CHAPTER 10

ENVIRONMENTAL PROTECTION, CLIMATE CHANGE AND DISASTER MANAGEMENT

SECTORAL OVERVIEW

In 1987, the United Nations released the Brundtland Report[[1]](#footnote-2), which defines sustainable development as 'development which meets the needs of the present without compromising the ability of future generations to meet their own needs’. This report was the result of a realization by the world community that economic progress, which brought material prosperity to large sections of the world population, also imposes costs on current and future generations in terms of environmental degradation. Consequently, there was broad consensus that the environment and production systems should be tailored to minimize damage to the environment so as to ensure sustainability of development.

Bangladesh was an early convert to this understanding. Economic progress, accompanied with rapid urbanization and industrialization, had also left its toll on Bangladesh’s own ecosystem. This was evident from natural calamities, loss of bio-diversity, deforestation, destruction of wetlands and inland fisheries, arsenic contamination in the ground water in the southern part of the country, soil nutrient depletion and inland salinity intrusion in the South West region, creeping desertification in the Northern region etc. Bangladesh is also one of the most natural disaster prone areas that suffer from ravages of floods, cyclones, storm surges and drought. In urban areas, air pollution, sound pollution and waste load from industries, hospitals, and municipalities are matters of great concern.

One major threat for the country is the predicted climate change and sea level rise due to global warming. According to Nobel laureate Intergovernmental Panel on Climate Change (IPCC), Bangladesh will be among the worst victims due to climate change. Sea level is expected to rise on account of escalating atmospheric temperature and the frequency of cyclone-storms will increase. As a result, food and energy security will be threatened leading to rise in different types of diseases and frequency of natural calamities. To top it all, the high density of population will make the problem worse.

Understandably, the adverse interactions of environmental degradation and climate change could have severe consequences on citizen’s welfare, especially for the poorer segment that may not have adequate access to coping mechanisms. Indeed, degradation of land, water pollution and arsenic in water, floods and cyclones, rising levels of sea water can easily threaten the sustainability of poverty reduction strategies unless appropriate measures are taken to protect the environment and address climate change issues. Equally important is the need to have an adequate disaster management strategy to tackle associated challenges when natural disasters occur.

**PROGRESS WITH ENVIRONMENTAL MANAGEMENT**

Degraded environment implies that there are fewer resources available not only for the present but also for future generations, implying greater risk of unsustainability. It creates adverse impact on both production and consumption activities of the people. With this realization, the Department of Environment (DoE) has been working for the conservation of environment and undertaking various activities to prevent environmental degradation.

***Government Programs for Protecting the Environment***

The DoE is formulating and implementing policies and programs that strike a realistic balance between the existing livelihood requirement of the people and sound environmental resource management that can ensure sustainability. A major part of its activities include environmental impact assessment carried out through the Environment Conservation Rules promulgated under the Environment Conservation Act 1997. These programs will be continued and be strengthened during the SFYP. Programs undertaken by the DoE include raising awareness on environment, environmental management and its monitoring, implementation of the international conventions and protocols signed by the government and programs to implement existing environmental laws of the country.

During the Fifth Plan period, DoE implemented two major projects: Air Quality management Project (AQMP), and Bangladesh Environment Management Project (BEMP). The objective of the AQMP was to develop components of an air quality management system to reduce human exposure to vehicular air pollution in Dhaka, Chittagong and Khulna. The key components were improved enforcement; setting appropriate air quality standards; better monitoring and dissemination of information; and overall evaluation. The BEMP was implemented with the goal of increasing the capacity for sustainable environment management in Bangladesh by enabling the DoE to exercise its legislative powers and functions as expressed under various environmental laws.

One specific program being implemented is the Clean Development Mechanism (CDM), which is among the three mechanisms adopted under the Kyoto Protocol toward abatement of GHG emissions. As provided in CDM, industrial establishments belonging to the developed world will be able to accumulate their Certified Emission Reduction (CER) credit under their respective heads of account through investment in developing countries in lieu of reduction of GHG emissions from their industries located within their respective own countries. With a view to developing management of waste of the city of Dhaka under the auspices of CDM, 700 MT of decomposable waste is being collected from kitchen markets of various locations to prepare compost fertilizers. Such a program will save cost in respect of waste collection and transportation and simultaneously ensure availability of environment-friendly organic fertilizers produced from the above collected kitchen market wastes. The project was approved by the CDM Executive Board of UNFCCC. Production of waste-based compost fertilizers would result in and ensure cessation of 900,000 MT GHG emissions which could be transacted as CER under CDM.

Besides completing a large number of projects during the previous plans, DoE is engaged in implementing a number of programs to improve as well as to protect the environment. A brief listing of these programs is:

* Control of Air Pollution
* Controlling Industrial Pollution
* Conservation of Ecosystem
* Partnership Program for Environment Protection
* Conservation of Biological Diversities
* Protection of the Ozone Layer
* Measures toward Management of Wastes
* National Bio-Safety Framework
* Control of Noise Pollution
* Saving the Buriganga River
* Generating electricity from waste
* Declaring Ecologically Critical Areas
* Reduction in the Production and Use of Black Polythene

**Controlling Air Pollution**

Air po1lution occurs both at indoors and outdoors. Quite a significant number of Acts and Rules are in force in the country towards addressing such po1lution. The Environment Conservation Rules, 1997 (ECR, '97) have undergone amendments through incorporation of relevant sections toward effective control of various aspects of air pollution. Two-stroke three-wheelers, too, have completely been made off-roads in the city of Dhaka since 1 January, 2003. Air Quality Standards mentioned in Schedule-2 of ECR, '97 have undergone amendment on 19 July, 2005. Air Quality Index has been published on the basis of the state of day to day air qualities. On the same date of 2005, the Vehicular Emission Standards mentioned in Schedule-6 of the above rules have also been amended. The Department of Environment has acquired a couple mobile monitoring vans equipped with testing systems for emissions from on-road automobiles as per Revised Standards for Vehicular Emissions.

Five Continuous Air-quality Monitoring Stations (CAMS) have been set up in the country under the Air Quality Management Project (AQMP) implemented by the Department of Environment with financial assistance from the World Bank. Two of such CAMS are located in the city of Dhaka, while of the rest three, one each in the cities of Chittagong, Rajshahi and Khulna. Besides, a couple of Mobile Air-quality Monitoring Stations (M4MS) have also been acquired for measuring air pollution at local levels in various other areas. AQMP has opened a web-site to provide information and data pertaining to air pollution and to create and enhance public awareness of the Issue.

In order to control air pollution, the Meeting of the Governing Council of the South Asia Cooperative Environment Program (SA CEP) held in 1998 adopted the 'Male Declaration on Control and Prevention of Air Pollution and its Likely Transboundary Effects for South Asia'. The Department of Environment has been in a process of implementation of the above Male Declaration in stages. Under this implementation program, a Transboundary Air Pollution Monitoring Station has been set up in Upazila Shyamnagar of the district of Satkhira and the monitoring program is being run on a regular basis. Department of Environmental Science of the Bangladesh Agricultural University, Mymensingh has carried out a study on 'Impacts of Ozone (03) on Crops' under the supervision of Department of Environment. The above research project has proved the adverse impacts of 03 on crops. There was yet another research program which was devoted to 'Assessment of Impacts of Air Pollution on Child Health' and is being run in three schools in the city of Dhaka. Publicity materials have been prepared for print and electronic media toward creating mass-awareness in checking air pollution.

In yet another way to combating environmental pollution, introduction of environment-friendly compressed block-bricks as alternative to conventional kiln-burnt bricks is being encouraged. Production of sand-cement block-bricks will check loss of crop lands. Among the advantages of such a process has been avoiding kiln-burning of bricks resulting in protection of valuable forest resources and crop lands from degradation. In the existing conventional brick kilns, erection of 120ft permanent stacks has been made mandatory. To date, stacks of such heights have been erected in 80% of brickfields. Zigzag stacks and Vertical Shaft Brick Kiln types of brickfields are being encouraged in simultaneous process of conventional ones. Attempts are being made for demonstration and publicity of environment-friendly brick-burning technologies under the project 'Clean Air Sustainable Environment (CASE)' has implemented by the Department of Environment.

A number of activities have been undertaken to control toxic emissions and for resolving the problem of traffic jams in Dhaka City. The activities include administering of mobile court at different points in the city.

**Control of Noise Pollution**

For the limitation about controlling noise pollution in Environment Conservation Act, 1995 Noise Pollution Control Rules, 2006 was enacted in the light of opinion of common people including government and non-government organizations. Among the multidimensional pollutions, noise pollution is one of the worst pollutions in some of the cities of Bangladesh including Dhaka City. The Ministry of Environment and Forests has set a target of reducing the noise pollution level 45-55 db from 90- 110 db by 2009-10 fiscal year.

**Managing Industrial Pollution**

Environmental Clearance Certificates (ECCs) are being issued from the Department of Environment to proposed industrial enterprises in pursuance of ECA, '95 and ECR, '97 only after getting ensured that the proposed sites of such industrial enterprises are acceptable and also that the anticipated pollution loads due to such industries will be within acceptable limits. In case of highly polluting industries, ECCs is accorded only after construction of and establishing Effluent Treatment Plants (ETPs) within them and on the basis of proven efficacy of such ETPs.

During a survey covering 11,149 industrial units conducted during 2002-2005, the Department of Environment had identified 524 falling under the Red Category as per ECR, '97. Among the above-identified 524 red-listed industrial units, 417 were found to have constructed their ETPs in their own initiative while 105 had no ETP at all.

With the above state of existing industries in background, an International ETP Fair was organized in Dhaka in September, 2007 toward raising awareness among and encouraging the various industrial entrepreneurs about constructing and establishing ETPs within their respective industrial premises. Besides, four Enforcement Teams constituted by the Department of Environment have been, since November, 2006, in a process of regular inspection of various industrial units and undertaking legal measures against the polluting ones. Up to May 2008, the Teams have inspected nearly 855 industrial units.

Currently, a UNEP-assisted project, entitled, 'Survey and Mapping of Environmental Pollution from Industries in Greater Dhaka and Preparation of Strategies for its Mitigation' has been implemented. It was undertaken with a view to formulating and undertaking an action plan on accurate assessment of the number and pollution loads of the various industrial units operating in the greater Dhaka District and controlling pollution due to them. The above project has been designed to provide information pertaining to the exact location of various industrial units, their types, dimensions, waste characteristics and whether or not they are run abiding the existing Acts, Rules and Regulations.

**Conservation of Biological Diversities**

In 1995 the Government of Bangladesh has declared the areas covering sea beaches of Cox's Bazar and Teknaf Peninsula, St. Martin's Island, Sonadia Island, Hakaluki Haor, Tanguar Haor and Marjat Baor of Sunamganj, the Gulshan-Baridhara Lake and the Sundarbans as Ecologically Critical Areas (ECAs). Following the provisions of the Ramsar Convention, The GEF/UNDP assisted project on 'Coastal and Wetland Biodiversity Management at Cox's Bazar and Hakaluki Haor (CWBMP)' being implemented by the Department of Environment has been undertaking various programs toward conservation of the biological diversities of Cox's Bazar- Teknaf Peninsula, Sonadia Island, St. Martin's Island and Hakaluki Haor with a view to ensuring conservation, management and sustainable use of the biological and other resources of haors and wetlands including those of the Tanguar Haor.

Under the above program several ECA Coordination Committees have been constituted at district, Upazila and union levels and fish sanctuaries have been created along the rivers Kushiara and Juri and in the Teknaf area. At the national level, five NGOs are engaged in awareness generation program toward biodiversity conservation and regeneration.

Besides the above, steps have been undertaken toward reducing the pressure upon the biodiversities in the above project areas through establishing Biodiversity Cells and an on-going process of establishing Biodiversity Conservation Centers - five at Hakaluki Haor and two at Cox's Bazar. Seventy Village Conservation Groups (VCGs) have also been constituted toward ensuring provision for alternative way of living of around 4000 locals. Draft ECA Rules have also been formulated. Moreover, census of various avian species was conducted in the project areas during the last winter.

Bio-Safety guideline of Bangladesh and National Bio-Safety Framework have been published and distributed under National Bio-Safety project. Poster, booklet and leaflet have been prepared in Bangla language and distributed for public awareness about Bio-Safety. Bio-Safety related education materials opened by a workshop. Without these, "Bio-Safety Clearing House" website prepared with bio-safety related information.

**Ecosystem**

The Government has issued a notice to impose a ban on illegal hill cutting on March 2002 by considering the importance of hill for a balanced ecosystem and environment. Tendency for illegal cutting of hills has been reduced a lot as a result of gradual increase of awareness about hill cutting.

A notice declaring ecologically critical areas was issued on April 19, 1999. These areas include ten kilometers around the Sundarbans Reserve Forests, Cox's Bazar and Teknaf sea shore, Saint Martin's Island, Sonadia, Hakalukee Haor, Tanguour Haor, Marjat Haor and Gulshan lake. Activities banned in these areas include felling or collecting trees from these areas; hunting, catching or killing wildlife; industrial development; fishing and other activities that might affect fish and other aquatic life; and any activity that could destroy or change the natural characteristics of soil or water.

**Protection of Ozone Layer**

Bangladesh has been among the few countries which have earned remarkable successes in her efforts related to relevant aspects of global action toward protection of the ozone layer. Use of Ozone Depleting Substances (ODS) in the Aerosol Sector has already been phased out resulting in around 50% reduction of the use of such substances in this specific sector. Besides, in the Refrigeration Sector, industry-owners and technicians have been provided with necessary equipment and machineries including imparting training to around 2000 technicians under the project on Recovery and Recycling toward checking unnecessary emission of cloro-floro-carbon (CFCs).

In the Pharmaceuticals Sector, a National Transition Strategy and a proposal on Conversion Project toward phase-out of CFC-ll/12 in the production of Metered Dose Inhalers (MDIs) have been approved for funding from the Montreal Protocol Multilateral Fund (MLF). It may be mentioned here that Beximco Pharmaceuticals have already launched CFC free MDIs .Acme laboratories and Square Pharmaceuticals are going to launch the same program.

**Management of Wastes**

With the rise in population, especially in the urban areas, domestic and other forms of wastes have increased both in dimension and in quantities. Waste management programs are being implemented all over the world through reduction of volumes and quantities of wastes, waste re-use and waste recycling. In Bangladesh, National 3R (Reduce, Re-use and Recycle) Program has been under implementation toward reducing, re-use and recycling of various forms of wastes through the assistance of the United Nations Centre for Regional Development (UNCRD) following the recommendation of the 3R Workshop held in Dhaka during 27-28 February, 2007. At present 2nd draft of National 3R strategy has been prepared. The 3rd and final draft of the same will be prepared within a couple of month.

**Saving the Buriganga River**

The Department looked into how to reduce the levels of illegal encroachment on the banks of the Buriganga River and the amount of pollution in the river. As part of this program, the following activities were undertaken:

* Surveying different structures on the riverbanks and determining how the settlers acquired the land and formulating plans for future activities.
* Identifying polluting industries on both banks of the river, classifying and making recommendations to reduce pollution. Assessing the disposal rate and degree of pollution of tributaries of the Buriganga River and making recommendations for treatment.

Under this program, an inter-ministerial committee with two sub-committees has been formed. The role of these sub-committees is to remove people living illegally on the banks of the river (encroachers) and to control and reduce pollution of the river. The draft report of the sub-committee for removing the encroachers is now under consideration by the convener of the subcommittee. After thorough review, it will be sent to the Ministry of Environment and Forests for final approval. In addition, a demonstration project looking at pollution prevention and control in the Buriganga River is being carried out by the 'Bangladesh Environmental Management Project. Its focus is on conducting surveys and reviewing pollution levels in the river to establish baseline conditions; designing and implementing a strategic pilot monitoring and compliance action program for preventing and controlling pollution on a portion of the river to assess its effects. It can be applied to the entire river; developing a process for evaluating and revising pollution control standards; building enforcement and regulatory competency and capacity within Department; and after identifying the stakeholders, developing with them a strategy for implementing non-regulatory measures, including awareness-rising. The Inter-Ministerial Committee visited the Buriganga River around Dhaka City and removal of submerged waste has been started from January, 2010.

**Electricity from Waste**

One of the major causes of environment pollution of Dhaka City is the improper disposal of solid waste. In order to resolve the problem a private sector agency submitted a proposal to the Energy Division to build a power plant using municipal solid waste. To expedite the feasibility assessment process, an inter-ministerial meeting was held in August 19, 1999 as an initiative of the Ministry of Environment and Forests. The participants at the meeting decided to form an eight-member committee with the Department of Environment Director General as convener. Its job was to carry out a feasibility study of the proposal. Among other issues, the committee will consider the issues of environment, public health and socio-economic perspectives. CDM Project on generation of electricity from waste was given approval from CDM Board.

**Reduction in the Production and Use of Black Polythene**

Production and use of black polythene has been banned by the Government. A Task Force with representatives from the Ministry of Industry, National Revenue Board, Department of Environment. Federation of Bangladesh Chambers of Commerce and Industry (FBCCI), ASDO, Dhaka City Corporation and Department of Police has been formed to monitor, facilitate and implement the decision. Enforcement activity against production and selling of polythene shopping bags has also being carried out.

**Management of Hospital/Clinical Waste**

For environment-friendly management of Hospitals’ Clinical wastes in Dhaka city, the DoE and Bangladesh Private Clinic and Diagnostic Owner's association are working closely. By now, many hospitals and clinics in Dhaka city have developed management system of waste disposal by receiving consultancy support from the DoE. 133 Upazila health complexes have been included for the smooth disposal system of clinical waste. In compliance with the Environment Conservation Act, framing of draft clinical waste management rules and guidelines are at the final stage. The Government has taken an initiative to produce energy and fertilizer from waste. With the support from JICA, Dhaka City Corporation has undertaken a 20- year master plan for waste management. Technical assistance has been provided to DCC for taking CDM projects. With the financial assistance from UNCRD, the Department of Environment is implementing a project titled “National Strategy on Waste Reduce, Reuse and Recycle”. Preparation of 3R strategy is in progress. The DoE has set up a pilot composting plant under Kushtia Municipality with the assistance from JICA.

**NGO Activities for Conservation of Environment**

In alliance with the Government, a good number of NGOs have been working to address environmental problems and to improve environmental system of the country since 1980s. The NGOs play an important role in motivating people at the grass root level to protect environment and to take coordinated efforts in solving environmental problems. There are NGOs which are playing commendable role in projecting environment. Included among them are: International Union for the Conservation of Nature (IUCN), Centre for Sustainable Development (CSD), Bangladesh Centre for Advanced Studies (BCAS), Environmental Conservation Management Centre, Waste Concern, Bangladesh Paribesh Andolon (BAPA) and Bangladesh Environmental Lawyers' Association (BELA).etc.

**Conserving Forestry Resources**

The Forest Department plays an important role in the development of physical, socio-economic development, maintenance of environmental balance and sustainable land based production system. The forest management system of Bangladesh is an age-old system. At the beginning, the main task of the forest department was to protect the forest and to ensure sustained yield management. The present Government has taken up a plan to bring 20 percent of our land under aforestation programs by 2015 to attain self-sufficiency in forest resources and maintain ecological balance. Co- management has been implemented in 6 out of 19 protected areas to promote conservation of bio-diversity and the protection of wild life. To promote conservation of biodiversity established with the "medakachapia" variety of plants, Madhupur National Garden, a wild life sanctuary in the char Kukri-Mukri areas, a marine eco-park in the Ichakhali areas of Mirersharai Upazila (Chittagong district) will be developed to expand eco- tourism. A development program has been taken up for maintaining ecological balance and biodiversity in the Sundarbans area at a cost of Tk. 650 crore.

Social forestry program is one of the important programs of the Forest Department. Since 1981, the Forest Department implemented four social projects with the financial assistance from the Asian Development Bank (ADB). The Forest department has been successfully implementing these social forestry programs. During the last three years, the DoF has provided training in social forestry to 46021 persons which have allowed the poor village people to benefit from common property.

Through different social forestry projects, 56,484 hectares encroached and degraded forest area has already been bought under social forestry. In the three coming years, activities will continue to control soil erosion and forest land erosion as well as to stabilize new char land. Also there will be activities for improvement of soil quality and for this purpose, block plantation in 51,000 hectares of land, strip plantation in 7,855 km, homesteads and institutional plantation and the sale and distribution of 43.80 lakh seedlings among the people. The poor and marginal farmers are participating in the social forestry programs and there is a legally binding definite share of benefit for them. Currently, the Forest Department has been implementing three projects viz (1) Redland Integrated Social Forestry Project; (2) Agar Plantation (1st phase); (3) Biodiversity Conservation and Poverty Alleviation in the Greater Rajshahi and Kushtia Districts Projects. In addition, there are two programs like Aforestation program in the denuded hill areas of greater Sylhet and Cox's bazar districts (2nd phase)and Aforestation program in the Canals band, Embankment and link road of Tista Barrage Irrigation project for poverty reduction.

After joining the plantation program, the social restrictions on women employment has largely been removed. Social forestry is not only producing wood, fuel-wood, and improving environmental condition, it is also playing a significant role in reducing poverty.

**CHALLENGES FOR THE SFYP**

Despite progress made in strengthening the implementation of environmental protection program, there is a substantial unfinished agenda that will need to be addressed in the SFYP. Amongst the most important challenge is proper waste management that continues to pose serious health risks. Bangladesh remains a very poor country with large slums and weak urban services. Accordingly, proper waste management is a serious challenge. The air pollution is another top health concern that requires more effort. The DoE needs to be considerably strengthened, particularly to enable it to undertake environmental impact assessment as mandated by the Environment Conservation Rules promulgated under the Environment Conservation Act 1997. Enforcement of environmental standards is also a serious challenge.

**ENVIRONMENTAL PROTECTION OBJECTIVES IN THE SFYP**

In light of the long-run consequences of environmental degradation to the country’s ecosystem and citizen’s welfare, the Government has set a number of goals to attain a sustainable environment on the one hand and to address the fallout of climate change on the other. These goals are crystallized as the main objectives relating to environment and Climate Change under the SFYP as follows:

* To promote appropriate environment management system for sustainable development.
* To ensure conservation of biodiversity and its sustainable utilization.
* To promote appropriate environment management system for mitigation and adaptation to climate change.
* To ensure active participation of the poor, especially the women in environment management activities at all levels.
* To promote environment friendly activities in development of interventions.
* To preserve, protect and develop the natural resource base.
* To strengthen the capability of public and private sectors to manage environmental concerns.
* To monitor, control and prevent environmental pollution and degradation related to soil, water and air.
* To initiate actions with regard to obligations under international treaties and conventions for minimizing adverse impact on global environment.
* To promote cooperation with regional and international institutions/organizations to address regional and global environmental problems.
* To undertake research and development for innovating technology in national perspective and application of modern technology, information exchange and benefit sharing with other countries.
* To create public awareness, in order to participate in environment promotion activities.
* To undertake Environmental Assessment and environmental reporting.
* To improve air quality through clean fuel and vehicle.
* To promote public-private partnership in environment management.
* To promote 3R waste management strategy (Reduce, Reuse and Recycle).
* To improve air quality in major cities through monitoring and prevention measure.
* To establish Environment Management System (EMS) in Industries for pollution control.
* To reduce dependency on fossil fuel by promoting solar/green energy.

**STRATEGIES IN THE SFYP**

The agenda for attaining a sustainable environment for the long-term is daunting and it can hardly be over-emphasized. To translate the above objectives into reality, the Government is undertaking the following policies, strategies and programs for the environment sub-sector during the SFYP:

* National Environment Council headed by the Prime Minister and executive committee of National Environment Council headed by the Minister for Environment and Forests would be activated.
* Environment committees at Division, District and Upazila levels will be activated with the participation of all stakeholders.
* Existing environmental laws and regulations will be amended to address new environmental issues.
* Department of Environment will be strengthened in the light of existing Environment Policy, Environmental Act, Rules and Environment Management Action Plan in order to coordinate, monitor and implement these activities.
* Drafting of EIA guidelines for all sectors under the Environment Conservation Act (ECA) 1995 will be formulated in order to ensure effective enforcement of EIA.
* Sectoral legislations are to be reviewed and redrafted in light of Bangladesh’s commitments expressed through signing and ratifying of a number of International Conventions and Protocols on environment.
* ‘Polluters Pay Principle’ will be followed in order to ensure strict compliance of environment legislation.
* Incentives, in the form of tax-rebate, tax-holiday etc. will be provided and incremental cost incurred by the Environment-friendly entrepreneurs will be met in various forms/sources.
* ‘National Environment Fund’ will be established in order to provide assistance to the victims of environment degradation caused by the natural disasters and anthropogenic activities.
* Environmental Impact Assessment will be made while processing each development project requiring approval of the Government.

**SUB SECTORAL STRATEGIES UNDER THE SFYP**

***Preparation of National Land Policy***

The optimum use of land and water depends on planned use of land, water resources and natural environment which are the important sources of the growth. It is possible to ensure optimum use of scarce land resources by way of integrating the uses of these three natural resources. With this end in view, the Government has approved ‘National Land Use Policy, Bangladesh’ in June 2001. The Government has adopted various other national policies and measures to prevent land depletion. Notable among them include ‘The National Environment Policy’, ‘National Environment Act and Rules’, ‘National Forestry Policy’ and ‘The National Plan for Agricultural Research’.

In light of ‘National Land Use Policy 2001’ the Land Ministry has taken initiatives for specific policies as discussed below:

* An inter-ministerial committee has been formed for preparing a draft law on “Krishi Jomi Surakkha O Bhumi Zoning Ain 2010” (Protection of Agricultural Land and Land Zoning Law, 2010”.
* A draft of the policy on“Haat-Bazarer Khas Jomi Babosthapona O Bohutol Market Ba Bhaban Nirman Nitimala, 2010” (Management of ‘Khas’ Land of Bazars and Construction of Multistoried Market or Building Policies) has been prepared which will be placed in the Cabinet soon.
* “Balu Mohal O Mati Babosthapona Aain, 2010” (Sand Fields and Soil Management Act, 2010) has been tabled to the National Parliament as bill for necessary approval.
* An inter-ministerial committee has been formed for finalizing the draft act on “Gram Unnoyon Ain” (Village Improvement Act).
* “Jalmohal Babosthapona Niteemala” (Water Bodies Management Policy) - this policy has been made in order to efficiently manage the water bodies to benefit the poor fishermen for their income generation and livelihood improvement.
* The project on “Gucchogram (Climate Victims Rehabilitation Project)” is an ongoing project. 207 cluster villages will be constructed with a view to rehabilitate 10650 climate victim land less families. They will be given houses, income generating training and microcredit. Implementation period of the project is January 2009-June 2012.
* “Krishi Khas Jomi Babosthapona Niteemala” (State-owned Agricultural Land Settlement Policy)-this policy is to distribute the state-owned agricultural land to the poor landless households for their rehabilitation and livelihood improvement.

**National Water Management**

Bangladesh is endowed with a good number of water bodies scattered all over the country. WARPO maintains a National Water Resources Database (NWRD) established at WARPO under NWMP project that preserve and disseminate information/data of country’s water sector including information data of other related sectors. There are analytical tools analyzing information. Different organizations use data of NWRD in their planning and research works. Updating and upgrading of NWRD will be done under Water Management Improvement Project (WMIP) to be implemented by December 2014. A 5- tier web-enabling database has been created for coastal zones. 5 layers of ICRD include Presentation, application server, data server, web server and spatial data engine.

**Waste Management**

The main strategy for ensuring better waste management is to establish accountable city governments that will have primary accountability to ensure that urban waste management is properly handled. This is admittedly a long-term challenge, yet progress with this important institutional reform holds the key to better management of urban waste. The underlying policies will include encouragement of private waste collection facilities, improving the slums, public education, strengthening the water and sanitation authorities, and better management and disposal of accumulated waste.

**Capacity Building**

Proper management of environmental degradation requires substantial capacity in the public sector as well as interaction and cooperation with the citizens. Accordingly, the Sixth Plan will take a number of initiatives to strengthen environmental capacities. In the public sector efforts will continue to strengthen the Department of Environment and other ministries dealing with environment including Agriculture, Land, Water, Energy, Industry and Local government. For the private sector, emphasis will be placed on environmental research and development, strengthening educational programs that promote broad-based awareness of environmental concerns, and strengthening the dissemination of environmental knowledge through ICT and mass media.

**Financial Management**

Implementation of NEMAP, Forestry Master Plan, National Conservation Strategy and a number of development activities related to environment will require adequate financing. The shared responsibility for improvement of the environment by all partners in development including various government organizations, local government bodies, NGOs, research and training institutes will be strongly emphasized. Private sector will be increasingly involved in providing support to the environment protecting programs under the Fifth Plan.

**Government-NGO Co-operation**

Growing instances of co-operation between the government and NGOs have been witnessed on the issues like environment, resettlement and disaster management, education, health, population, women and youth development, livestock and fisheries. The participation of the poor in these sectors is increasingly high. By and large, the government acknowledges the effectiveness of the NGO approach in reaching the target groups, while NGOs enjoy widening (scaling-up) of their impacts as a result of such co-operation. Till now, it has been more prevalent in project implementation than in project formulation and design with a broader perspective. The increased involvement of NGOs in forestry and fisheries programs is a step in the right direction. GO-NGO co-operation at local levels in project formulation and implementation has a high potential for conservation of environment.

**Partnership Program for the Protection of Environment**

Program based on partnership between the Department of Environment and various stakeholder groups has, recently, been initiated for protection of the environment. The program, named, Partnership for Environment Protection (PEP), aims to inspire the people belonging to various strata of the society and various shades of opinion irrespective of religion, caste and creed, to participate in the nation-wide movement to the above end. To date, the following groups are actively involved in the above PEP program:

* Educational Institutions;
* Children's Organizations;
* Periodicals for Children; and
* House Owners' Welfare Association of Greater Pollobi.

These efforts will be further strengthened and broadened to ensure broad ownership with the citizens at large whose support is critical for sustained progress with environmental protection.

**MANAGING CLIMATE CHANGE:**

More recently the issue of protection of the environment assumed special importance because of the accumulation of evidence of global warming and the associated climate change that it is likely to accompany. Climate Change is not the only problem of environmental degradation, the problem runs far deep and its reach in destabilizing many of the natural systems is potentially immense.

***Implications of Climate Change in the Context of Bangladesh***

Human-induced changes in the global climate and associated sea level rise are widely accepted by policy makers and scientists. The Intergovernmental Panel on Climate Change (IPCC) concluded that “the balance of evidence suggests a discernible human influence on global climate”. The exact magnitude of the changes in the global climate is still uncertain and subject of worldwide scientific studies. It is broadly recognized that Bangladesh is very vulnerable to these changes because it is low-lying, located on the Bay of Bengal in the delta of the Ganges, Brahmaputra and Meghna and densely populated. Its national economy strongly depends on agriculture and natural resources that are sensitive to climate change and sea level rise.

Studies on climate change in Bangladesh report that the surface average temperature has been rising in, though there is no agreement in these studies on the rate of change. Available literature suggests that a general warming is expected in future, where the rate of warming will be higher for the winter months (i.e., December, January and February) than the monsoon months (i.e., June, July, August).

There is a great deal of local-level perception-based evidence that the rainfall pattern has become erratic in recent years, if not in recent decades. However, the official agency has ruled out any possibility of drastic change in rainfall patterns beyond climate variability. Intriguingly, a bi-modal shift in rainfall behavior has already been reported, which may further be attributed to recent shifts in hydrological peaks in various rivers inside Bangladesh. Local level experience and anecdotal evidence clearly show that in both Gaibandha and Jamalpur, people now observe two to three flood peaks instead of one, as the latter had been regularly observed decades ago.

**Increased susceptibility to natural disasters:** All the above phenomena clearly highlight the increased hazard susceptibility in terms of flood, drought, storm surge and salinity ingress in Bangladesh. As it has been reported in many articles, floods will be more intense, will inundate more areas and occasionally will perhaps prolong to devastate people’s livelihoods, national economy and infrastructure. Similarly, literature suggest that the central western region will be hit hard due to exacerbated drought and marginal farmers would not be able to maintain livelihood thrusts by switching technologies to offset moisture stress. Simultaneously, increased salinity would tend to reduce crop suitability throughout the southwestern region and perhaps appear to be a deterring factor for industrial activities in the affected areas.

**Coastal impacts - water logging:** A northward shift in isohaline lines under climate change would compound the already alarming effect of water logging in the southwestern region. It has been reported that the sea surface temperatures along the northern Indian Ocean (i.e., Bay of Bengal) has gradually been rising steadily. Though there is no evidence that the frequency of occurrence of cyclone along the Bay of Bengal has actually changed over the past five decades due to rising sea surface temperatures that cyclone intensity might be increased by as much as 10% due to increased warming. A devastating example that Bangladesh has been observing in this regard is the Aila affected areas in Satkhira, Khulna and Bagerhat district.

**Coastal impacts-rough seas and cyclones:** There is a strong correlation between increasing sea surface temperatures and the occurrence of too many rough sea events in the recent years. High wind actions have been causing economic damage to fisher folks by quickly damaging the traditional boats.

High wind actions have been eroding sea-facing coastal islands; even embankments located far inland than the open sea. Sudden breaches in embankments have been destroying standing crops, inundating crop lands with saline water, thereby diminishing economic potential of the coastal lands, and forcing poor people to out-migrate from the affected areas by destroying their livelihoods.

A potential implication would be that future storm surges might be even higher than those observed currently. About 1.2 million hectares of arable land are affected by varying degree of soil salinity, tidal flooding during wet season, direct inundation by saline water and upward and lateral movement of saline ground water during dry season. Inundation of brackish water for shrimp farming is key causes for secondary salinisation of coastal lands. The severity of salinity problem has increased over the years and expected in increase in future due to sea level rise.

**Increased drought posed higher risk:** North-western region (Barind tract) of Bangladesh is normally drought prone. Droughts are associated with the late arrival or an early withdrawal of monsoon rains and also due to intermittent dry spells coinciding with critical stages of T. Aman rice. Droughts in May and June destroy broadcast *Aman*, *Aus* and jute. Inadequate rains in July delay transplantation of *Aman* in high Barind areas, while droughts in September and October reduce yields of both broadcast and transplanted *Aman* and delay the sowing of pulses and potatoes. *Boro*, wheat and other crops grown in the dry season are also periodically affected by drought.

**Global Response to Climate Change & its Implication for Bangladesh:** The first definitive action came in 1992 at the UN Conference on Environment and Development held in Rio de Janeiro. The Conference established the United Nations Framework Convention on Climate Change (UNFCCC, or, Convention) which came into force in 1994. Countries which have signed the Convention and ratified are called Parties (192 in number). A Conference of Parties takes place every year. Linked to the Convention, a protocol has been signed in 1997 in Kyoto (hence called Kyoto Protocol) which came into effect much later in 2005. The Kyoto Protocol is a legally binding instrument under which industrialized countries committed themselves to a lowering of emission on an average of 5% below the 1990 level. The first commitment period ends in 2012. Bangladesh is among the least responsible countries for polluting stratosphere with GHG but it is the worst recipient of stress from the climatic perturbations

The Bali Action Plan and Subsequent Developments: The thirteenth Conference of Parties in Bali saw some path-breaking changes in the negotiations for mitigation (i.e., emission reduction). The actions adopted in the Conference, known as the Bali Action Plan, calls for a *global shared vision and enhanced actions on 4 areas*, mitigation (i.e., emission reduction), adaptation, finance and technology transfer and development as well as capacity development. The most interesting aspects were the decisions which dealt respectively with mandatory mitigation commitment by developed country parties and voluntary mitigation actions by developing country parties. All country parties are expected to reduce emission. Much of the debate that is going on since then revolves around the conditions under which these should become operational. Specifically, the relationships of these with the commitments under Kyoto Protocol beyond 2012, and the level of reduction pledged given the scientific evidence that there has to be drastic cuts in emission and its peaking within 2015.

Operationalizing Bali Action Plan in Bangladesh context: The Bali Action Plan makes it clear that the developing countries responsibilities and actions have to be looked at within the framework of sustainable development. Bangladesh, in subsequent submission regarding how to operationalize the Bali Action Plan, has put it in terms of ensuring four types of security. These are food security, water security, energy security and livelihood security (including health). Given that agriculture is expected to be heavily adversely affected, food security becomes the most important issue for Bangladesh. On the other hand, much of what happens to various sectors due to climate change relates to water, too much or too little of it or its spatial distribution between and within years. Furthermore, water is also a shared natural resource for Bangladesh with some of the country’s neighbors which calls for regional actions for ensuring availability. Water security is thus absolutely essential. Livelihood security relates to the ultimate well-being of the people without which development is meaningless. As health becomes a major issue under climate change, this is also included as part of well-being under climate change.

The issue of energy security is interesting in Bangladesh context. Given that Bangladesh is a low energy consumer while her demand for energy is increasing with development, the country must be allowed to consume as much energy as necessary for development. While this may seem obvious, a potential conflict may arise with the decision 1b(ii) under the Bali Action Plan that calls upon all developing countries to contribute, as their situations permit, to lower emission which means in many cases lowering energy consumption. But this may conflict with the right to development. Bangladesh has made it clear that while it will use energy in the most efficient way, it will not compromise with the needs for energy for development. Indeed, the four securities are inviolate principles of development which has been later incorporated in the Bangladesh Climate Change Strategy and Action Plan.

The Cancun Climate Agreement 2010

After two weeks of intensive negotiations amongst nearly two hundred countries taking part in the sixteenth conference of parties of the United Nations Framework Convention on Climate Change in Cancun, Mexico the Cancun Climate agreement has been reached

The Cancun agreement created a new Green Climate Fund to receive and distribute up to $100 billion a year from 2020. Although this fund will take some time to actually be set up and start distributing funds to vulnerable developing countries the transitional committee to set it up has been agreed.

For the shorter term the developed countries have pledged and already started disbursing the $30 billion of ‘fast start finance’ which was pledged in 2009 in the Copenhagen Accord.

There were also significant agreements reached on three of the negotiating tracks namely reducing emissions from deforestation and land degradation, technology transfer and adaptation.

On adaptation the Cancun Adaptation Framework was adopted with a high-level adaptation committee to oversee support for adaptation in vulnerable developing countries.

However, the mitigation targets under the Kyoto Protocol and establishing a new legally binding agreement was not resolved in Cancun but shall remain in play to be resolved at COP17 in Durban, South Africa in December 2011.

Against this backdrop it is crucial that Bangladesh positions itself strategically and take steps towards more effectively addressing its climate change-induced vulnerabilities particularly when related to disaster hazards.

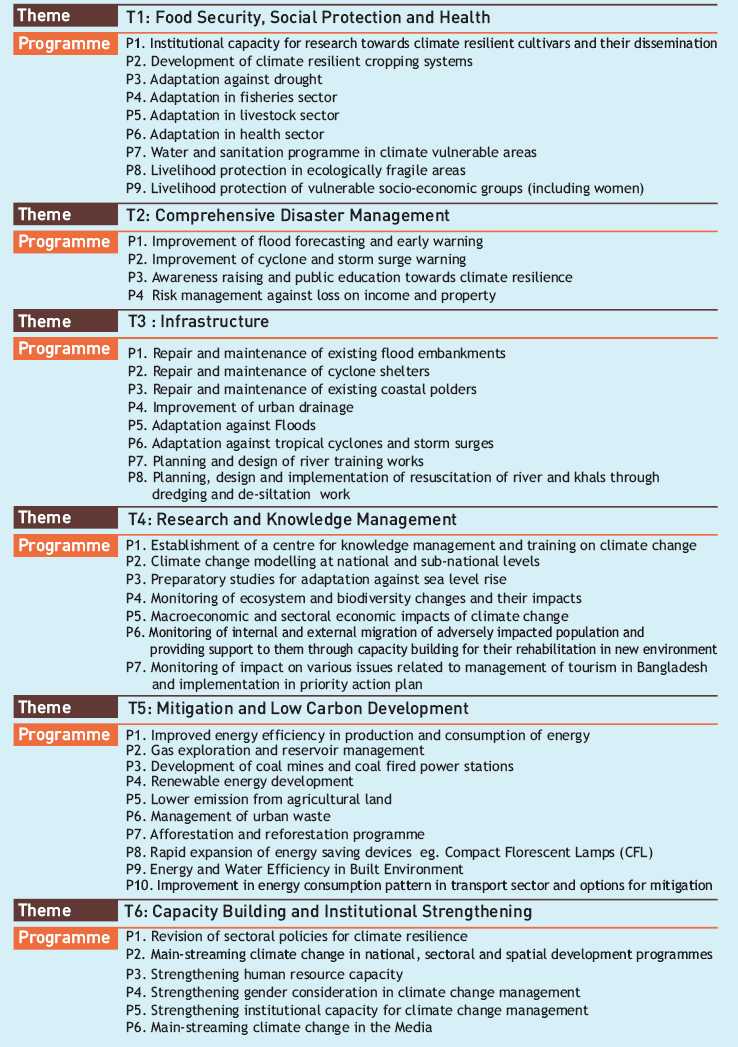
**BANGLADESH CLIMATE CHANGE ACTION PLAN**

Bangladesh prepared the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) in 2008 and revised it in 2009. This is now an approved document of the Government. This is expected to be the blue print for subsequent integration of climate change issues such as adaptation, technology transfer, mitigation, and development, and capacity building into the mainstream planning process.

The BCCSAP takes the Bangladesh submission on Bali Road Map, particularly the 4 securities, as the starting point and develops a strategy of sustainable development centered on the issue of climate change. On the basis of the 4 securities, the strategy is to safeguard the development prospects of Bangladesh in a way that the country becomes a middle-income one by 2021 and achieves the targets under MDGs as fast as possible. Under the action plan, there are six major themes and 44 programs (Table 1). The very first relates to ensuring food and livelihood security. The programs mainly fall under development of crop varieties and development of technology suitable for agricultural production under various adverse climatic conditions that are likely to materialize in future. Three of the themes including food and livelihood security fall under adaptation which is the prime need of the country. The other two adaptation programs relate to construction and maintenance of necessary infrastructure, particularly those related to water management. The third important area is disaster management as disaster risk reduction and post-disaster rehabilitation are going to engage a lot of energy and resources of the country due to climate change.

The serious consequences of climate change, including especially the consequences for Bangladesh, lead naturally to the question of what should be our response. Two types of response need to be considered. The first relates to adaptation, i.e., measures that have to be taken given the very high likelihood that climate change will occur and will have adverse effects. The second relates to mitigation, i.e. steps to be taken that might reduce the extent of climate change.

**Table 1: BCCSAP 2009 Themes and Program Areas**

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Source: (BIDS study on Climate Change)

**BENCHMARKS AND TARGETS FOR THE SFYP**

It is important to recognize that climate change is not something for which any quantitative benchmark in physical terms can be set. The agenda is large and involves creation and management of knowledge, formulation policies, and development of institutions. It also requires coordination and collaboration with regional and global partners. The BCCSAP 2009 provides a very convenient framework to build on the climate change agenda for the SFYP. Given the large agenda, it would be prudent to prioritize the urgent tasks that need to be taken up and may be completed, by and large, within the next five years. As such, the following may form part of target programs of the SFYP, listed in accordance with approved themes (Table 2).

The Climate Change impacts that Bangladesh may face present a daunting challenge for policymakers. Adaptation is the prime need right now as any delay will create havoc with the growth prospects of the economy and deny millions of people even their basic necessities. International support might come eventually but may be woefully inadequate given Bangladesh’s enormous requirement of resources annually to combat the menace of Climate Change.

In this situation, the Sixth Plan will place first priority on the repair and maintenance of coastal polders and defenses which have been washed away first by Sidr and then by Aila. The second priority will be to mainstream Climate Change issues of adaptation, mitigation and capacity building based on the actions identified in Table 2.

Bangladesh will continue its active dialogue and participation in international fora to ensure compliance with the agreed global agenda while at the same time ensuring that Bangladesh’s rights to seek progress with economic growth and social development are protected. Similarly, Bangladesh will work hard to ensure that equitable solutions are found to help Bangladesh finance appropriate adaptation measures resulting from past global actions. Nevertheless, it is recognized that the financing needs for proper adaptation are large and that global funding will be limited. Proper funding of priority adaptation programs will be a key policy focus in the SFYP.

**Table 2: Sixth Plan Benchmark and Proposed Target Programs**

|  |  |  |  |
| --- | --- | --- | --- |
| **Theme** | **Program** | **Benchmark** | **Target** |
| *Food security, social protection and health* | Institutional capacity for research on climate resilient cultivars and dissemination | Capacity exists; certain new varieties released recently | Extension service to be geared up |
| Adaptation against drought, salinity resistance and heat | Very limited experience | To be started |
| Adaptation in fisheries sector | Very limited experience | Initial studies for ideas on adaptation |
| Adaptation in livestock sector | Very limited experience | Initial studies for ideas on adaptation |
| Adaptation in health sector | Very limited experience | Initial studies for ideas on adaptation |
| Water and sanitation programs for climate-vulnerable areas | Limited experience | Immediate actions needed |
| Livelihood protection in ecologically fragile areas | Little experience | Initial interventions to be made |
| Livelihood protection of vulnerable socio-economic groups | Major experience | To be made immediately |
| *Comprehensive disaster management* | Improvement of cyclone and storm surge warning | Limited experience | Needs review for improvement |
| Awareness raising and public dissemination | Some experience | Needs review for improvement |
| Risk management against loss of income and property | Limited experience | Needs review and pilot intervention |
| *Infrastructure* | Repair and maintenance of existing flood embankments | Limited activity | To be taken up immediately |
| Repair and maintenance of existing cyclone shelters | Limited activity | To be taken up immediately |
| Repair and maintenance of existing coastal polders | Limited activity | To prioritize and taken up immediately |
| Urban drainage needs assessment | Limited activity | To prioritize and taken up immediately |
| Adaptation against Floods and constructing new embankments and flood shelters | Limited activity | Needs review for improvement & construction |
| Adaptation against tropical cyclones and storm surges through landuse planning | Limited activity | To be taken up immediately |
| Planning & Designof river trainjng and bank erosion mitigation works | Major experience with limited success | Needs review for significant improvement |
| Resuscitation of rivers and khals through dredging | Limited activity | To prioritize and taken up immediately |
| Earthquake resilliant structure and land slide protected structure have to be constructed and retrofitted | Limited activity | To prioritize and taken up immediately |
| *Research and knowledge management* | National Centre for research, knowledge management and training on disaster and climate change | Limited activity | Scope to be extended immediately |
| Climate change modeling and their impacts | Limited human and institutional capacity exists | Training to be arranged for imparting skill |
| Preparatory studies for adaptation against SLR | Capacity exists; limited experience of adaptation | To be initiated and continued |
| Research on the climate change adaptation for knowledge and technology generation | Capacity exists, some technologies are in use | To be expanded the scope and ongoing effort |
| *Low carbon development* | Renewable energy development | Limited experience | To be expanded |
| Management of urban waste | Limited experience | To be taken up immediately |
| Aforestation and reforestation | Some experience | To be taken up immediately |
| Rapid expansion of energy saving devices | Some experience | To be taken up immediately |
| Improving energy efficiency in transport sector | Limited experience | To be introduced in phases |
| *Capacity building* | Revision of sectoral policies for climate resilience | - | Immediate need |
| Mainstreaming CC in national, sectoral and spatial development programs and policies | - | Immediate need  BCCSAP to be part of National Plan |
| Strengthening human resource capacity | Limited capacity | To be started |
| Gender considerations in CC | - | To be started |
| Strengthening institutional capacity | Limited capacity | To be started |
| Mainstreaming CC in media | Limited experience | To be started |

**DISASTER MANAGEMENT**

Bangladesh, because of its geo-physical location, topography and high population density is at risk of recurring natural and human induced hazards with an average 10 million people affected every year. Frequent floods, cyclones, river bank erosion, water-logging, drought and tornadoes significantly disrupt Bangladesh’s economy and the lives and livelihoods of its population. Bangladesh is in the top of the list of 10 most disaster affected countries. During 1990-2008 the country incurred annual loss of US$ 2,189 million (1.8% of annual GDP) from disasters. Climate change is adding a new dimension to the current risk environment with global predictions suggesting that the country could expect more intense cyclones, storm surge and flooding (disaster) – and that a rise in sea levels could have a significant impact on the lives and livelihoods of up to 30 million people.

Disaster Management has assumed an important concern for the government and the people. The Government of Bangladeshsets **the Disaster Management Vision** as *“to reduce the risk of people, especially the poor and the disadvantaged, from the effects of natural, environmental and human induced hazards, to a manageable and acceptable humanitarian level, and to have in place an efficient emergency response system capable of handling large scale disasters*”.

Disaster Management in Bangladesh is guided by a number of national and international drivers which among others includes a) the Standing Orders on Disasters first introduced in 1997; b) the Millennium Declaration of September 2000 to protecting the vulnerable from the consequences of natural disasters; c) theHyogo Framework for Action (HFA) 2005-2015**;** and d) theSAARC Framework for Action (SFA) 2006-2015. Bangladesh recognizes that disaster management which includes both risk reduction and response management is the responsibility of all sectors, all organisations and all agencies. Disasters can either be natural, human induced, or even arising out of technological causes; risk is dynamic and always changing. Therefore, mainstreaming risk reduction efforts within government, NGOs and private sector is viewed as being the key to achieving sustainable all hazards risk reduction interventions across the whole country.

In last few years country’s emphasis has been placed to create a foundation to achieve a paradigm shift in disaster management from a conventional relief and response practice to a more holistic risk reduction culture. To achieve this paradigm shift the Standing Orders on Disasters (SOD) was revised and the National Plan for Disaster Management 2010-2015 (NPDM) was introduced. In last April 2010, the National Disaster Management Council approved the revised SOD and NPDM which will guide Government sectoral ministries and departments, NGOs, civil society organizations and public representatives to carry out disaster risk reduction and climate change adaptation functions. Disaster management has become an integral part of the educational curricula at primary, secondary and tertiary levels as well as major training courses of all public training institutions. The Executive Committee of the National Economic Council (ECNEC) on 8th October 2007 meeting approved the decision to include information on “lessons learnt from the previous project” as well as “Risk Identification and Risk Mitigation” in all Development Project Proposal (DPP) and Working Paper for the ECNEC as the first milestone achieved to ensure the integration of risk management in the development activities.

Bangladesh has also achieved a number of other milestones. The country has established a planning and strategic framework with the following seven (7) strategic goals which were set as the basis of action matrix under the NPDM:

* + Professionalising the Disaster Management System;
  + Mainstreaming disaster risk reduction and climate change adaptation;
  + Strengthening Institutional Mechanisms
  + Empowering at risk communities
  + Expanding Risk Reduction Programming across all hazards and all sectors
  + Strengthening Emergency Response Systems and
* Developing and Strengthening regional and global Networks

The country builds the risk reduction, preparedness and emergency management capacities based on the people’s indigenous knowledge, experiences and the capacity to cope with disasters.

**Disaster Management Strategy in the SFYP**

The SFYP will carry forward the implementation of the approved National Disaster Management Plan 2010-2015. It will continue the comprehensive all hazard, all risk and all sector approach and be built on the foundations laid in the last several years and learn from the positive experiences. The Bangladesh Disaster Management Model, which made the basis for revising the disaster management policy and planning documents, has mainly comprised of 2 inter-related elements: Disaster Risk Reduction and Emergency Response. The SFYP will focus more on Disaster Risk Reduction (DRR) in order for reducing the relief and recovery needs and also be prepared to deal with any emergencies.

***The DRR activities will broadly include***

* Professionalizing the Disaster Management systems and institutions through execution of the Disaster Management Regulatory Framework already established
* Strengthening the Disaster Management Bureau’s capacity to monitor and take part in cross-government mainstreaming of disaster risk reduction through pre, during and post disaster assessment
* Strengthening institutional capacity of government sectoral ministries, departments and other technical and academic actors in ensuring inclusion of DRR and Climate Change Adaptation (CCA) issues and agendas within their respective sectoral policies, plans, programmes and allocations of businesses
* Empowering at risk communities to withstand and cope up with the disastrous situations through community and household level risk reduction interventions and livelihood support services
* Reducing vulnerabilities of at risk communities through social safety nets – ensuring protection of women, children, the aged and differently able people giving due attention to their special needs
* Preparedness for Earthquake and Tsunami risks through
  + vulnerability and risks assessments and mapping,
  + hazard land zoning,
  + Land use planning
  + contingency planning,
  + strengthening search and rescue capacity of fast responding institutions and
  + mass public awareness
* Building Knowledge on DRR and CCA through
  + piloting and adaptation research
  + Establishing an Integrated Approach to disaster management including Climate Change and climate variability impacts
  + Developing climate change scenarios and accordingly anticipated hazard risks following climate change
  + Updating hazard maps such as flood, cyclone, drought, earthquake and tsunami
* Strengthening national capability to reduce the risks of Chemical, technological and biological hazards; Infrastructure collapse; Fire; Road accidents; Launch capsize and Landslide
* Strengthening national capacity for erosion prediction and monitoring
* Developing and establishing policy and planning frameworks to incorporate all hazard (including anticipated risks of climate change) risk reduction perspectives into sectoral policies and development plans, such as: Agriculture, livestock and fishery; Industry; Education (primary, secondary and Madrasha); Rural and urban housing; Construction of roads, bridges and culvert; Water transportation; Health; Water resources; Power, energy and mineral resources; Environment and forestry; Science and Technology; Telecommunication; Water Supply and Sanitation and Food Security
* Establishing public - private partnerships for disaster risk reduction
* Supporting regional and global risk reduction initiatives and ensure representation that is consistent with the government integrated all sector risk reduction approach at all levels

***The Emergency Response activities will broadly include***

* Strengthening and improving an all Hazard Early Warning Systems through technical, technological and physical capacity strengthening of Bangladesh Meteorological Department and Flood Forecasting and Warning Centre
* Establishing and strengthening regional networks for real time data/information sharing
* Establishing an effective Community Alerting System through capacity strengthening of Cyclone Preparedness Programme and Disaster Management Committees (DMC) at District, Upazila and Union levels
* Introducing Contingency Planning and Disaster Preparedness across all sectors and at all levels
* Establishing and improving Search and Rescue Mechanism by a) preparing a potential search and rescue scenario; b) strengthening Search and Rescue capability of first responding institutions by providing training and equipments support; c) establishing an all hazard volunteer groups for Search and Rescue operations; d) establishing an effective command and control system and e) construction and maintenance of sufficient multi-purpose disaster shelters
* Strengthening GO-NGO and private sector coordinations on relief and emergency management
* Developing and establishing a well coordinated multi-sectoral post-disaster recovery and reconstruction mechanism
* Establishing and operational a National Disaster Management Information Centre connected with all the 64 Districts and high-risk Upazila DMCs to a) archive and share disaster risk reduction information; b) produce and share policy briefs; c) receive and disseminate early warning information; and d) to receive and disseminate information on emergency need assessments and management;

As per the revised SOD and NDMP the Disaster Management and Relief Division, Ministry of Food and Disaster Management is the focal agency for disaster risk reduction and emergency management; will take lead coordinating role in ensuring implementation of the activities as described in the action matrix of the NDMP the summary of which have been presented above. Goals, Targets, activities and indicative costs and monitoring indicators are shown in attachment 1 and 2.

**RESOURCE REQUIREMENT FOR ENVIRONMENT, CLIMATE CHANGE & DISASTER MANAGEMENT UNDER THE SFYP**

In light of the long-run consequences of environmental degradation to the country’s ecosystem and citizen’s welfare, the Government has set a number of goals to attain a sustainable environment and to address the fallout of climate change. Substantial resources will be needed to achieve these targets. The resource mobilization strategy includes collaboration with private sector, mobilization of international funding, especially to manage climate change issues, and allocation of own resources. Planned allocation of development resources to carry out the strategies and programs for environment, climate change and disaster management over the Sixth Plan period is shown in current prices in Table 3.

**Table 3: Development Expenditure Allocation of Environment Sector under the SFYP**

Taka in lakh (current price)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Ministry/Sector** | **2010-11** | **2011-12** | **2012-13** | **2013-14** | **2014-15** |
| 000Ministry of Environment & Forest | 243 | 176 | 212 | 255 | 310 |
| Ministry of Land | 115 | 136 | 164 | 198 | 240 |
| Ministry of Disaster Management & Relief | 23463.00 | 1319 | 1312 | 1278 | 436 |
| Project |  |  |  |  |  |
| ECRRP-d1 | 1712.00 | 1500.00 | 1500.00 | 2000.00 | -- |
| Procurement of equipment for search & rescue operation for earthquake & other disasters | 1873.00 | -- | -- | -- | -- |
| Procurement of equipment for search & rescue operation for earthquake & other disasters-2nd phase | -- | 50.00 | 1000.00 | 2050.00 | 21900.00 |
| Disaster preventive reconstruction in Barguna nad Patuakhali districts | 10.00 | 200.00 | 500.00 | 413.00 |  |
| Establishment of National Training Institute for Disaster Risk Management | - | 5.00 | 100.00 | 500.00 | 1000.00 |
| Capacity building of the related department of disaster management in Bangladesh | -- | 500.00 | 500.00 | 500.00 | 500.00 |
| Emergency Disaster Risk Reduction Telecommunications System in Bangladesh. | -- | 1000.00 | 2000.00 | 1800.00 |  |
| Mitigation measures for climate change affect in drought prone areas of Bangladesh. | -- | 1000.00 | 5000.00 | 5000.00 | 2800.00 |
| Improve Seismic Safety Practices in urban mega-city of Bangladesh | -- | 1000.00 | 2000.00 | 1800.00 |  |
| Construction of flood shelters in flood prone and river erosion areas | 552.00 | -- |  |  |  |
| Construction of bridges/culverts in rural roads | 9000.00 | 9872.36 | -- |  |  |
| Construction of small bridges/culverts in rural roads in chittagong hill tracts. | 3025.00 | 3288.79 | 3596.21 |  |  |
| Construction of multipurpose cyclone shelters in the coastal belt area.(100 nos) | 500.00 | 4000.00 | 9000.00 | 4668.00 |  |
| Construction of flood shelters in flood prone and river erosion areas- 2nd phase | 50.00 | 2000.00 | 6950.00 | 3837.23 |  |
| Vertical extension of the relief building and construction of relief godowns in 21 district towns. | 50.00 | 1000.00 | 1450.00 | -- |  |
| Construction of flood shelters in flood prone and river erosion areas- further phases | -- | 5000.00 | 5000.00 | 5000.00 | 5000.00 |
| Construction of small bridges/culverts in rural roads in chittagong hill tracts and construction of rural roads. | -- | 1000.00 | 5000.00 | 5000.00 | 690.00 |
| Construction of multipurpose cyclone shelters in the coastal belt area.816 nos. | -- | -- | -- | 7000.00 | 7000.00 |
| Construction of cyclone resistant houses in the SIDR and AILA area. | -- | -- | 8000.00 | 10000.00 | 10000.00 |
| Comprehensive Disaster Management Programme | 6070.00 | 1000.00 | 6473.47 | 3047.18 | 10,316.26 |
| Operational support to the employment generation programme | 600.00 | 1943.70 | 743.00 | 366.00 |  |
| Procurement of saline water treatment plant- | 10.00 | 2000.00 | 5000.00 | 7799.00 | 3000.00 |
| **Total** | **23463.00** | **36404.85** | **63812.68** | **60780.41** | **62206.26** |
| **Programme** |  |  |  |  |  |
| **Nobo jibon** | **4358.30** | **6887.65** | **6416.58** | **5120.83** | **2776.00** |
| **Proshar** |  |  |  |  |  |

**Table 4: Development Expenditure Allocation of Environme**

**Table 3: Development Expenditure Allocation of Environment Sector under the SFYP**

Taka in lakh (current price)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Ministry/Sector** | **2010-11** | **2011-12** | **2012-13** | **2013-14** | **2014-15** |
| Ministry of Environment & Forest | 243 | 176 | 212 | 255 | 310 |
| Ministry of Land | 115 | 136 | 164 | 198 | 240 |
| Ministry of Disaster Management & Relief | 23463.00 | 1319 | 1312 | 1278 | 436 |
| ECRRP | 1712.00 | 1500.00 | 1500.00 | 2000.00 | -- |
| Procurement of equipment for search & rescue operation for earthquake & other disasters | 1873.00 | -- | -- | -- | -- |
| Procurement of equipment for search & rescue operation for earthquake & other disasters-2nd phase | -- | 50.00 | 1000.00 | 2050.00 | 21900.00 |
|  |  |  |  |  |  |
| Nobo jibon |  |  |  |  |  |
| Bridge/culvert |  |  |  |  |  |
|  |  |  |  |  |  |
| S&R equipment |  |  |  |  |  |
| **Total** | **1668** | **2249** | **2710** | **3259** | **3962** |

**Table 4: Development Expenditure Allocation of Environment Sector under the SFYP** and constant prices in Table 3 and

Taka in Million (2011 price)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Ministry/Sector** | **2010-11** | **2011-12** | **2012-13** | **2013-14** | **2014-15** | |
| Ministry of Environment & Forest | 243 | 165 | 187 | 213 | | 245 |
| Ministry of Land | 115 | 128 | 145 | 165 | | 190 |
| Ministry of Disaster Management & Relief | 1310 | 1820 | 2063 | 2340 | | 2697 |
| **Total** | **1668** | **2113** | **2395** | **2718** | | **3132** |

Annex 2

Details of the proposed disaster management projects of DMRD, MoFDM

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sl. No. | Proposed projects | Goal | Target | Activities | Indicative budgets | Development partners |
| 01. | Establishment of National Training Institute for Disaster Risk Management | Training to the Disaster Risk Management professionals | 1. Capacity building to the professionals and DMCs | 1. Training module development 2. Arrange different types - training of trainers | 2400 |  |
| 02. | Emergency Disaster Risk Reduction Tele-Communication Siren System in Bangladesh | Improve warning and monitoring systems | 1. Hazard specific risk mitigation 2. Decentralized Emergency management system | 1. Emergency preparedness through local communication systems 2. Collecting computer based communication system | 4800 | Japan / Qatar |
| 03. | Improve Seismic Safety Practices in urban mega-city of Bangladesh | Development and implementation of risk reduction strategies | 1. Establishment of regional and national response mechanism for mega cities 2. Application of ICT in disaster management | 1. Training, education, research and awareness of disaster management 2. Monitoring of the progress made in the implementation of the framework | 4800 | JICA/ SAARC Secretariate |
| 04. | Procurement of equipment for search & rescue operation on Earthquake and other disasters-(phase-2) | To reduce the Vulnerability of the people & loss of lives due to earthquake & other disasters | 1. To conduct search and rescue operation for emergency response as a part of Disaster Management 2. To collect necessary equipment both heavy & light for response operation after disaster | 1. Search and Rescue equipment procured 2. Capacity develop for search & rescue activities | 25000 | JDCF, GoB |
| 05. | CARP | Disaster preventive reconstruction in selected communities in the coastal districts of Barguna and Patuakhali | 1. Rehabilitate the people in the field of arable farming, animal husbandry and fishing 2. Rebuild local infrastructure and improve its resilience to disaster 3. Strengthen local capacity for disaster preparedness | 1. Introduce salt-tolerant rice species, improved cultivation methods to cope with climate change, support farms and households with small areas of land by providing livestock’s 2. Introduce cage farms, promote pond based fisheries management and support IGAs 3. Using local materials, disaster-resistant construction technologies for rebuild infrastructure 4. Build deep wells for water supply in vulnerable areas 5. Improve embankments and water management in small polder 6. Analyse disaster risk status (technical and participatory) 7. Disseminate information for disaster risk and climate change to local groups, schools 8. Strengthen the disaster preparedness committees at all levels | 1123 | GTZ |

**Chapter 9**

**Reaching out the Poor and the Vulnerable Population**

**INTRODUCTION**

Poverty is the single most important socio-economic policy challenge for Bangladesh. Bangladesh has been struggling for a long time to reduce the incidence of poverty and to improve the living standards of its millions of impoverished citizens. In recent decades, Bangladesh has made significant 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 40 percent in 2005 (Table 1). However, Bangladesh still faces the reality that 60 million of its population live in poverty*.*

**Table 1: Headcount Poverty Rate (%)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Year** | **Rural** | **Urban** | **National** |
| 1973-74 | 82.9 | 81.4 |  |
| 1981-82 | 73.8 | 66.0 |  |
| 1991-92 | 61.2 | 44.9 | 58.8 |
| 1995-96 | 55.2 | 29.4 | 51.0 |
| 1999-00 | 52.3 | 35.2 | 48.9 |
| 2004-05 | 43.8 | 28.4 | 40.0 |

Source: Different HES, HIES

The decline in poverty in Bangladesh stems in large part from strong, decade-long economic growth. The economy’s expansion during the 1990s – on average annual real GDP increase of almost 5 percent – meant a rise in real per capita GDP of 36 percent or twice the average rate of other low-and middle-income countries during the same decade. This impressive performance was fueled by large jump in real GDP in the expanding industrial sector where the output of export-oriented ready-made garment (RMG) enterprises grew by double-digit increments. Also, remarkable growth in the inflow of remittances helped reduce headcount poverty.

Despite the progress in alleviation of poverty, Bangladesh still has a larger proportion of people living below the poverty line income defined as $1.25 a day compared to many developing countries (Figure 1.).

Source: World Bank, World Development Indicators

The other dimension of poverty is the spatial distribution of poor beyond the urban-rural divide. This concerns the distribution of poverty by districts and divisions. The data suggests an East-West divide in the distribution of poverty, with a significantly higher poverty incidence in the Western Divisions of Rajshahi, Khulna and Barisal as compared with the Eastern Divisions of Dhaka, Sylhet and Chittagong (Table 2).

**Table 2: Distribution of Poverty by Divisions**

| Poverty line and division | | | **2005** | | | **2000** | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | National | Rural | Urban | National | Rural | Urban |
| **1. Using the Lower Poverty Line (Extreme Poverty)** | | | | | | | |  |
|  | **National** | | **25.1** | **28.6** | **14.6** | **34.3** | **37.9** | **20.0** |
|  |  | Barisal | 35.6 | 37.2 | 26.4 | 34.7 | 35.9 | 21.7 |
|  |  | Chittagong | 16.1 | 18.7 | 8.1 | 27.5 | 30.1 | 17.1 |
|  |  | Dhaka | 19.9 | 26.1 | 9.6 | 34.5 | 43.6 | 15.8 |
|  |  | Khulna | 31.6 | 32.7 | 27.8 | 32.3 | 34.0 | 23.0 |
|  |  | Rajshahi | 34.5 | 35.6 | 28.4 | 42.7 | 43.9 | 34.5 |
|  |  | Sylhet | 20.8 | 22.3 | 11.0 | 26.7 | 26.1 | 35.2 |
| **2. Using the Upper Poverty Line** | | | | | | | | |
|  | **National** | | **40.0** | **43.8** | **28.4** | **48.9** | **52.3** | **35.2** |
|  |  | Barisal | 52.0 | 54.1 | 40.4 | 53.1 | 55.1 | 32.0 |
|  |  | Chittagong | 34.0 | 36.0 | 27.8 | 45.7 | 46.3 | 44.2 |
|  |  | Dhaka | 32.0 | 39.0 | 20.2 | 46.7 | 55.9 | 28.2 |
|  |  | Khulna | 45.7 | 46.5 | 43.2 | 45.1 | 46.4 | 38.5 |
|  |  | Rajshahi | 51.2 | 52.3 | 45.2 | 56.7 | 58.5 | 44.5 |
|  |  | Sylhet | 33.8 | 36.1 | 18.6 | 42.4 | 41.9 | 49.6 |
|  |  |  |  |  |  |  |  |  |
| Poverty line and division | | | **1995/96** | | |  |  |  |
|  |  |  | National | Rural | Urban |  |  |  |
| **1. Using the Lower Poverty Line (Extreme Poverty)** | | | | | | | | |
|  | **National** | | **35.6** | **39.8** | **14.3** |  |  |  |
|  |  | Barisal | 43.9 | 44.8 | 28.9 |  |  |  |
|  |  | Chittagong | 32.4 | 35.3 | 12.1 |  |  |  |
|  |  | Dhaka | 33.0 | 41.5 | 10.8 |  |  |  |
|  |  | Khulna | 32.2 | 33.2 | 25.8 |  |  |  |
|  |  | Rajshahi | 41.6 | 44.4 | 19.2 |  |  |  |
|  |  | Sylhet | -- | -- | -- |  |  |  |
| **2. Using the Upper Poverty Line** | | | | | | | | |
|  | **National** |  | **53.1** | **56.7** | **35.0** |  |  |  |
|  |  | Barisal | 59.9 | 60.6 | 47.7 |  |  |  |
|  |  | Chittagong | 44.9 | 47.2 | 29.2 |  |  |  |
|  |  | Dhaka | 52.0 | 58.9 | 33.6 |  |  |  |
|  |  | Khulna | 51.7 | 51.5 | 53.3 |  |  |  |
|  |  | Rajshahi | 62.2 | 65.7 | 33.9 |  |  |  |
|  |  | Sylhet | -- | -- | -- |  |  |  |

*Source: BBS, HIES 2005 and HES, 1995-96 Report*

A yet another aspect of the poverty profile is the hard core or ultra poor. These are the poorest of the poor category and are characterized by much deeper impoverishment and deprivation than the normal poor. They are also amongst the hardest to reach by the normal growth process and would likely require targeted poverty reduction programs. Locating these poor and targeting policies and programs to lift them from the poverty trap is a real challenge and requires concerted efforts. The magnitudes of the ultra poor in terms of both a calorie intake measure and a normal cost of basic needs measure are shown in Tables 3A and 3B. The percentage of ultra poor population is alarmingly high (25 percent in 2005 by the basic needs method, which is a staggering 35 million people).

**Table 3A: Hardcore or Ultra Poor Based on Cost of Basic Needs**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Head Count Rate of Poverty by Cost of Needs Method (CBN) | | | | |
|  | Upper Poverty Line (Moderate Poor: food expenditure equal to food poverty lines | | Lower Poverty Line (Extreme Poor: total expenditure equal to food poverty line) | |
| % | No. in million | % | No. in million |
| % of HH | 40.0 | 11.46 | 25.1 | 7.19 |
| % of Pop. | 40.0 | 53.53 | 25.1 | 34.84 |

**Table 3B: Hardcore or Ultra Poor Based on Calorie Intake**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Incidence of Poverty By Direct Calorie Method (DCI) | | | | | | |
|  | Poverty Line-1 Absolute Poverty <=2122 Kcal per person per day | | Poverty Line-2 Hardcore Poverty <=1805 Kcal per person per day | | Poverty Line-3 Ultra Poverty <=1805 Kcal per person per day | |
| % | No. in million | % | No .in million | % | No. in million |
| % of HH | 37.95 | 10.87 | 18.29 | 5.24 | Na | Na |
| % of Pop. | 40.40 | 56.00 | 19.50 | 27.00 | 7.80 | 10.80 |

These various aspects of the poverty profile suggest that growth strategy alone will not be able to fully solve the poverty problem in Bangladesh. While growth acceleration and job creation will be the primary foundation for the poverty strategy, this will need to be complemented by a well designed specific and targeted interventions that go to the bottom of the various factors contributing to the rural-urban poverty divide, the regional variations in poverty, and the large concentration of ultra-poor and seek to remove those constraints. This is a long-term challenge, but the Sixth Plan is well placed to address many of the concerns.

**STRATEGIES FOR POVERTY ALLEVIATION IN SFYP**

The role of the public sector in generating growth is important for several reasons. First, public investment in infrastructure like transport and communication, power and energy, ports, and human capital would be critical to enhance the efficiency of private investment. Second, the government needs to support the private sector through facilitating development-friendly institutions– property rights, rule of law, market-oriented incentives, sustainable public finances, sound monetary and trade policy, strong and efficient financial sector and good governance. Finally, public investment will determine the structure of growth by allocating resources to the social sectors like education, health, and rural infrastructure. The role of the public and the private sector would assume renewed importance through the explicit adoption of public private partnership (PPP) by the present government.

***Sources of Growth***

Since the 1990s, the growth of total factor productivity (TFP) has been low, growing at only 1.2 percent. For enhancing the growth of the economy during SFYP, the focus therefore would be on increasing TFP growth and the essential elements of this approach would be (i) pursuit of supportive macroeconomic policy, (ii) removal of infrastructural bottlenecks including electricity, gas, telecommunication, transport and port services, (iii) enhancing the supply of effective labor through investment in health, nutrition and education of all people especially people living in poverty, women, indigenous people, and persons with disabilities, (iv) generation, adaptation and diffusion of technology, through emphasis on R&D and inflow of FDI, (v) minimizing the negative productivity shocks of natural disaster through better management of such disaster, enhancement of the poor’s capacity to cope with the disaster and supporting the efforts of the entrepreneurs to overcome damages to production, plants and machinery, (vi) improving the quality of governance, (vii) lowering regulatory and administrative burden on business, (vii) promoting openness to trade and devising appropriate fiscal stimulus and policy responses to international shocks like global recession; (viii) improving the quality of financial sector intermediation, (ix) improving the performance of the tax system, and (x) bringing about institutional reforms to make them more market oriented and growth friendly.

***Ensuring Regional Balance***

The sharp regional difference in the incidence of poverty between the eastern and western regions of the country will be addressed through introducing regional dimension in allocation and utilization of resources. Special attention will be given to bring dynamism in the economy of the western region through provision of infrastructural facilities, credit and fiscal incentives, encouraging locational dispersion of industries and creating regional growth centers, providing training and upgrading skills, promoting rural non-farm activities and increasing the coverage of social safety nets.

***Decentralizing Growth***

Decentralized growth with participation in the most inclusive manner will have greater impact on poverty reduction. Rural towns or semi-urban areas growing outside the municipal areas have shown dynamism of non-farm activities. Growth of rural towns will be promoted through improved provision of public utilities, better connectivity, planned development of towns and land use planning.

The meso-economy, consisting of formal and informal activities in service, trade, construction and small industries provides scope for decentralized employment generation. These activities are often characterized by low asset base and limited scale and informal nature of operation. Hence, traditional policy interventions having a sectoral focus do not always serve well the growth requirements of these activities.

The meso-economy will be supported through appropriate credit facilities, skills training and technology upgradation to enable this vibrant component of the economy to integrate with the growing formal sector and contribute towards decentralized growth.

***Gaining from Demographic Dividend***

Bangladesh’s population is likely to increase to 233 million in 2051 from the estimate of 144.2 million in 2009. In this context, population planning will take a number of initiatives to reduce the growth rate such as (i) creating awareness about the population problem and enlisting public support for population planning and development; (ii) implementing family planning and reproductive health programs more efficiently; and (iii) strengthening inter-ministerial coordination. The demographic transition that the country has undergone resulting in a higher proportion of young and working age population and a lower dependency ratio would create virtuous cycles of growth.

Macroeconomic and sectoral policies will be geared towards providing productive employment to the growing labor force to reap the demographic dividend. Focusing Women’s Advancement and Rights Women in Bangladesh have made important gains along with changes in social attitudes towards women’s economic participation. Further progress in women development will be achieved by including women’s advancement and rights issues in all mainstream activities.

Although women and men share many of the burdens of poverty, women frequently experience poverty differently, have different poverty reduction priorities, and are affected differently by development interventions. The SFYP will address the gender dimensions of poverty and implement gender responsive interventions to enhance the likelihood of success of poverty reduction efforts.

***Strengthening Safety Nets Programs***

An effective, extensive, and development oriented social protection and safety nets program will form an integral part of the poverty reduction strategy. The existing programs will be consolidated and strengthened in terms of targeting and coverage.

Social safety nets will be extended for the ultra poor. Social safety nets will also be extended for the urban poor who are often not reached by existing measures. Some previous programs such as one house one farm, rural housing, ideal village, and returning home will be revived, and the coverage of old age allowance and destitute women allowance programs will be substantially increased.

***Strengthening Financial Sector***

An efficient financial sector plays a crucial role in accelerating economic growth process. Therefore, reform initiatives implemented in the financial sector so far would be carried forward during SFYP period to propel Bangladesh’s economy on a higher trajectory. The government will carry out financial sector reforms to catalyze economic growth and will step up public expenditure to make a significant breakthrough in poverty eradication program.

The supervisory capacity of the Bangladesh Bank to oversee the commercial banks’ activities will be further strengthen, and the NCB’s privatization process will be expedited. Prudent credit policy will followed to avoid concentration of wealth to few group/companies. A cap on the credit limit of up to 35 percent of any bank’s paid up capital has been imposed. The overall activities of the Bangladesh Bank and the NCBs will be fully automated. Meanwhile power of the Boards of Directors of SCBs has been enhanced. A 5- year business strategic plan has been prepared and expected to be put in to operation with the SFYP period. This will infuse dynamism in banking operation.

The Bangladesh Shilpa Bank and Bangladesh Shilpa Rin Shangtha will be merged to create a wholly-owned public limited company to strengthen the operational efficiency of a unified investment bank. The Government has recapitalized Bangladesh Krishi Bank (BKB), Rajshahi Krishi Unnayan Bank (RAKUB) and Karmashanghstan Bank in order to expand agricultural loans program as well as micro-credit.

***Ensuring Environmental Protection***

Operationally, poverty-environment linkages are evident at two levels - one is conservation of nature and natural resources for sustainable livelihood and the other is controlling/combating pollution for the maintenance of biodiversity and protection of human health. An integrated policy and plan will be formulated under the strategy to ensure environmental protection and protection from the adverse effects of global warming and climate change. Effective regional and international cooperation will be sought to ensure environmental protection and to cope with the effects of climate change.

**Critical Role of Access to Finance For Poverty Alleviation**

A review of the characteristics of the poor shows that lack of assets is a critical determinant of poverty. This is in terms physical assets, financial assets as well as human capital. Human development policies focused on health and education is a powerful instrument for equipping the poor with human capital and is a great equalizer of opportunities. Regarding physical assets, short of redistributing land, possibly the most potent way of enhancing the opportunities for capital accumulation is better access to financial resources at an affordable price

Three financial service requirements have been identified that, on the one hand, will reduce income vulnerability, and enhance income level, on the other hand. They are:

(i) *Access to credit of poor households*: It will relax liquidity constraint of the resource constrained poor households and create economic opportunities, though marginal benefit of such access to credit will depend on access to economic information and skills of the borrowers.

(ii) *Access to social safety net programs:* Poor are subject to both income and consumption vulnerability. The social safety net programs can minimize income and consumption vulnerability for the extreme poor households. Expansion of such programs can be complimentary to the first requirement that we have mentioned. Consequently, marginal benefits of access to credit will be higher.

(iii) *Access to Insurance for Protection and Preservation of Assets/Wealth*: Poor households, like everybody else, are subject to life and property risk as well as credit risk. Death or disability of bread earner or damage to property due to acts of God makes poor households more destitute. In such a situation, access to micro insurance can protect family from income shocks and preserve wealth.

Micro finance revolution that started some three decades age has brought changes in financial landscape in rural financial markets. Poor that did not have access to credit can access credit. Micro finance institutions address the problem of formal market failure due to adverse selection and moral hazard. On the other hand, it offers institutional framework that can make rural financial market more effective. The major elements of micro finance are: (i) self-selected group; (ii) compulsory savings; (iii) participation of poor members in investment decisions, and (iv) joint liability of the group members for loan default.

**Micro Finance Addresses Needs of the Ultra Poor**

Targeting ultra poor is another frontier of micro finance movement in Bangladesh. More than 20 percent of rural population live in extreme poverty. These households live below lower poverty line, which is defined as the line where average food consumption per capita is equal to average total consumption implying that the households did not have any any-food expenditure. It is also defined in terms of minimum food calorie, 1805 kilo calorie. These households are also termed as ultra poor. MFIs have been addressing the needs of the ultra poor through different programs.

Beggars, destitute, landless, daily wage earners, bonded labor, female headed poor households, physically handicapped, seasonal labor, poor households living in char and/or flood prone or river erosion areas and households with no regular income flow are generally under the UP programs. Generally they are in structural poverty. In case of structural poverty, special focus is needed to push them forward.

MFIs in Bangladesh have been pursuing flexible system to provide financial services to the ultra poor. There are variations in approaches as practiced in Bangladesh. Although generally group approach is pursued, most MFIs tend to follow individual approach. Flexible loan contract as well as loan interest rates are offered. Common lending interest rate is 20 percent. In case of ultra poor programs interest rates vary between zero and 15 percent. Repayment installment system is flexible. Flexible payment system based on the ability of ultra poor is followed. Like traditional micro finance programs, savings is the dominating element. The major MFIs in Bangladesh have been implementing separate programs for the ultra poor. BRAC has an approach with assets transfer and training support in addition to daily subsistence allowance. Grameen Bank has Beggars’ program (interest free flexible loan repayment system). It has a credit guarantee scheme under which UP traders trade credit for goods worth max Tk.2000 ($30). The supplier of credit gets GB guarantee. ASA has a special program for the UP which are offered through specialized branches. Loan contract is flexible – repayment schedule. PKSF has been implementing HP program through its partners with flexible terms and conditions.

Bangladesh MFIs have made significant progress in reaching out the ultra poor. Around 4 percent of the members are ultra poor members when micro finance coverage of ultra poor is compared with the total number of members mobilized. Around 1.38 million ultra poor members have been brought under micro finance net by the end of 2008. Of them around 80 percent were borrowers. Loans outstanding amounted to Tk. 2.25 billion. The design of the ultra poor programs enables its members to save. Around 29 percent of the loans outstanding was member net savings. This reflects that even the ultra poor can save if appropriate instruments are available.

Micro finance has expanded tremendously both horizontally and vertically. With wider branch network, MFIs have been able to expand financial services to the millions of poor members and borrowers. Financial products are diversified – from traditional small business to livestock development and manufacturing. From the portfolio mix of the lenders, one is able to derive information on demand side. Livestock has a higher demand. This is less risky. Small business remains prominent sector. Demand for loans for financing these sectors has grown over time. Increase in the supply of loans is a testimony of such higher demand.

**Micro Finance in Reducing Seasonal Poverty and Vulnerability**

Poor HHs are vulnerable because of idiosyncratic risk and covariate risk. The presence of these risks affects both poor and non-poor. In either of the cases, it makes them vulnerable. In some cases, covariate risk, like flood, cyclone, tornado and other natural disaster, may contribute to seasonal poverty. In this section, we use the term ‘vulnerability’ in terms of consumption vulnerability, income vulnerability and exposure to different shocks. We present two evidences – one on monga where consumption vulnerability is extreme, and the other one on exposure to different shocks, based on a national survey. Both the surveys were conducted by institute of Microfinance.

Monga (famine like situation), caused by flood or draught, in north-western Bangladesh is frequent. It is essentially caused by inadequate employment opportunities for the poor during September-November when there is no farming. It is equally observed in Southern Bangladesh where intensity of covariate risk is colossal, caused by cyclone, for example. In the north-western region of Bangladesh, intensity of poverty increases during monga, although poverty is structural in nature. The Government of Bangladesh has been expanding social safety net programs like food for works programs, 100-day employment guarantee scheme, old age pension scheme. Despite expansion, its ability to outweigh marginal loss from covariate risk is limited as not all poor are under these programs and the amount of benefit is small. In such a situation, more long term interventions are required. In the case of monga type of situation, off-farm economic activities need to be created so that farm-based employments can be largely substituted by off-farm based employment opportunities. In the case cyclone driven covariate risk requires larger interventions. In either or both the cases, two financial services will be required – one, provision of micro credit, and second, provision for micro insurance.

**Micro Finance in Bangladesh: Present Scenario**

Bangladesh has experience of over two decades in micro finance. Some 750 micro finance institutions with a network of some 16000 branches have been operating. In 2008, annual disbursement was around Tk.300 million (US$4.2 billion), loans outstanding of Tk.220 billion (US $3.3 billion) and net member savings of Taka 140 billion (US$2 billion). Annual loans disbursement has grown during the past five years at a rate of 20 percent. Average loan size is around Tk.23,000. Micro credit is diversified in nature. Micro enterprise loans, relatively large loan varying between Tk.30,000 and Tk.500,000 constitute around 14 percent of the loans. Around three million borrowers are micro enterprise borrowers. In addition, micro credit is targeted for ultra poor. More than 12 percent of the borrowers are ultra-poor.

Although poor households are benefited from micro credit but the larger effect of micro credit can be found only when vulnerability of poor households is minimized. The poor are vulnerable to seasonal poverty and different shocks including lumpy expenditures for children marriage and major medical treatment. Seasonal poverty arises because of natural disaster such as monga in the greater Rangpur region and Sedor in Southern region. Vulnerability to shocks is common. The net gains from micro credit are, in case of any covariate shock of higher magnitude like Sedor, not sufficient to cope with vulnerability to consumption and income loss. In other cases, micro credit has contributed to minimizing vulnerability to consumption and income. The less vulnerable are the households with off-farm self-employment. In the greater Rangpur region, during the period of monga, households with self-employment had twice more employment days than the households depending on wage employment only. Micro credit does contribute to off-farm employment creation. It is not only the natural shocks that the poor are exposed to. They are exposed to idiosyncratic shock like health related shocks. Often we do not find negligible net economic impact of micro credit from one point to another point. This is due to idiosyncratic shocks. Idiosyncratic shocks like lumpy medical expenses or cost of marriage reduce net gains from micro credit. Idiosyncratic shocks are costly and they create both short and long run burden. Micro credit reduces such vulnerability of the households.

*Access to Rural Credit*

Although non-government micro finance programs dominate micro credit market structure, the GoB micro credit programs are no less important. The noted source is Palli Daridra Bimachan Foundation (PDBF), organizational transformation of BRDB's RD-12 program. This is the only organized public-sector micro credit program. BRDB has been promoting rural development through providing both rural finance including micro finance, and skill development training. It has been contributing substantially but its effects are less sustainable. It is also heavily subsidized. Nevertheless, both PDBF and BRDB have expanded credit substantially during the past years.

The Table 4 shows an increasing trend in the disbursement of targeted agricultural and specialized programs for rural development by the public sector banks. The share of specialized agricultural development banks (BKB and RAKUB) is consistently around 66 percent. Although disaggregation of such loans is not available, we find it difficult to point out the share of nonncrop loans. Nevertheless, available newspaper reports suggest that around one-third of these loans are non-crop loans. These loans finance off-farm economic activities, and in turn self employment vis-à-vis income growth.

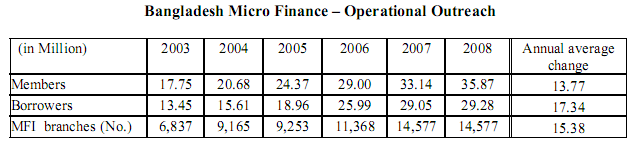
**Table 4: Targeted Agricultural and specialized Credit Program Through Public Sector Banks and Cooperatives (Taka in Crore)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Year | BRDB & BSBL | Specialized Banks (Agricultural Development Banks) | State owned commercial Banks | Total public sector targeted credit disbursement | Share of Specialized Banks |
| 1999-00 | 408.31 | 1905.51 | 537.47 | 2851.29 | 66.83 |
| 2000-01 | 251.81 | 2189.88 | 577.98 | 3019.67 | 72.52 |
| 2001-02 | 313.7 | 2042.25 | 598.96 | 2954.91 | 69.11 |
| 2002-03 | 354.88 | 2243.1 | 680.39 | 3278.37 | 68.42 |
| 2003-04 | 502.48 | 2640.87 | 905.66 | 4049.01 | 65.22 |
| 2004-05 | 665.32 | 3149.32 | 1142.14 | 4956.78 | 63.54 |
| 2005-06 | 752.12 | 3551.66 | 1192.43 | 5496.21 | 64.62 |
| 2006-07 | 782.69 | 3482.02 | 1027.8 | 5292.51 | 65.79 |
| 2007-08 | 740.36 | 4061.12 | 1365.5 | 6166.98 | 65.85 |
| 2008-09 | 698.99 | 4703.69 | 1588.89 | 6991.57 | 67.28 |

***Outreach***

Outreach of the MFIs is defined in terms of number of members, borrowers and branches. Wide expansion over the past six years has taken place. Number of members at the end of 2008 was 33.4 million, almost doubled during the past six years and grew at an annual rate of around 14 percent. More than 90 percent of the members are borrowers. Annual average growth rate has been more than 17 percent implying higher demand for credit. Over 600 MFIs mobilized these members through a network of over 14,500 branches, three times the number of commercial and development bank branches in rural credit market (Table 6). Such expansion reflects (i) higher ability of the MFIs to provide financial services to the poor, and (ii) higher demand of poor for financial services. It, however, also reflects promotion and development of rural financial markets.

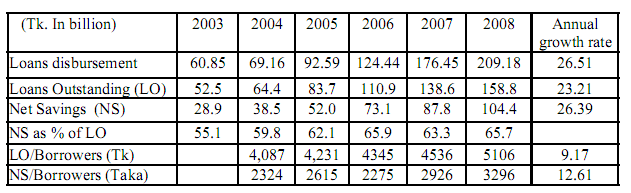
**Table 6:**



***Financial Outreach***

Financial outreach includes both credit and member savings. There has been higher growth in loans disbursement as well as loans outstanding during the past six years. The Industry that had disbursed Taka 60 billion through a network of 6,837 branches in 2003 had grown at an annual rate of 27 percent. In 2008, it disbursed Taka 209 billion (Table 7). Loans outstanding have been growing at a lower rate. Critics often argue that growth of credit is a reflection of growing indebtedness. This probably is proved to be wrong even simply looking at the amount of savings that the members/borrowers have saved over time. The net saving balance was Tk.104 billion in 2008, which is around two-third of the loans outstanding. Net loan per borrower has also

**Table 7: Financial outreach of the MFIs, 2003-08**



increased. It is interesting to note that while loans outstanding grew three times during the period 2003-08, net savings increased by around 3.5 times. This is only possible through higher growth rate of savings. This is further evident from the growth rate of average loans outstanding and average net savings balance. Average savings per borrower has grown at a higher than that of average loan balance per borrower. Savings not only makes the members financially independent but it also act as insurance in times of crisis. During the past several natural shocks, savings have played as a cushion for the poor members.

***Main Issues and Challenges in Microcredit***

Microcredit has helped address poverty by providing loan in small amounts without collateral and has helped in particular women who are the target borrowers of micro lending. Over the years, various challenges with regard to microcredit have emerged. These are: (i) prevalence of high interest rates which are being reduced, but further reduction of interest rate is necessary; (ii) vicious cycle of microcredit - the poor are borrowing from one microcredit organization to repay another; (iii) microcredit programs have not been very successful in including the hardcore poor; (iv) rate of graduation to above the poverty line among the microcredit borrowers is low, indicating persistent dependency on microcredit; (v) most of the microcredit recipients being women, bear the burden of repayment; (vi) microcredit organizations compete with each other and often put pressure on the potential clients to borrow; (vii) profitability of micro enterprises is small and often is not sustainable on a long-term basis because of enterprise decapitalization, saturation of markets for products that are traditionally produced by microcredit borrowers, weak coordination among NGOs and MFIs and a weak financial system.

**Strategies for Microcredit Expansion in SFYP**

The Sixth Plan’s micro credit expansion consists of the following:

* Formal rural credit should be expanded from the present level of Tk. 7000 crore. It has been growing every year at an annual growth rate of around 10 percent. This is quite low. This has to be enhanced, and it should grow at 15% annually in order to create more demand for credit to finance off-farm economic activities including SMEs.
* There is a formal market failure to address demand for credit of poor households. Public sector banks are inefficient and costly, and are not able to expand financial services to poor households for their high transaction costs and perceived associated risk of non-recovery of loans. Under these circumstances and in view of the successful experiences of micro financial institutions (MFls), the Government will emphasize on expanding financial services to poor households through micro finance institutions because of their wider network and commitment.
* Greater emphasis will be placed to increase the coverage of the program to a larger number of deserving households; introduce a uniform approach of operation both by NGOs and the public sector; and introduce a regulatory framework for streamlining the activities of the microcredit program in the country. The Government would channel more resources for microcredit operations, increase effectiveness of microcredit for poverty alleviation, avoid overlapping and reduce seasonal vulnerability through microcredit. Local governments will be involved in microcredit delivery.
* A Microfinance Regulatory Authority (MRA) has been established to provide appropriate regulatory framework. A national microcredit policy will be framed to provide guidelines about the operation of microcredit. It is also necessary to rationalize interest rates. Necessary mechanism will be devised to ensure that microcredit reaches the ultra poor and the hard to reach areas especially those located in regions with higher incidence of poverty.
* Up-scaling microcredit is a natural consequence of microcredit program as the progressive microcredit recipients demonstrate their entrepreneurial ability to handle larger size loans requiring expansion, deepening and diversification of loan products. Some of the microcredit organizations, notably some partner organizations with support of PKSF, have increased their loan ceilings to Tk. 300,000 for microenterprise program and to Tk. 30,000 for all other programs. The microenterprise loan not only helps reduce poverty of the borrowing household but also creates employment opportunity for other poor people. It is expected that as more and more borrowers graduate out of the regular microcredit program the demand for larger size loans will increase. The Sixth Plan will facilitate this transition to scale up.
* Special emphasis will be placed on micro enterprise development. Micro enterprise development can be engine of rural economic growth provided appropriate interventions are introduced. Credit as well as access to information and training will be required for micro enterprise development.
* Skill development of borrowers would contribute to income growth and efficiency in micro credit market. MFls would be involved in the process.
* Access to better information for microcredit borrowers will improve the productivity of credit. Special effort will be made to target the benefits of the ICT expansion program for these borrowers.

**International Migration and Remittances**

Bangladesh has benefitted tremendously from the large inflow of remittances. Evidence from Bangladesh and other South Asian countries show that income from remittances has been a major positive factor for the reduction of poverty. The Government has been striving hard to deepen overseas employment opportunities in different countries in the World. The major exporting countries of Bangladesh manpower have been Saudi Arabia, Malaysia and Abu Dhabi in terms of remittances and number of employments. The concerned ministry and the Bureau of manpower export have concentrated on the incentive structure required for cost-effective manpower export as well as for remittances of foreign currency through formal channel. Table-5 shows number of exported manpower and the amount of remittances received during the past ten years.

**Table 5: Trend in Number of Employment Abroad and Amount Remittances**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | Amount of remittances | | | |
| Fiscal year | Number of  employment abroad ('000) | Million (US $) | Percentage Change | Taka in Crore | Percentage Change |
| 1999-00 | 248 | 1949.32 | 14.28 | 9825.4 | 19.63 |
| 2000-01 | 213 | 1882.1 | -3.45 | 10266 | 4.48 |
| 2001-02 | 195 | 2503.44 | 32.81 | 14390.19 | 40.17 |
| 2002-03 | 251 | 3060.31 | 22.25 | 17719.58 | 23.14 |
| 2003-04 | 277 | 3372.49 | 10.2 | 19872.39 | 12.15 |
| 2004-05 | 250 | 3848.3 | 14.11 | 23646.97 | 18.99 |
| 2005-06 | 291 | 4801.88 | 24.78 | 32274.6 | 36.49 |
| 2006-07 | 564 | 5978.47 | 24.5 | 41298.5 | 27.96 |
| 2007-08 | 981 | 7914.78 | 32.39 | 54293.24 | 31.47 |
| 2008-09 | 650 | 9689.16 | 16.22 | 66674.87 | 22.8 |

Further efforts will be made in the Sixth Plan to promote migration, especially from lagging districts of the northern and north-western regions of the country. Two major interventions will be undertaken - skill development through training programs and financing of migration. Efforts will also continue to reduce the transaction costs of remittances through better banking support to migrant workers and also to ensure that migrant workers are treated well and with dignity in host countries through the oversight by local embassies as well as through high-level policy dialogue with host governments as necessary.

**SOCIAL PROTECTION PROGRAMS**

Social security, empowerment, and employment generation are indispensable elements of poverty reduction programs. Strong and expanded social safety nets will protect the poor from different social, economic, and natural shocks and poverty will certainly reduce through social empowerment. In achieving faster poverty reduction, attention needs to be given to activities that are directly targeted to benefit the extreme poor and disable, women in poverty, landless poor and other vulnerable groups like urban poor. To protect the poor from falling into deeper poverty, attention has to be given to at least five areas. These are: social safety net programs; food security; disaster management; and rural non-farm activities. Regarding women and children, the Government’s strategy is to mainstream the issues in all related areas including human development and microcredit while also eliminating the policy biases in social and political arena. Yet, some specialized programs are necessary to address some of the concerns.

***Social Safety Net Programs***

A strong and expanded social safety net program (SSNP) is the main emphases of Vision 2021, which will protect the poor and the vulnerable from all sorts of social, economic and natural shocks. The social safety net may be defined operationally to include all kinds of cash and kind transfers to the poor, all welfare activities, unemployment benefits for retrenched workers, subsidized health care, shelters for the homeless, and pension benefits, which prevent individuals from falling into poverty.

The major goals of SSNPs are: (i) safety net interventions will achieve the protection of all types of poor people and the prevention of chronic poverty as well as transient poverty. It will target the extreme poor first; (ii) the Government will encourage NGOs, CBOs and the private sector to augment their role and contributions to expand the social safety net; and (iii) attempts will be made to increase coverage through increased budgetary allocation each year.

All the programs undertaken under the social safety net at present will continue. The old age allowances, allowance for insolvent persons with disabilities, stipend program for students with disabilities, allowance for widows and distressed women, maternity allowance for poor mothers, and small ethnic groups would be expanded. The present government gives more emphasis on SSNPs as a means to reduce poverty. Social safety nets will be extended for the ultra poor and the number of recipients of old age allowances and destitute women allowance would, at least, be doubled. Besides, other programs such as one house one farm, rural housing, ideal village and returning homes will be taken up.

There are, however, some problems in the social safety net programs. These problems are: (1) coverage of safety net program: Despite all efforts current coverage of social safety net program is poor. Achievement of 100 percent coverage is a great challenge. (2) Appropriate targeting: Inclusion of ineligible or exclusion eligible person in the program is a common phenomenon. Appropriate measure has to take in order to appropriate targeting/selecting eligible person. (3) Leakage: Leakage has been reported in some studies. Necessary measures to be undertaken to avoid leakage. (4) Development Management Information System/ Database: Development MIS/ Database is very important to appropriate selection of eligible person for safety net program and as well as undertaking appropriate projects and programs for the development of disabled persons.

***Food Security***

Food security is a core issue in the struggle against poverty. Food security encompasses three broad aspects, namely, availability, access and utilization. The government has formulated several national policies highlighting various aspects of food security. The National Food and Nutrition Policy and the National Plan of Action for Nutrition are more comprehensive and these have served as starting points for the implementation of the policies. These policies focus on objectives such as: (i) ensure adequate and stable supply of safe and nutritious food; (ii) enhance the purchasing power of the people for increased access to food; and (iii) ensure adequate nutrition for all, especially women, children and persons with disabilities.

Despite significant progress in domestic food grains production, Bangladesh is still facing food insecurity. The government operates a number of multi-purpose social safety net programs to ensure food security of the most vulnerable people in the country. These include: (i) open market sales (OMS); (ii) FFW program; (iii) VGD program; (iv) VGF program; (v) test relief (TR); (vi) gratuitous relief (GR); (vii) food aid to CHT area people; (viii) food subsidy; (ix) employment generation for pro-poor people and (x) employment in char areas.

Main problems of access to food relate to lack of purchasing power among poor people, which has seasonality and spatial dimension. Considerable intra-household disparity and discrimination persist in food consumption. Further, Increasing food availability and household access to food alone will not be adequate to satisfactorily address the malnutrition problem. Nutritional issues will need to be addressed more directly and comprehensively. Comprehensive programs involving nutrition education, food fortification, improvement in water quality and public health will be undertaken. Further, awareness of nutrition will be created through mass communication. The government is committed to ensure quality and safe food to the people. To this end, in addition to enacting laws, the government has taken initiatives to strengthen the Bangladesh Standard and Testing Institution (BSTI).

To ensure food security for the nation and particularly for the extreme poor, the government will (i) maintain an optimum level of food stock; (ii) ensure access to food at an affordable price for the hardcore poor, the disadvantaged groups and persons with disabilities; (iii) operate special food program in the poverty/disaster prone areas; (iv) increase awareness about safe and nutritious food through the mass media and school education; (v) ensure food security by strengthening the public procurement system; (vi) distribute food under VGD cards area-wise in proportion to the population living below poverty line; (vii) ensure adequate coverage under VGD; (viii) strengthen OMS for increasing access to food for the urban poor; (ix) encourage domestic cereal production; (x) encourage building of cold storage plants, giving guidance to banks for assessing the scope of financing these; (xi) encourage supply of nutritious food including pulses and oil seeds through high quality seeds, technology and credit support to the farmers; (xii) encourage cooperative agricultural marketing to maintain stable prices of food; (xiii) introduce crop insurance; (xiv) increase storage capacity for food grains; (xv) provide incentives for construction of rural warehousing; and (xvi) improve food management and monitoring in the domestic and world markets to avert future crises.

***Disaster Management***

In November 2007, a devastating cyclone ‘Sidr’ hit the coastal belts of Bangladesh which was followed by another cyclone ‘Aila’ in May 2009. Although the cyclones devastated large areas, the death toll was relatively low (3,406 in 2007 and 190 in 2009) because of the improved early warning system and its ability to mobilize organizational and community actions in a timely manner and relief and early recovery systems.

The goal for disaster management (DM) is prevention and protection of lives and properties from any kind of hazards with priority given to disaster risk management along with mitigation. The government emphasizes disaster risk management in a cost effective manner. The draft Disaster Management Act has identified a group of broad-based strategies, which focus on management of risk and consequences, community involvement in protecting lives and properties with greater involvement of local government bodies and emphasis on non-structural mitigation. The government has taken a number of steps for building up institutional capacity from national to union levels for effective and systematic disaster management.

DM will include (i) improving the cyclone signal system to make it clear to common people and improving flood forecasting to be able to make forecasts 6-7 days ahead instead of 3-4 days as currently made; (ii) strengthening coordination among the government agencies, NGOs and civil society institutions and coordination and management at grassroots level; (iii) creation of a disaster relief fund to support victims of natural disasters; (iv) developing insurance system to cover disaster-related losses of property; (v) avoiding overlap in relief distribution and rehabilitation initiatives, (vi) providing adequate health facilities for the disaster victims, quick transportation of the affected people and instant treatment of the injured people, and (vii) improving capacity for adequate and quick response to emerging and potential disaster like sea-level rise, bird flu, etc.

The strategies for DM will focus on: (i) collective action of public sector, NGOs and community organizations to reduce the risk of disasters in the country, (ii) increase the mitigation capacity of the community and NGOs, (iii) promoting optimum coordination and best utilization of resources along with ensuring community participation so that they are aware of what they can do for protecting their lives and property, and (iv) undertaking measures for dealing with disasters such as Tsunami and earthquake.

The DM needs to be continuously upgraded and strengthened. Various actions to be taken in this area are: (i) reducing disaster risks and vulnerabilities through construction and maintenance of roads, bridges and culverts under social safety net and community and livelihood support programmes (ii) mainstreaming disaster risk reduction and climate change adaptation issues into all sectoral policies, plans and institutional development; (iii) increasing community involvement in disaster management; (iv) ensuring protection of women, children, the aged, and people with disabilities giving due attention to their special needs; (v) improving coping capacity at global, regional, national, local, community, household and individual levels; (vi) continuing risk assessment to address the new risks arising from the changing national, regional and global situations; (vii) strengthening attention to environmental management, land-use and urban planning, protection of critical facilities, application of science and technology, and partnership and networking in disaster risk reduction and mitigation; (viii) improving early warning and community alerting system by enhancing the capacity of disaster forecasting and introducing community radio throughout the coastal belt and adjoining districts; (viii) undertaking construction of multipurpose shelters in the cyclone prone coastal areas and flood prone areas; (ix) undertaking structural interventions such as construction of embankment, regulator, and flood control mechanism; (x) implementing a coastal disaster management policy; (xi) introducing contingency planning at all levels to improve emergency response coordination; and (xii) introduction of property insurance to cover disaster- related damages.

***Rural Non-Farm Activities***

The vision for rural non-farm activities (RNFA) is to foster such activities as an important and effective poverty reduction activity for women in particular. Therefore it is important to identify activities for RNFA and the roles of both public and private sectors and to encourage entrepreneurs to promote RNFA.

The following problems/challenges have been identified for RNFA: (i) since RNFA includes a diverse group of activities, it is difficult to define it as a sector and hence it lacks any baseline assessment; (ii) activities in RNFA are often financed by microcredit, which can only support very small-sized activities. There is a limitation in accessing finances for larger sized activities; (iii) people engaged in RNFA activities, particularly women, lack capacity and skill for producing quality products; have inadequate access to information in determining what to produce and often they lack skills in marketing their products; (iv) as institutional financing is mainly urban biased, problems arise since the NGOs are not very effective in providing business advice because they themselves are not well-equipped to provide such support; (v) management capacity of small enterprises operating in RNFA is rather poor; and (vi) RNFA suffers from inadequate infrastructural facilities particularly energy and communication;

Future strategies will focus on two broad areas: (i) improving the rural investment climate; and (ii) supporting institutional framework. Measures for improving investment climate will include ensuring more energy supply in the rural areas with emphasis on bio-fuel and solar energy use; emphasis on routine maintenance of the existing roads, development of waterways and railway communication; up-scaling and technology upgradation of small enterprises focusing on product development and quality improvement; provision of training for workers based on market demand and also for entrepreneurs in improved business method; promoting linkage with agriculture and greater value addition of farm products through a boost in agro-processing, arranging local-level fairs on routine basis to promote RNF products, skill development training and internship facilities, in-country and international tours through public-private financial participation.

In order to mainstream RNF issues in rural development, an institutional set-up will be formed with different stakeholders, including local government institutions, private entrepreneurs in RNF and providers of financing and other support services. These stakeholders shall identify the strategic policy and investment priorities. The government will consider instituting a monitoring unit to monitor implementation of the initiative and the results.

The RNFAs are undertaken mainly within the informal sector and it is desirable to keep them informal under the present settings. However, creation of an enabling environment for them and provision of some support services would make this sector more vibrant and will contribute substantially to poverty reduction. Some interventions that would be considered are: improving marketing capacity by providing sales centers in the GCM and other periurban markets where the government can provide supports and entrepreneurs can undertake a buy-back system; training and awareness building about hygienic agro-processing and food processing activities; strengthening SME Foundation to allow it to serve more effectively, providing women with basic skills about business management and steps linking them to markets, setting up of more vocational institutes in the rural and periurban areas, allocating more funds under microcredit and microfinance, improving the management of this sector through organizing training, orientation, and workshops, disseminating market information and providing institutional and logistic support to entrepreneurs, taking initiatives by the government to create ICT villages in rural areas and taking initiatives by government and NGOs to bring diversification in products and upgrading product designs.

***Women Empowerment***

The economic empowerment of women expand and diversify their life, lower the disproportionate levels of poverty among women and significantly raise household income and encourage economic development in countries. To create more jobs, actions will be taken to improve women employment opportunity and wages outside household, introduce more vocational skill training facilities for women particularly in high-tech industries. In this context there will be a target that marketable skill training reaches at least 50 percent of adolescent girls by 2015 and also ensure equal pay for equal work. In order to facilitate women participation in employment, an enabling environment will be created in the work place. These include establishment of day care centers at work place for children of working mothers and provision of life. Steps will be taken to ensure secure job and decent working condition for women in the formal and informal sector.

The government will continue to impart training to new women entrepreneurs for business development. Women Bank will be created for the women entrepreneurs. The preferential treatment in terms collateral requirements and interest rate on credit will continue. An information collection and dissemination unit will be established which will provide the women entrepreneurs with information of markets, procedures of formation of companies, getting bank credit, sources of availability of equipment and technological support.

Program will continue for providing safe shelter and housing for urban and rural poor particularly for poor and single women and women headed household. Social protection for disadvantaged women (VGF, FSVGD, Widow & Old age allowance, WTC) is an ongoing activity and will continue.

The main problem with gender governance is the implementation of the existing laws, rules and regulations and stated policies, projects and programs. Some of the laws, rule and regulations, institutional mechanism, policies projects and programs which are not gender sensitive will be reformed in line with the National Women’s Advancement Policy 1997. The intuitional mechanism for coordination and monitoring of gender equality issues will be strengthened.

***Welfare of Children***

During the SFYP period, initiative will be taken for developing policies on early childhood development (ECD) and implementing some programs on awareness raising and capacity development on ECD as well as establishing early learning centers (ELCs). Extensive advocacy and awareness programs will be taken for removing all form of discrimination against girl child and to establish the rights of the girl-child. Equity measures will be taken for girl child for their physical and mental capacity development, and to ensure their participation in the decision making process.

Programs will be undertaken for providing safe shelters for the street children so that they can stay, get education, learn skills to participate in the labor force as skilled labor. The program will help reduction if not elimination of vulnerabilities of these groups against hunger, sexual abuse and trafficking. This program may be implemented by the BSA as this is related to children. In this case private-public partnership and GO-NGO partnership may be explored.

The legal measures along with advocacy work will be taken for eradicating the Worst Forms of Child Labor. Under the current socio-economic conditions, the parents are forced to let their children to these work due to their poverty. During the SFYP, program will be taken for supporting the families and providing education and trade training for these children preparing them for decent work.

Programs will be undertaken for the children belonging to the Dalit community, Adivasis, outcast groups and other excluded group like Bede, tea worker and sex workers. There are schools currently run by NGOs for the children of the sex workers which are often closed down for lack of funding. GO-NGO partnership may be made for running schools for children of Dalit communities, Adivasis, outcast groups, Bede, tea workers and sex workers.

Legal measures will be taken to prohibit use of children in political activities, to stop violence, sexual abuse against children, child prostitution, pornography and trafficking. Programs will be undertaken for providing safe shelters for children victims of child abuse, sexual abuse, violence, exploitation and trafficking. Measures will be taken to rehabilitate them socially, economically and psychologically. Birth registration will be strictly enforced as compulsory to all including hard-to-reach area,

Equity measures will be taken through projects/programs to create opportunities and favorable environment for development and participation of children with disabilities. Advocacy programs will be taken to sensitize people for reducing stigma against children with disability.

Measures will be taken to develop ICT knowledge among children with special focus on excluded children, through training. Digital library facilities will be introduced at Bangladesh Shishu Academy to ensure children’s access to media and information. Training will be provided to children for developing their skill in producing children film. Space will be provided in terrestrial channel of BTV for daily broadcasting of Children program.

National Child Labor Elimination Policy 2010 has been formulated to reduce prevalence of child labor. We are continuing with child labor reducing activities to protect children from risky jobs. This will keep 40,000 children away from risky jobs and provide them with non-formal education in the next 3 years. As a result, they will be able to help parents in their work.

**DEVELOPMENT RESOURCE ALLOCATION FOR SOCIAL PROTECTION DURING THE SIXTH PLAN**

The social protection programs in the SFYP will receive increased allocation of resources during those five years (Table 4). In current price the annual average growth of expenditure on social protection will be 17.3 percent and the allocation will rise from 444 million taka to 835 million taka. In real term the annual average growth rate will be 10.6 percent.

Table 6: Development Allocation for Social Protection under the SFYP (crore taka)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **FY 2010-2011** | **FY 2011- 2012** | **FY 2012-2013** | **FY 2013-2014** | **FY2014- 2015** |  |  |
| Ministry |  |  |  |  |  |  |
| Ministry of Social Welfare | 235 | 247 | 297 | 358 | 435 |  |  |
| Ministry of Women  Affairs and Youth Development | 209 | 227 | 274 | 329 | 400 |  |  |
| Ministry of Food & Disaster Management (Disaster Management & Relief Division) – VGF, TR, GR, employment generation etc. | 4797.86 | 5338.49 | 5972.66 | 6677.60 | 7460.87 |  |  |
| Total |  |  |  |  |  |  |  |

**CONCLUSION**

A coherent and integrated national social protection strategy based on a comprehensive mapping of existing and emerging vulnerabilities will be developed. This strategy will also draw on good international practices. The strategy will decide the variety of social assistance and the social insurance programs to be undertaken during the plan period. The coverage of existing programs which have proven track records will be expanded. A rigorous evaluation of current social protection will be done to identify weaknesses and improve efficiency.

Table 6: Development Allocation for Social Protection under the SFYP (current million taka)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **FY 2011** | **FY 2012** | **FY 2013** | **FY 2014** | **FY 2015** | **SFYP** | **Average**  **Resource**  **growth %** |
| Ministry |  |  |  |  |  |  |
| Ministry of Social Welfare | 235 | 247 | 297 | 358 | 435 | 1572 | 16.6 |
| Ministry of Women  Affairs and Youth Development | 209 | 227 | 274 | 329 | 400 | 1440 | 17.6 |
| Ministry of Food & Disaster Management (Disaster Management & Relief Division) – VGD, VGF, FFW, TR,R,100 days….. |  |  |  |  |  |  |  |
| Total | 444 | 474 | 571 | 687 | 835 | 3012 | 17.3 |

**Table 7:** **Development Allocation for Social Protection under the SFYP (million taka; 2011 prices)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **FY 2011** | **FY 2012** | **FY 2013** | **FY 2014** | **FY 2015** | **SFYP** | **Average**  **Resource**  **growth %** |
| Ministry |  |  |  |  |  |  |
| Ministry of Social Welfare | 235 | 232 | 263 | 298 | 344 | 1372 | 10.0 |
| Women  Affairs and Youth Development | 209 | 214 | 242 | 275 | 317 | 1257 | 11.0 |
| Ministry of Food & Disaster Management (Disaster Management & Relief Division) – VGD, VGF, FFW, TR,GR,100 days….. |  |  |  |  |  |  |  |
| Total | 444 | 446 | 505 | 573 | 661 | 2629 | 10.6 |

**CONCLUSION**

A coherent and integrated national social protection strategy based on a comprehensive mapping of existing and emerging vulnerabilities will be developed. This strategy will also draw on good international practices. The strategy will decide the variety of social assistance and the social insurance programs to be undertaken during the plan period. The coverage of existing programs which have proven track records will be expanded. A rigorous evaluation of current social protection will be done to identify weaknesses and im

**Government of the People’s Republic of Bangladesh**

**Ministry of Food and Disaster Management**

**Bangladesh Secretariat, Dhaka.**

**Sixth Five Year Plan (2011-2015)**

**Sector : Agriculture**

**Sub-Sector : Food**

# Review of past development policies, strategies, programs / projects of the sector/ sub-sector.

The Public Food Distribution System (PFDS) has storage facilities to the tune of 1.5 million MT in the form of Silo, LSD & CSD across the country with almost all the upazillas (Total 482 Upazillas) having at least one LSD (Local Supply Depot) in each Upazilla. Food grains are procured in these storage facilities during the harvest period in order to prevent the price falling below the farmer’s production cost. These stocks in the warehouses, thus procured & imported, whenever necessary are released through different monetized and non-monetized channels to the public to contain the price hike and to cater to the needs of the population under safety net program. To facilitate these actions, increased modern food storage facilities are needed.

Under the Directorate of Relief and Rehabilitation Food For Works Programme non-metallic road was constructed without bridge/culvert. So uninterrupted communication system in the rural area could not be ensured. The problem had been attended form 1982 by connecting the rural road through the bridge/culvert under PL-480 title II & III (ISAID) programme and WFP fund. USAID is in favour of continuation of the programme within the development process of GOB through its ADP. Directorate of Relief and Rehabilitation has also given emphasis on construction of flood shelters , cyclone shelters for distressed people during flood, cyclone and other disaster.

Directorate General of Food, and Directorate General of Relief and Rehabilitation, Ministry of Food and Disaster Management have taken many development policies, strategies and programs for developing safe storage facilities & shelters for distressed people in the public sector. The following development programs and projects were taken in the past by the Directorate General of Food:

1. Construction of Food Godowns in the uncovered upa-zilla all over the country;
2. Rehabilitation of cyclone affected food godowns under PL-480 project;
3. Rehabilitation of flood affected food godowns with GOB fund in the western region of the country;
4. Rehabilitation of flood affected food godowns with GOB fund in the greater Dhaka-Tangail region of the country;
5. Rehabilitation of food godowns of 9 CSD and 1 LSD throughout the country;
6. Extension of Chittagong Silo Jetty project;
7. Yearly basis repair and maintenance program under revenue budget for safe food storing.
8. Reconstruction /Rehabilitation of food godowns & its infrastructures with EC Assistance.
9. Reconstruction /Rehabilitation of food godowns & its infrastructures with Dutch Assistance.
10. Reconstruction /Rehabilitation of food godowns & its infrastructures with CIDA Assistance.

**2.0 Lessons learned from past development interventions and key constraints:**

Presently the Ministry of Food & Disaster Management (MoFDM) possesses 1.5 million mt of food grain storage facilities, spread over 482 upazillas of the country. Apart from that, few warehouses are being used by some NGOs, WFP, BDR etc. Most of the godowns were built during 1940s through late 1990s. No new warehouses have since been built. Although the population of the country has substantially increased during the last decade, the effective storage capacity of MoFDM has decreased from 1.7 million m. tons of late 1990s to 1.5 million mt at present. This has created a great impediment in tackling the volatile food grain market situation. The Govt. is very keen to address such situation effectively, which requires an affordable security stock. But for construction of Food godowns in the public sector a huge amount of cultivable land is required. But as per Govt. decision no cultivable land can be used or acquisitioned for this purpose. At present a considerable amount of land is fallen vacant within the premises of Food dept. Due to that, in implementing government plan to construct new food godowns no cultivable land would be acquired; rather the new facilities would be raised in existing premises of the Directorate General of Food. The other constraint is budget. Several development partners have been approached for financial assistance. The overall response appears to be very encouraging.

**3.00 Development Vision, goals, objectives and targets for SFYP by Directorate General of Food:**

**a) Increased size:**. In the public storage system 2.8 (if 8% of production to handle) to 3.3 million tons (if 10% of production to handle) of capacity is required.

**b) Increased capacity to respond:** In order to decrease time to respond, ensure quick response and delivery mechanism increased food storage capacity to be developed. It’s a strategy described in National Food Policy well as disaster management strategy as described in National Disaster Management Plan. No alternative to adapt technology in the public storage system. Traditional godowns may act contrary to this objective. Modernization, mechanization, vertical and bulk storage with modern weighing and handling etc are inevitable.

i) **Increase shelf life and maintain quality:** need modernization, mechanization, vertical and bulk storage.

ii) **Reduced need of land:** promote vertical storage in place of flat godowns.

iii) **Reduced cost of handling and storage:** bulk and vertical storage with modern bagging, weighing and handling equipments.

iv) **Increased traceability of stocks and reduced transit: to p**romote ICT use.

v) **Farmers’ support:** increased storage with drying system in the intensive production zone needed.

vi) **Withstand impacts of natural disasters:** especially in the coastal zones/flood plains where there are possibilities of submergence due to storm surges/floods, it is required to promote vertical storage.

vii) **Increased storage capacity :** in the geographically vulnerable disaster prone areas to boost response capacity.

viii) **Storage to cater for the need for nutrition interventions:** storage for fortified food; having temperature control systems.

ix) **Storage to cater for handling of multiple grains:** rice, wheat, oil seeds, pulses.

x) **Storage to increased port handling capacity:** Silo at Mongla port

xi) **Storage to replenish at required intervals**

xii) **Storage having supporting technology to control quality:** conveyors for aeration, entoleters etc**.**

xiii) **Storage be equipped with ICT** : to update and quick sharing of data and information on transactions and be equipped with supply/production management applications

**4.0 Current and future challenges for the sub-sector :**

The recent phenomenon of soaring food prices is posing a threat to the level of Food consumption, particularly of the poor. It is apprehended that the following phenomenon has already aggravated and will further aggravate the poverty and food security situation in the country:

i) Increased population with increased number of poor :

-increased requirements for distribution needs increased storage capacity.

ii) Global market uncertainties-a complex portfolio

iii) Seasonality of prices in the domestic food market

iv) Dwindling food aid and inadequate production of wheat

v) New challenges likely to necessitate increased safety nets

**a) Global financial crisis:** The country is now running into the impacts of global economic meltdown which have caused stagnation in investment across the countries. It has carried in its wake massive retrenchment of workers. We are being impacted by the recession in three fronts: export, import and remittance.

**b) Climate change:** stipulate the impacts of climate changes as it has already pushed the country into increasing natural disasters. The global warming and sea level rise phenomenon is likely to cause loss of cultivable land (20-30 % of countries land mass) in the coastal area, loss of agricultural yield, loss of livelihoods of many millions, invoke salinity intrusion and create more ‘climate refugees’.

**c) Actions initiated:**

In persuasion of the National Food Policy-2006 Govt. has to take care of stocks exceeding security stock during domestic food grain procurement seasons. The policy envisages the dynamics of procurement, storage and distribution to reflect real situation in building up of Public Food Grains Distribution System (PFDS) stock. The annual cereal consumption requirement for the 150 million populations is approximately 30 million tons. To meet this gigantic demand of the country, government has to follow the strategy of storing stock of 40 days consumption requirement which is 3.0 million tons, as the replenishment of stock requires minimum 40 days in the procurement process after signing of contract. In consideration of the above food grain budget is formulated in each financial year which needs to have infrastructural facilities of storing and handling 3 million tons of food grains in near future.

**5.0 Sub- sectoral development strategies and policies for SFYP**

Directorate General of food (DGoF) currently posses 5 silos and 2357 flat conventional godowns of which 304 are unusable. The 50% of unusable godowns have already been rehabilitated and the rest are in the process of rehabilitation. The silos were constructed during the late 1960s (commissioned in 1971) funded by World Bank (WB). Out of the 5 silos the 4 are made of concrete and 1 small silo of capacity 800 mt only is made of steel (UNDP Pilot Project). Govt. has planned to increase the storage capacity by additional 1.5 million mt within the next 10 years under the **two umbrella** **(Framework-1 and Framework-2)** schemes.

**6.0** The Institutional capacity of the Computer Network and its infrastructure development of different offices of Directorate General of Food (DGoF) now needs to improve by extending and en-compassing ICT, e-governance and its training portfolio commensurate with the government policy.

**7.0 Recommendations:** In the light of increased demand of storage facilities, Ministry of Food and Disaster Management has already taken initiatives to increase the existing capacity of public food storage. Thus Govt. of Bangladesh is searching fund from different development partners. By this time, Japan Government has agreed to finance for the of construction of 1.10 million mt flat storage and 0.50 million mt grain silo in Mongla port area of the country. Besides, Govt. of Bangladesh has planned to build 3.40 million mt (including 1.0 million mt silo in Postaghola, Dhaka) capacity godowns. To implement these project with GoB fund there will be a big pressure on financial resources. To mitigate this financial pressure Govt. of Bangladesh would welcome any financial support from any development partners including the World Bank. To carryout the feasibility and strategic studies to assess the actual need of new modern grain storage facilities as well as for drawing, design of the proposed projects, financial assistance can be sought from any development partners including World Bank.

**8.0 GOB plan for construction of additional food storage facilities. Attachment-1**

**9.0 Institutional mechanism for monitoring progress of SFYP implementation and list of indicators: Attachment - 2**

**Sixth Five Year Plan (2011-2015)**  Attachment-2

**SFYP implementation Progress Monitoring Indicators**

Sector : Agriculture

Sub-Sector : Food

**(Framework-1) (Taka in Lakh)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sl. No | Goals | Input Indicators (resources/ Policy changes, etc) | Output Indicators | Impact Indicators |
| (1) | (2) | (3) | (4) | (5) |
| 01 | Improvement of Food Security Network in the Northern region (Rajshahi Division) | Construction of 110,000 mt capacity new food godowns.  Total Taka. 24100.00 | 1. Construction of 81 nos. of 1000 mt capacity each and 2. Construction of 58 nos of 500 mt capacity each.   Total 139 nos of flat godowns  c) Supply of wooden dunnage for 139 nos godowns. | Additional 110,000 mt food storage facility developed with the existing capacity in Rajshahi division. Govt. sector food storage facility increased. |
| 02 | Improvement of Food Security Network in the coastal region (Khulna and Barisal Division) | Construction of a Concrete Grain Silo at Mongla Port with ancillary facilities (50,000 mt capacity).  Total Taka 20000.00 | a) Construction of 50,000 mt capacity concrete grain silo;  b) Construction of 175 meter long unloading jetty;   1. Construction 75 meter long loading Jetty; 2. Procurement of 2 nos Unloader and conveying equipments. | Additional 50,000 mt food storage facility developed with the existing capacity. Modern unloading facility developed in the Mongla port area. |
| 03 | Improvement of Food Security Network throughout Bangladesh. | Construction of 135,000 mt capacity new food godowns.  Total taka 29295.82 | a) Construction of 115 nos. of 1000 mt capacity each and   1. Construction of 40 nos of 500 mt capacity each.   Total 155 nos of flat godowns  c) Supply of wooden dunnage for 155 nos godowns. | Additional 135,000 mt food storage facility developed with the existing throughout Bangladesh. |
| 04 | Improvement of Food Security Network in the Chittagong Port area, Bangladesh. | Construction of 84,000 mt capacity new food godowns with ancillary facilities at Halisahar CSD compound, Chittagong.  Total Taka 23455.82 | a) Construction of 77 nos. of 1000 mt capacity each and  b) Construction of 14 nos of 500 mt capacity each.  Total 91 nos of flat godowns   1. Supply of wooden dunnage for 91 nos godwns. 2. Rehabilitation of residential building of project area. 3. Rehabilitation of Bituminous road at project area | Additional 110,000 mt food storage facility developed with the existing capacity in Rajshahi division. |
| 05 | Ensure Longer and safe storage facility for creating national buffer stock in the country. | Construction of vertical rice silo of capacity 100,000 mt at Santahar grain Silo Premises. Total Taka 8938.23 | a) Construction of 100,000 mt capacity STEEL RICE silo;  b) Construction of infrastructure for the silo; | Additional 100,000 mt food storage facility developed with the existing capacity in Rajshahi division. Govt. sector food storage facility increased. |
| 06 | Improvement of Food Security Network throughout Bangladesh. | Construction of 105,000 mt capacity New Food Godowns throughout Bangladesh (Phase-2) Total Taka 25259.61 | 1. Construction of 42 nos. of 1000 mt capacity each and 2. Construction of 126 nos of 500 mt capacity each.   Total 168 nos of flat godowns  c) Supply of wooden dunnage for 168 nos godown. | Additional 105,000 mt food storage facility developed with the existing throughout Bangladesh. |
| 07 | Implementation of e-governance system for Directorate General of Food (DGoF) and ICT based food management system | Local and Foreign Training of 42 personnel and Set up an institutional arrangement for ICT based management.  Total Cost : 3283.70 | 1. Foreign training for 42 personnel in abroad; 2. Procurement of ICT equipments (computer, printer, software, other items etc); 3. Construction of 1500 m2 building for Server set-up and Training facilities. | ICT based manpower and facilities developed in Directorate General of Food for implementing e-governance  in Directorate General of Food. |
|  | Total | Taka 131049.40 Lakh | 584,000 mt |  |

**SFYP implementation Progress Monitoring Indicators**

Sector : Agriculture

Sub-Sector : Food

**(Framework-2) (Taka in Lakh)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sl. No | Goals | Input Indicators (resources/ Policy changes, etc) | Output Indicators | Impact Indicators |
| 01 | Ensure Longer and safe storage facility for creating national buffer stock in the country. | Construction of vertical rice silo of capacity 100,000 mt at Postagola of Dhaka city. Total taka 8500.00 | a) Construction of 100,000 mt capacity RICE RICE silo;  b) Construction of infrastructure for the silo; | Additional 100,000 mt modern food storage facility developed with the existing capacity in Dhaka division. Govt. storage capacity increased. |
| 02 | Ensure Longer and safe storage facility for creating national buffer stock in the country. | Construction of vertical rice silo of capacity 100,000 mt at Baghabari, Sirajgonj. Total taka 9000.00 | a) Construction of 100,000 mt capacity RICE RICE silo;  b) Construction of infrastructure for the silo; | Additional 100,000 mt modern food storage facility developed with the existing capacity in Rajshahi division. Govt. storage capacity in the country increased. |
| 03 | Ensure Longer and safe storage facility for creating national buffer stock in the northern region of the country. | Construction of vertical rice silo of capacity 100,000 mt at Dinajpur. Total taka 9000.00 | a) Construction of 100,000 mt capacity RICE RICE silo;  b) Construction of infrastructure for the silo; | Additional 100,000 mt modern food storage facility developed with the existing capacity in Rajshahi division. Govt. storage capacity in the country increased. |
| 04 | Ensure Longer and safe storage facility for creating national buffer stock in the country. | Construction of vertical rice silo of capacity 116,000 mt at Ashugonj Silo premise, B-Baria.  Total taka 10500.00 | a) Construction of 116,000 mt capacity RICE RICE silo;  b) Construction of infrastructure for the silo; | Additional 116,000 mt modern food storage facility developed with the existing capacity in Chittagong division. Govt. storage capacity increased. |
| 05 | Ensure Longer and safe storage facility for creating national buffer stock in the country. | Construction of vertical grain silo of capacity 100,000 mt at Narayangonj Silo premise, Narayangonj. Total taka 9000.00 | a) Construction of 100,000 mt capacity Grain silo;  b) Construction of infrastructure for the silo; | Additional 100,000 mt modern food storage facility developed with the existing capacity in Dhaka division. Govt. storage capacity increased. |
| 06 | Ensure Longer and safe storage facility for creating national buffer stock in the country. | Construction of vertical grain silo of capacity 200,000 mt at Chittagong Silo premise, Chittagong. Total taka 19000.00 | a) Construction of 200,000 mt capacity Grain silo;  b) Construction of infrastructure for the silo; | Additional 200,000 mt modern food storage facility developed with the existing capacity in Chittagong division. Govt. storage capacity increased in the port city Chittagong. |
| 07 | Ensure Longer and safe storage facility for creating national buffer stock in the country. | Construction of vertical rice silo of capacity 100,000 mt at Dewanhut CSD premise, Chittagong. Total taka 9000.00 | a) Construction of 100,000 mt capacity RICE RICE silo;  b) Construction of infrastructure for the silo; | Additional 100,000 mt modern food storage facility developed with the existing capacity in Chittagong division. Govt. storage capacity increased in the port city Chittagong. |
| 08 | Ensure Longer and safe storage facility for creating national buffer stock in the country. | Construction of vertical rice silo of capacity 100,000 mt at Khulna CSD premise, Khulna. Total taka 9000.00 | a) Construction of 100,000 mt capacity RICE RICE silo;  b) Construction of infrastructure for the silo; | Additional 100,000 mt modern food storage facility developed with the existing capacity in Khulna division. Govt. storage capacity increased. |
|  | Total | Taka 83000.00 Lakh | 816,000 mt |  |

Sixth Five Year Plan (2011-2015)

Goals, Targets, Activities and Indicative Costs

Sector :Agriculture

Sub-Sector :Food

**(Framework-1)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sl. No | Goals | Targets | Activities  (Programs/ Project) | Program/Project wise Indicative cost (Lakh Tk. at 2009/10 Prices) |
| (1) | (2) | (3) | (4) | (5) |
| 01 | Improvement of Food Security Network in the Northern region (Rajshahi Division) | Construction of 110,000 mt capacity new food godowns. | 1. Construction of 81 nos. of 1000 mt capacity each and 2. Construction of 58 nos of 500 mt capacity each.   Total 139 nos of flat godowns  c) Supply of wooden dunnage. | 24100.00 |
| 02 | Improvement of Food Security Network in the coastal region (Khulna and Barisal Division) | Construction of a Concrete Grain Silo at Mongla Port with ancillary facilities (50,000 mt capacity). | a) Construction of 50,000 mt capacity concrete grain silo;  b) Construction of 175 meter long unloading jetty;   1. Construction 75 meter long loading Jetty; 2. Procurement of 2 nos Unloader and conveying equipments. | 20000.00 |
| 03 | Improvement of Food Security Network throughout Bangladesh. | Construction of 135,000 mt capacity new food godowns. | a) Construction of 115 nos. of 1000 mt capacity each and   1. Construction of 40 nos of 500 mt capacity each.   Total 155 nos of flat godowns  c) Supply of wooden dunnage | 29295.82 |
| 04 | Improvement of Food Security Network in the Chittagong Port area, Bangladesh. | Construction of 84,000 mt capacity new food godowns with ancillary facilities at Halisahar CSD compound, Chittagong. | a) Construction of 77 nos. of 1000 mt capacity each and  b) Construction of 14 nos of 500 mt capacity each.  Total 91 nos of flat godowns   1. Supply of wooden dunnage. 2. Rehabilitation of residential building of project area. 3. Rehabilitation of Bituminous road at project area | 23455.82 |
| 05 | Ensure Longer and safe storage facility for creating national buffer stock in the country. | Construction of vertical rice silo of capacity 100,000 mt at Santahar grain Silo Premises. | a) Construction of 100,000 mt capacity STEEL RICE silo;  b) Construction of infrastructure for the silo; | 8938.23 |
| 06 | Improvement of Food Security Network throughout Bangladesh. | Construction of 105,000 mt capacity New Food Godowns throughout Bangladesh  (Phase-2) | 1. Construction of 42 nos. of 1000 mt capacity each and 2. Construction of 126 nos of 500 mt capacity each.   Total 168 nos of flat godowns  c) Supply of wooden dunnage. | 25259.61 |
| 07 | To implement e-governance system for Directorate General of Food (DGoF) and ICT based food management system | Local and Foreign Training of DGoF personnel and set up an institutional arrangement for ICT based management. | 1. Foreign training for 42 personnel in abroad; 2. Procurement of ICT equipments (computer, printer, software, other items etc); 3. Construction of 1500 m2 building for Server set-up and Training facilities. | 3283.70 |
|  | Total | 584,000 mt |  | 134333.10 |

Sixth Five Year Plan (2011-2015)

Goals, Targets, Activities and Indicative Costs

Sector :Agriculture

Sub-Sector :Food

**(Framework-2)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sl. No | Goals | Targets | Activities  (Programs/ Project) | Program/Project wise Indicative cost (Lakh Tk. at 2009/10 Prices) |
| 01 | Ensure Longer and safe storage facility for creating national buffer stock in the country. | Construction of vertical rice silo of capacity 100,000 mt at Postagola of Dhaka city. | a) Construction of 100,000 mt capacity RICE RICE silo;  b) Construction of infrastructure for the silo; | 8500.00 |
| 02 | Ensure Longer and safe storage facility for creating national buffer stock in the country. | Construction of vertical rice silo of capacity 100,000 mt at Baghabari, Sirajgonj. | a) Construction of 100,000 mt capacity RICE RICE silo;  b) Construction of infrastructure for the silo; | 9000.00 |
| 03 | Ensure Longer and safe storage facility for creating national buffer stock in the northern region of the country. | Construction of vertical rice silo of capacity 100,000 mt at Dinajpur. | a) Construction of 100,000 mt capacity RICE RICE silo;  b) Construction of infrastructure for the silo; | 9000.00 |
| 04 | Ensure Longer and safe storage facility for creating national buffer stock in the country. | Construction of vertical rice silo of capacity 116,000 mt at Ashugonj Silo premise, B-Baria. | a) Construction of 116,000 mt capacity RICE RICE silo;  b) Construction of infrastructure for the silo; | 10500.00 |
| 05 | Ensure Longer and safe storage facility for creating national buffer stock in the country. | Construction of vertical grain silo of capacity 100,000 mt at Narayangonj Silo premise, Narayangonj. | a) Construction of 100,000 mt capacity Grain silo;  b) Construction of infrastructure for the silo; | 9000.00 |
| 06 | Ensure Longer and safe storage facility for creating national buffer stock in the country. | Construction of vertical grain silo of capacity 200,000 mt at Chittagong Silo premise, Chittagong. | a) Construction of 200,000 mt capacity Grain silo;  b) Construction of infrastructure for the silo; | 19000.00 |
| 07 | Ensure Longer and safe storage facility for creating national buffer stock in the country. | Construction of vertical rice silo of capacity 100,000 mt at Dewanhut CSD premise, Chittagong. | a) Construction of 100,000 mt capacity RICE RICE silo;  b) Construction of infrastructure for the silo; | 9000.00 |
| 08 | Ensure Longer and safe storage facility for creating national buffer stock in the country. | Construction of vertical rice silo of capacity 100,000 mt at Khulna CSD premise, Khulna. | a) Construction of 100,000 mt capacity RICE RICE silo;  b) Construction of infrastructure for the silo; | 9000.00 |
|  | Total | 816,000 mt |  | 83,000.00 |

Attachment 1

**Sixth Five Year Plan (2011-2015)**

**Goals, Targets, Activities and Indicative Costs**

Sector : Agriculture

Subsector : Food

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| SL  No. | Goals | Targets | Activities (program/project) | Program/project wise indicative cost (lakh Tk. At 2009/10 prices) |
| (1) | (2) | (3) | (4) | (5) |
| 01 | 1. Construction of bridges/culverts on the rural roads to connect the Local markets, Growth Centers, Schools and other important places to improve road communication network and to facilitate the marketing of local products. 2. Creation of annual and seasonal employment opportunities for the rural poor people through construction activities under the project | 4660Nos. of Bridge/culverts will be construct under this project. | Construction of bridges/culverts (up to 12m long) on the rural roads (2nd Phase)  Construction of bridges/culverts (up to 12m long) on the rural roads (3rd Phase) | 60000.00 |
| 02 | a) Construction of rural roads and bridges/culverts on the rural roads of the Chittagong Hill Tracts (CHT) Region to connect the Local markets, Growth Centers, Schools and other important places to improve road communication network and to facilitate the marketing of local products.  b) Creation of annual and seasonal employment opportunities for the rural poor people through construction activities under the project.  c) To reduce the incidence of absolute poverty  among the rural population of the CHT Region through developing the basic physical infrastructure and expanding income and employment generating opportunities that would substantially raise the standard of living of the hill people. | 260 km. Rural roads and 260Nos. of Bridge/culverts will be construct under this project. | Construction of rural roads and bridges/ culverts (up to 12m long) at Chittagong Hill Tracts Region | 21600.00 |
| 03 | a) To construct 173 Flood shelters to provide shelter to the distress poor people during flood.b) To save the cattle heads and valuable properties.c) To increase institutional facilities for education using this shelters as School/College/Madrasha during normal time. | 173 Flood shelters will be construct under this project. | Construction of Flood shelters in the flood prone and river erosion areas. | 21230.00 |
| 04 | a) To construct 816 Cyclone shelters to provide safe shelter to the people during cyclone and other disasters.  b) To save cattle heads and valuable properties.  iic) To create direct & indirect employment opportunities for the poor through construction of Cyclone shelters.  d) To improve and enhance institutional facilities  for education and recreation using these shelters as school, college, madrasha, Community Centre during normal period. | 816 Cyclone shelters will be construct under this project. | Construction of multipurpose Cyclone shelters in the coastal belt of the country. | 121054.00 |
| 05 | a) Construction of Cyclone resistant houses in SIDR & AYLIA affected areas in south-west coastal area  b) Objective: Contribute in the national economy through reconstructing damaged houses of the landless families affected by SIDR 2007 & AYLIA 2009 in south-west coastal area. | The entire physical activities of the project have been programmed spreading over a period of 3 year. 20000 Cyclone resistant houses will be constructed. Around 80 thousand people of 20,000 families will directly and 4 hundred thousand people will indirectly be benefited through this project. | Title: Construction of Cyclone resistant houses in SIDR & AYLIA affected areas in south-west coastal area. | 28000.00 |
| 06 | Vertical extension of the relief building and construction of relief godowns in 21 district towns. | This project will enable to create additional accommodation which is of utmost importance. | Vertical extension of the relief building and construction of relief godowns in 21 district towns. | 25000.00 |

Attachment 2

**Sixth Five Year Plan (2011-2015)**

**SFYP Implementation Progress Monitoring Indicators**

Sector : Agriculture

Subsector : Food

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| SL  No. | Goals | Input indicators (resources /policy changes, etc) | Output indicators | Impact indicators | |
| (1) | (2) | (3) | (4) | (5) | |
| 01 | 1. Construction of bridges/ culverts on the rural roads to connect the Local markets, Growth Centers, Schools and other important places to improve road communication network and to facilitate the marketing of local products. 2. Creation of annual and seasonal employment opportunities for the rural poor people through construction activities under the project | The project will be implemented under ADP with GOB Fund. | 4660 Nos. of Bridge/culverts will be construct under this project. | 35,00,000 people are employed of which about 23,10,000 local poor women will be employed in the construction work of the project. The children education will be increased due to well communication. Infra structure will be developed. | |
| 02 | a) Construction of rural roads and bridges/culverts on the rural roads of the Chittagong Hill Tracts (CHT) Region to connect the Local markets, Growth Centers, Schools and other important places to improve road communication network and to facilitate the marketing of local products.  b) Creation of annual and seasonal employment opportunities for the rural poor people through construction activities under the project.  c) To reduce the incidence of absolute poverty among the rural population of the CHT Region through developing the basic physical infrastructure and expanding income and employment generating opportunities that would substantially raise the standard of living of the hill people. | The project will be implemented under ADP with GOB Fund. | 260 km. Rural roads and 260Nos. of Bridge/culverts will be construct under this project. | 7,75,000 people are employed of which about 3,10,000 local poor women will be employed in the construction work of the project .The children education will be increased due to well communication. | |
| 03 | a) To construct 173 Flood shelters to provide shelter to the distress poor people during flood.  b) To save the cattle heads and valuable properties.  c) To increase institutional facilities for education using this shelters as School/College during normal time. | The project will be implemented under ADP with GOB Fund. | 173 Flood shelters will be construct under this project. | About 224000 labours will be directly engaged in the construction works of the proposed 173 shelters. Out of witch 40 % (89600) will be women. Disaster will be mitigated | |
| 04 | a) To construct 816 Cyclone shelters to provide safe shelter to the people during cyclone and other disasters.  b) To save cattle heads and valuable properties.  iic) To create direct & indirect employment opportunities for the poor through construction of Cyclone shelters.  d) To improve and enhance institutional facilities  for education and recreation using these shelters as school, college, madrasha, Community Centre during normal period. | The project will be implemented under ADP with GOB Fund or Foreign AID. | 816 Cyclone shelters will be construct under this project. | About 224000 labours will be directly engaged in the construction works of the proposed 64 shelters. Out of witch 40 % (89600) will be women. Disaster & will be mitigated |
| 05 | a) Construction of Cyclone resistant houses in SIDR & AYLIA affected areas in south-west coastal area  b) Objective: Contribute in the national economy through reconstructing damaged houses of the landless families affected by SIDR 2007 & AYLIA 2009 in south-west coastal area. | The project will be implemented under ADP with GOB Fund or Foreign AID | 20000 Cyclone resistant house. | Around 80 thousand people of 20,000 families will directly and 4 hundred thousand people will indirectly be benefited through this project. |

**Sixth Five Year Plan (2011-2015)**

**Sector: Public Administration**

**Goals, Targets, Activities and Indicative Costs:**

The overall goal of Disasters Disaster Management Bureau and the Comprehensive Disaster Management Programme (CDMP) is to reduce the country's vulnerability to adverse natural and anthropogenic events–including cyclones, hurricanes, floods, tidal surges, earthquakes, tsunamis, climate change and variability, avian flu, fire, toxic chemical/gas/pollutant leaks–through technical assistance in risk reduction and comprehensive disaster management activities. The specific objective is to reduce the risk of people, specially the poor and the disadvantaged from the effects of natural, environmental and human induced hazards to a manageable and acceptable level and to have in place an efficient emergency disaster management system.

Support will be channeled through government and development partners, civil society and NGOs into a people-oriented disaster management and risk reduction partnership. That partnership will promote cooperation, provide coordination, rank priority programmes and projects, and allocate resources to disaster management activities and risk reduction activities in Bangladesh.

CDMP offers an outstanding opportunity to improve linkages with, and synergies between, disaster risk reduction and adaptation to climate change. This applies both at the community and at the general stakeholder level. The linkages are clearly expressed in many of the activities outlined in the operational outcomes of the project design, as well as through strengthened institutional capacities.

Attachment 1

|  |  |  |  |
| --- | --- | --- | --- |
| **Goals** | **Targets** | **Project Activities** | Indicative cost in lakh Taka |
| Risk management integrated into development  Skills and institutional capacity strengthened for risk reduction  Comprehensive risk management program adopted | The development of strong, well-managed and professional institutions in Bangladesh which are able to implement a comprehensive range of risk reduction programmes and interventions at national level, as well as contributing to regional actions and international learning and best practices. | Approved and implemented policy and legislative framework to guide disaster management reforms and programmes  MoFDM structure and skills improved to help the execution of revised Allocation of Business functions  Strengthened collaborative partnerships, information management and liaison capability  Decentralised capacity building and professional development structures established  and providing quality support  Sustained MoFDM and sectoral ministries capability to effectively contribute to international and regional initiatives  ‘Knowledge Services Centre’ established and providing efficient quality KM service to disaster management | 1426.14 |
| Reduced risk to rural populations through structural and non-structural interventions, empowerment of rural communities and improved awareness of, and planning for, natural hazard events, including the likely impacts of climate change | Strengthened institutional capacity of DDMC, UzDMC, and UDMC  Focused risk reduction and adaptation support provided to vulnerable communities through expansion and integration of CRA/RRAP within local level planning.  Disaster risk reduction into the microfinance sector included to improve asset building and lower the financial impacts of disasters at the household level  Livelihood security and adaptation strategies for specific marginalized groups in 40 districts in place | 19978.86 |
| Reduced risk to urban populations through structural and non-structural interventions, improved awareness of natural hazard events and the piloting of urban community risk reduction methodologies that target the extreme poor | Expansion of earthquake risk assessment and contingency planning and improved response in five new districts  Support to city corporations and municipalities to increase awareness & response for urban hazard risk across a range of key target audiences in selected cities  Community-based CRA/RRAP and mitigation works piloted in 45 marginalized slum and densely populated wards in three cities  Ward level contingency planning institutionalized in Dhaka, Sylhet and Chittagong | 3346.13 |
| Improved overall effectiveness and timeliness of disaster preparedness and response in Bangladesh by strengthening early warning systems, national management capacity and coordination facilities at all levels. | Improved and more effective early warning, response and relief management in 40 high-risk districts.  Effectiveness of community warning systems in high risk flood and cyclone districts improved and expanded.  DMIC/DMIN fully operational and providing information management and alerting capability.  National damage and needs assessment system established and functioning effectively | 4039.70 |
| Improved disaster-proofing of development programming, and enhanced technical capacity to incentivise positive long-term changes in planning and investment decisions, in targeted ministries | Facilitating Mainstreaming DRR and CCA across sectors.  Disaster Management issues are incorporated in the books of primary to higher secondary levels.  Strengthened BMD’s Early Warning Capacity.  Strengthened FFWC Early Warning Capacity  Strengthened DAE and DoF&L livelihood to climate change adaptation capacity  Mainstreaming climate risk management with technical support to MoEF/DOE.  Ensuring Mainstreaming DRR in the Health Sector.  Enhanced skills and technical capability BFS and CD.  Enhanced skills and technical capability of BGS  Ensuring Mainstreaming DRR in the DPHE  Mainstreaming DRR in the Land use planning  Mainstreaming DRR in women and children affairs development initiatives | 7363.26 |
| Community-level adaptations to disaster risks from a changing climate is effectively managed. | Gaps bridged in community, institutions and climate science for improved and effective climate responsive CRA and RRAP initiatives.  Contingency planning for vulnerable populations living in very high-risk areas.  Disaster risk reduction with tools, techniques and methods developed on adaptation to climate change to enhance community resilience and policy advocacy. | 1128.60 |
| Others |  |  | 9625.10 |
| **Total** |  |  | 46907.79 |

**Attachment-2**

**Sixth Five Year Plan (2011-2015)**

**SFYP Implementation Progress Monitoring Indicators**

Sector: Public Administration

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sl. No. | Goals | Input Indicators (Resources/policy changes, etc.) | Output Indicators | Impact indicators |
| (1) | (2) | (3) | (4) | (5) |
| 1. | The development of strong, well-managed and professional institutions in Bangladesh which are able to implement a comprehensive range of risk reduction programmes and interventions at national level, as well as contributing to regional actions and international learning and best practices. | MoFDM structure, capacity and mechanism strengthened  Approved and implemented policy and legislative framework to guide DM reform programmes  Include disaster risk management in the development project validation process through Disaster Impact and Risk Assessment  Introduce disaster management and risk reduction in all development activities  Establish and strengthen DM training & education network with public training & academic instutions | DM capacity strengthened in central level  DM Legislative Framework established  Disaster Risk Assessment and Lessons Learned included in all DPPs and TPPs.  Disaster Risk Reduction (DRR) issues considered in all sectoral policies and plans.  Overall DM framework updated and strengthened  DM training & Education network functional and effective  DM curriculum included in NCTB Textbooks.  DM included in the regular curricula of all public training institutes.  DM taught in university courses | Disaster risk management mainstreamed within and across sectors  Institutional DM capacity strengthened at local level |
| 2. | Reduced risk to rural populations through structural and non-structural interventions, empowerment of rural communities and improved awareness of, and planning for, natural hazard events, including the likely impacts of climate change | Build capacity of district, upazila and union DMCs  CRA conducted for 2000 unions  Build network among local, regional and international stakeholders  Fund and implement community risk reduction projects identified through CRA process | Local level DM capacity strengthened  Community risk identified and RRAP produced for 2000 unions | DM capacity of DMCs strengthened  Community risks reduced through LDRRF intervention  Enhanced community resilience to disasters |
| 3. | Reduced risk to urban populations through structural and non-structural interventions, improved awareness of natural hazard events and the piloting of urban community risk reduction methodologies that target the extreme poor | Expansion of earthquake risk assessment and contingency planning and improved response to 5 more cities  Ward level contingency planning institutionalised in Dhaka, Sylhet and Chittagong  Support to city corporations and municipalities to increase awareness & response for urban hazard risk across a range of key target audiences in selected cities  Community-based CRA/RRAP and mitigation works piloted in 45 marginalised slum and densely populated wards in three cities | Earthquake contingency plan expanded  Risks reduced in slums and populaded areas of cities  Updated contingency plan and cell broadcasting produced  Earthquake awareness raised & response mechanism improved  Marginalized wards in cities get prepared | Earthquake maps for urban disasters  Earthquake resilience enhanced in cities |
| 4. | Improved overall effectiveness and timeliness of disaster preparedness and response in Bangladesh by strengthening early warning systems, national management capacity and coordination facilities at all levels. | Improved and more effective early warning, response and relief management in 40 high-risk districts.    Effectiveness of community warning systems in high risk flood and cyclone districts improved and expanded.    DMIC/DMIN fully operational and providing 24/7 information management and alerting capability.  National damage and needs assessment system established and functioning effectively | Improved and updated early warning system established  Prepared community in high risk zones  Strong information networking achieved  Rapid need assessment system established | Prepared community, improved DM system and reduced risk |
| 5. | Improved disaster-proofing of development programming, and enhanced technical capacity to incentivise positive long-term changes in planning and investment decisions, in targeted ministries | Facilitating Mainstreaming DM development programmes, policies and CCA across sectors in coordination with GOs-NGOs.  Disaster Management issues are incorporated in the books of primary to higher secondary levels.  Strengthened BMD’s Early Warning Capacity.  Enhanced skills and technical capability of BFS & CD. | DM Policy & Regulatory Framework established and executed.  Go-NGO coordination mechanism established and functioning.  Early warning and technical capacity strengthened | DM development programmes and coordination among GOs-NGOs strengthened and achieved |
| 6. | Community-level adaptations to disaster risks from a changing climate is effectively managed. | Mainstreaming climate risk management with technical support to MoEF/DOE.  Contingency planning for vulnerable populations living in very climate change high-risk areas.  Strengthened FFWC Early Warning Capacity  Strengthened DAE and DoF&L livelihood to climate change adaptation capacity  Gaps bridged in community, institutions and climate science for improved and effective climate responsive CRA and RRAP initiatives. | Disaster risk reduction with tools, techniques and methods developed on adaptation to climate change to enhance community resilience and policy advocacy. | Established linkage between climate change institutions and local communities to enhance adaptation measures in the affected communities |

Attachment-1

**Sixth Five Year Plan (2011-2015)**

**Goals, Targets, Activities and Indicative Costs**

Sector: Socio-Economic Infrastructure

Sub-Sector: Public Administration

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl.No.** | **Goals** | **Targets** | **Activities (program/project)** | **Program/project wise indicative cost (lakh Tk at 2009/10 prices)** |
| 1 | 2 | 3 | 4 | 5 |
|  | According to the Standing Orders on Disasters Disaster Management Bureau has the responsibility to minimize the disaster risk at the Community level and country as well.The proposed Disaster Management Act and proposed the National Plan for Disaster Management for the period of 2008-20015 is a long desired document, both will reflect the global and regional commitment of the Government of Bangladesh and its vision on disaster management. Development plans incorporating Disaster Risk Reduction and Hazard specific multi sectored plans have made this plan an exclusive tool for reducing risk and achieving sustainable development. Have to increase the capability for Disaster Management and risk reduction by professionalizing the Disaster Management System, Strengthening in institutional Mechanism, strengthening Emergency Response System | i. Articulate the long-term strategic focus of disaster management in Bangladesh.  ii. Demonstrate a Commitment to addresses key issues: risk reduction capacity building in fronting management, climate change adaptation, livelihood security, issues of gender and the socially disadvantaged.  iii. Indicate relationship between government vision, key result areas, goals and strategies and to align priorities and strategies with international and national drivers of changes.  iv. Detail a road map for the development of disaster management plan by various utilities.  v. Guide the MOFDM in the development process and delivery of guidelines and programme.  vi. Illustrate to others, NGOS, Civil society and the private sector how their work can contribute to achievement of the strategy goals i.e. government vision on Disaster Management | 2 | 1. Procurement of equipment for search & rescue operation for earthquake and other disasters = 6909  2. Procurement of equipment for search & rescue operation for earthquake and other disasters (2nd phase) = 25000  3. ECRRP: D-1:- Disasters Risk Mitigation and Reduction = 5516  4 Capacity building of the related department of disaster management in Bangladesh. = 2000  5. Establishment of National Training Institute for Disaster Risk Management = 2400  6. Improve Seismic Safety Practices in urban mega-city of Bangladesh. = 4800  7. Mitigation measures for climate change affect in drought prone areas of Bangladesh. =13800  9. Emergency Disaster Risk Reduction Telecommunications System in Bangladesh. = 4800  10. Disaster preventive reconstruction in Barguna nad Patuakhali districts=1123.00 11. Operational support to the employment generation programme. 3600.00  12. Procurement of saline water treatment plant- 18000.00 |

**Table 3: Development Expenditure Allocation of Environment Sector under the SFYP**

Taka in lakh (current price)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Ministry/Sector** | **2010-11** | **2011-12** | **2012-13** | **2013-14** | **2014-15** |
| 000Ministry of Environment & Forest | 243 | 176 | 212 | 255 | 310 |
| Ministry of Land | 115 | 136 | 164 | 198 | 240 |
| Ministry of Disaster Management & Relief | 23463.00 | 1319 | 1312 | 1278 | 436 |
| ECRRP-d1 | 1712.00 | 1500.00 | 1500.00 | 2000.00 | -- |
| Procurement of equipment for search & rescue operation for earthquake & other disasters | 1873.00 | -- | -- | -- | -- |
| Procurement of equipment for search & rescue operation for earthquake & other disasters-2nd phase | -- | 50.00 | 1000.00 | 2050.00 | 21900.00 |
| Disaster preventive reconstruction in Barguna nad Patuakhali districts | 10.00 | 200.00 | 500.00 | 413.00 |  |
| Establishment of National Training Institute for Disaster Risk Management | - | 5.00 | 100.00 | 500.00 | 1000.00 |
| Capacity building of the related department of disaster management in Bangladesh | -- | 500.00 | 500.00 | 500.00 | 500.00 |
| Emergency Disaster Risk Reduction Telecommunications System in Bangladesh. | -- | 1000.00 | 2000.00 | 1800.00 |  |
| Mitigation measures for climate change affect in drought prone areas of Bangladesh. | -- | 1000.00 | 5000.00 | 5000.00 | 2800.00 |
| Improve Seismic Safety Practices in urban mega-city of Bangladesh | -- | 1000.00 | 2000.00 | 1800.00 |  |
| Construction of flood shelters in flood prone and river erosion areas | 552.00 | -- |  |  |  |
| Construction of bridges/culverts in rural roads | 9000.00 | 9872.36 | -- |  |  |
| Construction of small bridges/culverts in rural roads in chittagong hill tracts. | 3025.00 | 3288.79 | 3596.21 |  |  |
| Construction of multipurpose cyclone shelters in the coastal belt area.(100 nos) | 500.00 | 4000.00 | 9000.00 | 4668.00 |  |
| Construction of flood shelters in flood prone and river erosion areas- 2nd phase | 50.00 | 2000.00 | 6950.00 | 3837.23 |  |
| Vertical extension of the relief building and construction of relief godowns in 21 district towns. | 50.00 | 1000.00 | 1450.00 | -- |  |
| Construction of flood shelters in flood prone and river erosion areas- further phases | -- | 5000.00 | 5000.00 | 5000.00 | 5000.00 |
| Construction of small bridges/culverts in rural roads in chittagong hill tracts and construction of rural roads. | -- | 1000.00 | 5000.00 | 5000.00 | 690.00 |
| Construction of multipurpose cyclone shelters in the coastal belt area.816 nos. | -- | -- | -- | 7000.00 | 7000.00 |
| Construction of cyclone resistant houses in the SIDR and AILA area. | -- | -- | 8000.00 | 10000.00 | 10000.00 |
| Comprehensive Disaster Management Programme | 6070.00 | 1000.00 | 6473.47 | 3047.18 | 10,316.26 |
| Operational support to the employment generation programme | 600.00 | 1943.70 | 743.00 | 366.00 |  |
| Procurement of saline water treatment plant- | 10.00 | 2000.00 | 5000.00 | 7799.00 | 3000.00 |
| **Total** | **23463.00** | **36404.85** | **63812.68** | **60780.41** | **62206.26** |

**Table 4: Development Expenditure Allocation of Environment Sector under the SFYP**

Taka in Million (2011 price)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Ministry/Sector** | **2010-11** | **2011-12** | **2012-13** | **2013-14** | **2014-15** | |
| Ministry of Environment & Forest | 243 | 165 | 187 | 213 | | 245 |
| Ministry of Land | 115 | 128 | 145 | 165 | | 190 |
| Ministry of Disaster Management & Relief | 1310 | 1820 | 2063 | 2340 | | 2697 |
| **Total** | **1668** | **2113** | **2395** | **2718** | | **3132** |

Attachment 2

**Sixth Five Year Plan (2011-2015)**

**SFYP Implementation Progress Monitoring Indicators**

Sector: Socio-Economic Infrastructure

Sub-Sector: Public Administration

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl.No.** | **Goals** | **Input indicators (resources/policy changes, etc)** | **Output indicators** | **Impact indicators** |
| 1 | 2 | 3 | 4 | 5 |
| (1) | To minimize the disaster risk at the community level & country as well | i) CDMP will be continued 2nd phase  ii) Procurement of equipment for search and rescue will be enhanced  iii) National Volunteers programme will be developed for disaster prone urban and rural areas of the country  iv) Capacity building of the vulnerable community through disaster risk reduction programme. | i) Enhancement of Capacity of DMB & other govt. deptts.  ii) Ensure search & rescue activities. | Pre disaster awareness and Post disaster rescue & rehabilitation activities will reduce loss of lives & resources |
| (2) | To reduce disaster risk & achieve sustainable development | i) Incorporate Disaster Risk Reduction & Hazard Specific multi-sectoral plans in dev. plan.  ii) Awareness raising & advocacy programme will be strengthening among policy makers & the people as well. | i) Realization of government visions for targeted goals & Hyogo Frame Work of Action (HFA) and SARRC plan of action on disaster management | To ensure uninterrupted socio-economic development of the country. |
| (3) | To Increase Capability for disaster management & risk reduction strengthening institutional mechanism & Emergency response system. | i) To Establish Training institute  ii) To establish a well established institutional framework and installation of DMIC for uninterrupted communication system | i) Train all sector of people on disaster management.  ii) Well established network for quick response & decision making | Contribute to achieve institutional & capacity to face disasters. |

Annex 1

**Details of the ongoing Disaster Management Projects of DMRD, MoFDM**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sl. No.** | | | **List of ongoing projects of DMRD** | | **Goal** | **Target** | **Broad activities** | | | **Indicative Budget (lack taka)** | **Development partners** |
| 1 | | | CDMP | Risk management integrated into development  Skills and institutional capacity strengthened for risk reduction  Comprehensive risk management program adopted | The development of strong, well-managed and professional institutions in Bangladesh which are able to implement a comprehensive range of risk reduction programmes and interventions at national level, as well as contributing to regional actions and international learning and best practices. | | Approved and implemented policy and legislative framework to guide disaster management reforms and programmes  MoFDM structure and skills improved to help the execution of revised Allocation of Business functions  Strengthened collaborative partnerships, information management and liaison capability  Decentralised capacity building and professional development structures established  and providing quality support  Sustained MoFDM and sectoral ministries capability to effectively contribute to international and regional initiatives  ‘Knowledge Services Centre’ established and providing efficient quality KM service to disaster management | 1426.14 | |  | |
|  | | | Reduced risk to rural populations through structural and non-structural interventions, empowerment of rural communities and improved awareness of, and planning for, natural hazard events, including the likely impacts of climate change | | Strengthened institutional capacity of DDMC, UzDMC, and UDMC  Focused risk reduction and adaptation support provided to vulnerable communities through expansion and integration of CRA/RRAP within local level planning.  Disaster risk reduction into the microfinance sector included to improve asset building and lower the financial impacts of disasters at the household level  Livelihood security and adaptation strategies for specific marginalized groups in 40 districts in place | 19978.86 | |  | |
|  | | | Reduced risk to urban populations through structural and non-structural interventions, improved awareness of natural hazard events and the piloting of urban community risk reduction methodologies that target the extreme poor | | Expansion of earthquake risk assessment and contingency planning and improved response in five new districts  Support to city corporations and municipalities to increase awareness & response for urban hazard risk across a range of key target audiences in selected cities  Community-based CRA/RRAP and mitigation works piloted in 45 marginalized slum and densely populated wards in three cities  Ward level contingency planning institutionalized in Dhaka, Sylhet and Chittagong | 3346.13 | |  | |
|  | | | Improved overall effectiveness and timeliness of disaster preparedness and response in Bangladesh by strengthening early warning systems, national management capacity and coordination facilities at all levels. | | Improved and more effective early warning, response and relief management in 40 high-risk districts.  Effectiveness of community warning systems in high risk flood and cyclone districts improved and expanded.  DMIC/DMIN fully operational and providing information management and alerting capability.  National damage and needs assessment system established and functioning effectively | 4039.70 | |  | |
|  | | | Improved disaster-proofing of development programming, and enhanced technical capacity to incentivise positive long-term changes in planning and investment decisions, in targeted ministries | | Facilitating Mainstreaming DRR and CCA across sectors.  Disaster Management issues are incorporated in the books of primary to higher secondary levels.  Strengthened BMD’s Early Warning Capacity.  Strengthened FFWC Early Warning Capacity  Strengthened DAE and DoF&L livelihood to climate change adaptation capacity  Mainstreaming climate risk management with technical support to MoEF/DOE.  Ensuring Mainstreaming DRR in the Health Sector.  Enhanced skills and technical capability BFS and CD.  Enhanced skills and technical capability of BGS  Ensuring Mainstreaming DRR in the DPHE  Mainstreaming DRR in the Land use planning  Mainstreaming DRR in women and children affairs development initiatives | 7363.26 | |  | |
|  | | | Community-level adaptations to disaster risks from a changing climate is effectively managed. | | Gaps bridged in community, institutions and climate science for improved and effective climate responsive CRA and RRAP initiatives.  Contingency planning for vulnerable populations living in very high-risk areas.  Disaster risk reduction with tools, techniques and methods developed on adaptation to climate change to enhance community resilience and policy advocacy. | 1128.60 | |  | |
|  | | | others |  |  | |  | 9625.10 | |  | |
| **2** | **ECRRP** | | **To reduce the vulnerability of the people and loss of lives for all disasters** | 1. **Establishment of cells and design all preparedness plan** 2. **Developing tools for education and training** 3. **Capacity building on multi-hazard risk and vulnerability assessment and modeling and mapping of DMB pre, during and post for DMB** 4. **Unification of existing disaster management organizational set-up** | 1. **Establishment of Multi-hazard Risk & Vulnerability Assessment and DNA cells at DMB with the help of consultants** 2. **Supporting and building the capacity of the various level DMC** 3. **Develop and implement disaster management plan** 4. **Technical assistance to DMCs in developing standard evacuation protocol and plans** 5. **Multi-hazard risk and vulnerability assessments, modeling and mapping in pre, during and post disaster** 6. **Strengthening of emergency preparedness at the community level** 7. **Conduct various training and awareness raising programme.** | | | **6895.00** | **World Bank** |
| **03.** | **Procurement of equipment for search & rescue operation on Earthquake and other disasters** | | **Capacity building for search and rescue operation during and post disaster** |  |  | | | **6909** | **GoB** |
| **04.** | **Nobo Jibon** | | **Improve community resilience to cope with disaster though livelihood support** | 1. **Improve health and nutritional status**   **Increased production and income to improve access to food** | 1. **Improved health and nutritional status of targeted households, particularly children under 5 years of age;** 2. **Poor and extremely poor households have increased production and income to improve access to food;**   **Households in targeted communities protect their lives and assets and quickly resume livelihoods activities following disasters.** | | | **37895** | **USAid** |
| **05.** | **Proshar** | | **Improve community resilience to cope with disaster though livelihood support** | 1. **Improved health and nutrition of children and women;** 2. **Increase the income of poor and ultra poor households;**   **Strengthen the resiliency to shocks and their long term impacts.** |  | | | **31708** | **USAid** |
| **06** |  | | 1. Construction of bridges/culverts on the rural roads to connect the Local markets, Growth Centers, Schools and other important places to improve road communication network and to facilitate the marketing of local products.   Creation of annual and seasonal employment opportunities for the rural poor people through construction activities under the project | 4660Nos. of Bridge/culverts will be construct under this project. | Construction of bridges/culverts (up to 12m long) on the rural roads (2nd Phase)  Construction of bridges/culverts (up to 12m long) on the rural roads (3rd Phase) | | | 60000.00 |  |
| **07** |  | | a) Construction of rural roads and bridges/culverts on the rural roads of the Chittagong Hill Tracts (CHT) Region to connect the Local markets, Growth Centers, Schools and other important places to improve road communication network and to facilitate the marketing of local products.  b) Creation of annual and seasonal employment opportunities for the rural poor people through construction activities under the project.  c) To reduce the incidence of absolute poverty  among the rural population of the CHT Region through developing the basic physical infrastructure and expanding income and employment generating opportunities that would substantially raise the standard of living of the hill people. | 260 km. Rural roads and 260Nos. of Bridge/culverts will be construct under this project. | Construction of rural roads and bridges/ culverts (up to 12m long) at Chittagong Hill Tracts Region | | | 21600.00 |  |
| **08** |  | | a) To construct 173 Flood shelters to provide shelter to the distress poor people during flood.b) To save the cattle heads and valuable properties.c) To increase institutional facilities for education using this shelters as School/College/Madrasha during normal time. | 173 Flood shelters will be construct under this project. | Construction of Flood shelters in the flood prone and river erosion areas. | | | 21230.00 |  |
| **09** |  | | a) To construct 816 Cyclone shelters to provide safe shelter to the people during cyclone and other disasters.  b) To save cattle heads and valuable properties.  iic) To create direct & indirect employment opportunities for the poor through construction of Cyclone shelters.  d) To improve and enhance institutional facilities  for education and recreation using these shelters as school, college, madrasha, Community Centre during normal period. | 816 Cyclone shelters will be construct under this project. | Construction of multipurpose Cyclone shelters in the coastal belt of the country. | | | 121054.00 |  |
| **10** |  | | a) Construction of Cyclone resistant houses in SIDR & AYLIA affected areas in south-west coastal area  b) Objective: Contribute in the national economy through reconstructing damaged houses of the landless families affected by SIDR 2007 & AYLIA 2009 in south-west coastal area. | The entire physical activities of the project have been programmed spreading over a period of 3 year. 20000 Cyclone resistant houses will be constructed. Around 80 thousand people of 20,000 families will directly and 4 hundred thousand people will indirectly be benefited through this project. | Title: Construction of Cyclone resistant houses in SIDR & AYLIA affected areas in south-west coastal area. | | | 28000.00 |  |
|  |  | |  |  |  | | |  |  |

1. United Nations. 1987. “Report of the World Commission on Environment and Development”. General Assembly Resolution 42/187, 11 December 1987. [↑](#footnote-ref-2)