



Coastal Zone Policy

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Ministry of Water Resources
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1. INTRODUCTION

1.1 Coastal Setting

According to 2001 population census, Bangladesh has a population of about 13 crore living on 147,570 square kilometer of land. The Ganges, the Brahmaputra and the Meghna that constitute one of the largest river systems in the world drain through the Bangladesh into the Bay of Bengal. The country has a coastline of 710 km along the Bay of Bengal.

The coast of Bangladesh is known as a zone of vulnerabilities as well as opportunities. It is prone to natural disasters like cyclone, storm surge and flood. The combination of natural and man-made hazards, such as erosion, high arsenic content in ground water, water logging, earthquake, water and soil salinity, various forms of pollution, risks from climate change, etc, have adversely affected lives and livelihoods in the coastal zone and slowed down the pace of social and economic developments in this region.

The coast has distinctive development opportunities that can be instrumental in reducing poverty and can contribute significantly to the development of Bangladesh as a whole. The zone has diversity of natural resources including coastal fisheries and shrimp, forest, salt and minerals. It has sites for Export Processing Zones, harbors, airports, land ports and tourism complexes and opportunity for other industries. This zone also has high potential for exploitation of both onshore and offshore natural gas. Some of these resources still remained untapped while there are opportunities for using many of them for their significant expansion potentials.

The coast also contains several ecosystems that have important conservation values. Part of the Sundarban, the world's largest stretch of mangrove ecosystem, has been declared a World Heritage Site, whereas coral ecosystems are found around St Martin's Island. The coastal zone has not only biodiversity hot spots, but also provides the ecological foundation for an important common property resource; A large portion of these resources is various types of fisheries the Bay of Bengal.

Increasing population, competition for limited resources, natural and man-made hazards, lack of economic opportunities, important ecological hot spots, etc, calls for distinctive coastal management. The Government of Bangladesh realizes this need, and special reference to coastal issues has been repeatedly made in government policies, strategies (including the national strategy for poverty reduction) and planning documents.

1.2 Existing Policies

Different Ministries of the Government have announced, over the years, their respective policies for carrying out the mandates. The Ministries implement various programs directly and indirectly through their concerned agencies and the coastal issues are being adopted directly or indirectly with these policies¹.

1.3 Rationale

The Government considers the following three reasons for initiating the coastal zone policy:

- a) the coastal zone is lagging behind in socio-economic developments on many aspects;
- b) Poor initiatives to cope with different disasters and gradual deterioration of the environment;
- c) the coastal zone has the potential to contribute much to national development.

¹ Environment Policy (1992) and Implementation Plan (1992), National Forestry Policy (1994), Livestock Development Policy (1992), National Fish Policy (1998), National Tourism Policy (1992), National Energy Policy (1996), National Policy for Safe Water Supply and Sanitation (1998), National Rural Development Policy (2001), National Education Policy (1997), National Children Policy (1994), The National Policy for the Advancement of Women (1998), National Water Policy (1999), National Agricultural Policy (1999), Industrial Policy (1999), National Shipping Policy (2000), National Health Policy (2000), National Land Use Policy (2001).

2. DECLARATION

Coastal zone is different in a number of aspects from rest of the country. A participatory and integrated approach holds the promise of reducing conflicts in the utilization of coastal resources and optimum exploitation of opportunities. The Government, therefore, has formulated this coastal zone policy (CZPo) that would provide a general guidance to all concerned for the management and development of the coastal zone in a manner so that the coastal people are able to pursue their life and livelihoods within secure and conducive environment.

This CZPo may be revised if and when it becomes necessary.

The coastal zone policy is unique in the sense that it is a harmonized policy that transcends beyond sectoral perspectives. The CZPo initiates a process that commits different Ministries, Departments and Agencies to agree to harmonize and coordinate their activities in the coastal zone and elaborates the basis for a firm co-ordination mechanism.

3. COASTAL ZONE MANAGEMENT

3.1 Area of Management

Three indicators have been considered for determining the landward boundaries of the coastal zone of Bangladesh. These are: influence of tidal waters, salinity intrusion and cyclones/storm surges. 19 districts² of the country are being affected directly or indirectly by some of these phenomena.

The districts are considered including all upazilas/thanas. A total of 48 upazilas/thanas are considered as 'exposed' directly to vulnerabilities from natural disasters. The exclusive economic zone (EEZ) is regarded as the seaward coastal zone.

One-third of the country belongs to the coastal zone. According to 2001 population census, population of the coastal zone is 3 crore and 48 lakh.

3.2 ICZM -- Key to Coastal Development

The Government hereby declares its intention of integrated coastal zone management following the principles of coastal zone policy. Following this policy, all concerned Ministries, Agencies, Local Government Institutions, NGOs, private sector and the civil society will put their efforts for the development of the coastal zone.

While preparing policy and strategy it is important to take into account the conflict of interest in using the resources and the explored activities that are responsible for the adverse impact on the environment

The main principles in ICZM approach would include:

- a. integration through harmonization and coordination;
- b. adoption of a process approach;
- c. linkage to national planning mechanisms;
- d. implementation through respective line agencies;
- e. co-management and participatory decision;
- f. gender equality;
- g. participatory monitoring and evaluation;
- h. supporting national policy of decentralization and development of the private sector;
- i. interventions based on the best available knowledge; efforts to fill knowledge gaps;
- j. priority setting on issues of the coastal zone.

² The districts are Bagerhat, Barguna, Barisal, Bhola, Chandpur, Chittagong, Cox's Bazar, Feni, Gopalganj, Jessore, Jhalkati, Khulna, Lakshmipur, Narail, Noakhali, Patuakhali, Pirojpur, Satkhira and Shariatpur.

3.3 Goal

The coastal development process aims to meet, on an overall basis, National Goal for Economic Growth, Poverty Reduction & Social Development; Code of Conduct for Responsible Fisheries, Code of Conduct for Responsible Mangrove Management and other international conventions and treaties including to achieve the targets of the Millennium Development Goals (MDGs).

The goal of integrated coastal zone management is: *to create conditions, in which the reduction of poverty, development of sustainable livelihoods and the integration of the coastal zone into national processes can take place.*

4. POLICY FRAMEWORK

The Government has made the coastal zone policy statements in relation to development objectives. These policies provide general guidance so that the coastal people can pursue their livelihoods under secured conditions in a sustainable manner without impairing the integrity of the natural environment.

4.1 Economic growth

Effective measures will be taken to realize the objectives of poverty reduction through enhancing economic growth in the coastal zone. Policies in this context are:

- a. Efforts shall be made to enhance annual growth rate to a level required to achieve national goal for poverty reduction and economic growth;
- b. Available opportunities of the coastal zone will be used through sustainable management to enhance standard of living of coastal communities by investing in different sectors like marine fisheries, salt production, shrimp culture, crab culture, shell culture, pearl culture, livestock development, area-based agricultural development and agro-based industries, transport, ship building, ship-breaking, tourism, extraction of beach minerals, renewable and non-renewable energy, etc;
- c. A strategy shall be formulated covering all routes to development taking multidimensional nature of poverty. However, priority would be accorded to (i) labor-intensive and low technology investments should be given importance where the poor and the disadvantaged can find employment, as well as (ii) to promote those industries and activities that will reasonably use manmade coastal resources as basic raw material;
- d. Emphasis will be given on building efficient power, transportation and telecommunication links, particularly with islands;
- e. Special emphasis will be given to utilize gas-based power, manufacturing and processing industries;
- f. Settled isolated chars and islands will be brought under 'special rural development programs';
- g. Necessary measures will be taken to increase the flow of investments in the coastal zone including direct foreign investment (DFI), especially by setting up more export processing zones (EPZ);
- h. Cox's Bazar, Nijhum Dwip, St. Martin Island and Kuakata sea beaches and Sundarban will be further developed to attract tourists and those areas and islands will be developed as 'Special Zone for Tourism'. Private sector initiatives will be encouraged in this respect;
- i. Steps will be taken for medium and small private investments for coastal development.

4.2 Basic needs and opportunities for livelihoods

The 2002 World Summit on Sustainable Development (WSSD)³ adopted five areas for particular focus: water and sanitation, energy, health, agriculture and biodiversity (WEHAB)⁴. The coastal zone is lagging behind in some of these key areas. To meet basic needs of the coastal people and enhance livelihood opportunities, Government policy will be as follows:

³ World Summit on Sustainable Development

⁴ Water, Energy, Health, Agriculture and Bio-diversity

- a. Alleviation of poverty through creation of job opportunities and finding options for diversified livelihoods would be the major principles of all economic activities. Economic opportunities based on local resources will be explored to enhance income of the people;
- b. The intensity of coverage of primary education, health care, sanitation and safe drinking water facilities will be increased;
- c. Food production will be continued at the self-sufficiency level and of higher production of diversified high-value export goods;
- d. Private sector and the non-governmental organizations (NGO) will be encouraged to implement activities for the poor people;
- e. Collateral-free credit under easy terms will be arranged as part of all livelihood enhancement programs and activities;
- f. No alteration or stoppage of an existing employment opportunity shall be made without creating opportunities for alternative employment;
- g. Special measures will be taken during the period of disaster;
- h. Khas land will be distributed among the landless and a more transparent process of land settlement will be ensured;
- i. An effective program for land reclamation will be developed;
- j. To facilitate coastal navigation, the following steps will be taken:
 1. development and maintenance of main channels of seaports and main important channels of inland navigation;
 2. development of two existing seaports and installation of a communication network between main river ports, ghat and inland container ports and depots;
 3. Initiatives of establishing deep sea port;
 4. development of communication network with islands for passengers and freight traffic;
 5. ensuring shipping security for passengers and freight;
 6. maintaining river ways;
 7. increasing excavation capacity to maintain the navigability of the waterways;
- k. An integrated network of communication including highways, major roads, rural roads, railways and waterways will be developed;
- l. The law and order situation will be improved by setting up police outposts in remote and far flung areas;
- m. Free flow of information for the people will be ensured.

4.3 Reduction of *vulnerabilities*

The level of the well being of households has direct correlation with exogenous phenomena influencing them. Disasters like cyclone, drainage congestion, land erosion and drought that take toll on life and property and depletion of natural resource base that supports particularly the poor. Majority households are vulnerable to climate change. In the coastal zone, agriculture continues to be a major source of employment, which is seasonal in nature.

In this regard, Government policy is as follows:

- a. Reduction to vulnerability to natural disasters would be an integral aspect of the national strategies for poverty reduction;
- b. Integration will be made with 'Comprehensive Disaster Management Plan' on aspects concerning the coastal zone;
- c. Effective measures will be taken to enhance coping capacity of the poor during the period of disaster and to initiate insurance scheme for improving their social security;
- d. Effective measures will be taken for protection against erosion and for rehabilitation of the victims of erosion;
- e. Safety measures will be enhanced by combining cyclone shelters, multi-purpose embankments, killas, road system and disaster warning system. It should include special measures for children, women, the disabled and the old;
- f. Sea-dykes will be regularly maintained as first line of defense against storm surges and afforestation on it according to the existing policy;

- g. Earthquake management will be strengthened and capacity to cope with earthquakes will be enhanced;
- h. Adequate provision will be made for safety of livestock during disaster and post-disaster period;
- i. Programs shall be taken to encourage all for tree plantation in a planned manner in the coastal zone. Emphasis will be given to social forestry and other forms of plantations, plant care and maintenance;
- j. The asset base of the poor, with special focus on women, shall be improved through ownership or access so that their coping capacity improves.

4.4 Sustainable management of natural resources

Coastal zone is full of diverse natural resources: inland fisheries & shrimp, marine fisheries, mangrove and other forests, land, livestock, salt, minerals, sources of renewable energy like tide, wind and solar energy. Medium and long term Government policy to ensure sustainable management of both biotic and abiotic coastal resources will be as follows:

- a. Every possible steps shall be taken to secure just share from all international rivers reaching the coastal zone and the Bay of Bengal;
- b. Suitable measures will be taken for sustainable use of renewable resources and, to that end, limit harvesting, extraction or utilization to the corresponding cycles of their regeneration;
- c. Sustainable use of coastal resources shall be ensured. Combination of resource use, e.g. agriculture, forestry and fishing including aquaculture is often the major economic activity. Efforts will be given to make this sustainable;
- d. Optimum utilization of resources will be ensured by taking advantage of the complementarities and trade-offs between competing uses;
- e. Rigid enforcement of conservation regulations will affect the livelihoods of many people and such conservation efforts will be linked, as far as possible, with alternative opportunities of employment;
- f. Initiation of plan and its implementation will be ensured by participation of people of all sectors.

4.4.1 Land

- a. Planning will be done under land use policy to control unplanned and indiscriminate use of land resources. Strategies for new chars will be developed. Zoning regulations would be formulated and enforced in due course;
- b. Through its responsible agencies, the Government will proper plan and implement schemes for reclamation of balanced land from the sea and rivers.

4.4.2 Water

- a. Adequate upland flow shall be ensured in water channels to preserve the coastal estuary ecosystem threatened by the intrusion of soil salinity from the sea;
- b. Small water reservoirs shall be built to capture tidal water in order to enhance minor irrigation in coastal areas. Appropriate water management system within the polder utilizing existing infrastructures will be established for freshwater storage and other water utilization;
- c. Rainwater harvesting and conservation shall be promoted;
- d. Ponds and tanks will be excavated for conservation of water and local technology for water treatment (such as, pond sand filtering - P.S.F.) will be used for the supply of safe water;
- e. Step will be taken to ensure sustainable use and management of ground water.

4.4.3 Capture fisheries

- a. Comprehensive policies, as dealt in the National Fish Policy, in relation to exploitation, conservation and management of marine fisheries resources will be followed;
- b. Fishers' right will be established on open water bodies for sustainable fisheries management.

4.4.4 Aquaculture

- a. Environmentally adopted and socially responsive shrimp farming will be encouraged. In this regard, internationally accepted quality control measures will be introduced;
- b. All opportunities and potentials of aquaculture will be utilized in the coastal zone. Crab culture, pearl culture, sea grass will be encouraged.

4.4.5 Agriculture

- a. Programs for intensification of agriculture and crop diversification for improving the economic conditions of both male and female farmers and increasing food security at local and regional level shall be supported;
- b. Special development programs will be taken-up with a view to increasing the production of crops suitable for the coastal area with attention to maintenance of soil health;
- c. Use of chemical fertilizers and pesticides will be reduced, while organic manure and integrated pest management will be encouraged;
- d. Salt-tolerant crop varieties will be developed and extended along with possible measures to resist salinity;
- e. The scope of irrigation facilities will be explored and / or extended and a comprehensive water management for agriculture will be implemented.

4.4.6 Livestock

- a. Grazing land for livestock will be arranged. Facilities for livestock development will be enhanced;
- b. Facilities for rearing of poultry of different species including the local ones will be enhanced.

4.4.7 Afforestation

- a. Measures will be taken for afforestation in the coastal areas including newly accreted chars;
- b. Effective measures will be taken for conservation of forests;
- c. Social forestry will be encouraged and extended.

4.4.8 Energy

- a. Assessments shall be made on the prospect of tidal and wave power in coastal areas' as potential energy source;
- b. An assessment of all types of energy resources (e.g., oil, gas, coal, nuclear minerals, hydropower, biomass fuels, solar, wind and tidal waves) will be undertaken on a regular/continuous basis by the appropriate authorities. Special measures will be undertaken for exploration and appraisal of petroleum resources in the offshore areas without undermining the nature;
- c. Potentials of area-based renewable sources of energy will be assessed;
- d. Remote and isolated areas including offshore islands, which are not likely to be brought under the networks of commercial fuels in a foreseeable future, are to be considered as potential sites for implementing renewable energy technologies, in spite of their high capital cost. Solar photovoltaic will be used for cyclone shelters;
- e. Special projects will be identified, for example power plants in the offshore islands. Plans for the generation of electricity in isolated and remote areas like offshore islands will be prepared separately.

4.5 Equitable distribution

Different kind of social, economic, technical or institutional barriers limit access of the poor people to opportunities. The resources available in a particular jurisdiction may be good enough to meet everyone's basic need. However, due to ineffective access mechanism, the disadvantaged cannot get there. To ensure right of the neglected and disadvantaged groups, Government policy is as follows:

- a. Actions will be designed to reach the poorest and the remote rural areas (including the cyclone-prone coastal regions, chars and river erosion affected areas), which are vulnerable to adverse ecological processes and those with high concentrations of socially disadvantaged;
- b. In order to ensure equitable distribution of national economic benefits, priority will be given to exposed upazilas and coastal islands;
- c. In order to ensure equity, the thrust should be on human development of the poor for raising their capability through education, health, nutrition, employment-oriented skill training and social interventions;
- d. Measures will be adopted that increase access to natural resources for the poor and the disadvantaged (on which they are dependent for their livelihood).

4.6 Empowerment of communities

Mainstreaming of the coastal people will be done by enhancing their safety and capacity. In this context, Government policy will be as follows:

- a) Equal participation of all stakeholders shall be ensured and establishing effective co-operation between the government agencies, local government institutions and non-governmental organizations;
- b) Co-management procedures shall be established that will bring decision-making power to the grass root levels;
- c) Specific vulnerabilities of the coastal communities shall be addressed: like farmers in the saline zone, marine fishers, salt producers, dry fish processors, people living on forestry resources, ship-breaking workers, vulnerable ethnic communities and so forth;
- d) Vesting on local government institutions, at the union, upazila and district levels, the power and responsibilities for design, formulation and implementation of local level development programs and projects;
- e) An awareness campaign shall be mounted about the long-term benefits of ICZM, recent initiatives in the coastal zone, and coastal development strategy among the NGOs, private sector, civil society and coastal communities;
- f) Initiatives will be taken to keep up the cultural heritage of different communities living in the coastal zone.

4.7 Women's development and gender equity

It is recognized that gender inequalities and gaps exist in the coastal zone, in particular in the fields of access to livelihoods assets and access to resources. Malnutrition in coastal zone is twice the national average as severe among girls. Poor access to sources of potable water for domestic purposes contributes to heavy workload on poor women. Other gender issue that affects women's life and limits their participation is personal insecurity, more serious in remote coastal areas. Enabling cultural and institutional environment is necessary to remove hurdles to mobility of women.

The national strategy of the Government clearly states the importance of women's development and reduction of gender gaps as a development objective. The Government has ratified major international conventions on the rights of women and children.

Government policy will be as follows:

- a. A gender sensitive and participatory approach will be adopted that focuses at the reduction of gender inequalities and that takes into account differences in needs and interests between men and women;
- b. Efforts will be made to close the gender gap, giving priority to women's education, training and employment and special support for broadening their coping capacity;
- c. Special attention will be paid towards employment generation for women, the promotion of women entrepreneurs as well as the removal of restrictions on women's employment and economic opportunities;
- d. During distribution of newly accreted khas lands, special attention will be paid to the allocation of land titles to women;
- e. Special projects will be implemented exclusively addressed to livelihoods enhancement and empowerment of disadvantaged women;
- f. Necessary institutional measures including mass awareness and motivation on violence against women will be taken.

4.8 Conservation and enhancement of critical ecosystems

Necessary measures will be taken to conserve and develop aquatic and terrestrial including all the ecosystems of importance identified by the *Bangladesh National Conservation Strategy* (Mangrove, coral reef, tidal wetland, sea grass bed, barrier island, estuary, closed water body, etc).

Implementation of all laws for the protection of all special areas⁵ will be ensured for environmental balance.

Government policy will be as follows:

4.8.1 Conserving the ecosystems

- a. Meaningful conservation shall be enforced of critical ecosystems including ECAs, heritage sites and marine reserves;
- b. Special measures will be taken for conservation and development of the natural environment of Sundarban;
- c. The programs for institutional strengthening and capacity building shall be supported along with further development of the regulatory framework for the protection of the environment;
- d. The role of the Coast Guard will be acknowledged with emphasis and its capacity will be enhanced so that it can be used on behalf of all relevant institutions as a common resource for enforcement of different regulations applicable to the coastal zone;
- e. For activities that have direct adverse consequences on bio-diversity, steps will be taken to stop those activities and specific mitigation measures will be taken to minimize those effects;
- f. To protect the environment, all commitments shall be honored as signatory to different international protocols and guidelines in planning and implementation;
- g. Efforts shall be made to harmonize in the provisions of different existing laws and enact new laws, where required, to protect and preserve the coastal environment and its resources;
- h. Special measures will be taken for bio-diversity conservation;
- i. Measures will be taken for hill management including prohibition of hill cutting.

4.8.2 Pollution Control

- a. Zoning regulations will be established for location of new industries in consideration of fresh and safe water availability and effluent discharge possibilities;
- b. All industrial units will be required to install built-in safeguards against pollution within a given timeframe and will help them in obtaining financial support from international bodies to carry out the adjustments. Units failing to comply with the pollution standards will be required to pay “green tax” for cleanup of the environment polluted by them;
- c. Sewage treatment plants will be set up for the major cities like Chittagong, Khulna and Barisal and gradually in other urban centers;
- d. Steps will be taken to handle the issue of discharge of bilge water from ships and oil-spill according to international conventions to which Bangladesh is a signatory;
- e. A review of the desirability of supporting ship breaking as an industry will be done and, in the event of its continuation, environmental standards will be prescribed under which it has to conduct its activities.

4.8.3 Climate Change

- a. Existing institutional arrangements for monitoring of climate change in Bangladesh will continue. Steps will be taken to support upgrading of technology and institutional strengthening for enhancing their capacity for generation of better data and more accurate long-term prediction and risk related to climate change;
- b. Implementation of adaptive measures identified in relation to climate change for coastal zone and resources shall be gradually undertaken;
- c. Efforts shall be made to continuously maintain sea-dykes along the coastline as first line of defense against predicted sea-level rise;
- d. An institutional framework for monitoring/detecting sea level rise shall be made and a contingency plans for coping with its impact.

⁵ reserve forest, wildlife sanctuary, world heritage site, marine reserve, national park, eco park, game reserve, ecologically critical areas (ECAs), Ramsar site, etc.

5. ENABLING INSTITUTIONAL ENVIRONMENT

Measures will be taken to formulate an appropriate institutional framework and to enact necessary laws and regulations in order to harmonize and coordinate all development activities in the coastal zone.

5.1 Mainstreaming Coastal Zone Management

There are three pre-requisites to be met before reaching a satisfactory level of mainstreaming integrated coastal zone management (ICZM):

- a. focus on coastal development in national strategy documents, multi-year and annual development plans (Example: PRSP);
- b. based on the above focus, a commonly agreed framework for coastal development;
- c. agreed division of responsibilities for implementation among different levels of administration.

In order to set a national focus on coastal development and to formulate a broad based, well-debated and commonly agreed framework, coordination between work procedures and strategies of different institutions is a must. Working through the LGIs in the field level should be the strategy for mainstreaming ICZM.

Through the adoption of this policy document, the Government reiterates its commitment to support the approach of ICZM for continued and enhanced development of the coastal zone. Policy with regard to mainstreaming will be as follows:

- a. Special focus shall be given on coastal development in all national strategy documents (like PRSP), multi-year and annual development plans;
- b. A Coastal Development Strategy (CDS) shall be developed and adopted in line with national strategy documents as a commonly agreed framework document;
- c. Coastal zone development shall be mainstreamed through existing Ministries/ Departments and organizations;
- d. Existing policies shall be harmonized and coastal issues shall be incorporated in all future policy and strategy documents;
- e. There shall be special mention of resource allocation for coastal development in the Annual Development Plan (ADP) of all Ministries. At the same time, efforts shall be made to increase that allocation gradually.

Work through the local Government institutes as a first step towards mainstreaming adhering to the principles of decentralization. Co-management, understood as a range of management systems where responsibilities are shared between the government and the communities, will be the preferred mode of management at the local and regional levels.

5.2 Strategic Planning and Program Development

A Coastal Development Strategy for poverty reduction, economic growth and social development will be formulated and implemented.

This strategy will be a time and resource-bound specification of the priority actions in coastal development, but it will be about building a process to implement the policies, not preparing a classic master plan. Such a strategy makes critical choices, for example in relation to targeted regions, disadvantaged groups and issues. Focus is on implementation, including a set of indicators and corresponding monitoring arrangements to assess performance.

The strategy document will reflect the specific actions needed to achieve coastal development objectives. In particular, links will be made to the content and process of the National Strategy for Economic Growth and Poverty Reduction and the subsequent multi-year development plans and to other national policy and planning processes.

The strategy document is a component of the chain: *policy* ⇒ *strategy* ⇒ *priority investment program*.

Policy with regard to strategic planning and program development will be as follows:

- a. It will support the preparation of a Coastal Development Strategy (CDS) as an ICZM framework document by all concerned Ministries and agencies through an intensive consultative process;
- b. For ensuring ownership of the CDS by the beneficiaries and for sustainable management, the procedures and guidelines relating to people's participation along with all relevant analytical procedures and evaluation methods will be adhered to;
- c. It will support the relevant Ministries and agencies to work together and in partnership with the Local Government Institutions (such as District, Upazila and Union Parishads), NGOs, private sector, civil society and community organizations to reach an agreed framework for coastal development;
- d. In the long term, the aim is to internalize the process of integration as a standard mode of operation for all the concerned agencies. Towards that end, the CDS will identify the social, economic, organizational and institutional barriers that hinder the adoption of an integrated approach.

5.3 Implementation

Implementation will be the responsibility of the respective Ministries and the agencies. With regard to implementation of the CDS, Government policy will be as follows:

- a. A 'Priority Investment Program (PIP)', as operational arm of the CDS, will be the basis for implementation of ICZM process;
- b. Implementation would be the responsibility of the concerned Ministries and the agencies within the existing regulations and framework of multi-sector program implementation. Linkage with LGIs will be established during implementation;
- c. A Program Co-ordination Unit (PCU), based within the lead agency (WARPO), will be established to discharge the coordination functions during the implementation stage. Monitoring and evaluation of projects in relation to ICZM indicator framework will be the main function;
- d. The agencies will take necessary steps to inform and orient their officials at regional and local levels about the CDS and the plan for its implementation;
- e. The community organizations will be based on existing social institutions and will be closely linked with the LGIs for their integration with higher levels of government.

5.4 Co-ordination

ICZM being a multi-level and multi-sectoral activity, institutionalization of ICZM would require the development of mechanisms for coordination and interaction between and among the many parties involved at national, regional and local levels. One aim of the program is to develop, in course of time, the ICZM principles and practices as the standard mode of operation for all the agencies operating in the coastal zone.

To co-ordinate these activities, a lead Ministry, MoWR and a lead agency, WARPO is designated. Inter-ministerial Technical Committees and Program Steering Committees, constituted at appropriate levels, will assist the lead agency and the lead Ministry, respectively in overall coordination.

To ensure overall coordination, the following institutional arrangements will be made:

- a. The *National Council* of the lead Ministry will act as higher level coordinating and decision-making body for ICZM programs and activities, especially implementation of the Coastal Development Strategy and to support overall ICZM process;
- b. An *Inter-Ministerial Steering Committee (SC)* will be set up to provide policy guidelines on issues related to the coastal zone. This high level committee will be chaired by the Minister of the lead Ministry and will include representatives (at the Secretary level) of concerned Ministries and agencies. The lead Ministry will act as the Secretariat for this Committee;
- c. An *Inter-Ministerial Technical Committees (TC)* will be set up, headed by the Secretary of the lead Ministry and participated by the representatives of all the concerned agencies, for removing

planning and implementation bottlenecks and resolving inter-organizational conflicts. The TC also comprises of representatives from universities, NGOs, private sector and the civil society. The lead agency will act as the Secretariat for this Committee;

- d. A *Program Co-ordination Unit (PCU)* will be established to provide technical support to the lead agency in the discharge of their coordination functions. The terms of reference of the PCU would include, among others, the mandate to liaison with the service Ministries like the Ministry of Finance, Ministry of Planning and the Ministry of Establishment and the development partners;
- e. *Focal Points* will be established in all relevant agencies and will act as operational contact points in relation to ICZM activities and maintain contact with the lead agency;
- f. Existing Local Government structure (district, upazila, union) will ensure people's participation in planning and implementation. Participatory and integrated planning process at the local level will be promoted with linkages to PCU and sector agencies at the national level;
- g. During the preparatory phase, *Program Development Office (PDO)*, which has been established for a limited period, will be responsible for delivery of defined project output as well as to foster and initiate ICZM as a process.

5.5 Supporting Activities

In order to strengthen enabling institutional environment, the following supporting activities have been identified:

5.5.1 Coastal Resources Survey

This is primarily concerned with the biophysical characteristics of the coastal area and their impact on the coastal communities. Biophysical information will include: biological resources, major habitats and ecosystems, reproduction sites (nurseries, and species) and the presence of species and areas (rare, threatened, endangered). Among other resources are river, soil, forest, sea, water, wind, minerals, etc.

5.5.2 Integrated Coastal Resources Database:

An Integrated Coastal Resources Database (ICRD) will be set up;

5.5.3 Modeling Tools:

Mathematical modeling, remote sensing and geographic information system to be continued to support ICZM planning and implementation;

5.5.4 Information Dissemination:

In order to create awareness among the general public about the ICZM program, coastal zone policy, CDS and other initiatives, an exhaustive information dissemination mechanism has to be evolved;

5.5.5 Capacity Building:

In order to strengthen meaningful participation of relevant agencies, especially LGIs, in planning and implementation of ICZM framework, a supporting capacity building program is important.

In the medium and long term, Government policy in this regard will be as follows:

- a. A baseline 'Profile of the Coastal Zone' will be prepared which will be updated periodically through inputs from partner organizations. Similarly 'profile of the districts' will be prepared with available information;
- b. Support the establishment of the ICRD with linkage to other databases and facilitate the formulation of agreed guidelines that will enunciate the principles of common standard, protocols, and data sharing;
- c. Ensure free flow of data among all users by reviewing the existing regulations. If necessary, new legislation will be considered to ease dissemination protocols and rationalize the mandates of the data collecting agencies;
- d. Continue its support for further strengthening of institutions dedicated to modeling, satellite imagery and geographic information system;

- e. Support updating of available coastal zone hydrodynamic modeling tool in ICZM framework. To get a clear understanding of the coastal dynamics, small-scale physical modeling will be done for some appropriate areas;
- f. Encourage building up a strong survey and research component in the CDS and other plans of relevant sector institutions. Identify, in consultation with the concerned agencies of the government and stakeholders, priority areas for research;
- g. Necessary steps will be taken by the concerned agencies to create awareness among all the participants about the ICZM, benefits of the CDS and to develop their skills in planning and executing activities under such a program. Tailor made training programs will be developed and delivered to meet those ends.

5.6 Legislative Framework

Setting the appropriate legislative framework is fundamental to effective implementation of the coastal zone policy. A number of laws are in operation since long authorizing surveillance and patrolling of the coastal and marine waters for the preservation of the natural environment and sustainable use of coastal resources. All the laws of Bangladesh are applicable to coastal zone.

The enforcement of existing legal coverage is a key issue in sustainable coastal management. This policy will be given effect, if needed, through revision, modification of existing laws, rules and regulations specifying provisions of the coastal zone policy to facilitate its implementation. Government policy with regard to establishing a viable and transparent legal framework for coastal management will be:

- a. In this respect, a “Compendium on the Laws Relating to and/or having bearing on Coastal Areas” will be prepared. The purpose of such a compilation would be to: (i) identifying areas of conflict and contradiction among and within the laws; (ii) to find out the solutions of conflicts (iii) to prepare a list of rules/laws which are conflicting with existing policies along with suggesting necessary amendments to harmonize them; and (iv) to review the necessity of an umbrella legislation for the coastal zone.
- b. Enforcement of existing legal coverage will be facilitated with adequate logistics and support, to relevant agencies.