.00	0.01	0.01	0.03	0.05	0.02
R	-0.69	-0.01	0.93	-0.28	0.37	0.71	0.97	0.97	0.97
Ln(Yt)= + Ln(CropGDP)									
	11.63	6.61	1.89	9.78	7.12	4.25	4.53	0.69	3.07
	-0.64	0.15	0.79	-0.05	0.38	0.42	0.81	1.53	0.72
R	-0.57	0.15	0.95	-0.13	0.51	0.82	0.96	0.96	0.95
ExpGR	-1.74	1.07	2.82	-0.11	1.29	1.40	2.38	4.46	2.08
TRGR	-2.54	-0.02	2.58	-0.32	0.91	1.23	2.74	5.25	2.44
AveGR	-1.35	2.86	3.90	-0.01	2.42	2.23	2.48	5.00	2.40
CV(%)	-703	519	170	-	405	261	99	110	131
Proj. Method	MinGR	MinGR	Derivd	MinGR	MinGR	Derivd	MinGR	MinGR	Derivd
PGR	-2.54	-0.02	Derivd	-0.32	0.91	Derivd	2.38	2.00	Derivd
Projected									
P2011-12	2680	2132	796	13907	12908	928	12068	18989	1574
P2012-13	2612	2132	816	13862	13025	940	12355	19369	1568
P2013-14	2546	2131	837	13818	13143	951	12648	19757	1562
P2014-15	2481	2131	859	13775	13262	963	12949	20152	1556
P2015-16	2418	2130	881	13731	13382	975	13257	20555	1551
P2016-17	2357	2130	904	13687	13503	987	13572	20966	1545
Annual GR									
2000-01	-1.9	10.5	12.7	0.1	9.2	9.1	3.0	8.1	4.9
2001-02	-6.3	-5.6	0.7	-1.1	-4.6	-3.6	0.3	-1.3	-1.5
2002-03	0.1	2.3	2.2	0.6	3.6	3.0	2.0	3.9	1.9
2003-04	-3.3	-1.0	2.4	-0.1	3.7	3.7	2.6	5.0	2.4
2004-05	-14.8	-18.1	-3.9	-7.0	-14.8	-8.3	3.0	7.8	4.6
2005-06	0.9	16.3	15.2	2.8	10.1	7.1	0.0	1.0	0.9
2006-07	-12.4	-13.4	-1.0	-0.3	0.3	0.5	4.5	7.1	2.5
2007-08	1.4	-0.3	-1.7	-6.8	-10.9	-4.4	8.5	18.7	9.4
2008-09	16.0	25.7	8.4	8.9	20.2	10.4	2.4	0.3	-2.0
2009-10	-7.6	-9.8	-2.4	3.0	5.1	2.1	1.3	3.0	1.6
2010-11	13.1	24.8	10.4	-0.3	4.8	5.1	-0.2	1.5	1.7
Plan Period	-2.5	0.0	2.6	-0.3	0.9	1.2	2.4	2.0	-0.4

Table A 4.2 Past Trends (2001-2010) and Projections of Key Performance Indicators for 2011-2016

(Area in '000 Acres, Production in '000 M Tons and Yield in Kg per Acre)

Items	Rice Area	Rice Prod	Rice Yield	Wheat Area	Wheat Prod	Wheat Yield	Pulse Area	Pulse Prod	Pulses yield
2000-01	26679	25085	940	1909	1673	876	1170	366	313
2001-02	26343	24300	922	1833	1606	876	1116	342	306
2002-03	26615	25187	946	1746	1507	863	1108	349	315
2003-04	26746	26190	979	1586	1253	790	1039	333	321
2004-05	25621	25157	982	1380	976	707	947	316	334
2005-06	26019	26530	1020	1183	735	621	833	279	335
2006-07	26116	27318	1046	988	737	746	769	258	336
2007-08	26129	28931	1107	958	844	881	558	204	366
2008-09	27872	31317	1124	975	849	871	559	196	351
2009-10	28236	32257	1142	922	969	1051	593	221	373
2010-11	28489	33542	1177	923	972	1053	627	232	370
Ln(Yt)= + T									
	10.07	9.62	6.45	8.79	8.29	6.41	8.29	6.82	5.43
	0.01	0.03	0.02	-0.08	-0.07	0.02	-0.08	-0.06	0.02
R	0.60	0.94	0.98	-0.96	-0.76	0.35	-0.93	-0.90	0.96
Ln(Yt)= + Ln(Crop GDP)									
	8.88	4.57	2.60	21.05	16.85	2.71	20.27	15.80	2.45
	0.22	0.97	0.74	-2.38	-1.69	0.69	-2.32	-1.75	0.58
R	0.72	0.98	0.99	-0.92	-0.64	0.50	-0.90	-0.87	0.94
ExpGR	0.66	2.91	2.25	-7.27	-5.43	1.84	-6.24	-4.56	1.68
TRGR	0.62	3.12	2.48	-7.95	-6.47	1.61	-7.65	-5.84	1.96
AveGR	0.70	3.53	2.79	-6.86	-4.82	2.12	-5.50	-4.09	1.65
CV(%)	364	113	93	-85	-268	569	-168	-214	226
Proj. Method	Derivd	Derivd	Derivd	AveGR	AveGR	Derivd	AveGR	AveGR	Derivd
PGR	Derivd	Derivd	Derivd	1.00	2.00	Derivd	1.00	2.00	Derivd
Projected									
P2011-12	28655	34030	1188	932	991	1064	633	237	374
P2012-13	28829	34526	1198	942	1011	1074	640	241	377
P2013-14	29012	35031	1207	951	1031	1085	646	246	381
P2014-15	29204	35544	1217	960	1052	1095	652	251	385
P2015-16	29405	36067	1227	970	1073	1106	659	256	389
P2016-17	29615	36598	1236	980	1095	1117	666	261	393
Annual GR									
2000-01	0.8	8.8	7.8	-7.2	-9.1	-2.0	-5.0	-4.4	0.5
2001-02	-1.3	-3.1	-1.9	-4.0	-4.0	0.0	-4.6	-6.6	-2.0
2002-03	1.0	3.7	2.6	-4.7	-6.2	-1.5	-0.7	2.0	2.8
2003-04	0.5	4.0	3.5	-9.2	-16.9	-8.5	-6.2	-4.6	1.8
2004-05	-4.2	-3.9	0.3	-13.0	-22.1	-10.5	-8.9	-5.1	4.1
2005-06	1.6	5.5	3.8	-14.3	-24.7	-12.2	-12.0	-11.7	0.4
2006-07	0.4	3.0	2.6	-16.5	0.3	20.1	-7.7	-7.5	0.2
2007-08	0.0	5.9	5.9	-3.0	14.5	18.1	-27.4	-20.9	9.0
2008-09	6.7	8.2	1.5	1.8	0.6	-1.2	0.2	-3.9	-4.1
2009-10	1.3	3.0	1.7	-5.4	14.1	20.7	6.1	12.8	6.3
2010-11	0.9	4.0	3.1	0.1	0.3	0.2	5.7	5.0	-0.7
Plan Period	0.6	1.5	0.8	1.0	2.0	1.0	1.0	2.0	1.0

Table A 4.3: Past Trends (2001-2010) and Projections of Key Performance Indicators for 2011-2016

(Area in '000 Acres, Production in '000 M Tons and Yield in Kg per Acre)

Items	Oilsed Area	Oilsed Prod	Oilsed Yield	Spice Area	Spice Prod	Spice yield	Sugarcane Area	Sugarcane Prod	Sugarcane Yield
2000-01	948	292	308	588	397	675	417	6742	16168
2001-02	909	285	314	622	417	670	402	6502	16174
2002-03	897	277	309	625	425	680	410	6838	16678
2003-04	850	270	318	667	608	912	404	6484	16050
2004-05	828	304	367	364	1000	2747	388	6423	16554
2005-06	823	322	391	442	1184	2679	377	5511	14618
2006-07	841	683	812	683	1406	2059	371	5770	15553
2007-08	875	701	801	701	1390	1983	312	4984	15974
2008-09	1200	661	551	661	1213	1835	312	5233	16772
2009-10	1250	750	600	750	1350	1800	290	4491	15486
2010-11	1300	840	646	850	1473	1733	287	4671	16275
Ln(Yt)= + T									
	6.22	3.59	4.28	5.84	3.91	4.97	6.66	9.47	9.72
	0.03	0.13	0.09	0.03	0.14	0.11	-0.04	-0.04	0.00
R	0.64	0.90	0.82	0.42	0.92	0.71	-0.93	-0.93	-0.15
Ln(Yt)= + Ln(Crop GDP)									
	0.09	-16.60	-9.78	-0.25	-16.57	-9.41	12.99	16.04	9.96
	1.16	3.89	2.73	1.14	4.00	2.86	-1.22	-1.27	-0.05
R	0.76	0.92	0.80	0.55	0.84	0.59	-0.96	-0.95	-0.14
ExpGR	3.16	10.57	7.41	3.69	13.11	9.43	-3.74	-3.67	0.07
TRGR	3.29	13.36	9.75	2.97	15.50	12.17	-3.85	-4.02	-0.17
AveGR	2.32	10.66	8.98	5.60	14.18	17.94	-3.31	-3.20	0.08
CV(%)	541	334	393	425	156	347	-145	-244	7299
Proj. Method	MinGR	MinGR	Derivd	MinGR	MinGR	Derivd	MinGR	MinGR	Derivd
PGR	2.32	7.40	Derivd	2.97	9.18	Derivd	2.00	3.00	Derivd
Projected									
P2011-12	1330	902	678	875	1608	1837	293	4811	16435
P2012-13	1361	969	712	901	1756	1948	299	4955	16596
P2013-14	1393	1041	747	928	1917	2066	305	5104	16759
P2014-15	1425	1117	784	956	2093	2190	311	5257	16923
P2015-16	1458	1200	823	984	2285	2322	317	5415	17089
P2016-17	1492	1289	864	1013	2495	2462	323	5577	17256
Annual GR									
2000-01	-12.1	-28.1	-18.2	-5.6	-2.2	3.6	-1.0	-2.4	-1.5
2001-02	-4.1	-2.4	1.8	5.8	5.0	-0.7	-3.6	-3.6	0.0
2002-03	-1.3	-2.8	-1.5	0.5	1.9	1.4	2.0	5.2	3.1
2003-04	-5.2	-2.5	2.9	6.7	43.1	34.1	-1.5	-5.2	-3.8
2004-05	-2.6	12.6	15.6	-45.4	64.5	201.4	-4.0	-0.9	3.1
2005-06	-0.6	5.9	6.6	21.4	18.4	-2.5	-2.8	-14.2	-11.7
2006-07	2.2	112.1	107.6	54.5	18.8	-23.2	-1.6	4.7	6.4
2007-08	4.0	2.6	-1.4	2.6	-1.1	-3.7	-15.9	-13.6	2.7
2008-09	37.1	-5.7	-31.2	-5.7	-12.7	-7.5	0.0	5.0	5.0
2009-10	4.2	13.5	8.9	13.5	11.3	-1.9	-7.1	-14.2	-7.7
2010-11	4.0	12.0	7.7	13.3	9.1	-3.7	-1.0	4.0	5.1
Plan Period	2.3	7.4	5.0	3.0	9.2	6.0	2.0	3.0	1.0

Table A 4.4 Past Trends (2001-2010) and Projections of Key Performance Indicators for 2011-2016

(Area in '000 Acres, Production in '000 M Tons and Yield in Kg per Acre)

Items	Jute Area	Jute Prod	Jute Yield	Potato Area	Potato Prod	Potato Yield	Maize Area	Maize Prod	Maize Yield
2000-01	1107	821	742	615	3216	5229	11	10	909
2001-02	1128	859	762	587	2994	5101	49	64	1306
2002-03	1079	800	741	606	3386	5587	72	117	1625
2003-04	1008	794	788	669	3907	5840	124	241	1944
2004-05	965	717	743	806	4855	6024	165	356	2158
2005-06	993	836	842	744	4161	5593	243	522	2148
2006-07	1034	884	855	852	5167	6065	373	902	2418
2007-08	1089	837	769	993	6648	6695	553	1346	2434
2008-09	1039	847	815	978	5268	5387	317	730	2303
2009-10	1029	922	896	1120	8168	7293	376	887	2359
2010-11	1751	1521	869	1137	8328	7325	425	1002	2358
Ln(Yt)= + T									
	6.66	6.13	6.37	5.31	6.52	8.12	-0.92	-1.79	6.03
	0.02	0.03	0.02	0.07	0.10	0.03	0.30	0.38	0.08
R	0.36	0.58	0.78	0.97	0.95	0.80	0.88	0.88	0.84
Ln(Yt)= + Ln(Crop GDP)									
	2.86	-0.25	3.80	-5.41	-8.79	3.53	-41.64	-52.38	-3.84
	0.71	1.20	0.49	2.07	2.96	0.88	8.00	9.96	1.95
R	0.50	0.71	0.81	0.96	0.95	0.81	0.78	0.77	0.71
ExpGR	4.59	6.17	1.58	6.15	9.51	3.37	36.54	46.07	9.53
TRGR	1.70	3.31	1.58	7.19	10.34	2.94	35.21	45.99	7.98
AveGR	6.68	8.62	2.13	6.34	11.84	4.53	61.20	98.53	17.30
CV(%)	324	238	328	148	182	297	162	157	149
Proj. Method	MinGR	MinGR	Derivd	MinGR	MinGR	Derivd	MinGR	MinGR	Derivd
PGR	1.70	3.31	Derivd	6.15	9.51	Derivd	8.00	12.00	Derivd
Projected									
P2011-12	1781	1571	882	1207	9120	7557	459	1122	2445
P2012-13	1811	1623	896	1281	9988	7797	496	1257	2536
P2013-14	1842	1677	911	1360	10939	8044	535	1408	2629
P2014-15	1873	1733	925	1443	11979	8300	578	1577	2727
P2015-16	1905	1790	940	1532	13119	8563	624	1766	2828
P2016-17	1938	1849	954	1626	14367	8835	674	1978	2933
Annual GR									
2000-01	9.8	15.5	5.1	2.3	9.6	7.2	37.5	150.0	81.8
2001-02	1.9	4.6	2.7	-4.6	-6.9	-2.5	345.5	540.0	43.7
2002-03	-4.3	-6.9	-2.6	3.2	13.1	9.5	46.9	82.8	24.4
2003-04	-6.6	-0.7	6.2	10.4	15.4	4.5	72.2	106.0	19.6
2004-05	-4.3	-9.7	-5.7	20.5	24.3	3.1	33.1	47.7	11.0
2005-06	2.9	16.6	13.3	-7.7	-14.3	-7.2	47.3	46.6	-0.4
2006-07	4.1	5.7	1.5	14.5	24.2	8.4	53.5	72.8	12.6
2007-08	5.3	-5.3	-10.1	16.5	28.7	10.4	48.3	49.2	0.7
2008-09	-4.6	1.2	6.1	-1.5	-20.8	-19.5	-42.7	-45.8	-5.4
2009-10	-1.0	8.9	9.9	14.5	55.0	35.4	18.6	21.5	2.4
2010-11	70.2	65.0	-3.1	1.5	2.0	0.4	13.0	13.0	-0.1
Plan Period	1.7	3.3	1.6	6.1	9.5	3.2	8.0	12.0	3.7

Table A 4.5: Past Trends (2001-2010) and Projections of Key Performance Indicators for 2011-2016

(Agricultural Credits in Crore Taka and Fertilizers Use in '000 M Ton)

Items	Credit Disbursed	Credit Recovered	Credit Outstanding	Urea	TSP	MOP	Gypsum	Fertilizer
2000-01	3020	2878	11137	2121	399	124	102	2991
2001-02	2955	3260	11498	2247	401	233	116	3285
2002-03	3278	3516	11913	2247	375	271	151	3339
2003-04	4048	3135	12706	2324	361	240	140	3364
2004-05	4957	3171	14040	2523	420	260	136	3755
2005-06	5496	4164	15377	2451	436	291	105	3683
2006-07	5293	4676	14583	2515	340	230	72	3551
2007-08	8581	6004	17823	2685	380	380	160	4090
2008-09	9285	8378	19598	2400	200	150	100	3005
2009-10	11117	10113	22589	2300	300	210	100	3134
2010-11	12184	12149	25492	2253	435	365	105	3817
Ln(Yt)= + T								
	5.69	5.75	8.08	7.61	6.36	4.80	5.08	7.96
	0.15	0.14	0.08	0.01	-0.02	0.03	-0.02	0.01
R	0.98	0.92	0.97	0.40	-0.37	0.35	-0.26	0.31
Ln(Yt)= + Ln(CropGDP)								
	-17.26	-17.02	-4.43	7.02	9.72	0.84	8.67	7.02
	4.44	4.37	2.41	0.13	-0.66	0.79	-0.67	0.19
R	0.97	0.97	0.98	0.22	-0.33	0.27	-0.33	0.21
ExpGR	13.95	14.40	8.28	0.60	0.86	10.80	0.29	2.44
TRGR	15.96	14.82	8.18	0.78	-2.35	3.45	-1.73	0.93
AveGR	15.23	14.53	8.48	0.57	9.26	14.77	2.11	2.38
CV(%)	118	106	85	989	336	329	2176	542
Proj. Method	MinGR	MinGR	MinGR	MinGR	MinGR	MinGR	MinGR	MinGR
PGR	13.95	14.40	8.18	0.57	-2.35	3.45	-1.73	0.93
Projected								
P2011-12	13884	13898	27577	2266	425	378	103	3852
P2012-13	15821	15900	29832	2279	415	391	101	3888
P2013-14	18028	18190	32272	2291	405	404	100	3924
P2014-15	20543	20809	34911	2304	396	418	98	3960
P2015-16	23408	23806	37766	2318	386	432	96	3997
P2016-17	26674	27234	40854	2331	377	447	95	4034
Annual GR								
2000-01	5.9	-4.0	4.6	-1.4	54.1	-48.1	-46.0	-6.9
2001-02	-2.1	13.3	3.2	5.9	0.5	87.9	13.7	9.8
2002-03	10.9	7.9	3.6	0.0	-6.5	16.3	30.2	1.6
2003-04	23.5	-10.8	6.7	3.4	-3.7	-11.4	-7.3	0.7
2004-05	22.4	1.1	10.5	8.6	16.3	8.3	-2.9	11.6
2005-06	10.9	31.3	9.5	-2.9	3.8	11.9	-22.8	-1.9
2006-07	-3.7	12.3	-5.2	2.6	-22.0	-21.0	-31.4	-3.6
2007-08	62.1	28.4	22.2	6.8	11.8	65.2	122.2	15.2
2008-09	8.2	39.5	10.0	-10.6	-47.4	-60.5	-37.5	-26.5
2009-10	19.7	20.7	15.3	-4.2	50.0	40.0	0.0	4.3
2010-11	9.6	20.1	12.9	-2.0	45.0	73.8	5.0	21.8
Plan Period	13.9	14.4	8.2	0.6	-2.4	3.4	-1.7	0.9

Table A 4.6: Past Trends (2001-2010) and Projections of Key Performance Indicators for 2011-2016

(Seeds distributed in '000 metric ton, and Crops GDP at constant prices in Billion Taka)

Items	Aus Seed	Aman Seed	Boro Seed	Paddy Seeds	Wheat Seed	Potato Seed	Oil Seed	Total Seeds
2000-01	22	45	76	143	27	63	29	262
2001-02	21	46	101	169	24	70	29	291
2002-03	30	59	82	171	22	64	28	285
2003-04	35	51	124	209	22	73	27	332
2004-05	46	73	151	269	24	76	30	399
2005-06	47	71	128	246	22	87	32	388
2006-07	48	91	148	287	28	83	68	466
2007-08	48	136	161	345	30	100	70	545
2008-09	48	138	115	301	34	105	66	506
2009-10	49	139	118	306	39	110	75	530
2010-11	5	140	120	265	40	120	84	509
Ln(Yt)= + T								
	3.70	1.82	4.00	4.04	2.30	3.20	1.29	4.50
	-0.01	0.13	0.04	0.07	0.05	0.06	0.13	0.07
R	-0.06	0.96	0.56	0.87	0.81	0.96	0.90	0.95
Ln(Yt)= + Ln(CropGDP)								
	11.38	-17.68	-0.30	-5.61	-6.81	-6.60	-18.91	-6.39
	-1.36	3.78	0.87	1.90	1.74	1.89	3.89	2.12
R	-0.23	0.93	0.42	0.76	0.90	0.97	0.92	0.89
ExpGR	-14.82	11.33	4.55	6.16	4.03	6.43	10.57	6.63
TRGR	-1.28	13.82	3.90	7.47	5.30	6.44	13.36	7.77
AveGR	-2.70	10.01	6.70	5.27	12.95	6.54	16.58	8.78
CV(%)	-1292	240	347	311	228	129	205	129
Proj. Method	MinGR	MinGR	MinGR	MinGR	MinGR	MinGR	MinGR	Derived
PGR	-14.82	10.01	3.90	5.27	4.03	6.43	10.57	6.30
Projected								
P2011-12	42	153	123	322	41	117	83	563
P2012-13	36	168	127	339	43	125	92	598
P2013-14	30	185	132	357	44	133	101	635
P2014-15	26	203	138	375	46	141	112	675
P2015-16	22	224	143	395	48	150	124	718
P2016-17	19	246	148	416	50	160	137	763
Annual GR								
2000-01	-32.7	-27.6	1.9	-16.0	96.2	2.2	37.1	23.0
2001-02	-4.5	2.6	33.2	17.8	-9.0	10.6	-2.4	11.1
2002-03	42.9	27.2	-19.2	1.3	-7.4	-7.9	-2.8	-2.1
2003-04	16.7	-14.2	51.3	22.7	0.0	13.8	-2.5	16.4
2004-05	31.4	44.0	21.5	28.6	5.8	4.0	12.6	20.3
2005-06	2.2	-1.9	-14.9	-8.5	-5.5	14.5	5.9	-2.8
2006-07	2.1	28.0	15.1	16.4	25.9	-4.9	112.1	20.1
2007-08	0.0	49.2	8.8	20.2	7.1	20.9	2.6	17.0
2008-09	0.0	1.2	-28.3	-12.7	13.2	5.0	-5.7	-7.1
2009-10	2.1	0.7	2.6	1.7	14.9	4.9	13.5	4.8
2010-11	-89.8	0.9	1.7	-13.3	1.3	8.9	12.0	-4.1
Plan Period	-14.8	10.0	3.9	5.3	4.0	6.4	10.6	6.3

Table A 4.7: Projections of KPIs given in the Agriculture Ministry Budget Framework 2012-13

Indicators	Unit Of measurement	Revised Target 2010-11	Actual 2010-11	Target 2011-12	Revised Target 2011-12	Medium Term Targets				
						2012-13	2013-14	2014-15	2015-16	2016-17
1	2	3	4	5	6	7	8	9	10	11
1. Innovation of technologies & improved varieties of crops	Number	79	79	98	60	62	61	65	64	65
2. Expansion of soil sample testing facilities	Percentage of soil sample facilities	-	-	10	10	10.1	10.2	10.3	10.4	10.5
3. Expansion of minor irrigation facilities on arable land	Lakh hectares arable land covered by minor irrigation	7.03	7.49	7.46	7.98	8.15	8.68	9.24	10.01	10.56
	% of arable land covered by minor irrigation	13.42	14.33	14.12	15.12	15.25	16.04	16.94	18.15	18.96
4. Production of crops										
a) Rice	M.M.Ton	34.30	33.54	34.50	34.75	35	35.4	35.45	35.5	35.55
b) Wheat	M.M.Ton	1.05	0.972	0.85	0.975	0.95	0.94	0.96	0.98	1.09
c) Pulse	M.M.Ton	0.741	0.716	0.700	0.774	0.712	0.734	0.744	0.755	0.764
d) Oil seeds	M.M.Ton	0.90	0.84	0.78	0.94	0.93	0.94	0.95	0.96	0.97
5. Production of cash crops										
a) Jute	Lakh bale	80.00	84.00	51.70	79.88	52.7	53.5	54	54	55
b) Cotton	'000 bale	94	80	120	110	250	390	530	670	740
c) Sugarcane	Lakh M. Ton	75	75	80	75	82	84	86	88	90
d) Potato	M.M.Ton	8.36	8.33	10.00	8.33	9.25	8.6	8.8	9.0	9.2
e) Spices	M.M.Ton	2.353	2.571	2.220	2.64	2.25	2.28	2.26	2.28	2.3
f) Maize	M.M.Ton	1.64	1.018	1.070	1.075	1.08	1.085	1.09	1.095	1.1



Annex-5

Ministry Level Medium Term Strategy

Major Strategic Objectives	Relevant Policy Documents (National and Ministry/Division level)	Desirable Actions	Implementing Departments/ Agencies
1. Create enabling environment for agricultural development	<ul style="list-style-type: none"> • Vision 2021 • Perspective Plan (2010-2021) • Sixth Five Year Plan (2011-2015) • Citizens charter • All Acts, Policies, Rules and Regulations of the Ministry of Agriculture • Fiscal regime and other government support for agriculture 	<ul style="list-style-type: none"> • Review, develop and harmonize various agriculture policies; • Review, develop and harmonize legal and regulatory framework; • Advocate fiscal, monetary and other incentives for agriculture; • Advocate appropriate trade and tariff policies consistent with WTO regime • Strengthen private-private partnership in agriculture, • Mainstream poverty reduction and gender issues in agriculture; • Augment public investment in agricultural R&D for accelerating technological progress in agriculture; • Improve access to information and use of ICT for agriculture development; • Strengthen linkages among research institutions, extension services and their commercial applications by the farmers, NGOs and local government bodies; • Strengthen client-orientation by decentralizing program development to the <i>upazila</i> level is a priority; 	<ul style="list-style-type: none"> • Secretariat and all Departments /Agencies of the MOA
2. Enhance production and productivity of crops	<ul style="list-style-type: none"> • Vision 2021 • Perspective Plan (2010-2021) • Sixth Five Year Plan (2011-2015) • Citizens charter • National Agriculture Policy • New Agricultural Extension Policy • National Integrated Pest Management Policy 	<ul style="list-style-type: none"> • Enhance adaptive research and development activities and effective research-extension linkages for agriculture development • Review and strengthen agricultural extension system and services; • Increase coverage of cultivable land under High yielding varieties and Hybrid; • Raise cropping intensity by spread of short duration and Hybrid multiple cropping; • Enhance rice production and yields through a breeding strategy focusing on grain quality, shorter maturity and hybrid and/or super rice; • Pursue balanced development of cereal and other crops; • Reduction of pre-harvest and post-harvest crop losses; • Targeted food security programmes; 	<ul style="list-style-type: none"> • Secretariat • Bangladesh Rice Research Institute • Bangladesh Institute of Nuclear Agriculture • Bangladesh Agricultural Research Institute • Bangladesh Agricultural Research Council • Bangladesh Jute Research Institute

Contd.

Major Strategic Objectives	Relevant Policy Documents (National and Ministry/Division level)	Desirable Actions	Implementing Departments/Agencies
	<ul style="list-style-type: none"> • The National Seed Policy of Bangladesh • Small scale Irrigation Policy • Policy for the Innovation of climate resilience and short duration variety crops and technologies • Policy for the determination of irrigation charge rate • National Jute Policy 	<ul style="list-style-type: none"> • Crop-specific development programs • Increasing awareness about food value and nutrition through publications, meetings and workshops • Strengthen monitoring and Evaluation system 	<ul style="list-style-type: none"> • Bangladesh Sugarcane Research Institute • Cotton Development Board • Department of Agricultural Extension • Bangladesh Applied Nutrition and Human Resources Development Board • Bangladesh Agriculture Development Corporation • Seeds Certification Agency • Agricultural Information Service • Barendra Multipurpose Development Authority
3. Enhance accessibility of affordable inputs and credit to farmers	<ul style="list-style-type: none"> • Sixth Five Year Plan (2011-2015) • Citizens charter • National Agriculture Policy, • New Agricultural Extension Policy, • The National Seed Policy of Bangladesh , 	<ul style="list-style-type: none"> • Supply adequate quantity of quality inputs at affordable prices; • Enhance production of quality seeds of different crops in both public and private sectors and strengthen seed monitoring and evaluation activities • Production, certification and distribution of breeder, foundation and truthfully level seeds tolerant to salinity, drought and water submergence • Ensure supply of quality fertilizers and pesticides at reasonable prices; • Ensure access to agriculture credits at affordable interest rates 	<ul style="list-style-type: none"> • Secretariat • Bangladesh Agriculture Development Corporation • Barendra Multipurpose Development Authority • Department of Agricultural Extension • Bangladesh Agricultural Research Institute
			Contd.

Major Strategic Objectives	Relevant Policy Documents (National and Ministry/Division level)	Desirable Actions	Implementing Departments/Agencies
	<ul style="list-style-type: none"> • Small scale Irrigation Policy • Policy for the Innovation of climate resilience and short duration variety crops and technologies • Policy for the determination of irrigation charge rate 	<ul style="list-style-type: none"> • Expansion of minor irrigation coverage by encouraging optimal use of surface water • Increasing the area of arable land by reducing water logging and sub-mergence • Procurement of irrigation machinery and increasing its availability 	<ul style="list-style-type: none"> • Bangladesh Rice Research Institute • Bangladesh Nuclear Agriculture Research Institute • Seed Certification Agency • Bangladesh Jute Research Institute • Cotton Development Board • Bangladesh Sugarcane Research Institute
4. Enhance land productivity and promote sustainable land use and environmental conservation	<ul style="list-style-type: none"> • Sixth Five Year Plan (2011-2015) • Citizens charter • National Agriculture Policy • New Agricultural Extension Policy • Policy for the Innovation of climate resilience and short duration variety crops and technologies 	<ul style="list-style-type: none"> • Efficient management of water resources; • Appropriate land-use policy and regulation to arrest agricultural land diversion; • Promote mechanized farming; • Promote agriculture in coastal areas and hilly terrains; • Application of contemporary science and technology to tackle environmental degradation, soil erosion, climate change etc. • Identification and classification of soil and land resources through soil survey • Extension of soil test facilities to Upazila and Union level • Popularize the use of organic fertilizer, green fertilizer and microbe fertilizer among the farmers 	<ul style="list-style-type: none"> • Secretariat • Soil Resource Development Institute • Bangladesh Agriculture Research Institute • Department of Agricultural Extension • Agricultural Information Services • Bangladesh Institute of Nuclear Agriculture
5. Promote market access and product development for crops	<ul style="list-style-type: none"> • Sixth Five Year Plan (2011-2015) • Citizens charter • National Agriculture Policy • New Agricultural Extension Policy 	<ul style="list-style-type: none"> • Provide market information; • Promote market development by strengthening cold storage facilities, transportation system and supply chains for crops; • Announcement of appropriate procurement prices for food grains • Development and maintenance of market infrastructure • Providing technological support and technical assistance to agricultural entrepreneurs 	<ul style="list-style-type: none"> • Secretariat • Department of Agriculture Marketing • Agricultural Information Services

Contd.

Major Strategic Objectives	Relevant Policy Documents (National and Ministry/Division level)	Desirable Actions	Implementing Departments/Agencies
	<ul style="list-style-type: none"> • The National Seed Policy of Bangladesh • Small scale Irrigation Policy • Policy for the Innovation of climate resilience and short duration variety crops and technologies • Policy for the determination of irrigation charge rate 	<ul style="list-style-type: none"> • Co-ordination with relevant government department and private sector to expand market reach for agricultural commodities • Exploit potential for diversification into higher-value crops for domestic and external markets; • Improve marketing linkages and information networking; • Commercialize agriculture production by encouraging forward linkages with agro-based industries 	



Annex-6

Annual Business Plan for Projects

(Department/ Agency wise Medium Term costing of Development Projects)²³

Ongoing Projects

- A6.1.1 Secretariat
- A6.1.2 Department of Agricultural Extension (DAE)
- A6.1.3 Bangladesh Agriculture Development Corporation (BADC)
- A6.1.4 Bangladesh Agricultural Research Institute (BARI)
- A6.1.5 Bangladesh Rice Research Institute (BRRI)
- A6.1.6 Bangladesh Agricultural Research Council (BARC)
- A6.1.7 Department of Agricultural Marketing (DAM)
- A6.1.8 Seed Certification Agency (SCA)
- A6.1.9 Soil Resource Development Institute (SRDI)
- A6.1.10 Agricultural Information Services (AIS)
- A6.1.11 Bangladesh Sugarcane Research Institute (BSRI)
- A6.1.12 Barend Multipurpose Development Authority (BMDA)
- A6.1.13 Bangladesh Jute Research Institute (BJRI)
- A6.1.14 Cotton Development Board (CDB)
- A6.1.15 Bangladesh Institute of Nuclear Agriculture (BINA)

Listed expected Projects

- A6.2.1 Secretariat
- A6.2.2 Department of Agricultural Extension (DAE)

²³ 1. In the MTSBP, total development allocations for the Ministry of Agriculture is categorized into two parts, (i) Ongoing projects, (ii) Expected projects. Expected Projects are also categorized into two categories: 1) Listed expected Projects 2) Priority area wise expected projects. The cost estimates have been made based on the ADP provision of 2012-13. Actual ADP provision in the subsequent years may differ from what has been provisioned in this document. Given that the MTSBP is a living document and likely to undergo revision in the third year, any change/or actual allocation will be reflected in the revised version.

2. Most of the ongoing projects are scheduled to be completed by FY2014-15 (Annex A6.1.1–A6.1.15).The sizable amount of unspent development resources in the MTSBP is kept reserved for FY 2015-16 and FY 2016-17 to implement listed and priority area wise expected projects.

3. Allocations for listed expected projects (Annex A6.2.1–A6.2.11) are those projects that are included in the green page under ADP 2012-13.

4. In addition, based on the priority areas of future agricultural development, project areas have been identified and listed under different implementing agencies in the priority area wise expected Projects. The priority areas are considered to be linked with the Sixth Five Year Plan objectives. Some block allocations are also shown in the table for priority areas (Annex A6.3.1–A6.3.6).

- A6.2.3 Bangladesh Agriculture Development Corporation (BADC)
- A6.2.4 Bangladesh Agricultural Research Institute (BARI)
- A6.2.5 Bangladesh Rice Research Institute (BRRI)
- A6.2.6 Department of Agricultural Marketing (DAM)
- A6.2.7 Seed Certification Agency (SCA)
- A6.2.8 Barend Multipurpose Development Authority (BMDA)
- A6.2.9 Bangladesh Jute Research Institute (BJRI)
- A6.2.10 Cotton Development Board (CDB)
- A6.2.11 Bangladesh Applied Nutrition and Human Resource Development Board (BIRTAN)

Priority area wise expected Projects

- A6.3.1 Research
- A6.3.2 Input Management
- A6.3.3 Technology dissemination and mechanization
- A6.3.4 Agricultural diversification and increased crop production
- A6.3.5 Agriculture marketing and commercial farming
- A6.3.6 Institutional human resource development



A6.1.1: Ministry of Agriculture (Secretariat) Ongoing Projects²⁴

Name of the Programme /Projects	Year of starting and completion	Total Project cost ('Tk in lakh)	Expenditure upto June 2012 ('Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Priority (High/Medium/Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16				
Integrated Agricultural Productivity Project (IAPP)	July/11 - June/16	11856.00	595.27	4264.00	3500.00	2500.00	996.73	0.00	• Enhance production and productivity of crops • Enhance accessibility of affordable inputs and credit to farmers (To improve productivity through production and supply of quality seed & improved agril. equipments to target groups) • Production of Quality seed and Breeding material.	High	GoB, IDA
Agricultural Sector Programme Support, Phase-II: (ASPSTI/AEC) (2nd Revised) (Seed Wing Part)	October/06-December/12)	787.00	679.38	40.00	67.62	0.00	0.00	0.00	• Enhance production and productivity of crops • Enhance accessibility of affordable inputs and credit to farmers (i) Improved living standards of poor,	High	DANIDA

²⁴ During Mid-term review, any change/or actual allocation will be reflected in the revised document. At the same time, slow progressing on-going Projects will be revised or restructured accordingly.

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
National Agricultural Technology Project, Phase-1 (2nd Revised) PCU component	01 July 2007 to 31 December, 2013	4716.00	1412.35	1312.00	1991.65	0.00	0.00	<ul style="list-style-type: none"> • FFS developed into clubs and then farmer associations are provided support for marketing, agribusiness and micro-enterprise development • Significantly increased number of FTs developed • An increased emphasis on linkages between agricultural production, food use and nutrition. 	<ul style="list-style-type: none"> • FFS developed into clubs and then farmer associations are provided support for marketing, agribusiness and micro-enterprise development • Significantly increased number of FTs developed • An increased emphasis on linkages between agricultural production, food use and nutrition. 	High	DANIDA
Total of MoA		17359.00	2687.00	5616.00	5559.27	2500.00	996.73				

A 6.1.2: Department of Agriculture Extension (DAE) Ongoing Projects

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
1. Integrated Agricultural Productivity Project (IAPP) (agriculture Extension Part)	July/11 - June/16	10991.00	739.00	3102.00	2500.00	2150.00	0.00	<ul style="list-style-type: none"> • Enhance production and productivity of crops • Enhance accessibility of affordable inputs and credit to farmers (improve productivity through production and supply of quality seed & improved agricultural equipments to target groups) 	14 Improved crop varieties, farmers' adoption, Unemployment reduced 10%.	High	World Bank, GAFSP GoB
2. Greater Rangpur Agricultural and Rural Development Project*	July/06-June/13	6946.00	6004.65	872.00	69.35	0.00	0.00	<ul style="list-style-type: none"> • Enhance production and productivity of crops • Enhance accessibility of affordable inputs and credit to farmers • Promote market access and product development for crops (To combat chronologically landless, marginal and small farmers to improve their living standard development of socioeconomic condition in greater Rangpur area) 	Improved Irrigation, marketing & communication facility Use of agricultural Equipments Disseminated Improve technology	High	IDB + GoB

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)			Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16	2016-17			
3. Agriculture Sector Programme Support-Phase-II (DAE Component)	October/06-December/12)	11079.00	9648.88	1041.00	389.12	0.00	0.00	0.00	• Enhance production and productivity of crops • Enhance accessibility of affordable inputs and credit to farmers (Improved demand driven, integrated and decentralized extension systems developed to support poor, marginal and small farmer household) * 1624 Farmer Trainers developed * Increased Linkage between agricultural production, food use and nutrition * Appropriate agricultural technologies for small, poor and marginal farmers * Capacity of MOA agencies improved to provide quality assurance and control	High	DANIDA
4. Emergency 2007 Cyclone Recovery and Restoration Project (ECRRP) Recovery of Agriculture Sector (Crop) and Improvement Programme*	August/08-June/13	9294.47	5601.30	1200.00	2493.17				1. Improved Horticulture 2.Improved seeds 3.Balance Fertilizers 4.Distributed 50 Power Tiller 5.Distributed 25 Power Thresher 6.Distributed USG Applicator and others Agro-processing equipment 7.Small scale irrigation structure 8.Capacity Building	High	IDA

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
5. Construction of Rubber Dams in Small Medium Rivers for Increasing of Food Production (DAE part)*	July/09 - June/14)	14329.00	10038.90	3174.00	1116.10	0.00	0.00	• Enhance production and productivity of crops • Enhance accessibility of affordable inputs and credit to farmers * Efficient utilization of surface water in Agriculture by the farmers * Increase crop production in dam area	* Maximum utilization of surface water through Rubber dams * Expand the irrigation land * Increase the production of Boro, T-Aman, Robi & other crops	High	GoB
6. Establishment of Krishibid Institution, Bangladesh Complex*	March/10 - June/13	7632.00	2046.28	5020.00	565.72	0.00	0.00	• Create enabling environment for agricultural development (Established KIB complex which enriched scientific achievement and diffused knowledge to agriculture stakeholders)	KIB complex constructed with public, semi-public and private functional categories. Ensured development of agril. Education, research and extension. Established linked informational network	High	GoB
7. Integrated Pest Management Project (Phase-II)	July/10 - June/13)	2188.52	1388.52	800.00	0.00	0.00	0.00	• Create enabling environment for agricultural development * Enhance production and productivity of crops * To assist in achieving food self-sufficiency in Bangladesh without affecting environment * To increase smallholders farm	*3952 Nos. of FFS, *98800 farmers trained, and given exposure to TPM activities. * 2500 Nos. of TPM club assisted * 540 Nos. of Biological control and Organic farming demo. set up * 200 departmental and farmer trainers developed	High	GoB

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/ Medium/ Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
8. Integrated Quality Horticulture Development Project (2nd Phase)*	July/10 - December/13	7862.60	2468.54	1700.00	1500.00	2194.06	0.00	0.00	• Enhance production and productivity of crops (To increase capacity of Horticulture centers for quality planting material production through collection, evaluation and conservation of germplasm of horticultural crops from local & abroad and to create wide genetic base for future crop improvement program)	Improved Horticulture, 13650 farmers and 600 Office staff trained, Established germplasm of horticultural crops Increased Linkage between horticultural production, food use and nutrition	Medium	GoB
9. Second Crop Diversification Project**	July/10 - June/16	34978.00	946.81	2547.00	4000.00	6000.00	12000.00	9484.19	• Create enabling environment for agricultural development • Enhance production and productivity of crops (To reduce poverty by improving farmers income and	Increased area to 50000 ha of HYV, 523000 farmers trained, gender development, construction of 6 HDTC and 11 DD office Renovation of 16 DD office	High	ADB+GoB

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
10. Minimizing Rice Yield Gap Project	January/11 - December/13	1995.00	1033.04	670.00	291.96	0.00	0.00	• Enhance production and productivity of crops • Enhance accessibility of affordable inputs and credit to farmers * To minimize rice yield gap through training and demonstration on modern cultivation package * To provide good quality seeds of modern rice varieties * To maintain soil health fertility through soil test-based fertilizer use	3000 FFS established, 3000 farmers, 375 SAAO and 150 Officers trained, 9000 seed bed 3000 T. Aman & 6000 Boro demo established, 3000 Field days, 153 workshops arranged, 50 thousand poster & 7000 training manual distributed, Quality seed procured and distributed	High	GoB
11. Farmer's Training at the Upazila Level for Transfer of Technology- 2nd phase	July/11 - June/14)	9885.00	429.14	2500.00	6955.86	0.00	0.00	• Enhance production and productivity of crops * To institutionalize farmer's training through development of physical facilities * To change view and idea of Farmer's through systematic practical and on-farm training * To increase technical skills of extension workers	* Construct 106 upazila Farmer's Training centre (UFTC) * Skilled and knowledgeable farmers * Implement modern cultural practices * Increase yield per unit area * Reduce cost of production	High	GoB

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
12. Up gradation of Arahazar Horticulture centre to ATI Project	July/11 - June/14)	1778.00	14.56	800.00	963.44	0.00	0.00	• Create enabling environment for agricultural development (To develop human resources through providing modern agricultural education and training to gain self-sufficiency in food)	Established ATI at Arahazar. Starting Diploma agri. Education, training on Extension services and new Agricultural Technologies.	Medium	GoB
13. Tuber Crops Development Project (DAE part)*	July/10 - June/13	837.00	376.36	400.00	30.00	30.64	0.00	• Create enabling environment for agricultural development • Enhance production and productivity of crops • Promote market access and product development for crops (To extend/cultivate tuber varieties of sweet potato, aroid & yam in distressed & SDR affected areas and create market and marketing facilities).	Technology Dissemination Training (farmers, SAAO & officer), Create Market National workshop publicity & publication motivation tour	Medium	GoB
14. Mujibnagar Integrated Agricultural Development Project-(DAE Part)	July/11 - June/16)	3829.00	465.64	350.00	1000.00	1200.00	813.36	• Enhance production and productivity of crops (To increase 10% overall agricultural production and to improve nutritional status at least 10% of the people of the project area)	10925 no. Technology Dissemination Programme, 2090 no. Technology village, Training (1026 batchfarmers, 125 batch SAAO & officer), 285 Farmers Rally & 8550. Field day, 5 National workshop, 87 batches motivation tour, 92 Krishimela	High	GoB

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
15. National Agricultural Technology Project, Phase 1 (2nd Revised) DAE component	01 July, 2007 - 31 December, 2013	1562.00	9346.22	5308.00	987.78	0.00	0.00	0.00	• Create enabling environment for agricultural development • Enhance production and productivity of crops (Support GoB's strategy to improve national agricultural productivity and farm income, with a particular focus on small and marginal farmers)	Number of Upazilla extension plans in 120 Upazilla and 1200 Union level microplan prepared, approved and implemented * 18000 CGs organiaed and supported on a continuous basis, 20% of the CGs are formed with women members	High	IDA, IFAD
16. Farm Machinery Technology Development and Dissemination (DAE Part)*	July/10-December/13)	320.00	186.07	105.00	28.93	0.00	0.00	0.00	• Enhance production and productivity of crops • (To increase agricultural production by disseminating appropriate farm Machinery technology at farm level and thereby reducing cost of production& minimizing crop loss)	* no. of farm machinery at farmer level *Increased use of farm machinery	High	GoB
17. Strengthening Mushroom, Development Project	January/09 - June/13)	5450.63	4220.65	752.00	477.98	0.00	0.00	0.00	• Create enabling environment for agricultural development (Improving diversified and sustainable technologies of different world-popular Mushrooms and disseminate them to the growers	6 lab, 4 dormitories, 6 culture houses, 20 semipacca culture houses, 1 animal house etc. established 57000 farmers 420 TOT, 90 entrepreneur and 1320 officer trained 100 world popular mushroom varieties germplasm introduced	High	JDCF +GoB

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/ Medium/ Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
18. Integrated Agriculture Extension Approach for Poverty Reduction and Food securities Project (IAPRFP)	July/11 - June/14)	1500.00	599.66	600.00	300.34	0.00	0.00	● Enhance production and productivity of crops * To increase farm production and to create employment opportunities for the people living in the remote rural areas by introducing multidisciplinary agricultural production approach * To develop a self reliant model of improved livelihood & sustainable food and nutritionally secured village * To upgrade the knowledge, skills and overall capacity of farmers group, DAE officials, stakeholders and other officials	Crop yield increases 20-30% employment and income generation opportunities created 2-3 folds	High	JDCF +GoB	
19. Pirojpur, Gopalganj & Bagerhat Integrated Agricultural Development Project DAE part	July/11 - June/16)	5450.63	0.00	104.33	827.63	2000	2518.67	0.00	● Create enabling environment for agricultural development ● Enhance production and productivity of crops	Skilled manpower Rehabilitation of DAE offices, Ensured use of Agricultural equipments, Induced use of machinery & equipments, Developed ICT facilities	High	GoB

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
								(To ensure food security in Pirojpur, Gopalganj, Bagerhat and increasing crop production area by bringing fallow land under cultivation).				
20. Eastern Integrated Agricultural Development Project-2nd phase	July/12 - June/15	2036.66	0.00	104.33	799.20	1133.13	-	<ul style="list-style-type: none"> • Enhance production and productivity of crops (To reduce poverty by improving farmers income and socioeconomic condition of the rural people of eastern area) 	36000 Demonstration, 45000 farmers, 4500 SAAO & 1350 officers trained 27000 field day, 180 motivational tour & 171 agril. Fair	Medium	GoB	
21. Strengthening Phytosanitary Capacity in Bangladesh	July/12 - June/17	14540.40	0.00	104.34	6554.87	4542.17	1208.67	2130.35	<ul style="list-style-type: none"> • To protect and Create enabling environment for agricultural development (Agriculture from entry, introduction, establishment and spread of destructive pest with proper adoption of ISPMs in consonance with IPPC and agreement on the application of Sanitary & Phytosanitary Measure on international trade) 	Established 6 new Quarantine lab, Construction of 6 office building, 7 post entry quarantine center, upgradation of 10 existing lab Capacity building 5456 quarantine personnel & exporter-importer	High	GoB

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
22. Food Security through enhanced Agricultural Production, Diversified sources of Income, Value Addition and Marketing in Bangladesh (Mymensingh/ Sherpur) (FSMSP)	July/11 - June/15)	2604.00	157.77	1271.00	600.00	575.23	0.00	0.00	• Enhance production and productivity of crops • Promote market access and product development for crops (To establish village Based Organization (VBO) in order to mobilize farmer's group for best utilization of community revolving fund as a model social unit to ensure food security * To develop appropriate market linkage among the producer and consumer * To enhance income generating activities through increasing farmer's knowledge in value addition, processing and appropriate post-harvest handling of agricultural commodities)	High	Italy, FAO GoB
Total of DAE		171168.91	55711.99	32525.00	32651.45	20175.23	18690.70	11614.54			

*LGED Part of the Projects shown as DAE's Part

A 6.1.3: Bangladesh Agriculture Development Corporation (BADC) Ongoing Projects

SL No	Name of the Programm e/Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)					Dominant strategic objectives and activities	Dominant output	Priority (High/ Medium/ Low)	Sources of Financing
					2012-13	2013-14	2014-15	2015-16	2016-17				
1	Ashuganj-Polash Agro-Irrigation Project (4th Phase) 1st Revised	January 2009-June 2014	2682.38	2285.51	200.00	196.87	0.00	0.00	0.00	1. Enhance production and productivity of crops 2. Enhance accessibility of affordable inputs and credit to farmers. (To provide irrigation facilities to 22267 hectares of land)	To produce additional 96250 metric tons of food grain per year.	Medium	GOB
2*	Greater Dhaka Irrigation Area Development Project(2nd Phase) (1st Revised)	July 2010-December-2014	10751.72	6509.33	2300.00	1500.00	442.39	0.00	0.00	1. Expansion of irrigated area through installation of LLP and DTW. 2. Reexcavation of khali-nala 3. Construction of hydraulic structures.	To produce additional 49213 metric tons of food grain per year through 19685 hectares of irrigated land.	High	GOB
3	Greater Khulna-Jessore-Kushtia Integrated Agricultural Development Project (2nd Phase) 1st revised	July 2009-June 2014	2581.00	2015.76	327.00	238.24	0.00	0.00	0.00	1. Expansion of irrigated area through installation of LLP and DTW. 2. Reexcavation of khali-nala 3. Construction of hydraulic structures. 4. Providing training to farmers	To produce additional 13610 metric tons of food grain per year through 5444.00 hectares of irrigated land.	High	GOB
4*	Greater Faridpur Irrigation Area Development Project (1st revised)	July 2011-June 2015	9462.66	4744.55	2500.00	1500.00	718.11	0.00	0.00	1. Expansion of irrigated area through installation of LLP and DTW. 2. Reexcavation of khali-nala (To provide irrigation facilities to 3336 hectares of land)	To produce additional 33664.50 metric tons of food grain per year.	High	GOB

SL No	Name of the Programme/Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing
					2012-13	2013-14	2014-15	2015-16				
5	Greater Mymensingh Tangail Integrated Agricultural Development Project(2nd Phase)	July 2009-June 2014	2540.23	1645.93	345.00	549.30	0.00	0.00	1. Expansion of irrigated area through installation of LLP and DTW. 2. Reexcavation of khal-nala 3. Construction of hydrolic structures. 4. Providing training to farmers (To provide irrigation facilities to 9271 hectares of land.)	To produce additional 18925 metric tons of food grain per year.	High	GOB
6*	Pabna-Natore-Sirajgang Integrated Irrigation Area Development Project (3rd Phase)*	January 2011-June 2014	15174.00	4447.99	2200.00	3000.00	0.00	0.00	1. Expansion of irrigated area through installation of LLP and DTW. 2. Reexcavation of khal-nala 3. Construction of hydrolic structures. 4. Providing training to farmers 5. Enhance production and productivity of crops 6. Enhance accessibility of affordable inputs and credit to farmers. (To provide irrigation facilities to 45704 hectares of land.)	To produce additional 114671 metric tons of food grain per year	High	GOB

SL No	Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing
					2012-13	2013-14	2014-15	2015-16				
7*	Project for Enhancement of Agricultural Production and Poverty Alleviation by Introducing Force Mode Tube well Irrigation Project	July 2010-June 2014	2583.43	1693.30	500.00	390.13	0.00	0.00	1.To operate force mode tube wells and other irrigation infrastructures 2. Providing training to farmers/operators/fieldman of irrigation equipment (To provide irrigation facilities to 3336 hectares of land.)	To produce additional 8340 metric tons of food grain per year.	High	GOB
8	Expansion of Irrigation through Utilization of Surface Water by Double Lifting (2nd Phase)	July 2009-June 2014	10649.90	7800.47	1400.00	1449.43	0.00	0.00	1.To operate land base pumps and floating pumps for using surface water of the perennial rivers/natural water bodies by applying double lifting techniques. 2. Providing training to farmers/operators/fieldman of irrigation equipment	To produce additional 137812.50 metric tons of food grain per year.	High	GOB
9*	Project for Activating Inoperable Deep Tube wells of BADC for Irrigation**	July 2010-June 2015	20498.00	7105.23	3500.00	5776.35	4116.42	0.00	1.Expand irrigated area through inoperable 2 cusec DTWs through rehabilitation and buried pipe system. 2. To create self employment and alleviate poverty of owners/managers/operators/fieldsmen and farmers by upgrading their	To produce additional 167580 metric tons of food grain per year.	Medium	GOB

SL No	Name of the Programme/Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
10	Survey and Monitoring Project for Development of Minor Irrigation Project (3rd Phase)	July 2011-June 2014	2397.50	1363.18	700.00	334.32	0.00	0.00	To collect minor irrigation related data, analyze the data and convert into useful information, increase the knowledge and provide technical assistance.	Implementation of the project will create the provision for minor irrigation data bank at national level which will give technical assistance and support to the government.	High	GOB
11	Greater Bogra-Rangpur-Dinajpur Integrated Area Development Project	July 2009-June 2014	2503.68	1654.37	343.00	506.31	0.00	0.00	1. Expansion of irrigated area through installation of LLP and DTW. 2. Reexcavation of khali-nala 3. Construction of hydrolic structures. 4. Providing training to farmers 5. Enhance production and productivity of crops	To produce additional 1482 metric tons of food grain per year through irrigation up to 5928.00 hectares.	High	GOB

SL No	Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)			Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing
					2012-13	2013-14	2014-15				
12	Innovative Use of Surface water Project (2nd Phase)	July 2009-June 2014	2522.00	2086.59	180.00	255.41	0.00	0.00	To produce additional 228.75 metric tons of food grain per year through irrigation up to 915.00 hectares.	High	GOB
13	Development and Multiplication of Agricultural Seeds Project (2nd Phase)*	July 2010-June 2013	551.00	432.73	103.00	0.00	0.00	0.00	1. Enhance production and productivity of crops 2. Enhance accessibility of affordable inputs and credit to farmers. (To provide irrigation facilities to 22267 hectares of land)	High	GOB
14	Establishment of Integrated Seed Cold Storage Complex at Kurigram Project* 1st revised	July 2011-June 2014	3604.25	298.22	1200.00	2106.03	0.00	0.00	1. Enhance production and productivity of crops 2. To provide dehumidified storage facility for pulse oil, vegetables, rice and maize seed to the private seed producers.	High	GOB

SL No	Name of the Programme/Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
15	Chittagong Hill Tracts Integrated Agricultural Development Project (3rd Phase)	July 2011-June 2014	1451.50	600.00	421.00	430.50	0.00	0.00	1. Enhance production and productivity of crops 2. Enhance accessibility of affordable inputs and credit to farmers.	Expansion of irrigation to 6500 acres of land through 50 control structures and 300 nos. of power pumps.	Medium	GOB
16	Enhancing Quality Seed Supply Project (BADC Part) (1st Phase)**	January 2011-June 2014	18645.60	1807.34	3800.00	3000.00	6000.00	4038.26	1. Enhance production and productivity of crops 2. Enhance accessibility of affordable inputs and credit to farmers. (To genetically improve the seed of major crops like rice wheat maize, pulse, oil etc)	Production of 34450 m.t. certified & truthfully labeled seeds from foundation seed.	High	GOB+IDB
17	Private Sector Seed Development Project (2nd Phase)	January 2011-December 2013	1816.00	1018.8	600.00	197.20	0.00	0.00	1. Enhance production and productivity of crops 2. Enhance accessibility of affordable inputs and credit to farmers. (Form self reliant seed producing farmers group/seed companies in private sector who will produce, process, preserve & market seed.)	Private sector seed enterprise development, human resource development, seed marketing & production of quality seed.	High	GOB

SL No	Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing
					2012-13	2013-14	2014-15	2015-16				
18	Improvement and Quality Seed Production of Rice, Wheat, and Maize (2nd Phase) (BADC Part)	March 2010-December 2013	18671.00	13643.04	2800.00	2227.96	0.00	0.00	1. Enhance production and productivity of crops 2. Enhance accessibility of affordable inputs and credit to farmers. (To produce 140000 metric tons of quality cereal seeds (paddy, wheat and maize).)	To produce additional 43.27 lakh metric tons paddy, and wheat whose market price may be tk. 1081750 lakh.	High	GOB
19	Mujibnagar Integrated Agricultural Development Project (BADC Part)	July 2011-June 2016	14931.00	3594	2650.00	2000.00	2500.00	4187.00	1. Enhance production and productivity of crops 2. Enhance accessibility of affordable inputs and credit to farmers. (To bring additional 24675 hectares of land under irrigation.)	To produce additional 61687 metric tons of food grain.	High	GOB
20	Tuber Crops Development Project (BADC Part)*	July 2010-June 2014	38553.00	9395.12	2500.00	12000.00	14657.88	0.00	1. Enhance production and productivity of crops 2. Enhance accessibility of affordable inputs and credit to farmers. (To increase quality seed potato production, preservation and distribution throughout the country.)	Potato production will be increased and huge amount of foreign currency will be saved.	Medium	GOB

SL No	Name of the Programme/Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
21	Pulse and oil Seed Project (2nd Phase)	July 2009-June 2014	16764.11	6907.32	2000.00	7856.79	0.00	0.00	1. Enhance production and productivity of crops 2. Enhance accessibility of affordable inputs and credit to farmers. (To build up pulse and oil seed stock of foundation standard 3435 metric tons TLS 10445 metric tons.)	By using these seeds 552750 metric tons of pulse and oil crops will be produced.	High	GOB
22	Construction of Rubber Dams in Small and Medium Rivers for Increasing of Food Production Project(BADC Part)	July 2009-June 2016	5731.90	1826.17	402.00	805.31	2698.42	0.00	1. Enhance production and productivity of crops 2. Enhance accessibility of affordable inputs and credit to farmers. (To expand the irrigation land by ensuring the maximum utilization of water by participatory water management and modern technology.)	To produce additional 35802 metric tons of food grain per year.	High	GOB
23	Establishment of Seed Multiplication Farm in the Southern Coastal Region (Barisal and Patuakhali) Project**	January 2012-June 2014	24497.00	304.79	5000.00	3000.00	6000.00	8000.00	2192.21	By using one third of the seeds about 9,258 million tons additional food will be produced.	High	GOB

SL No	Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing
					2012-13	2013-14	2014-15	2015-16				
24	Integrated Quality Horticulture Development Project(BADC Part)*	July 2010- December 2013	3635.00	2131.39	1000.00	503.61	0.00	0.00	1. Enhance production and productivity of crops 2. Enhance accessibility of affordable inputs and credit to farmers. To develop High yielding varieties, package of production and post harvest technologies of horticultural crops.	To produce about 1375000 metric tons of fruits and vegetables, 8.7 cores seedlings, 93 lakh saplings of flowers and plants.	High	GOB
25	Pirojpur , Gopalganj Bagerhat Integrated Agricultural Development Project BADC part	July 2012- June 2017	13967.87	128.93	0.00	3743.29	2500.00	5000.00	2595.65	To bring additional 2200 hectares of cultivable land under irrigation after completion of the project by which 55000 metric tons of additional food grain will be produced. To produce more food grain in the project area optimum utilization or resource by applying modern and local appropriate technology such reexcavation of khai nala installation of LIPs and construction of irrigation channel, hydrolic structure. To establish 200 MT capacity seed processing, preservation and distribution center.	High	GOB

SL No	Name of the Programme/Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
26	Improving surface water irrigation in Coastal areas and sylhet division in Bangladesh	July 2012-June 2014	468.00	0.00	295.60	172.40	0.00	0.00	1.To improve surface water irrigation in Coastal areas and sylhet division in Bangladesh 2. Development of an investment framework for improving surface water irrigation 3. Capacity development for Govt Dept. and farmers communities.	It is expected that the project will contribute to productive, equitable and sustainable water resource management and improve food security in rural areas.	High	GoB+FAO
27	Integrated Agricultural Productivity Project (IAPP) BADC Part	July/11 - June/16	10376.00	1928.26	1858.00	1500.00	4000.00	1089.74	1. Enhance production and productivity of crops 2. Enhance accessibility of affordable inputs and credit to farmers. (To improve productivity through production and supply of quality seed & improved agri. equipments to target groups)	• Development of new crops • Adoption of new varieties and production packages by the farmers • Homestead production, increase production, increase water use efficiency increased and rain water use increased • Production of Quality seed and Breeding material.	High	GoB+IDA

A 6.1.4: Bangladesh Agricultural Research Institute (BARI) Ongoing Projects

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
1. Agricultural Sector Programme Support, Phase-II: (APSII/AEC) (2nd Revised) BARI Part	October/06-December/12	303.00	278.68	16.00	8.32	0.00	0.00	<ul style="list-style-type: none"> • Create enabling environment for agricultural development • Enhance production and productivity of crops • Promote market access and product development for crops • FFS developed into clubs and then farmer associations are provided support for marketing, agribusiness and micro-enterprise development • Significantly increased number of FTs developed • An increased demand driven, integrated and decentralized extension system developed to support poor, marginal and small farmer household. (i) Improved living standards of poor, marginal and small farmer household through enhanced, integrated and sustainable agricultural productivity. (ii) Improved demand driven, integrated and decentralized extension system developed to support poor, marginal and small farmer household. (iii) Enhanced capacity of the concerned agencies of MOA 	<ul style="list-style-type: none"> • FFS with an ICM approach established and developed in 335 Upazilas, with a geographical focus on the North, North-West, Barisal, and Noakhali regions, but maintaining a nationwide presence 	High	DANIDA

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
2. Strengthening of Information & Communication Technology (ICT) and Biometrical facilities at BARI (1st Revised)	July 2009-June 2013	800.00	514.24	283.00	2.76	0.00	0.00	i. Create enabling environment for agricultural development To strengthen the capacity of Information and communication Technology (ICT) and Biometrical facilities of BARI. ii. To develop internal, national, regional and global linkages to improve research and information sharing. iii. To facilitate creation of environment for the establishment of e-governance at the institute. iv. To develop state-of-the-art MIS, Web and Biometrical laboratory facilities. v. To develop human resources in the field of ICT and improve ICT services of the institute and to establish a division at BARI.	The benefit of this project will be in three distinct areas of Research, Technology Implementation/Transfer and Management System	High	JDCF

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
3. Improvement and Quality Seed Production of Rice, Wheat and Maize (BARI Part)	March 2010-December 2013	3732.00	2432.08	742.00	497.92	0.00	0.00	0.00	<ul style="list-style-type: none"> • Enhance production and productivity of crops • Enhance accessibility of affordable inputs and credit to farmers • To develop high yielding superior varieties of wheat and hybrid maize. • To develop improved technologies of production, processing and preservation for harnessing potential yield of improved varieties of wheat and maize. • To produce sufficient quantities of breeder seed/foundation seed and inbred lines of wheat and maize. • To transfer developed technologies to the end users through training, demonstrations, field days, publications and electronic media. • To improve the knowledge and skill of the scientists through training, visits and higher education. 	High	

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
4. Integrated Quality Horticulture Development Project (Phase II) (BARI Part)*	July'10 - December'13	5481.00	1898.91	1200.00	1500.00	882.09	0.00	0.00	<ul style="list-style-type: none"> • Enhance production and productivity of crops • Enhance accessibility of affordable inputs and credit to farmers • Collection evaluation and conservation of germplasm of horticultural crops from local and abroad and to create wide genetic base for future crop improvement program. • Increased production of fruits and vegetables. • Increased production of fruits and vegetables will alleviate malnutrition and promote export. • to develop high yielding varieties, package of production and post-harvest technologies of horticultural crops including adaptation of modern horticultural technologies. • to increase the capacity of Horticultural Centers for quality planting material production • to build up the capacity of horticultural stakeholders and 	Medium	

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16			
								development of skilled manpower in nursery sector with emphasize to women through training. <ul style="list-style-type: none">• to disseminate the modern horticultural technologies at field level through demonstration and other means• to provide technical and logistic support to the producer and exporter to reduce post-harvest losses.• to develop processing and preservation system for horticultural produces at household level with a view to reduce post-harvest losses and ensuring household level nutrition throughout the year.• to build up sustainable linkages among farmers, traders, processors and exporters in order to minimize marketing network along with improved marketing information system of horticultural produce		

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
5. Farm Machinery Technology Development and Dissemination (BARI Part)*	July/2010-June/2013	1462.00	830.26	550.00	81.74	0.00	0.00	<ul style="list-style-type: none"> • to improve nutritional status, generation of women employment opportunities for poverty alleviation. 	<ul style="list-style-type: none"> • Enhance production and productivity of crops. • To increase crop production, and reduce post-harvest losses and production cost by using BARI-developed farm machinery. • Encourage small farmers to form farmers' group/co-operative for achieving the benefits of farm mechanization • To develop awareness of the farmers through demonstration and training and motivate them to adopt farm machinery. • Create positive impact on the usefulness of farm mechanization among farmers. • To upscale the capabilities of the local farm machinery manufacturers and traders through training and other technical support. 	High	

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Priority (High/Medium/Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16				
6. Tuber Crops Development Project (BARI Part) *	July 2010-June 2013	2752.00	1095.15	1200.00	300.00	156.85	0.00	<ul style="list-style-type: none"> To develop knowledge and skill of the farmers, operators and extension personnel on operation, repair and maintenance of BARI-developed farm machinery. To Strengthen research and development on farm machinery, postharvest process engineering and renewable energy. 	<ul style="list-style-type: none"> • Enhanced accessibility of affordable inputs and credit to farmers. • Enhance land productivity and promote sustainable land use and environmental conservation. • Promote market access and product development for crops. 	<ul style="list-style-type: none"> • Sustained varietal improvement. • Improved management practices. • Improved soil and water management. • Improved pest & disease management. • Improved post-harvest processing. 	Medium
								Germlasm collection both from local and exotic sources in order to develop high yielding, disease resistant, salt and drought tolerant and also processing varieties.			

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
7. Upgrading of Pulses Research Sub-station Madaripur to Regional Pulses Research Station (RPRS)	January 2011-June 2014	1816.00	736.00	800.00	280.00	0.00	0.00	• Potato breeder seed production through tissue culture technique in order to reduce importation. Production and distribution of sweet potato and aroids breeder seeds.	• Potato breeder seed production through tissue culture technique in order to reduce importation. Production and distribution of sweet potato and aroids breeder seeds.	High	• Increase area and production of pulses.
								• Infrastructure and manpower development.	• Improvement of seed potato quality of public and private sectors and also of farmers seeds through training, demonstration and field days.		• To make available HYV pulses to the growers.
								• Enhance accessibility of affordable inputs and credit to farmers.	• Improve soil health by biological nitrogen fixation.		• Motivate farmers in using modern technologies.
								• Enhance land productivity and promote sustainable land use and environment.	Conservation collection, identification, characterization and		

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16			
								evaluation of germplasm of pulses of the southern region of Bangladesh.		
8. Enhancing Quality Seed Supply (1st Revised)*	July/2011-June/2014	5803.00	225.05	2250.00	2000.00	1327.95	0.00	<ul style="list-style-type: none"> • Sustainable stress tolerant varieties of major crops developed. • Enhance production and productivity of crops. • Enhance accessibility of affordable inputs 	High	

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
9. Development of Safe Vegetables Production Technology Utilizing Urban Agricultural Organic Waste in the Peri-Urban Areas *	January 2011-June 2013	950.00	395.11	370.00	184.89	0.00	0.00	0.00	<ul style="list-style-type: none"> • Enhance accessibility of affordable inputs and credit to farmers • Promote market access and product development for crops • Effective project management on organic waste; • Trained manpower; • Developed market chain of safe vegetable 	<ul style="list-style-type: none"> • Improved crops management for vegetables growers of periurban areas; • Sustained use of municipal organic waste; • To develop less greenhouse gas (GHG) emitting environment friendly suitable methods of recycling the house hold, kitchen market and hotel organic wastes as organic fertilizer. • To examine the potentiality of locally available materials for making organic fertilizers to produce safe vegetables. • To standardize sustainable safe vegetable production technology focusing good agricultural practices in peri-urban areas, • To organize the interested safe vegetable growers from peri-urban areas to transfer 	High	

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
10. Continuation and expansion of Pesticide Research in Pesticide Analytical Laboratory at BARI	May 2011-June 15	859.00	401.28	106.00	200.00	151.72	0.00	0.00	<ul style="list-style-type: none"> • Enhance production and productivity of crops • Enhance land productivity and promote sustainable land use and environmental conservation • Continuation of research and expansion of Lab facilities; • Acceleration of the accreditation procedures; • Development of protocols of single and multiple pesticide residues; • Determination of PHI for different pesticides and crops; 	<ul style="list-style-type: none"> • Sustainable protocol for different groups of pesticides will be developed; • Scenario of pesticide residue load in different agro ecological zones will be known; • Awareness of safe use and handling of pesticides for farmers', GO, NGO personnel and private entrepreneurs. 	Medium	JDCF

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Priority (High/Medium/Low)	Sources of Financing		
				2012-13	2013-14	2014-15	2015-16					
11. Development and Expansion of Research and Research Infrastructure of BARI	July, 2012-June, 2016	16000.00	0.00	1000.00	3500.00	5500.00	6000.00	0.00	<ul style="list-style-type: none"> • Enhance accessibility of affordable inputs and credit to farmers • Enhance land productivity and promote sustainable land use and environmental conservation (Strengthening of Regional Station, sub-station and station for developing and disseminating new variety and technology) 	<ul style="list-style-type: none"> • Improved crop management research; • Sustained varietal improvement; • Improved soil and water management; • Improved insect, pests and disease management • Improved post-harvest technology. 	High	GoB
12. Mujibnagar Integrated Agricultural Development Project	July 2011-June 2016	619.00	154.05	172.00	150.00	100.00	42.95	0.00	<ul style="list-style-type: none"> • Enhancing of Regionality of affordable inputs and credit to farmers • Enhance land productivity and promote sustainable land use and environmental conservation 	<ul style="list-style-type: none"> • Increase area and production of vegetables, pulses, potato, oilseeds and maize. • To make available seeds of HV Fruits, vegetables, pulses, potato, oilseeds and maize to the growers. 	High	GoB

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
									<ul style="list-style-type: none"> • To make available seeds of HV fruits, vegetables, pulses, potato, oilseeds and maize to the growers. • Improve soil health by biological nitrogen fixation. • Motivate farmers in using modern technologies; • To bring additional 24675 hectares of cultivable land under irrigation after completion of the project through excavation and re-excavation of 250 Km. khals/nalas, optimum utilization of 425 nos. of various capacity low lift pumps, 130 nos. of force mode tube wells and construction of surface and sub-surface buried pipe irrigation channel including other necessary hydraulic structure by which 61687 metric ton additional food grain will be produced; • To disseminate potential technologies for increasing agricultural 			

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16			
								<ul style="list-style-type: none"> • To increase efficiency and effectiveness of Agricultural Extension System by providing institutional support and mobility facilities for extension; • To develop high yielding, insect and disease resistant varieties of vegetables, potato, fruits, pulses, oilseeds and maize suitable for Mujibnagar areas; • Generation and validation of site specific cropping patterns and component technologies; • To increase income of the farmers of the project area by providing fair prices to the farmers through linking farms to markets and extension of marketing services. 		

Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
13. Integrated Agricultural Productivity Project (BARI part)	July/2011-June/2016	2200.00	144.24	673.00	500.00	500.00	382.76	0.00	<ul style="list-style-type: none"> • Enhance production and productivity of crops • Enhance accessibility of affordable inputs and credit to farmers • To introduce new high yielding short duration varieties of wheat and protein enriched maize with specific adaptation to drought, boron deficiency and acid soil. • To introduce new high yielding short duration varieties of oilseeds and pulses with specific adaption to salinity, drought, boron-deficiency and acid soil; charland. • To demonstrate, validate and adapt new technologies in the farmers field with participation of farmers, DAE, NGO, private organization etc. • To produce and supply of breeder's seed. • To develop methods for restoration of soil health and maintenance of soil fertility. 	Medium	GOB-IDA
Total BARI		42777.00	9165.05	9362.00	9205.63	8618.61	6425.71	0.00			

A 6.1.5: Bangladesh Rice Research Institute (BRRI) Ongoing Projects

Name of the Programme/Projects	Year of starting and completion	Total Project Cost (in Lakh Taka)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost				Dominant strategic objectives	Dominant Output	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
1. Strengthening of Rice Breeder Seed Production and Maintenance of Nucleus Stock (1st Revised)*	July/2007-June/2013	1556.00	1310.00	245.00	0.00	0.00	0.00	Increase production and productivity in the crop sector	Rice breeder seed supply is increased and maintain nucleus stock	High	GoB
2. Strengthening and Capacity Building of Biotechnology Laboratory in BRRI (1st Revised)*	July/2007-June/2013	1015.20	830.17	182.00	0.00	0.00	0.00	Increase production and productivity in the crop sector	Biotechnology research capacity strengthened	Medium	GoB
3. Farm Machinery Technology Development and Dissemination (BRRI Component)*	July/2010-June/2015	1708.95	555.01	450.00	400.00	303.94	0.00	Increase production and productivity in the crop sector	Extended efficient agricultural machinery use.	High	GoB
4. Minimizing Rice Yield Gap Project (BRRI Component)	January/2011-December/2013	252.00	124.07	124.00	0.00	0.00	0.00	Increase production and productivity in the crop sector	Rice production is increased.	High	GoB
5. Biotechnology Research Facilities Development (BRFD) at BRRI *	May/2011-June/2013	608.50	99.15	500.00	0.00	0.00	0.00	Increase production and productivity in the crop sector	Biotechnology research facilities are developed	High	JDCF
6. Enhancing Quality Seed Supply (BRRI Component)*	July/2011-June/2014	6054.32	57.61	1120.00	2098.00	1660.35	1118.36	Increase production and productivity in the crop sector	Rice breeder seed supply is increased.	High	IDB

Name of the Programme/Projects	Year of starting and completion	Total Project Cost (in Lakh Taka)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost				Dominant strategic objectives	Dominant Output	Priority (High/Medium/Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
7. Mujibnagar Integrated Agricultural Development Project (BRRI Component)	July/2011-June/2016	945.00	147.66	200.00	150.00	250.00	197.34	0.00	Increase production and productivity in the crop sector	Improvement of area specific technologies and good quality seed.	High	GoB
8. Integrated Agricultural Productivity Project (IAPP) (BRRI part)	July/2011-June/2016	2056.00	194.69	606.00	366.00	500.00	389.31	0.00	Increase production and productivity in the crop sector	Stress tolerant variety improvement and expansion.	High	GAFSP Trust Fund
9. Pirojpur-Gopalganj-Bagerhat Integrated Agriculture Development Project (BRRI Part)	July/2012-June/2016	691.91	0.00	100.00	170.00	180.00	241.91	0.00	Increase production and productivity in the crop sector	Improvement of area specific technologies and good quality seed.	High	GoB
10. Development of Research Capacity of the Bangladesh Rice Research Institute	January/2012-December/2013	2366.00	783.85	900.00	110.00	0.00	0.00	0.00	Increase production and productivity in the crop sector	Research facilities and cold tolerant variety development	Medium	KOICA
		17253.88	4102.21	4327.00	3248.00	2884.29	1885.01	241.91				

A 6.1.6: Bangladesh Agriculture Research Council (BARC) Ongoing Projects

Name of the Programme/ Projects	Year of starting and completion	Total Project cost	Expenditure upto June	Year wise Project cost				Dominant strategic objectives	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
1. National Agricultural Technology Project, Phase-1 (2nd Revised) BARC component	01 July, 2007 to 31 December, 2013	18553.00	7808.86	5155.00	5589.14	0.00	0.00	• Enhance production and productivity of crops • Promote market access and product development for crops	1. High priority, pluralistic, participatory and demand led agricultural research. 2. Decentralized Agricultural Extension Approach.	High	IDA-IFAD- GOB
2. National Agricultural Technology Project, Phase 1 (2nd Revised), KGF component**	01 July, 2007 to 31 December, 2013	5929.00	2620.48	1020.00	2288.52	0.00	0.00	3. Promoting farmer market linkage through development of supply chains.	3. Promoting farmer market linkage through development of supply chains.	High	IDA-IFAD- GOB
3. National Agricultural Technology Project, Phase 1 (2nd Revised) - Hortex component**	01 July, 2007 to 31 December, 2013	3458.00	965.12	1585.00	907.88	0.00	0.00	4. Agreed reforms for the Agricultural Extension and Research System	4. Agreed reforms for the Agricultural Extension and Research System	High	IDA-IFAD- GOB
		27940.00	11394.46	7760.00	8785.54	0.00	0.00				

** KGF and Hortex is shown in BARC part.

A 6.1.7: Department of Agricultural Marketing (DAM) Ongoing Projects

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
1. Integrated Quality Horticulture Development Project (Phase-II) DAM- part	July 10 - December 13	2470.00	378.23	1100.00	600.00	391.77	0.00	<ul style="list-style-type: none"> • Create enabling environment for agricultural development • Enhance production and productivity of crops • Enhance accessibility of affordable inputs and credit to farmers • Promote market access and product development for crops <p>To develop processing and Preservation system for horticultural losses and ensuring household level nutrition throughout the year.</p>	<ul style="list-style-type: none"> a. Expansion of low cost processing technology of horticultural produces at homestead level among 18000 farmers and member of farmer's family. b. Extension of low cost post-harvest handling and marketing practices at producer's level. c. Increased on-farm income of the target farmers by the end of the project period. Reduction of present level of post-harvest losses by 50%. d. Generation of employment opportunity in the project areas particularly for village women. e. Protection from distress sale by 	Medium	GOB

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
								absorbing seasonal glut through processing and preservation.			
2. Pirojpur-Gopalganj-Bagerhat Integrated Agriculture Development Project (DAM part).	July'12 - June'17	748.00	0.00	50.00	50.00	200.00	300.00	248.00 <ul style="list-style-type: none"> ● Enhance accessibility of affordable inputs and credit to farmers ● Promote market access and product development for crops 	<ul style="list-style-type: none"> 1. Improvement of marketing system. 2. Contribution to the national economy. 3. Improvement of marketing efficiency. 4. Increase of income of the farmers and also people engaged in marketing. 5. Reducing post-harvest losses by rewarding farmers and traders about storage, handling, cleaning, and grading etc. 	High	GOB

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
								2) To reduce distress sale of crops of the small and medium farmers by providing credit facilities through Commercial Banks against stored crops through extension of SHOGORIP model.	6. Protection from distress sale in the glut situation by credit linkage and also by processing & storage improvement 7. Increase in the supply of homemade processed foods in the area. 8. Increase in the standard of living & improvement of socioeconomic condition of the people in the area. 9. Extension and improvement of post-harvest technology.		
3. Mujibnagar Integrated Agricultural Development Project (DAM Component) Total DAM	July'11 - June'16	772.00	43.59	450.00	100.00	150.00	28.41	• Create enabling environment for agricultural development • Promote market access and product development for crops Increase in income of the farmers of the project area by providing Fair prices to the farmers through linking farms to markets and extension of marketing services.	1. Improvement of marketing system 2. Contribution to the national economy 3. Improvement of marketing efficiency. 4. Increase of income of the farmers and also people engaged in marketing at the end of the project period. 5. Reduction in post-harvest losses by rewarding farmers and traders about storage, handling, cleaning, and grading etc.	High	GOB

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
								To reduce distress sale of crops of the small and medium farmers by providing credit facilities through Commercial Banks against stored crops through extension of SHOGORIP model.	6. Protection from distress sale in the glut situation by credit linkage and also by processing & storage improvement 7. Increase in supply of home made processed foods in the area 8. Increase in the standard of living & improvement of socioeconomic condition of the people in the area. 9. Extension and improvement of post-harvest technology.	High	GOB
				3242.00	421.82	1550.00	700.00	541.77	28.41	0.00	

A 6.1.8: Seed Certification Agency (SCA) Ongoing Projects

Name of the Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Priority (High/Medium/Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16				
Integrated Agricultural Productivity Project (IAPP) SCA Part	July/11 - June/16	600.00	150	76.00	180.00	100.00	94.00	0.00	To improve productivity through production and supply of quality seed & improved agril. equipments to target groups • Homestead production increased. • Water use efficiency increased and rain water use increased. • Production of Quality seed and Breeding material.	High	GoB+IDA

A 6.1.9: Soil Resource and Development Institute (SRDI) Ongoing Projects

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Priority (High/Medium/Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16				
1. Food security programme 2006 (1st Revised) (Soil fertility component)*	January/ December 2008 to 31 December 2012	8506.00	5305.04	1272.00	1200.00	728.96	0.00	0.00	1. To Improve soil management in target areas. 2. To increase diversity of crops being grown in the target areas. 3. Yields of target crops increase in target areas.	High	GOB, European Union

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
2. Soil resource management and farmers' service*	July/2012-june/2015	1999.00	0.00	95.00	200.00	1200.00	504.00	0.00	• Enhance land productivity and promote sustainable land use and environmental conservation To increase crop production by sustaining productivity of the land and ensuring efficient use of fertilizers.	1. Completion of 90 semi-detailed upazila survey and printing of 90 Upazila nirdeshika, 900 union Sahayika and Union festeens. 2. All laboratories, field offices and GIS unit physically equipped.	Medium	GOB
3. Establishment of Fertilizer Testing Laboratories and Research Centers*	July/2012-june/2015	3115.17	0.00	174.00	200	1200	1541.17	0.00	• Enhance land productivity and promote sustainable land use and environmental conservation Establishment of 2-storied 4(four) fertilizer laboratory buildings and 1st floor of existing 1 (one) laboratory building with installment of all necessary office and laboratory equipment, chemicals and furniture.	1. Laboratories establishment. 2. Analytical service strengthened. 3. To train about 5,000 farmers, fertilizer dealers and other beneficiaries.	High	GOB

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)			Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16	2016-17		
4. Integrated Agricultural Development Project in Pirojpur-Gopalganj-Bagerhat	July/13-June/18	117.00	0.00	30.00	30.00	20.00	37.00	<ul style="list-style-type: none"> • Enhance land productivity and promote sustainable land use and environmental conservation To attain food security through sustainable soil management practices in the project area. 	High	GOB
5. Minimizing rice yield gap project	January/2011-December/2013	93.00	49.99	30.00	13.01	0.00	0.00	<ul style="list-style-type: none"> • Enhance production and productivity of crops • Enhance land productivity and promote sustainable land use and environmental conservation <p>To achieve potential yield of rice by reducing the yield gap at farmer's level through using soil test-based fertilizers.</p>	High	GOB
Total SRDI	13830.17	5355.03	1571.00	1643.01	3158.96	2065.17	37.00			

A 6.1.10: Agriculture Information Service (AIS) Ongoing Projects

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
1. Intensification of Agriculture Information Service in Ten Agriculture Regions (1st Revised)	July 2008-June 2015	2273.01	1407.74	243.00	318.80	303.47	0.00	1. To Strengthen Agricultural Information Management System by accelerating & intensifying network of AIS towards 10 (ten) agricultural regions;	1. Arrangement of Training and Workshop/Seminar: One hundred (100) nos. training and 56 (Fifty Six) nos. of workshop/seminars were organized. Total 5000 nos. participants were trained and 1680 nos. participants participated in the workshop/seminars.	High	GOB and GOB

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
2. Enhancing Rural Communication Service for Agricultural Development	July 2010- December 2012	402.00	277.54	7.00	117.46	580.00	0.00	1. To ensure improved livelihood and food security through providing	1. Establishing a Community Radio Station at Amtoly in Barguna District;	Medium	GOB	

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
through Community Rural Radio Project								actual information required by a coastal belt disaster facing community through maintaining their traditional culture and learning.	2. Effective rural communication and community radio services for livelihood improvement;			
								2. To establish a Rural Community Services;	3. Staff of AIS, DAE, partners organization and community agents trained in radio broadcasting, communication skills and multimedia materials production;			
								3. To assist farmers to increase agricultural production at farm and home level , receiving knowledge of modern technology at their own community using their own language;	4. Improve institutional and local capacities in the design and implementation of communication plans in support of agricultural extension and advisory services			
								4. To work for the intensive development of a single community, instead of whole nation				
3. Enhancing Rural Communication Service for Agricultural Development through Community Rural Radio Project	January 2012-June 2014	1880.00	0.00	500.00	800.00	580.00	0.00	0.00	1. To conduct field survey in order to get farmers perception and real need.	a. Agriculture Information and Communication Centre (AICC) establishment: 150 AICCs would be established in 150 upazillas under 32 districts across the country. Necessary ICT logistics would be provided	Medium	GOB
									2. To promote "E-Krishi" at the selected areas of the country through Agriculture Information and			

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)			Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing
2012-13	2013-14	2014-15	2015-16	2016-17						
							<p>Communication Centre (AICC) run by AIS.</p> <p>3. To raise the voice of the farmers and transform their group/clubs (IPM, ICM, FFS, food security group and others) into farmers institution.</p> <p>4. To increase the capability of the farmers to work efficiently for better production and alleviate their poverty.</p> <p>5. To strengthen, intensify and modernize dissemination of Agricultural Information through both Print, Electronic media and ICT.</p> <p>6. To organize training and workshop for the extension agents, media personnel, scientists as well as for the farmers.</p> <p>7. To enhance quality service delivery among the farmers by establishing 10 district level offices.</p>	<p>amongst these AICCs.</p> <p>b. Establishment of ICT labs: 10 nos. of ICT labs would be established in ten regions.</p> <p>c. Digital agri/ Information/knowledge Bank:</p> <p>There will be 1 central agricultural information bank and 10 digital agri knowledge bank.</p> <p>d. Print and Video materials development:</p> <p>Different printed materials (like- poster/booklet/folder /leaflet etc.) containing agri information and technologies would be printed. Moreover different forms of 20 nos. video materials (film/filler/document ary/animation/multi media e-book etc.) would be prepared.</p> <p>e. Capacity development and awareness creation:</p> <p>For the capacity development of the farmers, extension personnel, different GO/NGO personnel</p>		

A 6.1.11: Bangladesh Sugarcane Research Institute (BSRI) Ongoing Projects

Name of the Programme/Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
1. Strengthening Biotechnological Research of Bangladesh Sugarcane Research Institute*	Nov 2010-Dec 2014	884.00	463.62	248.00	100.00	72.38	0.00	• Create enabling environment for agricultural development. • Enhance production and productivity of crops.	• Created biotechnological research facilities for sugarcane, date palm, Palmyra palm, golpata, stevia and other sugar crops at BSRI Head Quarter, regional stations, sub-stations. • Creation of technology transfer capacity	High	GOB

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
2.Pilot Project for Date palm, Palmyra palm and Golpata Development	July 2010-Dec 2013	862.00	58.86	250.00	553.14	0.00	0.00	0.00	• Create enabling environment for agricultural development • Enhance production and productivity of crops 2. Development of date palm, palmyra palm and golpata varieties and production technologies. 3. Date palm and palmyra palm (Novel & Local) seedling raising, micro propagation, plantation and maintenance.	a. Created research facilities for date palm, palmyra palm and golpata. b. Increase the production of sugar, gur and juice. c. Increased income of the rural peoples and thus contribute to reduce poverty and upliftment of nutritional status of rural peoples. d. Create environment to develop local entrepreneurship, manufacturers and traders. e. Proper utilization of fallow land.	Medium	GOB
3.Create Employment Opportunities of Char Dwellers in Greater Rangpur Districts through Sugarcane Cultivation	July 2011 - June 2015	821.00	249.00	200.00	250.00	122.00	0.00	0.00	• Create enabling environment for agricultural development • Enhance production and productivity of crops • Promote market access and product development.	a. Research facilities for sugarcane (gur and chewing variety) created. b. The production of gur, syrup and juice increased. c. Local entrepreneurship, manufacturers and traders created.	High	JDCF

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Priority (High/ Medium/ Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16				
								<p>d. Capacity building of the researcher, staff etc. on poverty reduction.</p> <p>2. Improving the quality of life and livelihood of the underprivileged people living in the riverine char areas.</p> <p>3. Establish small and cottage industries within or nearby the river basin with a view to enhance income of the poor families (e.g. Gur making, syrup & juice preparation, preservation and marketing).</p> <p>4. Proper utilization of char homestead and fallow lands for crop production.</p> <p>5. Empower women through technology transfer, poverty reduction and nutritional improvement.</p>			

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
4. Pilot Project for Development of Sugarbeet Cultivation Technologies in Bangladesh	July 2011 - June 2014	345.00	98.10	137.00	109.90	0.00	0.00	<ul style="list-style-type: none"> • Create enabling environment for agricultural development • Enhance production and productivity of crops Varieties/Cultivars collection from abroad and characterization. 2. Screening sugarbeet varieties suitable for cultivation in Bangladesh. 3. Development of agro-technologies for sugarbeet cultivation. 4. Study on technologies for true seed production, seedling raising and micro propagation of sugarbeet. 5. Development post-harvest technologies and marketing systems of produced sugar beet for sugar and other byproducts. 6. Economic viability of sugarbeet as an alternate crop and raw material both for farmer and the sugar millers. 		Medium	GOB
Total BSRI		2912.00	869.58	835.00	1013.04	194.38	0.00	0.00			

A 6.1.12: Barind Multipurpose Development Authority (BMDA) Ongoing Projects

Name of the Programme/Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
1. Activating Inoperable Deep Tube Wells For Irrigation (1st Revised)*	July 2008-June 2013	20128.00	16648.98	2000.00	1479.02	0.00	0.00	1. To activate 2569 nos. inoperable/unserviceable DTW through electrification & ensure utilization for irrigation.	• 2569 nos unused deep tube wells will come under irrigation. • Ensure control irrigation of 0.77 lakh hectare land. • Ensure efficient use of ground water.	Medium	GOB
2. Deeptube well installation Project Phase-ii**	January 2010-December 2013	24785.00	8700.00	2315.00	3000.00	2500.00	8000.00	270.00	1. To bring 37500 hectares of land under controlled irrigation management system. 2. To improve the socio-economic condition of the people in the project area by M.T food grains.	High	GOB

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
3. Command area development and Training Project, Phase-2.	July 2008-June 2013	16154.00	12999.78	2500.00	654.22	0.00	0.00	1. To ensure the control and best use of lifted ground water. 2. To bring about self-sufficiency in food production through increasing command area with proper irrigation management. 3. To build-up a group of efficient and technical manpower through providing training.	• Ensure best use of lifted ground water. • Increase command area by constructing buried pipe line.	Medium	GoB & Own Fund
4. Command Area Extention & Development Project.	April 2010-June 2013	5125.00	2840.00	2285.00	0.00	0.00	0.00	1. To Extend the length of existing pipeline water distribution system of 1000 nos. of Deep tubewells. 2. To reduce the loss of irrigation water and increase the irrigation efficiency of DTWs by controlled use of lifted ground	• 12010 hectare of land comes under irrigation through existing Deep tubewells. • Additional 0.60 lakh MT crops will be produced.	Medium	GOB

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
5. Marketing of Agricultural Products Through Development of Rural Communication Project **	October' 2010-June'2014	29980.00	2800.00	2000.00	5000.00	6000.00	11000.00	3180.00	1. To promote rural communication network in 40 upazillas and its remotest part of 5 districts Rajshahi, Chapai-Nawabgonj, Naogaon, Natore and Pabna by constructing Feeder Road including bridges/ culverts in the project area. 2. To facilitate agricultural and commercial activities in the project area, easy	High	GOB
									• 400 km pucca road will be constructed. • Easy marketing facilities of agricultural products will be created. • Ecological balance will be restored through afforestation.		

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
								marketing facility of agricultural products and ensuring fair price of food grains to local farmers.				
6. * Panchagarh, Thakurgaon, Dinajpur & Jyapurhat Integrated Agriculture Development Project*	July 2010-June 2013	27095.00	2265.00	2500.00	9000.00	8000.00	5330.00	0.00	The main objectives of the project are to extend irrigation facility and to improve the socio economic condition of the people in the project area.	• 31000 hectare of land comes under controlled irrigation. • Surface water storage capacity will be build up by excavating canal and pond.	Medium	GOB

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
								1. To bring 31000 hectares of land under controlled irrigation management system by installation of 1200 nos. deep tubewells, re-excavation of khals and ponds and their proper utilization through appropriate irrigation and water management.	• 3 lakh forest resources will be created.		

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16			
7. Barind Rainwater Conservation and Irrigation Project (Phase-ii).	March'2011-June'2014	23895.00	1000.00	2000.00	6500.00	8000.00	6395.00	<p>5. To create employment facilities for the marginal farmers and daily-wage laborer.</p> <p>6. To create employment facilities for poor and distressed women.</p>	High	GOB

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Priority (High/ Medium/ Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16			
								3. To dig 100 nos. of dug well for drinking purpose of poor people as well as supplementary irrigation.		
								4. To develop surface water body for conservation of rain water and to recharge ground water from such water body, to minimize temperature, to increase humidity in the driest project area.		
								5. To create additional forest resources for developing environment and socio economic condition through plantation of 3 lakh fruits sapling and 6 lakh Forest & medicinal plant sapling.		
147162.00	47253.76	15600.00	25633.24	24500.00	30725.00	3450.00				

A 6.1.13: Bangladesh Jute Research Institute (BJRI) Ongoing Projects

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
1. Basic and Applied Research on Jute (1st Revised)	September 2010 - August 2018	11820.00	3204.36	2000.00	1500.00	1800.00	2000.00	1. To develop stress tolerant lines/variety with higher productivity. 2. To update the draft genome of tossa jute and utilization of useful genes in developing modern jute varieties to combat the upcoming changed environment. 3. To generate the sequence of deshi jute genome and analyze for predicting useful genes. 4. To generate the sequence information of microbes involved in jute retting in different environment. 5. To scan the available jute germplasm preserved in BJRI gene bank for harvesting the useful genes. 6. To develop a platform for genome research in Bangladesh immediately benefiting Jute and later other crops.	2000.00	High	GOB
Total		11820.00	3204.36	2000.00	1500.00	1800.00	2000.00	1315.64			

A 6.1.14: Cotton Development Board (CDB) Ongoing Projects

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
1. Strengthening Research Activities of Cotton Development Board	July 2011-June 2015	1410.15	180.37	488.00	600.00	141.78	0.00	To increase research capacity of Cotton Development Board	Modern laboratories, green houses, gene bank will be established and modern technologies of cotton production will be evolved.	High	GOB

A 6.1.15: Bangladesh Institute of Nuclear Agriculture (BINA) Ongoing Projects

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
1. Strengthening Research and Sub-Stations Development of BINA *	May 2010 - June 2014	11292.00	3996.21	2500.00	3500.00	1295.79	0.00	<ul style="list-style-type: none"> • Create enabling environment for agricultural development • Enhance production and productivity of crops 	a. Developed export quality HYV aman rice variety (BINAdhan-9) salinity tolerant rice variety BINAdhan-8, saline-tolerant groundnut (BINACHINabada m-5&6), summer mungbean (BINAMoog-8), Pulses (BINAmasur-5 & 6), Soya bean	High	GOB

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
								drought, water logging and submergence) - stresses using nuclear and advanced techniques.	(BINASoyabean-1 & 2), Mustard (BINASarisha-7 & 8) and Sesame (BINATil-2).		

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
								f. Investigate on the economic and financial feasibility, yield gap, risk and adoption of the varieties/technologies developed at BINA.			
Total BINA		11292.00	3996.21	2500.00	3500.00	1295.79	0.00	0.00			

A 6.2.1: Ministry of Agriculture (Secretariat) Listed expected Projects²⁵

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
1. Projects on ICT Development, E-Governance	July/12 - June/17	1000.00	0.00	100.00	200.00	200.00	300.00	• Create enabling environment for agricultural development 1. Developing ICT infrastructure facilities and expansion of connectivity	1. Linking with "Digital Bangladesh Secretariat" established. 2. E-Governance enhanced.	High (Mid- term -2nd to 3rd year of MTSBP)	GOB

²⁵ During Mid-term review, any change/or actual allocation will be reflected in the revised document.

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)			Dominant strategic objectives and activities	Dominant Output	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15				
							2. Transforming traditional file-based administrative work in the public sector into e-government/digital government for better and efficient services to the people.	3. All the agencies under ministry is connected to a common network. 4. Enhanced online publications. 5. Trained manpower.		
							3. Deployment of a robust, country-wide system of market information with daily price update of all markets in the country. 4. Digitally publish all publications in Bangla using a standard encoding to guarantee document portability 5. Launching of online-data sharing and decision making system. 6. Creating a network for the government to connect all agencies 7. ICT training to Ministry personnel.			
Total MoA		1000.00	0.00	100.00	200.00	200.00	200.00	300.00		

A 6.2.2: Department of Agriculture Extension (DAE) Listed expected Projects

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
1. Agricultural support for smallholders in Southwestern Region of Bangladesh	July/12 - June/17	15000.00	0.00	200.00	2061.70	4307.82	6000.00	2430.48	• Enhance production and productivity of crops To improve livelihood of landless, marginal and small farmer through integrated and sustainable agricultural productivity.	Increased field crops, fruits, vegetables and spices cultivation. Increased Cropping Intensity, introduced saline tolerant varieties etc.	High (Immediate e-1st year of MTSBP)	IDB and GoB
2. Crop Intensification Through Fallow Land Utilization in Greater Sylhet Region	July/12 - June/16	14915.68	0.00	400.00	1500	3000	5500	4515.68	• Create enabling environment for agricultural development. • Enhance production and productivity of crops • To increase cropping intensity by bringing fallow land under cultivation through efficient irrigation facilities adopting sustainable agricultural technology.	• Publicity & Publication • Trained Farmers/SAAO/ Officers • Motivation Tour • Rally & Workshop/ Seminar • Demonstration • Repair, Maintenance & Rehabilitation • Machinery & Agri equipment's • Construction Works	Medium (Mid-term - 2nd to 3rd year of MTSBP)	GoB
3. Citrus Development Project (Mandarin, orange and others)	July/12 - June/17	4387.00	0.00	200.00	500.00	1000.00	1500.00	1187.00	• Enhance production and productivity of crops To increase production and dissemination of Citrus Fruits.	Block Demo 648 ha, Homestead garden 720 ha, 40000 trained Farmers	High (Immediate e-1st year of MTSBP)	GoB

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
4. Establishment of two ATI at Bancharampur Upazila, Brahmanbaria District and Saturia Upazila, Manikgong District	July/12 - June/15	2340.00	0.00	0.00	1588.53	751.47	0.00	0.00	• Create enabling environment for agricultural development To increase technical manpower in the country for upgrading agricultural knowledge and skill among young generation to enhance food security and agricultural growth of the country.	Established two ATI at Bancharampur and Saturia. Starting Diploma in agri. Education, training on Extension services and new Agricultural Technologies.	Medium (Mid-to long term-within 5th year of MTSBP)	GoB
5. Enhancement of Agricultural Production & Rural Employment Through Extension of Agricultural Engineering Technologies Project, phase-ii*	July/12 - June/17	20794.47	0.00	500.00	2047.00	5046.00	8000.00	5201.47	• Enhance production and productivity of crops To make agriculture economically profitable through reduction of operational cost & losses of produces.	Increased use of surface water re-excavation of Khal/canal & water bodies 1320000 farmers, 2130 staff and 98550 officer trained.	High (Immediate -1st year of MTSBP)	GoB
6. Magura, Jessore, Narail, Khulna and Satkhira Integrated Agriculture Development Project (MINKS-IADP) DAE part	July/12 - June/17	4500.00	0.00	200.00	1961.67	743.15	743.15	852.03	• Create enabling environment for agricultural development • Enhance production and productivity of crops To promote salinity resistant crop variety and to develop alternative systems to reduce risks and adaptation to ensure food security of the rural poor.	Printing & publication, Training ,Field day, Motivation tour completed Rally/ Seminar/Workshop • Technology dissemination • Midterm evaluation & Survey • Repair and Maintenance	Medium (Mid- term -2nd to 3rd year of MTSBP)	GoB

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
7. Expansion of Urea Deep Placement (UDP) Technology	July/12 - June/16)	10412.79	0.00	100.00	1795.03	4029.62	4488.14	0.00	<ul style="list-style-type: none"> • Enhance production and productivity of crops • Enhance accessibility of affordable inputs and credit to farmers To improve farmer's income & socio economic condition by increasing farm production and reducing cost by using technologies of UDP & balanced fertilizers. 	4.19 million ha of land covered by UDP technology, 4.2 million farm families adopted UDP tech. 7500 staff and 0.8 million farmers trained	High (Mid-term - 2nd to 3rd year of MTSBP)	USAID

A 6.2.3: Bangladesh Agriculture Development Corporation (BADC) Listed expected Projects

SL No	Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/ Medium/ Low)	Sources of Financing		
				2012-13	2013-14	2014-15	2015-16						
1	Establishment of Pulse and oil Seed Multiplication Farm and Seed Processing Centre at Subarnachar in Noakhali District Project	July 2012- June 2016	3538.76	0.00	0.00	1104.54	1056.09	711.19	666.94	<ol style="list-style-type: none"> 1. Enhance production and productivity of crops 2. Enhance accessibility of affordable inputs and credit to farmers. To ensure proper use of quality pulse and oil seed of farmers level of char area and create facilities for processing and preservation centers at the area.	To produce more crops in these areas which will alleviate the poverty & uplift the socio-economic condition of the people.	High (Immediate e-1st year of MTSBP)	GOB

SL No	Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)					Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing
					2012-13	2013-14	2014-15	2015-16	2016-17				
2	Maintenance, Rehabilitation of BADC's Existing Fertilizer Godowns and Strengthening of Fertilizer Management Activities Project	July 2012-June 2017	13430.90	0.00	200.00	3800.00	3722.97	2641.00	3066.93	1. Enhance production and productivity of crops 2. Enhance accessibility of affordable inputs and credit to farmers. Increase storage capacity of fertilizer and ensure distribution quality fertilizer to the farmers.	Increase 130000 m t storage capacity of fertilizer.	High (Immediate e-1st year of MTSBP)	GOB
3	Magura - Jessore-Norail -Khulna-Satkhira Integrated Agricultural Development Project (BADC Part)	July 2011-June 2017	14500.00	0.00	200.00	2000.00	5000.00	6500.00	800.00	1. Enhance production and productivity of crops 2. Enhance accessibility of affordable inputs and credit to farmers. To provide irrigation facilities to 22100 hectares of cultivable land.	To produce additional 52750 metric tons of food grain per year.	Medium (Mid-term - 2nd to 3rd year of MTSBP)	GOB
4	Sylhet Division Integrated Agricultural Development Project	July 2011-June 2014	8429.00	0.00	200.00	1101.73	5499.04	1628.23	0.00	To provide irrigation facilities to 6930 hectares of cultivable land.	To produce additional 31185 metric tons of food grain per year.	High ((Mid-term -2nd to 3rd year of MTSBP)	GOB
5	Eastern Integrated Irrigation Area Development Project	July 2013-June 2017	10200.00	0.00	200.00	1304.90	5003.05	1812.30	1879.75	1. To construct modern irrigation facilities such as DTW, surface and sub-surface irrigation channel. Reexcavation of khai-nala and hose pipe facilities. 2. Providing training to farmers/owners/operator/fieldman of irrigation equipment	To produce additional 49785 metric tons of food grain per year.	High (Immediate e-1st year of MTSBP)	GOB

SL No	Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Year wise Project cost (Tk in lakh)					Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16	2016-17					
6	Barisal-Patuakhali Irrigation Area Development Project	July 2013-June 2018	12251.41	0.00	0.00	1341.69	5343.00	3013.00	2553.72		Medium (Mid-to long term-within 5th year of MTSBP)		
7	Modernization, Repair and maintenance of BADC's existing seed production, processing and distribution project	July 2013-June 2018	30030.87	0.00	0.00	3000.00	9000.00	9000.00	9030.87		Medium (Mid-to long term-within 5th year of MTSBP)		
8	Minor Irrigation Development Project through Solar Energy use	July 2013-June 2018	19326.00	0.00	0.00	1000.00	5000.00	7000.00	6326.00		Medium (Mid-to long term-within 5th year of MTSBP)		
9	Project for Irrigation Expansion in Poverty Prone Area under greater Rangpur District through Modern Minor Irrigation Practices	July 2012-June 2017	7588.97	0.00	300.00	690.43	2523.95	2300.00	1774.59	To provide irrigation facilities to 6142 hectares of cultivable land.	To produce additional 15355 metric tons of food grain per year.	High (Immediate -1st year of MTSBP)	GOB
10	Construction of Rubber Dam to Utilize Surface Water for Enhancing Agricultural Production Project*	July 2011-June 2016	16650.00	0.00	500.00	2000.00	4613.92	4000.00	5536.08	To provide irrigation facilities to 9600 hectares of cultivable land.	To produce additional 33600 metric tons of food grain per year.	High (Mid-to long term-within 5th year of MTSBP)	GOB
			135945.91	0.00	1600.00	17343.29	46762.02	38605.72	31634.88				

A 6.2.4: Bangladesh Agricultural Research Institute (BARI) Listed expected Projects

SL No	Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing	
					2012-13	2013-14	2014-15	2015-16					
1	Crop production in stress prone areas through technological intervention to address climate change issue	January/2013-Dec/2017	805.00	0.00	100.00	200.00	200.00	200.00	105.00	<ul style="list-style-type: none"> • Create enabling environment for agricultural development • Enhance production and productivity of crops • Enhance accessibility of affordable inputs and credit to farmers <p>To strengthen environmental stress research for sustainable crop production in the problem areas of Bangladesh through development of environmental stress tolerant varieties and technologies;</p> <ul style="list-style-type: none"> • To increase cropping intensity and production in the problem areas through dissemination of stress tolerant variety and technology; • To develop abiotic stress (Salinity, drought, waterlogging, temperature, hail storm etc) tolerant crop varieties through studing the stress tolerant mechanisms; • To develop improved production technologies for the stress areas combating climate change; 		Medium (Mid-to long term-within 5th year of MTSBP)	GoB + Donor Agency

SL No	Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing	
					2012-13	2013-14	2014-15	2015-16					
2	Strengthening pulse production for livelihoods, food and nutritional security, and for sustainable intensification in the cereal based - cropping system in Bangladesh	January/2013-Dec/2017	985.00	0.00	200.00	200.00	200.00	200.00	185.00	<ul style="list-style-type: none"> To produce breeder/foundation seed of different crops; To disseminate potential technologies through participatory field demonstration, field day, training, workshop, symposium, booklets, leaflets, fact sheets and electronic means. 	<ul style="list-style-type: none"> • To produce breeder/foundation seed of different crops; • To disseminate potential technologies through participatory field demonstration, field day, training, workshop, symposium, booklets, leaflets, fact sheets and electronic means. 	Medium (Mid-to long term- within 5th year of MTSBP)	GoB + Donor Agency

SL No	Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing
					2012-13	2013-14	2014-15	2015-16				
3	Intervention of Improved Soil and Water Management Technologies for Crop Production in Coastal and Drought Prone Areas of Bangladesh.	January/2013-Dec/2015	260.00	0.00	100.00	100.00	60.00	0.00	<ul style="list-style-type: none"> • Pulses as an option in rice-fallow and for various production systems. 		High (Mid-to long term-within 5th year of MTSBP)	GoB + Donor Agency
									<ul style="list-style-type: none"> • Enhance production and productivity of crops. • Enhance accessibility of affordable inputs and credit to farmers. <p>To assess the change of climate by analyzing long-term agro-climate parameters and to predict the future scenario;</p> <ul style="list-style-type: none"> • To increase crop and water productivity by the adaptation of improved salinity and drought management techniques for crop production; • To increase surface water irrigation sources during dry season by renovation of existing ponds, canals and ditches of pilot basis; • To minimizing the yield losses of crop yield due to the effect of climate change; • Transfer the matured technologies through field days, trainings, demonstrations and publications. 			
					2050.00	0.00	400.00	500.00	460.00	400.00	290.00	

A 6.2.5: Bangladesh Rice Research Institute (BRRI) Listed expected Projects

SL No	Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/ Medium/ Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
1	Crop Intensification Through Fallow Land Utilization in Greater Sylhet Region (BRRI Part)	July/2012-June/2016	1000.00	0.00	100.00	200.00	300.00	200.00	• Increase production and productivity in the crop sector	Improvement of area specific technologies and good quality seed.	Medium (Mid-term - 2nd to 3rd year of MTSBP)	
2	Magura-Jessore-Narail-Khulna-Satkhira Integrated Agricultural Development Project (BRRI Part)	July/2012-June/2016	1100.00	0.00	100.00	200.00	250.00	300.00	350.00	• Increase production and productivity in the crop sector	Improvement of area specific technologies and good quality seed.	Medium (Mid-term - 2nd to 3rd year of MTSBP)
			2100.00	0.00	200.00	400.00	450.00	600.00	550.00			

A 6.2.6: Department of Agricultural Marketing (DAM) Expected Projects

SL No	Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/ Medium/ Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
1	Magura-Jessor-Narail-Khulna-Satkhira Integrated Agricultural Development Project (DAM part),	July'11-June-16	2000.00	0.00	100.00	100.00	200.00	1000.00	600.00	• Enhance accessibility of affordable inputs and credit to farmers. • Promote market access and product development for crops. 1. To increase income of farmers of the project	1. Improvement of marketing system. 2. Contribution to the national economy.	Medium (Mid-term - 2nd to 3rd year of MTSBP)

SL No	Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
								area by providing fair prices to the farmers through linking farms to markets and extension of marketing services.	3. Improvement of marketing efficiency. 4. Increased income of the farmers and also people engaged in marketing level at the end of the project period.		GoB

SL No	Name of the Programme /Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant output	Priority (High/Medium/Low)	Sources of Financing
					2012-13	2013-14	2014-15	2015-16				
2	Crop Intensification Through Fallow Land Utilization in Sylhet Region (DAM part),	July'12 -June-17	2340.00	0.00	100.00	300.00	500.00	1000.00	440.00	<ul style="list-style-type: none"> • Enhance accessibility of affordable inputs and credit to farmers • Promote market access and product development for crops <ol style="list-style-type: none"> 1. To build up sustainable linkages among farmers, traders, processors and exporters in order to minimize marketing cost and increase profitability by providing marketing information and other services. 2. To develop processing and preservation system for agricultural products at household level with a view to reduce post-harvest losses and ensuring household level nutrition throughout the year. 3. To improve nutritional status, generation of women employment opportunities for poverty alleviation. 4. Generation of employment opportunity in the project areas particularly for village women. 5. Protection from distress sale by absorbing seasonal glut through processing and preservation at home stead level. 	Medium (Mid-term - 2nd to 3rd year of MTSBP)	GoB

A 6.2.7: Seed Certification Agency (SCA) Listed expected Projects

Name of the Programme/Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/Medium/Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
1. Modernization of Seed Certification Agency Project	July/13 - June/17	15000.00	0.00	0.00	1000.00	2500.00	6000.00	5500.00	1. Increasing the capacity of Seed Certification agency, 2. Modernization of Seed Testing facilities for ISTA accreditation. 3. Capacity building of regional and mini regional testing laboratories. 4. Strengthening seed market monitoring activities. 5. Providing home and abroad training and development of ICT.	1. Availability of quality seed increased. 2. Quality of seed test and number of tested samples increased 3. DNA finger printing technology strengthen 4. ISTA accreditation of NSTL achieved. 5. Digitalization of SCA activites. 6. Skilled technical professionals developed. 7. Transport vehicle for HQ, NSTL, RSTL, VTL, RFO and FO offices 8. Facilities of control room at Gazipur increased. 9. Necessary construction and renovation. 10. Productivity and production of crops increased contributing the development of farm families. 11. Tagging system improved	High (Mid-to long term-within 5th year of MTSBP	GOB

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing GOB	
				2012-13	2013-14	2014-15	2015-16					
Strengthening Seed Certification Services Project.	July/13 - June/17	6275.00	0.00	0.00	300.00	1500.00	3000.00	1475.00	1. Establishment of new field level offices and increasing the capacity of field offices to cover more areas to meet increasing demand of seed in the country and to supply efficient and timely field inspection services. 2. Capacity building of Variety Testing Laboratory and modernization of VCU (value for cultivation and uses) test procedure. 3. Capacity building of Seed Testing Laboratories with seed health test facilities. 4. Arranging training for farmers, seed producers, seed dealers, officers & staff. 5. Strengthening market monitoring activities to stop import and sale of adulterated and low quality seed in the market.	1. Production of certified seed increased, quality of seed in the increased, food security achieved. 2. Genetically pure varieties of crops released, farmer's need based varieties made available. 3. Quality of seed test and number of tested samples increased, timely delivery of seed test results. 4. Human resource in seed sector developed, awareness for producing and using high quality seed increased. 5. Availability of quality seed increased, farmers saved from loss and deceptions.	Medium (Mid-to long term-within 5th year of MTSBP)	
		21275.00	0.00	0.00	1300.00	4000.00	9000.00	6975.00				

A 6.2.8: Barind Multipurpose Development Authority (BMDA) Listed expected Projects

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
1. Rehabilitation of Old Deep Tubewells and Construction of Recharge Well on Experimental Basis	July 2012-June 2015	8591.00	0.00	200.00	2000.00	3500.00	2891.00	0.00	1. Creating environment for agricultural development. 2. increase Ground water recharge through recharge well. 3. To rehabilitate existing Packed up/ Choked up/ sand pumping-Deep Tube Wells for continuous irrigation. 4. To carry on present irrigation system of 18000 (approx.) hectare land of the area. 5. To make sure production of 1.56 lac MT (approx.) food grains per annum and to ensure 28.8 lac man-days (approx.) job opportunities for Deep Tube Well's operators, Vending Dealers, security guard and so on.	1. Ground water recharge will be enhanced. 2. Irrigation facilities will be continuing through problematic Deep tubewells. 3. Present irrigation facilities of 18000 hectare land will continue.	High (Mid-term - 2nd to 3rd year of MTSBP)	GOB
2. BMDA Seed Production Strengthening Project*	July 2012-June 2017	3416.43	0.00	100.00	854.75	697.44	869.27	894.97	1. Fill up the deficit of quality paddy and wheat seed in the project area. 2. Motivating farmers for producing improved seed of local and high yielding variety through demonstration plot.	1. 3000 MT seed production capacity buildup of BMDA. 2. Wiping quality seed deficit.	Medium (Mid-to long term)	GOB

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
3. Irrigation Programme Through Surface Water Augmentation*	January 2013- June 2016	9380.99	0.00	200.00	2403.55	2908.89	3868.55	0.00	1. To reduce the stress on ground water by utilization of surface water. 2. To increase water reservoir by re-excavating 30km Khas Khal and constructing 10 nos submerged weir to hold surface water for irrigation and other purposes. 3. To extend controlled irrigation facilities in 12000 hectare land through 275 nos of LLP and 2,51,625m Burried pipe line. 4. To reduce irrigation cost using available surface water instead of ground water. 5. To create additional forest resources through plantation of 1.10 lakh fruits, forest and medicinal saplings and thus improve environmental condition. 6. To develop a mini Eco-park on the bank of the re-excavated canal for recreation of the rural population.	1. 30Km water reservoir will be held surface water. 2. 12000 hectare land will come under surface irrigation. 3. A mini Echo-park will be established for recreation.	High (Immediate -1st year of MTSBP	GOB

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
4. Smart Card Based Prepaid Pump Usages And Energy Measuring System Project (PPUEM)- Phase-II*	July 2012-June 2015	2480.59	0.00	100.00	696.48	894.16	789.95	0.00	1. To supply irrigation water to the crop field with pre-payment system according to farmers actual demand. 2. To establish Pre-paid Pump Usages and Energy Measuring Unit in 4500 Deep Tube Wells. 3. To increase additional employment facilities for the laborers and marginal farmers during and after project implementation. 4. To prevent meter tampering and thus to check pilferage of electricity.	1. Automation of irrigation system of 4500 Deep tube wells will be established. 2. Revenue collection functioning smoothly.	Medium (Mid-term - 2nd to 3rd year of MISBP	GOB
				23869.01	0.00	600.00	5954.78	8000.49	8418.77	894.97		

A 6.2.9: Bangladesh Jute Research Institute (BJRI) Listed expected Projects

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/Medium/Low)	Sources of Financing	
				2012-13	2013-14	2014-15	2015-16					
1. Development and Dissemination of Agricultural Technologies for Jute and Allied Fibre Crops	July 2013 - June 2015	988.00	0.00	100.00	219.25	509.75	159.00	0.00	<ul style="list-style-type: none"> • Enhance production and productivity of crops • Enhance accessibility of affordable inputs and credit to farmers • Promote research and development of high yielding varieties (HYV) of jute and allied fibre crops and diversified jute products. • Disseminate modern jute and jute seed production technologies at farmer's level and popularize the diversified jute products. 	Research Facilities for both agricultural and technological wing will be developed disseminated and popularized.	High (Mid-to long term)	GOB
Total BJRI		988.00	0.00	100.00	219.25	509.75	159.00	0.00				

A 6.2.10: Cotton Development Board (CDB) Listed expected Projects

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
1. Extensive Cotton Cultivation Project*	July, 2013 to June, 2018	12000.00	0.00	200.00	1500.00	3000.00	5000.00	• Create enabling environment for agricultural development • Enhance production and productivity of crops	1. Total area under cotton cultivation will be increased. 2. Technology dissemination and extension capabilities of CDB personnel will be improved. 3. Improve capabilities of Cotton Development Board.	High (Mid-term - 2nd to 3rd year of MTSBP)	GOB
Total		12000.00	0.00	200.00	1500.00	3000.00	5000.00				

A 6.2.11: Bangladesh Applied Nutrition and Human Resource Development Board (BIRTON) Listed expected Projects

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/ Medium/ Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
1. Strengthening of Training and Research Capabilities of BIRTON	July 2012 to June 2016	17600.00	0.00	500.00	2500.00	4000.00	6000.00	• Create enabling environment for agricultural development • Enhance production and productivity of crops a. To strengthen the motivational and awareness building	a. Better training facilities developed b. Better research facilities developed c. Infrastructure developed d. Extent of malnutrition reduced	High (Immediate e-1st year of MTSBP)	GoB

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
								training of BIRTAN (10,080 persons) on food-based nutrition, food hygiene and sanitation, food safety and nutritional security, post-harvest technologies, food processing and preservation, consequences of food adulteration, etc.	e. Nutrition training and education program strengthened f. More number of Highics on nutrition at the text books g.Recommendation of location-wise food intake habit/pattern h. Less intake of rice i. More intake of nutritionally rich pulses, vegetables and fruits j. More intake of meat, milk, eggs and fishes k. Balanced food habit l. Manpower developed		

Name of the Programme/ Projects	Year of starting and completion	Total Project cost (Tk in lakh)	Expenditure upto June 2012 (Tk in lakh)	Year wise Project cost (Tk in lakh)				Dominant strategic objectives and activities	Dominant Output	Priority (High/Medium/Low)	Sources of Financing
				2012-13	2013-14	2014-15	2015-16				
								drought and flood-prone areas, to ensure the proper food basket, and recommend for each of the specific locations according to the availability of the food items grown therein,			
								f. To create essential manpower posts and recruit and develop skilled manpower for effective research and dissemination of technologies on food-based nutrition.			
				17600.00	0.00	500.00	2500.00	4000.00	6000.00	4600.00	

Expected Projects (Priority Area wise)

Thematic Area	Project / Priority Area	Implementing Agency	Year wise Project cost (Tk in Lakh)				Dominant strategic objective	Dominant output	Priority (High/ medium/low and probable year of starting)	Sources of Financing
			2012-13	2013-14	2014-15	2015-16				
A6.3.1. Research	<ul style="list-style-type: none"> 1. Development of varieties tolerant to stresses (e.g. drought, salinity, water logging) 2. Bio-technology research 3. Agro-ecological zone-based research 4. Climate change mitigation/adaptive research 5. Research on the improvement of soil fertility 6. Assessment of impact evaluation on crop production and technology development 7. Development of integrated pest management (IPM) 8. Development of quality planting materials 9. Conservation of soil, plant and genetic resources 10. Quality improvement of horticulture and other crops 11. Yield gap minimization 12. Improvement of quality of food grain and other agricultural produces with more digestible protein 13. Increase in efficiency of water use in rice cultivation 14. Integrated plant nutrients system and 	All Research Institution under NARS system like BIRI, BARL, BJRI, BINA, BSRISRDI, under the coordinated leadership of Bangladesh Agriculture Research Council (BARC) and KGF	160.00	2426.77	11742.44	27859.54	60460.31	<ul style="list-style-type: none"> • Create enabling environment for agricultural development • Enhance production and productivity of crops 1. Development of varieties tolerant to stresses (e.g. drought, salinity, water logging) 2. Bio-technology research 3. Agro-ecological zone-based research 4. Climate change mitigation/adaptive research 5. Assessment of impact evaluation on crop production and technology development 6. Development of integrated pest management (IPM) 7. Development of quality planting materials 8. Quality improvement of horticulture and other crops 9. Crop zoning based crop production, 10. Improved farming system 	High (Mid to long term)	GoB+Donor

Thematic Area	Project / Priority Area	Implementing Agency	Year wise Project cost (Tk in Lakh)					Dominant strategic objective	Dominant output	Priority (High/ medium/low and probable year of starting)	Sources of Financing
			2012-13	2013-14	2014-15	2015-16	2016-17				
	sustainable soil management system; 15. Post-harvest technology, preservation and relevant agricultural machinery; 16. Higher photosynthetic efficiency; 17. Technologies for maximum use of commodities and their by-products for value addition; 18. Fruits and vegetables for off-season production including preservation, storability and tolerance to transportation damage 19. Development of hybrid technology for vegetables, maize and sunflowers; 20. Management of soil and plant nutrients with balanced use of organic nutrients; 21. Management of on-farm water resources in both irrigated and rain-fed agriculture; 22. Conservation of soil, plant and genetic resources; 23. Assessing the environmental impacts of declining ground water level; 24. Research on tillage operation to reduce turn-around time, multiple cropping and relay cropping;							planning and implementation 10. Crop diversification based agro-ecological impact 11. Yield gap minimization 12. Pre-harvest and post-harvest loss minimization 13. Reduction of Nutritional Problems			

Thematic Area	Project / Priority Area	Implementing Agency	Year wise Project cost (Tk in Lakh)				Dominant strategic objective	Dominant output	Priority (High/medium/low and probable year of starting)	Sources of Financing
			2012-13	2013-14	2014-15	2015-16				
A6.3.2. Input Management	<p>1. Ensuring the supply of high yielding and hybrid seed.</p> <p>2. Ensuring the supply of quality fertilizer.</p> <p>3. Modernization of Irrigation management with infrastructure development.</p> <p>4. Improve soil fertility.</p> <p>5. Development of ICT based input distribution management.</p> <p>6. Training and support services for private research and development, variety testing and registration, plant material inspection and maintaining germplasm, supporting seed associations and promotion of farmer and community-based seed program.</p> <p>7. Strengthening agencies in order to ensure quality of seed at all stages of its production - breeder, foundation and certified seed.</p> <p>8. Creating facilities and infrastructure support for hybrid seed research, marketing and development</p> <p>9. Training and technical assistance to farmers to extend improved methods of seed production, testing and storage</p>	BADC, DAE, BMDA, SCA	280.00	4246.85	20549.26	48754.20	105805.54	<ul style="list-style-type: none"> • Create enabling environment for agricultural development • Enhance production and productivity of crops • Enhance accessibility of affordable inputs and credit to farmers 1. Ensuring the supply of high yielding and hybrid seed 2. Ensuring the supply of quality fertilizer 3. Modernization of irrigation management with infrastructure development 4. Better utilization of surface water in irrigation projects 5. Non overlapping command area development. 4. Development of ICT based input distribution management 5. Command area development activities in surface water irrigation project and to explore expansion of irrigation. 	High (Mid-to long term)	GoB+Donor

Thematic Area	Project / Priority Area	Implementing Agency	Year wise Project cost (Tk in lakh)					Dominant strategic objective	Dominant output	Priority (High/medium/low and probable year of starting)	Sources of Financing
			2012-13	2013-14	2014-15	2015-16	2016-17				
	10. Command area development in surface water irrigation. 11. Water conservation for irrigation and other uses. 12. Climate change adoption and mitigation.										
A6.3.3.Tech nology Disseminati on and mechanizati on	1. Patronizing mechanization in agriculture 2. Strengthening research-extension-farmer-investor-market liaison. 3. Ensuring the extension of local appropriate technology. 4. Technology development for production, processing and preservation of quality seed including hybrid seed. 5. Promotion of ICT based E-Krishi. 6. Awareness building program, training, demonstration.	DAE, AIS, NARS,BADC	160.00	2426.77	11742.44	27859.54	60460.31	<ul style="list-style-type: none"> • Create enabling environment for agricultural development. • Enhance production and productivity of crops. • Enhance accessibility of affordable inputs and credit to farmers. • Enhance land productivity and promote sustainable land use and environmental conservation. 1. Development of qualitative demonstration, field days, agricultural exhibition. 2. Decentralized and farming system approach to extension system. 3. Priority to marginal and small farmers. 4. Promotion of mechanized agriculture. 	<ul style="list-style-type: none"> 1. Enhanced mechanized farming. 2. Research-extension-farmer-investor-market linkage established 3. Reduced post-harvest loss. 4. Development of varieties tolerant to stresses (e.g. drought, salinity, water logging). 5. Agricultural Information System enhanced. 6. E-Krishi popularized all over the country. 7. Public awareness raised. 8. Improved weather forecasting technique. 9. Accessibility to information will be increased. 10.Trained extension personnel. 	High (Mid-to long-term within 5th year of MTSBP)	Gob+Donor

Thematic Area	Project / Priority Area	Implementing Agency	Year wise Project cost (Tk in Lakh)					Dominant strategic objective	Dominant output	Priority (High/medium/low and probable year of starting)	Sources of Financing
			2012-13	2013-14	2014-15	2015-16	2016-17				
								5. Community seed production, storage and distribution 6. MIS (ICT) based knowledge management system 7. Business development initiative in agriculture especially capacity building of extension personnel 8. Expansion of community based e-information centers 9. Efficient utilization of mass media (print and electronic media) for agri information/technology dissemination.			
A6.3.4. Agricultural diversification & Increased Crop production	1. Crop zoning based crop production, planning and implementation 2. Proper utilization of land in unused area, char, barind, haor, hill tracts and coastal areas 3. Crop diversification based agro-ecological impact 4. Yield gap and knowledge gap minimization 5. Pre-harvest and post-harvest loss minimization	DAE, BRRI, BARI, BJRI, BINAS, BSRI, SRDI, BADC, CDB	120.00	1820.08	8806.83	20894.66	45345.23	• Create enabling environment for agricultural development. • Enhance production and productivity of crops. • Enhance accessibility of affordable inputs and credit to farmers. 1. To attain self-sufficiency in food grain production along with increased production of other nutritional crops; 2. Income of farmers rose. 3. Production of HYV increased. 4. Increased use of surface water for irrigation. 5. Yield gap minimization. 6. Commercial farming promoted. 7. Decentralized extension system introduced.		High (Mid to long term)	Gob+Donor

Thematic Area	Project / Priority Area	Implementing Agency	Year wise Project cost (Tk in lakh)				Dominant strategic objective	Dominant output	Priority (High/ medium/low and probable year of starting)	Sources of Financing	
2012-13	2013-14	2014-15	2015-16	2016-17							
							<p>2. Increase productivity and real income of farming families in rural areas on sustainable basis;</p> <p>3. To promote adoption of modern agricultural practices in drought, submergence and saline prone areas to encourage research on adaptation to climate change;</p> <p>4. To gradually shift the main HYV, irrigation-fed Boro rice production to the Southern areas and to utilize new salinity, submergence, and other stress tolerant varieties and also to utilize abundant surface water for irrigation;</p> <p>5. Proper use of genetically modified technology in agriculture;</p> <p>6. Utilize abundant surface water for irrigation;</p> <p>7. Utilize the irrigated north-eastern uplands to grow more high value cash crops like wheat, maize, corn etc. and horticulture products;</p>				

Thematic Area	Project / Priority Area	Implementing Agency	Year wise Project cost (Tk in Lakh)					Dominant strategic objective	Dominant output	Priority (High/medium/low and probable year of starting)	Sources of Financing				
			2012-13	2013-14	2014-15	2015-16	2016-17								
								8. To emphasize on yield gap reduction and also to emphasize on maximization of yield in Aus and Aman crops with similar care as the Boro cultivation for ensuring self-sufficiency in food grain;	9. To strengthen farming system/cropping system/whole farm approach based technology transfer	10. Increase production of jute, measures have to be taken to improve jute variety and retting system to obtain quality fibers;	11. To include oil crops and spices for increased production	12. Promotion of pulse crop;	13. To bring coastal and hilly areas under intensive cultivation;	14. Encourage comparatively large farm to graduate into commercial farming;	15. To promote the use of modern technologies with the help of ICT;

Thematic Area	Project / Priority Area	Implementing Agency	Year wise Project cost (Tk in lakh)					Dominant strategic objective	Dominant output	Priority (High/medium/low and probable year of starting)	Sources of Financing
			2012-13	2013-14	2014-15	2015-16	2016-17				
A6.3.5.	1. Commercialization of agriculture marketing, 2. Wholesale market development, promotion of agro-processing industries, market management. 3. Improvement of storage facilities, particularly for marginal and small farmers. 4. Development of ICT based market management. 5. Prioritization of production of high value crops. 6. Development of public/private agro industries.	DAM and Hortex	40.00	606.69	2935.61	6964.89	15115.08	<ul style="list-style-type: none"> • Promote market access and product development for crops. • Create enabling environment for agricultural development. 	<ol style="list-style-type: none"> 1. Wholesale market developed. 2. Growers selling their products with fair returns. 3. MIS development of DAM. 4. Improved marketing facilities for marginal and small farmers. 5. Performance of agro-processing industries enhanced. 	High (Mid-to-long term-within 5th year of MTSBP)	GoB+Donor

Thematic Area	Project / Priority Area	Implementing Agency	Year wise Project cost (Tk in Lakh)					Dominant strategic objective	Dominant output	Priority (High/medium/low and probable year of starting)	Sources of Financing
			2012-13	2013-14	2014-15	2015-16	2016-17				
								3. Modernization and mechanization of food storage system along with modern weighing and bagging, conveyors for aeration, adequate drying system, entoleters etc. is needed in order to enhance efficient handling and distribution of food grain, and increase shelf life and maintain quality.			
A6.3.6.Institutional & Human Resource Development	1. Strengthening research-extension-farmer-investor-market liaison. 2. Development of trained manpower. 3. Develop the efficiency of manpower of different organizations under Ministry of Agriculture. 4. Development of ICT in every sector of implementing agencies including Ministry of Agriculture. 5. Institutional capacity development to promote Public-Private partnership. 6. Steps to be taken to ensure the availability of labor.	Ministry of Agriculture (MoA) and all implementing agencies	40.00	606.69	2935.61	6964.89	15115.08	<ul style="list-style-type: none"> • Create enabling environment for agricultural development • Enhance production and productivity of crops 	<ol style="list-style-type: none"> 1. Linking with "Digital Bangladesh Secretariat" established 2. E-Governance enhanced. 3. All the agencies under ministry is connected to a common network. 4. Knowledge gap at extension agents and farmers level minimized. 5. Performance of agro-processing industries improved. 	High (Mid to long term)	GoB

Thematic Area	Project / Priority Area	Implementing Agency	Year wise Project cost (Tk in lakh)				Dominant strategic objective	Dominant output	Priority (High/medium/low and probable year of starting)	Sources of Financing	
			2012-13	2013-14	2014-15	2015-16					
	7. Establishment of small farmers and training institute to train local farmers		40.00	606.69	2935.61	6964.89	15115.08	3. Business development initiative in agriculture especially capacity building of extension personnel 4. Establishment of ATIs to meet the growing needs of extension personnel including women extension agents. 5. Emphasize ATIs and CERDI to provide training in agricultural management, instruction in the production of training materials, training of trainers and of extension agents.	6. Well-coordinated field level activities. 7. Establishment of training institute for small and marginal farmer. 8. Intensive training for extension agents.		



Annex-7

Department/Agency Wise Annual Performance Plans²⁶

A 7.1: Secretariat: Activities, Output Indicators and Targets

Activities	Output Indicator	Related Strategic Objectives	Unit of measurement	Revised Target 2010-11	Actual 2010-11	Target 2011-12	Revised Target 2011-12	Medium Term Targets				
								2012-13	2013-14	2014-15	2015-16	2016-17
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Preparation of MBF			Number	1	1	1	1	1	1	1	1	1
2. Publication of Annual Report	Annual Report published	1		0	0	0	0		1	1	1	1
3. Amendment of NAP	NAP amended											1
4. Enactment of new Act, say on agriculture FDI										1		
5. Review and updating of MTSBP										1		
6. ADP Monitoring and Evaluation Report for the MOA												
7. Annual Financial Report of the MOA												
8. Strengthening MIS									1	1	1	1

A 7.2: Department of Agricultural Extension: Activities, Output Indicators and Targets

Activities	Output Indicator	Related Strategic Objectives	Unit of measurement	Revised Target 2010-11	Actual 2010-11	Target 2011-12	Revised Target 2011-12	Medium Term Targets				
								2012-13	2013-14	2014-15	2015-16	2016-17
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Promotion of use of innovated varieties and technologies by farmers through training, demonstrations, fairs, rallies, seminars, workshops and publications	Farmers trained Exhibitions conducted Field days/rallies organized Agriculture Fairs conducted Motivation Tours conducted	1	Lakh	7.15	7.42	8.00	7.50	7.50	8.00	8.50	9.00	9.25
			Lakh	1.35	1.33	1.40	1.40	1.40	1.45	1.50	1.52	1.58
			Number (in thousands)	32.15	29.05	30.50	29.20	29.70	30.00	30.50	30.50	30.50
			Number	238	238	540	529	530	550	550	570	580
			Number	141	142	250	280	386	350	370	400	420
2. Provision of E-agriculture based information services	Computers distributed and internet access provided to "Upazilas"	1	Number of beneficiaries	133	133	194	194	200	250	300	325	350
3. Ensuring supply of fertilizers and other inputs at administered prices	Fertilizer distribution Inspected	1	Number (inspection)	235	237	239	241	243	244	245	246	247

²⁶ In the MTSBP, Department/Agency Wise Annual Performance Plans have been made mostly on the basis of 2012-13 Ministry Budget Framework information. Any change/revision will be reflected in the revised document.

4. Production, certification and distribution of breeder, foundation, certified and truthfully labeled seeds	Foundation, certified seeds distributed	1	Metric Ton (in thousands)	1.36	1.26	1.30	1.34	1.31	1.32	1.32	1.34	1.35
5. Production, certification and distribution of breeder, foundation and truthfully labeled seeds tolerant to salinity, drought and water submergence	Foundation seed of paddy Distributed	1	Metric Ton	360	360	400	400	410	415	420	400	410
6. Extension of soil testing facilities to Upazila and Union level.	Soil samples analyzed	2	Number (in thousands)	53.00	53.97	54.00	50.00	45.00	46.00	47.00	48.00	50.00
7. Popularize among the farmers the use of organic fertilizer, green manure and bio fertilizer	Heaps prepared at farmers' homesteads	2	Lakh	20.0	19.8	16.0	15.5	15.5	14.5	15.5	1.20	1.10
	Demonstration of green manure conducted		Number (in thousands)	5.80	5.68	5.60	5.60	5.80	6.00	6.20	6.30	6.40

A 7.3: Bangladesh Agriculture Development Corporation: Activities, Output Indicators and Targets

Activities	Output Indicator	Related Strategic Objectives	Unit of measurement	Revised Target 2010-11	Actual 2010-11	Target 2011-12	Revised Target 2011-12	Medium Term Targets				
								2012-13	2013-14	2014-15	2015-16	2016-17
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Promotion of use of innovated varieties and technologies by farmers through training, exhibitions, fairs, rallies, seminars, workshops and publications	Trained Farmers	1	Person (in thousands)	18.00	18.00	20.00	20.00	22.00	24.00	26.00	28.00	30.00
2. Expansion of minor irrigation coverage by encouraging optimal use of surface water, increasing the area of arable land by reducing water logging and submergence	Expanded irrigation area	1	Lakh Hector	5.35	5.35	5.70	5.70	6.00	6.50	6.85	7.00	7.15
	Increased arable land		Hector(in thousands)	97.00	97.70	89.00	89.60	90.00	90.50	90.60	90.70	90.80
3. Procurement of irrigation machinery and increasing its availability	Machinery items procured	1	Number (in thousands)	1.90	1.90	0.99	0.99	1.53	1.55	1.60	1.63	1.70
4. Ensuring the supply of fertilizers and other inputs at administered prices	Non-urea fertilizer distributed	1	Lakh Metric Ton	5.09	5.09	7.00	7.00	9.50	10.50	12.00	13.50	15.00
5. Production, certification and distribution of breeder, foundation, certified and truthfully labeled seeds	Produced seeds	1	Lakh Metric Ton	1.43	1.07	1.54	1.27	1.36	1.45	1.53	1.59	1.64

6. Production, certification and distribution of breeder, foundation and truthfully lebel seeds tolerant to salinity, draught and water submergence	Produced seeds	1	Metric Ton (in thousands)	-	-	1.60	1.60	2.40	4.00	4.50	5.00	5.50
7. Encouraging participation of the private sector in production and development of seeds through meetings, seminars, fairs and technology exchange	Arranged meeting/ seminar	1	Number	25	25	25	25	30	35	40	40	45

A 7.4: Bangladesh Rice Research Institute: Activities, Output Indicators and Targets

Activities	Output Indicator	Related Strategic Objectives	Unit of measurement	Revised Target 2010-11	Actual 2010-11	Target 2011-12	Revised Target 2011-12	Medium Term Targets				
								2012-13	2013-14	2014-15	2015-16	2016-17
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Innovation of high yielding varieties of different crops, and technologies	Innovated varieties of paddy and other crops	1	Number	1	0	1	1	1	1	1	1	1
	Innovated agriculture technologies			1	0	1	1	1	1	1	1	1
2. Innovation of salinity, draught and water submergence tolerant technologies and varieties of rice and other crops	Salinity, draught and water submergence resistant crop varieties developed and technologies innovated	1	Number	2	2	1	2	1	1	1	1	1
3. Promotion of use of innovated varieties and technologies by farmers through training, exhibitions, fairs, rallies, seminars, workshops and publications	Trained farmers	1	Number (in thousands)	2.20	2.00	2.50	2.50	3.00	3.50	4.00	4.50	5.00
	Field demonstration			2.00	2.00	2.50	2.50	3.00	3.50	4.00	4.50	5.00
4. Production, certification and distribution of breeder, foundation, certified and truthfully lebel seeds	Produced and distributed breeder seeds	1	Metric Ton	125.00	115.31	130.00	125.00	130.00	135.00	140.00	145.00	150.00
5. Production, certification and distribution of breeder, foundation and truthfully lebel seeds tolerant to salinity, draught and water submergence	Produced and distributed breeder seeds	1	Metric Ton	15.00	15.00	20.00	17.00	20.00	25.00	30.00	35.00	40.00
6. Encouraging the participation of private sector in production and development of seeds through meetings, seminars, fairs and technology exchange.	Technologies transferred	1	Number	24	22	24	24	25	26	27	28	30

A 7.5: Bangladesh Agricultural Research Institute: Activities, Output Indicators and Targets

Activities	Output Indicator	Related Strategic Objectives	Unit of measurement	Revised Target 2010-11	Actual 2010-11	Target 2011-12	Revised Target 2011-12	Medium Term Targets				
								2012-13	2013-14	2014-15	2015-16	2016-17
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Innovation of high yielding varieties of different crops, and technologies	Innovated varieties	1	Number	15	15	15	15	16	16	16	16	16
	Innovated technologies			-	-	25	25	25	25	25	25	25
2. Promotion of use of innovated varieties and technologies by farmers through training, exhibitions, fairs, rallies, seminars, workshops and publications	Farmers trained	1	Number (Batch)	125	125	125	125	150	200	250	300	350
			Person (in thousands)	5.00	5.00	5.00	5.00	5.50	6.00	6.50	7.00	7.50
3. Production, certification and distribution of breeder, foundation, certified and truthfully level seeds	Produced breeder and truthfully level seeds	1	Metric ton (in thousands)	1.20	1.16	1.20	1.20	1.20	1.30	1.30	1.40	1.50
4. Encouraging the participation of private sector in production and development of seeds through meetings, seminars, fairs and technology exchange.	Memorandum of Understanding signed	1	Number	-	-	3	3	3	3	3	3	3
5. Popularize among the farmers the use of organic fertilizer, green fertilizer and microbe fertilizer	Books and leaflets distributed	2	Number	-	-	3	3	4	5	6	7	8
	Crop pattern based on organic fertilizer			-	-	3	3	4	4	5	5	5

A 7.6: Bangladesh Jute Research Institute: Activities, Output Indicators and Targets

Activities	Output Indicator	Related Strategic Objectives	Unit of measurement	Revised Target 2010-11	Actual 2010-11	Target 2011-12	Revised Target 2011-12	Medium Term Targets				
								2012-13	2013-14	2014-15	2015-16	2016-17
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Innovation of high yielding varieties of different crops, and technologies	Innovated new varieties of jute	1	Number	2	2	2	1	1	1	1	1	1
	Innovated technology			1	1	2	2	3	3	4	4	4
2. Promotion of use of innovated varieties and technologies by farmers through training, exhibitions, fairs, rallies, seminars, workshops and publications	Training provided	1	Number (in thousands)	1.00	1.00	1.00	1.00	1.00	1.50	2.00	2.00	2.50

3. Production, certification and distribution of breeder, foundation, certified and truthfully labeled seeds	Produced breeder seeds	1	Kilogram (in thousands)	2.82	2.82	2.95	2.95	3.00	3.10	3.25	3.50	3.50
	Produced truthfully labeled seeds		Metric ton	86	86	100	100	100	100	110	115	120
4. Encourage participation of the private sector in production and development of seeds through meetings, seminars, fairs and technology exchange	Memorandum of understanding signed	1	Number	1	1	1	1	2	2	2	2	2
	Fairs organized			5	5	5	5	5	5	5	5	5

A 7.7: Bangladesh Institute of Nuclear Agriculture: Activities, Output Indicators and Targets

Activities	Output Indicator	Related Strategic Objectives	Unit of measurement	Revised Target 2010-11	Actual 2010-11	Target 2011-12	Revised Target 2011-12	Medium Term Targets				
								2012-13	2013-14	2014-15	2015-16	2016-17
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Innovation of high yielding varieties of different crops, and technologies	Innovated varieties of paddy and wheat	1	Number	3	3	5	5	5	4	6	5	6
	Innovated varieties of pulse, oil seed, vegetable, fruit and spices			4	4	6	6	6	7	7	7	7
2. Innovation of salinity, drought and water submergence tolerant technologies and varieties of rice and other crops	Innovation of BINA-- 8 (tolerant to salinity) and BINA-9(tolerant to submergence)	1	Number	1	1	2	2	2	2	2	2	2
3. Promotion of use of innovated varieties and technologies by farmers through training, exhibitions, fairs, rallies, seminars, workshops and publications	Training	1	Person (in thousand)	1.60	1.55	1.65	1.65	1.70	1.75	1.75	1.80	1.80
	Block and experimental exhibitions organized	1	Number (in thousand)	1.00	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70
4. Production, certification and distribution of breeder, foundation, certified and truthfully labeled seeds	Seeds produced and distributed	1	Metric ton	100	100	110	120	130	140	150	160	170
5. Production, certification and distribution of breeder, foundation and truthfully labeled seeds tolerant to salinity, drought and water submergence	Seeds distributed	1	Metric ton	10	10	15	15	20	20	20	25	25
6. Popularize among the farmers the use of organic fertilizer, green fertilizer and microbe fertilizer	Microbe fertilizer produced	1	Metric ton	2	2	5	5	6	6	7	8	8
	Innovated varieties of microbe fertilizer developed		Number	1	0	1	1	1	1	1	1	1

A 7.8: Bangladesh Sugarcane Research Institute: Activities, Output Indicators and Targets

Activities	Output Indicator	Related Strategic Objectives	Unit of measurement	Revised Target 2010-11	Actual 2010-11	Target 2011-12	Revised Target 2011-12	Medium Term Targets				
								2012-13	2013-14	2014-15	2015-16	2016-17
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Innovation of high yielding varieties of different crops, and technologies	Innovated varieties developed	1	Number	1	1	1	1	1	0	1	0	1
2. Promotion of use of innovated varieties and technologies by farmers through training, exhibitions, fairs, rallies, seminars, workshops and publications	Farmers trained	1	Person (in thousands)	1.30	1.28	1.50	1.50	1.60	1.65	1.70	1.85	1.90
	Block Exhibitions organized		Number	270	268	280	493	500	535	550	580	600
3. Production, certification and distribution of breeder, foundation, certified and truthfully labeled seeds	Seeds produced	1	Metric ton	300	300	350	320	360	370	390	400	420

A 7.9: Barendra Multipurpose Development Authority: Activities, Output Indicators and Targets

Activities	Output Indicator	Related Strategic Objectives	Unit of measurement	Revised Target 2010-11	Actual 2010-11	Target 2011-12	Revised Target 2011-12	Medium Term Targets				
								2012-13	2013-14	2014-15	2015-16	2016-17
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Promotion of use of innovated varieties and technologies by farmers through training, exhibitions, fairs, rallies, seminars, workshops and publications	Farmers trained	1	Person (in thousands)	7.00	5.50	5.50	5.00	5.50	6.00	6.20	6.50	7.30
	Plot exhibitions organized		Number (plot)	100	150	150	260	175	170	160	150	145
2. Expansion of minor irrigation coverage by encouraging optimal use of surface water, and increasing the area of arable land by reducing water logging and sub-mergence	Excavated canal	1	Kilometer	-	-	35	35	250	250	250	215	230
	Cross dams constructed			-	-	5	5	60	70	70	35	40
	Rubber dams constructed			-	-	-	-	1	1	2	1	3
	Ponds re-excavated			-	-	-	-	200	200	260	200	230
	Dug wells excavated			-	-	40	40	30	30	32	35	42
	Area covered under complementary irrigation		Hector (in thousands)	-	-	1.75	1.75	12.50	12.50	12.50	13.00	13.20
3. Procurement of irrigation machineries and increasing its availability	Deep tube well installed and connected to electricity	1	Number	800	800	460	500	650	675	700	725	750
	Energy driven pump used			-	-	-	-	20	50	50	70	75
	Irrigation machinery under pre-paid meter system		Number (in thousands)	-	-	-	-	1.00	2.00	1.50	1.55	1.60

A 7.10: Bangladesh Agricultural Research Council: Activities, Output Indicators and Targets

Activities	Output Indicator	Related Strategic Objectives	Unit of measurement	Revised Target 2010-11	Actual 2010-11	Target 2011-12	Revised Target 2011-12	Medium Term Targets				
								2012-13	2013-14	2014-15	2015-16	2016-17
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Innovation of high yielding varieties of different crops, and technologies.	New research action plans prepared	1	Number	30	28	32	32	35	37	37	39	38
	New research proposals approved			35	35	40	34	40	40	40	40	40
	New research proposals funded		Taka in crore	0.85	0.65	1.40	1.30	1.40	1.40	1.40	1.40	1.40
2. Promotion of use of innovated varieties and technologies by farmers through training, exhibitions, fairs, rallies, seminars, workshops and publications	Farmers trained	1	Person	36	35	40	40	42	44	46	48	50

A 7.11: Cotton Development Board: Activities, Output Indicators and Targets

Activities	Output Indicator	Related Strategic Objectives	Unit of measurement	Revised Target 2010-11	Actual 2010-11	Target 2011-12	Revised Target 2011-12	Medium Term Targets				
								2012-13	2013-14	2014-15	2015-16	2016-17
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Innovation of high yielding varieties of different crops, and technologies.	Innovation of varieties	1	Number	1	1	1	1	1	1	1	1	1
2. Promotion of use of innovated varieties and technologies by farmers through training, exhibitions, fairs, rallies, seminars, workshops and publications	Farmers training course	1	Number	4	4	4	4	4	4	6	6	6
	Participants			18.00	15.82	19.00	18.00	20.00	22.00	24.00	16.00	27.00
	Exhibition and trial	1	Number (in thousands)	57	55	60	55	65	70	75	80	85
3. Production, certification and distribution of breeder, foundation, certified and truthfully labeled seeds	Production and distribution of truthfully labeled seeds	1	Metric ton	220	130	225	200	220	240	260	280	300
4. Encouraging the participation of the private sector in production and development of seeds through meetings, seminars, fairs and technology exchange	Workshop	1	Number	3	3	3	3	4	4	4	4	4
	Meeting/ Seminar			1	1	1	1	2	2	2	2	2
5. Marketing and ginning of cotton seeds	Cotton seeds ginned	1	Metric ton	325	182	425	300	450	475	500	525	550

A 7.12: Seed Certification Agency: Activities, Output Indicators and Targets

Activities	Output Indicator	Related Strategic Objectives	Unit of measurement	Revised Target 2010-11	Actual 2010-11	Target 2011-12	Revised Target 2011-12	Medium Term Targets				
								2012-13	2013-14	2014-15	2015-16	2016-17
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Promotion of use of innovated varieties and technologies by farmers through training, exhibitions, fairs, rallies, seminars, workshops and publications	Trained Farmers	1	Person	450	400	450	450	400	450	500	550	600
2. Production, certification and distribution of breeder, foundation, certified and truthfully labeled seeds	Amount of certified paddy seeds-45	2	Metric ton	30	30	70	65	100	110	120	130	140
	Wheat-3			2.5	2.5	4	4	5	6	8	9	10
	Potato-2			1.8	1.8	3	3	4	5	6	7	8
	Jute-13			4	4	4	4	5	6	7	8	10
	Jute-13			4	4	4	4	5	6	7	8	10
3. Production, certification and distribution of breeder, foundation and truthfully labeled seeds tolerant to salinity, drought and water submergence	Breeder seeds certified	2	Metric ton(in lakh)	4.16	4.17	4.18	5.00	5.17	6.17	7.18	8.18	10.20
4. Ensuring the standardization of seeds	Seed samples examined	2	Metric ton(in thousands)	25.50	35.29	26.96	38.82	46.97	51.00	56.00	62.00	65.00
5. Encouraging participation of the private sector in production and development of seeds through meetings, seminars, fairs and technology exchange.	Participants of Workshop, Field day, Seminars	2	Person (in thousands)	1.00	.60	1.00	1.20	2.00	2.50	2.60	2.80	2.80

A 7.13: Agricultural Information Services: Activities, Output Indicators and Targets

Activities	Output Indicator	Related Strategic Objectives	Unit of measurement	Revised Target 2010-11	Actual 2010-11	Target 2011-12	Revised Target 2011-12	Medium Term Targets				
								2012-13	2013-14	2014-15	2015-16	2016-17
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Promotion of use of innovated varieties and technologies by farmers through training, exhibitions, fairs, rallies, seminars, workshops and publications	Trained farmers	1	Number (in thousands)	2.00	2.00	2.20	2.20	2.40	2.40	2.48	2.60	2.60
	Poster printed and distributed			50	50	50	50	55	55	60	60	60
	Booklet printed and distributed			50	50	50	50	55	55	60	60	60
	Leaflet printed and distributed			50	50	50	50	55	55	60	60	60
2. Provision of E-agriculture based information services	Video/ Film filler made and displayed	1	Number	5	5	6	6	7	7	8	8	8
	Advertisement in Television and Radio			10	10	10	10	11	11	12	12	14
	Cinema show			50	50	55	55	60	65	70	70	70
	Online agriculture technology transfer		Number (in thousands)	-	-	1.50	1.50	1.60	1.70	1.80	1.90	2.00
	Agriculture information service at finger touch			-	-	1	1	3	3	4	4	4
	Updated Website		Number	-	-	5	5	10	10	10	10	10
	E- Book			10	15	20	25	30	35	40	45	50
	Broadcasted "Mati o Manush" Program			100	100	104	104	100	108	110	110	110
	Talk show			40	40	41	41	45	45	50	50	50
3. Increasing awareness about food value and nutrition through publications, meetings and workshops	Film Filler	1	Number	2	2	2	2	3	3	4	5	6
	Video footage			5	5	6	6	7	7	8	8	8
	Poster		Number (in thousands)	50i	50	50	50	55 i	55	60	60	60
	Booklet			50	50	50	50	55	55	60	60	60
	Leaflet		Number	50	50	50	50	55	55	60	60	60
	Cinema show			840	840	840	840	810	820	830	830	830
4. Popularize among the farmers the use of organic fertilizer, green fertilizer and microbe fertilizer	Establishment of Community Radio	2	Number	1	1	1	1	1	1	1	1	1
	Documentary prepared			10	10	12	12	15	16	18	20	20
	Fillers prepared			10	10	13	13	15	20	20	20	20
5. Publicity and preservation of information on agricultural marketing and development	Database on agriculture market related information	3	Number	10	10	12	12	16	17	18	19	20
	Online information covering agriculture market related issues			10	10	12	12	16	17	18	19	20
	Farmers database			-	10	10	10	10	10	10	10	10

A 7.14: Department of Agricultural Marketing: Activities, Output Indicators and Targets

Activities	Output Indicator	Related Strategic Objectives	Unit of measurement	Revised Target 2010-11	Actual 2010-11	Target 2011-12	Revised Target 2011-12	Medium Term Targets				
								2012-13	2013-14	2014-15	2015-16	2016-17
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Publicity and preservation of information on agricultural marketing and development	Publish market price in Website	1	Number	417	417	417	417	417	417	417	417	417
	Publish Bulletin	3		300	317	320	325	327	328	330	332	340
	Construction of Market, Assembling centre, Cool chamber and processing centre	3	Number	106	106	106	106	156	156	156	156	156
	Market infrastructure constructed/repaired			1	1	6	0	6	7	8	9	10
	Farmers marketing group, processing group and farmers group	3	Number (in thousands)	1.09	1.09	1.15	1.15	1.50	1.50	1.50	1.50	1.50
3. Providing technological support and technical assistance to agricultural entrepreneurs and encouraging them invest in agro-processing and agro-business	Entrepreneurs hip created		Person (in thousands)	30.54	30.54	32.00	32.00	35.00	35.00	35.00	35.00	35.00
	Establish training cum agro-processing centre		Number	10	10	10	10	14	14	14	14	14

A7.15 Soil Resource Development Institute: Activities, Output Indicators and Targets

Activities	Output Indicator	Related Strategic Objectives	Unit of measurement	Revised Target 2010-11	Actual 2010-11	Target 2011-12	Revised Target 2011-12	Medium Term Targets				
								2012-13	2013-14	2014-15	2015-16	2016-17
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Identification of soil and land resources through soil survey and classification of land and soil resources in terms of their productivity	Field surveys undertaken	2	Number	30	30	40	40	40	40	40	50	55
	Upazilla directories printed			30	30	40	40	40	40	40	50	55
2. Extension of soil test facilities to Upazila and Union level	Soil samples analyzed	Farmers trained	Number	50.00	50.00	50.00	50.00	40.00	50.00	50.00	60.00	70.00
			Number (in thousands)	12.00	12.00	7.00	7.50	0.30	0.50	0.70	0.90	1.00
3. Popularize among the farmers the use of organic fertilizer, green fertilizer and microbe fertilizer												

**A 7.16: Bangladesh Applied Nutrition and Human Resource Development Board:
Activities, Output Indicators and Targets**

Activities	Output Indicator	Related Strategic Objectives	Unit of measurement	Revised Target 2010-11	Actual 2010-11	Target 2011-12	Revised Target 2011-12	Medium Term Targets				
								2012-13	2013-14	2014-15	2015-16	2016-17
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Promotion of use of innovated varieties and technologies by farmers through training, exhibitions, fairs, rallies, seminars, workshops and publications	Farmers, school teachers, social workers and others trained	1	Person in thousands)	3.60	3.21	4.00	3.60	4.15	4.20	4.30	4.50	4.65
2. Increasing awareness about food values and nutrition through publications, meetings and workshops	Workshops organized	1	Number	4	2	8	6	8	9	10	10	10
	Short stories, forecast through Radio			24	14	24	24	24	24	24	24	24
	Fairs organized			8	6	8	8	8	10	12	12	12

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