CHAPTER-15

ENVIRONMENT AND DEVELOPMENT

Environment is inseparably linked with development. In the context of recent realisation of this aspect, it is seriously felt that the striving for achieving economic prosperity be commensurate with the deliberate efforts in keeping environmental and ecological balance. Belatedly it is now appreciated that the environmental problem is also an economic issue indeed. For this reasons, there is no scope to visualise economic and environmental activities in isolation. An integrated approach is, therefore needed for the sake of efficient management of environmental resources.

Economic Growth and Environment

Economic growth, in traditional sense, implies the growth of goods and services produced in an economy. Economic Growth has been considered as the precondition of human welfare and development. But the traditional system of estimating economic growth on the basis of goods and services do not consider environmental effect. But recently the emergence of the concept of sustainable development made it clear that alternative method is needed for estimating physical and economic development appropriately to measure standard of living of human being. In this method the depletion of natural resources and environmental issues that has impact on sustainable development are taken into account.

In 1993, the United Nations Statistical Office (UNSO), first considered it as an important variable and developed the System for Environment and Economic Accounts (SEEA). In this system, an attempt has been made to integrate environmental data with the existing national accounts information. Using this, an Environmentally Adjusted Net Domestic Product (EDP) and an Environmentally Adjusted Net Income (ENI) are calculated. In calculating SEEA, environmental assets such as land, forest, water, biodiversity etc. are considered as productive assets relating to consumption and production. Similarly, other additional costs are also included in SEEA. Included among them are costs of imputed changes for the depletion of minerals and other natural resources and costs of degradation of land, water, air caused due to the production and consumption activities.

Global Environmental Movement

The Stockholm Conference is considered as a milestone in the emergence of global environmental movement. The said Conference, held in 1972, opened up the opportunity to look at the environmental issues from a wider social, political and economic perspective. As many as 113 countries, 19 international agencies and 400 non-governmental organisations (NGOs) attended the Stockholm Conference (UN Conference on the Human Environment). As an instant outcome of the Stockholm Conference, the United Nations Environmental Programmes (UNEP) was established in Nairobi, Kenya in 1972 and also the International Union for the Conservation

of Nature (IUCN) in 1997. The Stockholm Conference had several important outcomes. It prompted creation of Environmental Agencies/Ministries and also the development of National Environmental Policies/Action Plans in many countries.

The Earth Summit

In observance of the 20th anniversary of the Stockholm Conference, the United Nations organised the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, in June 1992, which is popularly known as the 'Earth Summit'. The Summit drew as many as 10,000 delegates and a large number of non-governmental organisations from 178 countries.

The Rio Summit came to a consensus on the following documents:

1. The Rio Declaration of 27 principles
2. Agenda 21 and
3. The Statement of Forest Principles

Consensus has also been made on the following two conventions:

1. Convention on Bio-diversity and
2. Convention on Climate Change Framework

UN Commission on Sustainable Development (UNCSD) has been set up to monitor the implementation progress of the decision taken in the Rio Summit.

World Summit on Sustainable Development (WSSD)

In order to assess the progress of the implementation of sustainable environmental development as agreed in the Earth Summit and to determine future work plan, the World Summit on Sustainable Development (WSSD) was held at Johannesburg, 3 September 2002. The cardinal objectives of the Summit are:

- Focus on accomplishments and areas where further actions were needed for fuller implementation of Agenda 21. Also review the problems and prospects of other Agreements of Rio Summit and the new issues emerged within the framework of Agenda 21.
- Ensure a balance between economic development, social development and environmental protection as interrelated issues and mutually reinforcing components of sustainable development.

The WSSD summit is said to be successful in the sense that the Summit has created special opportunities to draw appropriate work plan and pledge to implement the issues agreed in Rio Summit.

Kyoto Protocol

The Kyoto Protocol signed to reduce carbon-di-oxide and greenhouse gas emission that is responsible for increasing global warming, meltation of avalanche and rising sea level has come

into force on 17 February 2005. The Protocol has been signed by 141 countries. In December 1997, the negotiations on the Kyoto Protocol under the United Nations Convention on Climate Change Framework were completed. The Kyoto Protocol put the industrialised nations under obligation to meet specific legally binding targets for emissions of six-greenhouse gas emission by 7 percent below 1990 levels, between 2008-2012. The Kyoto Protocol plays an important role for aforestation. Activities that absorb carbon, such as planting trees facilitate low level of emission of greenhouse gas. Another important feature of the Kyoto Protocol is the Clean Development Mechanism (CDM), through which the Developed Countries (DCs) accumulate credit in their own account. In this mechanism the DCs instead of reducing greenhouse gas emission in their industries, invest in developing countries and help in reducing greenhouse gas emissions.

The Major Environmental Problems of Bangladesh

Because of its geographical location Bangladesh suffers from a range of environmental problems, arising from drought, flood and other natural hazards. Frequency of hazards is on the increase day by day. The quality of soil has deteriorated due to wanton use of agrochemicals, unplanned land use, undesirable encroachment on forest areas for agriculture and settlements and indiscriminate disposal of hazardous industrial wastes. Unplanned land use and intrusion of saline water are causing degradation of soil in the coastal area.

The surface water of the country is polluted through capricious disposal of untreated industrial effluents and municipal waste water, runoff pollution from chemical fertilizers and pesticides and oil and lubes spillage in the coastal area from the operation of sea and river ports and ship wreckage. The arsenic concentration in the ground water in many areas is a major problem in Bangladesh now. The problem is acute in tube wells extracting groundwater from 10 m to 100 m depth in the Southeast, South Central (the northern part only), and Southwest regions, which creates problems for getting safe drinking water in rural life.

Bangladesh has 57 trans-boundary rivers, of which 54 are shared with India and 3 with Myanmar. A significant amount of water flow is withdrawn and diverted upstream by neighbouring countries for irrigation and other purposes and thereby reducing normal flow of water. The Farakka Barrage on the river Ganges is a notable example. Desertification prevails in some northwestern areas of Bangladesh due to withdrawal and diversion of upstream water in the dry season by India. Besides, the proposed Inter-basin River Link Project of India, if implemented, the yearly water flow of Bangladesh will be drastically decreased which will have profound negative impact on economy, society and environment of Bangladesh.

Air pollution is one of the manmade environmental disasters that is taking place all over the world. There are two major sources of air pollution in Bangladesh, vehicular emissions and industrial emissions, which are mainly concentrated in the cities. There are also numerous brick-making kilns working in dry season all over Bangladesh, which is another source of air pollution.

Almost all of these kilns use coal and wood as their source of energy, resulting in the emissions of sulfur-di-oxide and volatile organic compounds. An emerging issue of great concern in the cities and towns is the high concentration of lead in the air from vehicular exhausts.

The depletion of biodiversity is the result of various kinds of human interventions that impinge on it through destruction and degradation of land, forest and aquatic habitats. These activities encompass the sectors of agriculture, forestry, fisheries, urbanisation, industry, transport, tourism, energy, chemicals and minerals etc. In the fisheries sector, shrimp cultivation has become a major concern during the past decade. It has caused serious environmental damage that has harmed fish and other aquatic biodiversity significantly. It is apprehended that the climate of Bangladesh may get warmer and wetter owing to global warming. The most serious consequences of climatic change for Bangladesh will be a rise in sea level along the Bay of Bengal coasts, causing inundation and submerging of 10 to 20 percent of the coastal land including the Sundarbans, as well as saline intrusion in the rivers.

The Government Initiatives to Address Environmental Protection and Development

Bangladesh has limitations in resources and capacities in terms of technology or money to confront with massive environmental disasters. For this reasons the Government has been working relentlessly to develop and conserve environment for preventing vast environmental disasters. Set out below the initiatives taken by the Government to address environmental problems:

Preparation of National Land Policy

The optimum use of land and water depend on appropriate land use plan. Land, water resources and natural environment are important sources of the growth of GDP. 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. There exist other national policies and measures that have positive impact on efforts to prevent land depletion. Notable among them are ‘The National Environment Policy’, ‘National Environment Act and Rules’, ‘National Forestry Policy’ and ‘The National Plan for Agricultural Research’.

National Water Policy

Various Government Agencies have been working to address the problems arising from water pollution and water scarcity. The Department of Environment (DoE) is responsible for addressing pollution related issues and the Ministry of Water Resources, Ministry of Communication, Ministry of LGRD and Co-operatives, Ministry of Agriculture and the Agencies under them are responsible for resolving the problems of water pollution and water scarcity.

The National Water Policy has been adopted in January 1999 to provide guidelines to all related Ministries, Agencies, Departments and non-government users and entrepreneurs including local

organisations who are involved in water resources development, maintenance, water supply and water related services in the field of water resources management of the country. The main objectives of the National Water Policy are:

- Surface and ground water development and use and their efficient and optimum management;
- Ensuring availability of water irrespective of rich and poor and laying special emphasis on the needs of women and children;
- Ensuring sustainable development of Government and private water supply systems;
- Carrying out decentralisation and necessary institutional changes for enhancing the role of women;
- Carrying out decentralisation along with creation of legal and regulatory atmosphere for increasing favourable investment in private sector; and
- Development of knowledge and capability.

DoE has been collecting data on surface water quality since 1980, at different points of the rivers in Bangladesh. Currently, DoE is monitoring water quality data at 80 stations. Some stations are designated as Global Environmental Monitoring System (GEMS) points. The results collected from these points are transmitted to Nairobi, Kenya, as part of an international commitment of the Government of Bangladesh.

National Water Management Plan (NWMP)

To ensure proper, integrated, effective and sustainable use of country's water resources a 25-year NWMP was prepared in November 2001 in the light of National Water Policy. The NWMP was approved by the National Water Resources Council (NWRC) on 31st March, 2004.

This long-term plan has been divided into three parts-the first 5 years will be considered a short term plan where current programmes will be further strengthened more and new programmes will be identified. The medium term plan will be started from 6th year and will continue till 10th year. The long term plan will be started from 11th year and will continue till 25th year

In the draft NWMP generic and region specific issues have been identified separately for eight hydrological regions. The issues have been taken into account in the context of socio-economic, environmental, state of water supply and demand and the overall framework of technical aspect. In the NWMP, national and regional programmes have been split up into 8 cluster programmes. A total of 84 programmes under 8 cluster programmes have been proposed for the whole country as well as eight regions for implementation under short-term, medium-term and long-term planning.

Control of Air Pollution

There exists a good number of laws and regulations in the country to confront air pollution. The DoE has been implementing a number of projects to control air pollution. In view of the

heightened awareness of the dangers of lead pollution the Government executed the decision of providing only lead-free gasoline in the country in July 1999. To control air pollution the Government has amended Environment Conservation Rules 1997 with new rules under which the use of catalytic converter, oxidation catalyst and diesel particulate filter has been made mandatory respectively in petrol, diesel and CNG driven vehicles. Plying of bus, minibus, microbus, taxi which is more than twenty years old and truck, mini-truck, tank lorry and van which are more than twenty five years old has been banned since 1st January 2002. Plying of two-stroke three-wheeler has been banned in Dhaka city since 1st January 2003. The Government has introduced CNG driven four-stroke three wheelers and encouraging CNG driven automobile.

A continuous Air Quality Monitoring Station has been set-up in the premises of National Parliament under the Air Quality Management Project with the financial assistance of the World Bank. From this station vehicular emission is being monitored regularly against different parameters to get various information on the status of the air quality of Dhaka City. Initiatives have been undertaken to setup a continuous air quality monitoring station in the Chittagong city. Under this programmes a number of satellite air quality monitoring stations will be set up in other cities. In addition, procurement of two mobile air quality monitoring station is underway to monitor local air quality regularly. A website has been opened for giving information and create awareness to the people about air pollution. A draft vehicular emission standard has been formulated. Besides, draft air pollution standard and air pollution index have been formulated.

Control of Pollution from Brick Klins

To protect the air pollution, compressed system environment-friendly 'Block Brick' are encouraged instead of traditional bricks. In the mean time, installing permanent chimney with the height of 120ft. has been made mandatory for traditional brickfields. Setting up of traditional brickfields (120ft. height permanent chimney) along with zigzag chimney brickfields and Vertical Shaft Brick Klin Chimney brickfields are encouraged. To implement Brick Burning Control Act 1989, the activities are underway to formulate Brick Burning (Control) Rules 2004.

Conservation of Ecology

Considering the importance of hills to protect ecology of the country, the Government has issued a notification in March 2002 banning hill cut. From now on, one has to receive clearance certificate from the Government if hill cutting and/or razing becomes necessary for the sake of public interest. To motivate people against hill cutting and/or razing, mass awareness campaign were carried out with the help of public representatives and local administration in Chittagong and Sylhet hill areas. People from all walks of life took part in the awareness campaigns. The level of awareness about the importance of hills in protection of ecology is increasing and the illegal attempts to hill cutting/razing are decreasing.

Industrial Pollution Control

In compliance of the Environment Conservation Act, 1995 and the Environment Conservation Rule, 1997, the Government now issues environmental clearance certificate for the new industries or projects after assessing project area and pollutants to be emitted or discharged by the industries or projects to be setup. For the highly polluting industries, environmental clearance is given after setting up effluent treatment plant. Initiatives have been undertaken to setup effluent treatment plants for the existing industries with the support of Chamber and concerned sector-association. 'Programmes to Save Dhaka' has been undertaken to save the surrounding rivers of Dhaka. As part of the implementation, of the programme the existing tanneries of Hazaribagh will be shifted to Horindhara, a place in between Savar and Keranigonj Upazila. A central effluent treatment plant shall be setup in the said leather industry. A demonstration project to treat liquid industrial waste by using low cost local resources has been completed at Madhabdi, Narshingdi which drew attention of the industrialists.

Banning of Polythene Shopping Bags:

Widespread use of polythene shopping bags brought about massive environmental disasters. The Government banned the production and use of polythene and its marketing in Dhaka city since January 1, 2002 to prevent such disaster. Later, since March 1, 2002, the ban was extended throughout Bangladesh. The effective monitoring and close supervision of the Government made this programme a success.

Control of Noise Pollution

Following the existing Environment Conservation Act 1995 where there is a set limit on noise pollution, the Government drafted the Noise Pollution (Control) Rules 2004 and sought opinion on the draft rule from all walks of life. The rule is now in the process of finalisation in the light of the comments. Once the proposed rules are in place it will be easier for the Government to control noise pollution particularly the use of microphone and high level horn.

Conservation of Biodiversity

Bangladesh signed the Biodiversity Convention at Rio in 1992. A focus on biodiversity has been emphasised in the forest and environment policy. However, a separate policy on biodiversity is yet to be formulated and until then various departments of the Government will be working for conservation of biodiversity within the existing rules and regulations. Some of the important rules and regulations are: the Protection and Conservation of Fish Act and Rules, the Marine Fisheries Ordinance, Wildlife Preservation Act, Forest Act, the Environment Conservation Act and Rules etc. The Bangladesh National Biodiversity Strategy and Action Plan is under preparation as a national obligation to the Convention on Biodiversity.

Under the Bangladesh Wildlife Preservation Act, 1974 (amendment Act 1994), three categories of protected areas have been established as national parks and wildlife sanctuaries. With an aim to

conserve the biodiversity, conserve and develop natural environment and eco-tourism and to develop education and research, the Government of Bangladesh has declared 16 protected areas constituting about 245 thousands hectares of forest in different parts of the country. Moreover, the Government of Bangladesh has declared 6 areas viz. Cox's Bazar, Teknaf Sea Beach, St. Martin's Island, Sonadia Island, Hakaluki Island, Tanguar Haor and Marjat Baor as Ecologically Critical Area (ECA) under Environmental Conservation Act, 1995.

As per, Ramsar Convention, the Government has undertaken major development activities to conserve the biodiversities of wetlands including Tanguar Haor. The Department of Environment with the assistance of Global Environmental Facilities (GEF) and UNDP is implementing a project titled Coastal and Wetland Biodiversity Management at Cox's Bazar and Hakaluki Haor for conservation, management and sustainable development of coastal and wetland biodiversity at Cox's Bazar, Saint Martins, Island and Hakaluki Haor.

Besides, a part of the Sundarbans (east, west and south sites) and the Tanguar Haor have been designated as Ramsar sites in the country. In addition, considering the importance of protecting biological diversity of the world, UNESCO has declared the Sundarbans, the largest single mangrove forest, as World Heritage Site in December 1997.

Climate Change

Climate change is the much talked issue of the day across the globe. Bangladesh is one among the signatories of United Nations Framework Convention on Climate Change (UNFCCC), Kyoto Protocol. Bangladesh has formulated Initial National Communication in 2002 with the financial assistance of GEF-UNDP under UNFCCC and submitted it to the UNFCCC Secretariat. The Initial National Communication includes Green Gas Inventory, Vulnerability and Adaptation, Mitigation and Climate Change Action Strategy. With the financial assistance from GEF-UNDP, the Government has undertaken activities to formulate National Strategy to combat climate change. A Climate Cell has been formed in the Department of Environment to take up coordinated strategy in local and national level about climate change related activities under comprehensive disaster management programmes being implemented under Ministry of Food and Disaster Management

Besides, according to Clean Development Mechanism (CDM) under Kyoto Protocol, national CDM Committee and National CDM Board have been formed. Under CDM, the industrial entities of the developed countries can receive Certified Emission Reduction, instead of reducing Green House Gas in their own industries. As a result, both developed and developing countries may be benefited. In the meantime, the CDM Board approved two separate CDM projects. Similar projects are under consideration of the Ministry of Local Government Rural Development and Co-operatives.

An international workshop titled National Adaptation Programme of Action (NAPA) was organised in Dhaka in 2002. Representatives from 42 developing countries participated in the

workshop. As per resolution taken in the workshop, the Government of Bangladesh is implementing a project titled 'Formulation of the Bangladesh Programme of Action to Climate Change' with the financial assistance from UNDP-GEF. The main features of the project are to provide supports:

- To increase adaptability to climate change;
- To formulate programme on priority basis keeping in view the present vulnerability and coping strategy at grass root levels and
- To formulate action-oriented programme.

Protection of Ozone Layer

Bangladesh has achieved noteworthy success in protection of ozone layer. By now, Ozone Depleting Substances (ODS) has been phased out from aerosol sector in Bangladesh. As a result, 60 percent use of ODS has been reduced in the country. Besides, to reduce emission of ODS gases from refrigeration sector, necessary equipment and training has been provided to the sector. To control import and export of ODS, a set of rules titled Ozone Layer Depleting Substances (Control) Rules 2004 has been formulated.

Initiatives Taken for Management of Hospital/Clinical Waste

For environment friendly management of Hospital/Clinical wastes in Dhaka city, the DoE and Bangladesh Private Clinic and Diagnostic Owners, Association are working closely. By now, many Hospital and Clinics in Dhaka city have developed management system of waste disposal by receiving consultancy support from the DoE. The Ministry of Health is formulating Biomedical Waste Management Act with assistance from Ministry of Environment and Forests. The DoE has undertaken a project titled ‘Training on Environmentally Sound Management of Biomedical Waste in Dhaka City, Bangladesh Basel Convention’ for environment-friendly management of clinical wastes in Dhaka city. Doctors, nurses, technicians and relevant individuals will be provided with training on environment-friendly management of clinical wastes under this project.

Environmental Education

The Government with the support of UNDP has incorporated environmental issues in the curriculum of the general, madrasha and technical education streams of the institutional educational system under the project titled 'Primary and Secondary Level Environment Curricula'. Besides, activities are underway to prepare training manual and learning materials for the teachers.

Measures taken to meet Natural Disasters

There are various government and non-government organisations, working in the field of disasters management and mitigation. The focal point for disaster management is the Ministry of Food and Disaster Management and the Disaster Management Bureau under the Ministry. The

Bangladesh Meteorological Department (BMD) is responsible for forecasting natural disasters, particularly cyclones, droughts, storms etc. The Bangladesh Space Research and Remote Sensing Organisation (SPARRSO) is responsible for providing satellite images while the Flood Forecasting and Warning Centre (FFWC) of Bangladesh Water Development Board is entrusted with the responsibility of forecasting flood.

Among the natural disasters, flood is a recurrent phenomenon in Bangladesh. The Government has taken both structural as well as other different initiatives for flood mitigation. With the assistance of the World Bank, a Flood Action Plan (FAP) was undertaken immediately after the unprecedented flood of 1988. Besides, the Government by using its own and external resources has so far constructed more than two thousand cyclone and flood shelters for evacuation of people threatened by cyclone or flood. In addition, coastal embankments have been built to protect coastal land from inundation by tidal waves and storm surges. Bangladesh Red Crescent Society has been operating Cyclone Preparedness Programme (CPP).

Three national committees have been working to administer disaster management effectively. The committees are: ‘National Disaster Management Council’ headed by the Hon’ble Prime Minister. This committee formulates guidelines and provides overall direction on all aspects of disaster management. Also there exists a 30-member ‘National Disaster Management Advisory Committee’ comprising representatives and experts from Government and Non-government organisations. This advisory committee provides advice to the ‘National Disaster Management Council’, ‘Ministry of Food and Disaster Management’ and the ‘Disaster Management Bureau’ on specific technical, management and socio-economic aspects of disaster management. The ‘Inter-Ministerial Disasters Management Co-ordination Committee’ of the Ministry of Food and Disaster Management is responsible for implementing policies and decisions of the ‘National Disaster Management Council’ and also for disaster prevention, preparedness and operation of relief and rehabilitation programmes.

Integrated Coastal Zone Management Plan (ICZMP)

Nineteen districts of the southwest of Bangladesh are directly or indirectly influenced by the environment of the coastal belt. The people of this area are in need of developed communication infrastructure, flood and water logging management, social and economic development and establishment of favourable institutions. In this respect, for the purpose of integrated development of coastal areas 'Integrated Coastal Zone Management Plan (ICZMP)' project phase 1 is being implemented with the support of Royal Netherlands Embassy (RNE) and UK Department for International Development (DFID) along with contribution of the Government of Bangladesh (GoB).

Under the framework of coastal zone management, the Government has undertaken the following activities:

- Preparation of Coastal Zone Policy
- Preparation of Coastal Development Strategy
- Preparation of Priority Investment Programme
- Establishment of favourable institutional environment.

The core objectives of the project are as follows:

- Supporting responsible and sustainable resource management;
- Developing unrealised resource potential;
- Developing physical and social infrastructure that adapt to the climate changes;
- Mitigating environmental resource degradation.

The immediate objectives of the project are:

- Redrressal of damages caused by cyclone and tidal surge, and improved management for mitigating the damages; and
- Improvement of natural resources management in coastal areas and protection of natural resources from human intervention, extinction of different species (marine and land) and reduction of environmental pollution.

Activities of NGOs to Protect Environment

Along with Government, a good number of NGOs has been working to face environmental problems and to improve environmental system of the country since 1980s. Particularly, they play an important role in motivating people at grass root level to protect environment and to take coordinated efforts in solving environmental problems. Some of the important NGOs are: International Union for the Conservation of Nature (IUCN), Centre for Sustainable Development (CSD), Bangladesh Centre for Advanced Studies (BCAS), Environmental Conservation Management Centre, West Concern and Bangladesh Environmental Lawyers' Association (BELA) etc.

Policies and Laws for the Development and Protection of Environment

The DoE has been working to protect environment of the country along with formulation of laws and the implementation of the conventions, protocols and agreements signed on environmental protection at international and regional level. People from all walks of life need to be involved to protect environment and ensure development utilising all kinds of national resources. This calls for creating mass awareness and legal obligation. With this end in view, the following policies and laws have been framed:

The Environmental Policy, 1992: In order to provide appropriate guidelines at national level in tandem with maintaining the momentum of development programmes, the Government formulated the Environmental Policy in 1992. The policy covers 15 sectors of the economy including agriculture, fisheries, education, communication and health.

The Bangladesh Environment Conservation Act, 1995: Recognising the need for a legislation to facilitate the conservation of environment, improvement of environmental standards and

control and mitigation of environmental pollution of the country, an Act titled 'The Bangladesh Environment Conservation Act, 1995' was passed by parliament while implementing the Act along with establishment of Environment Courts for the trial of offences against the person(s) responsible for environmental pollution, it was felt necessary to bring certain amendments. Accordingly necessary amendments to the 'Bangladesh Environment Conservation Act, 1995' were made. 'The Bangladesh Environment Conservation (Amendment) Act' was passed by the Parliament on April 6, 2000.

The Environment Conservation Rules, 1997: The Environment Conservation Rules, 1997 have been formulated to fulfill the objectives of 'The Bangladesh Environment Conservation Act, 1995' for the conservation of environment, improvement of environmental standards and control and mitigation of environmental pollution.

The Environment Court Act, 2000: 'The Environment Court Act, 2000' had been passed by the Parliament on April 6, 2000 for the establishment of environmental courts for the trial of offences relating to the environmental pollution and matters incidental thereto. Under this Act, one Environment Court will be established in each Division. Besides, one or more Environment Appeal Courts will be established. The Environment Appeal Court will be constituted with one judge. In the mean time, two Environment Courts have been established in Dhaka and Chittagong and an Environment Appeal Court has been set up in Dhaka.

The Department of Forest

The Department of Forest plays a pivotal role in developing natural resources and socio-economic conditions of the country, maintaining ecological balance and stability in land- based production system. In order to meet the shortfall of forest produces in the country, to ensure supply of raw materials to wood based industries, to conserve and develop environment and wildlife and to increase the recreational facilities for the people; the Forest Department has undertaken different development programmes. Besides, training programmes have been revamped at all levels to develop technological aspects of forestry. Programmes are continuing to develop and conserve the different species of trees specially the herbal trees and to motivate people to participate in plantation activities.

The Government has approved a Twenty-Year (1995-2015) Forestry Sector Master Plan for overall development of forestry sector of the country. The Forestry Master Plan has been prepared with an investment programme and the National Forest Policy, 1994 has been adopted for implementing Forestry Sector Master Plan. The following programmes for 2004-2005 have been undertaken in connection with recent policy.

- Distribution of benefit among the participants of Social Forestry Programme.
- Formation of Tree Farming Fund for sustainable replanting programme.
- The Social Forestry Rules 2004 has been approved. This has strengthened legal basis of Social Forestry Programme.

- For conservation of Biodiversity, Forest Department has been implementing number of development projects such as (a) Development of Madhupur National Park; (b) Establishment of Eco-park of Madhobkunda-Muraichara Waterfall Area; (c) Development of Kaptai National Park and (d) Development of Dulahazra Safari Park, Cox's Bazar (2nd Phase) and Natural Environment/ Bio-diversity Conservation and Development at Bashkhali, Chittagong.

Besides, the Forest Department involve in the forest management, aforestation, conservation of wild animals, management of protected areas, development of safari park etc. which directly have contribution of biodiversity and environmental development. During 2004-2005, Forest Department is implementing 11 development projects with an ADP allocation of Tk.9885.00 lakh. By the development activities of each project contributes environmental conservation and development of the country.

Bangladesh National Herbarium (BNH)

Bangladesh National Herbarium is a research organization of botanical species. It is a national organisation to survey, collect and conservation of plant spices. One of the main aims of national herbarium is to identify, collect and preserve all plant species including those associated with national traditions and culture. National Herbarium deals with taxonomic studies of plants, investigates medicinal and other economically important plants, threatened plant species, and plays an important role in the conservation of biodiversity and environment. Some of the important activities of Bangladesh National Herbarium are shown below:

- **Botanical Survey:** About 1500 plant specimens have been collected through botanical survey from the forest areas of the districts of Rangamati, Bandarban, Srimongal, Moulovi Bazar, Mymensingh, Tangail and Bogra since June 2004.
- **Plant Identification:** Through taxonomic studies about 500 plant species were identified by National Herbarium since June 2004. Besides, as many as 300 plant species on request from various government and non-government organisations have been identified.
- **Taxonomic Studies and the Publication of the Flora of Bangladesh:** Under the Taxonomic studies carried out by the National Herbarium, manuscripts of seven Angiospermaic families have been compiled for the publication of the series Flora of Bangladesh.
- **Floristic Publication:** 20 Floristic publications have been made by the National Herbarium in different journals since June 2004.
- **Publication of Medicinal Plant Manual:** Bangladesh National Herbarium is working on the publication of the third volume of illustrated Medicinal Plant Manual.
- **Publication of Medicinal Plant Manual on Chittagong Hill Tracts:** Bangladesh National Herbrium is working on the publication of a Medicinal Plant Manual on Chittagong Hill Tracts, which is used by the tribal people.

- **Preparation of Manuscript for the Flora of Bangladesh:** Taxonomic work has been undertaken by the National Herbarium towards the preparation of manuscripts for the Flora of Bangladesh in 5 Angiospermaic Family.
- **Publication of Flora of the Sundarbans:** Initiatives have been undertaken for the publication of the Flora of the Sundarbans.
- **Handbook on Flora of Bangladesh:** A handbook on the Flora of Bangladesh containing brief descriptions of the plant species is under preparation.

The Government of Bangladesh has been laying special emphasis on protection and development of environment. By using its limited resources, the Government has been working relentlessly to develop and protect the environment and eco-system of the country. The Ministry of Environment and Forest implement 32 projects during FY 2003-04 with an ADP allocation of Tk 163 crore 96 lakh. During FY 2004-05, the ministry is implementing 25 projects with an ADP allocation of Tk 144 crore 31 lakh. Besides, 7 programmes is under implementation at a cost of Tk. 12 crore 56 lakh from revenue budget. Apart from these projects or programmes which are directly related to the development of environment and eco-system, other projects which are taken by different ministries such as Ministry of Water Resources, Ministry of Food and Disaster Management, Ministry of Fisheries and Livestock etc. are also involved in environmental development. Besides, it is mandatory to mention environmental effect of the project in Development Project Pro-forma (DPP) before taking the project.