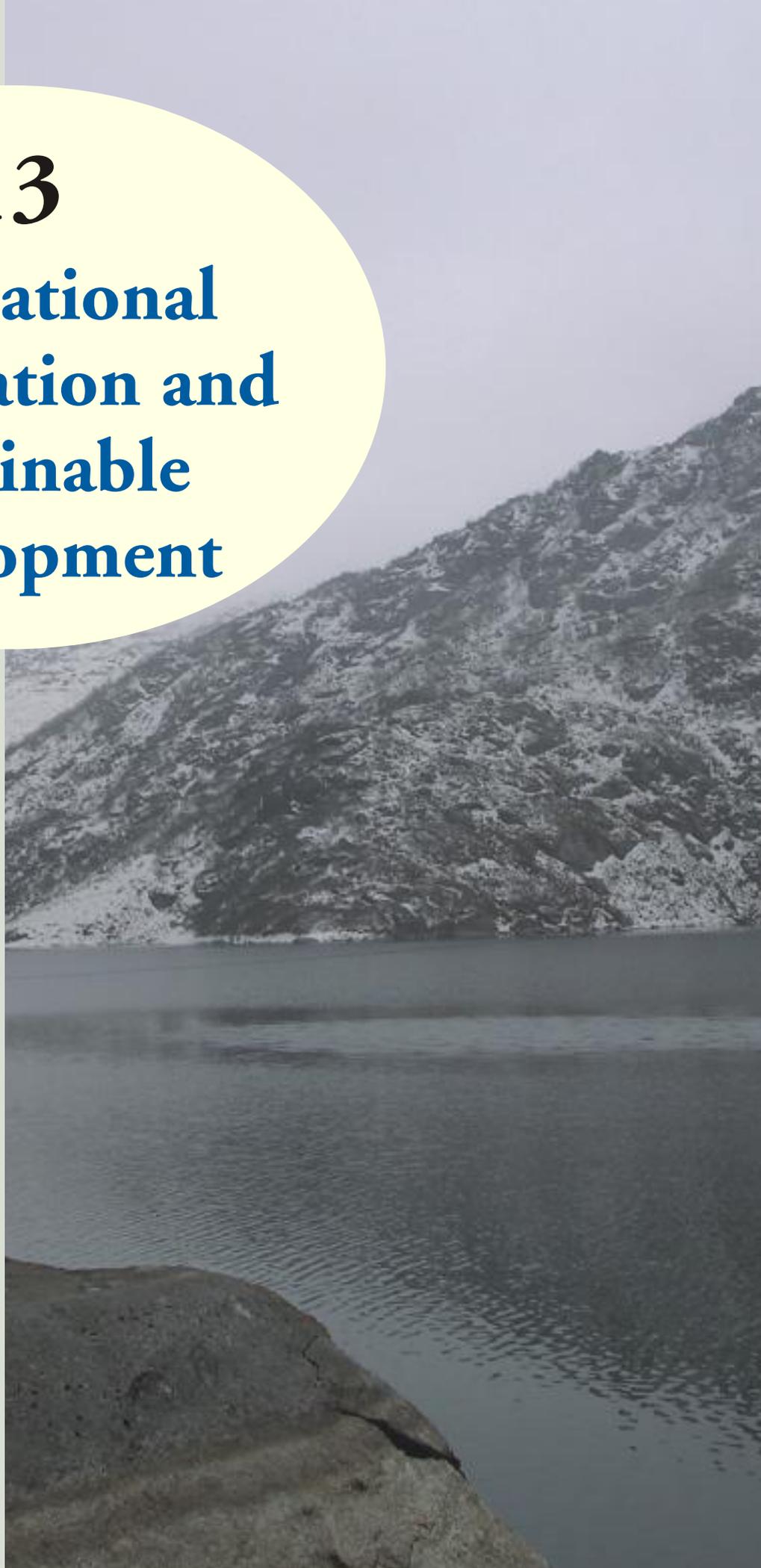


13

**International
Cooperation and
Sustainable
Development**



International Cooperation and Sustainable Development

Introduction

The Ministry of Environment and Forests is the nodal Ministry in the Government of India for all Multilateral Environmental Agreements. These include along with others the Convention on Wetlands of International Importance, especially as Waterfowl Habitat, Vienna Convention for the Protection of the Ozone Layer, Montreal Protocol on Substances that deplete the Ozone Layer, UN Conventions on Biological Diversity, UN Framework Convention on Climate Change, UN Convention to Combat Desertification, Kyoto Protocol, the Basel Convention on Trans-boundary Movement of Hazardous Substances, Stockholm Convention on Persistent Organic Pollutants, Rotterdam Conventions, Ramsar Convention etc.

International Co-operation & Sustainable Development Division is the nodal point within the Ministry to co-ordinate all international environmental cooperation and sustainable development issues. It is the nodal Division for United Nations Environment Programme (UNEP), UN Commission for Sustainable Development (CSD), Global Environment Facility (GEF) and regional bodies like Economic & Social Commission for Asia & Pacific (ESCAP), South Asian Association for Regional Cooperation (SAARC), South Asia Cooperative Environment Programme (SACEP), and European Union (EU). The Division in the Ministry also handles bilateral cooperation in the areas of environment protection and sustainable development.

Activities undertaken during the year are enumerated below

Commission on Sustainable Development (CSD)

Agenda 21, which is a blue print for a global plan of action for achieving sustainable development was adopted in the United Nations Conference on Environment and Development (UNCED), held in Brazil in 1992. The Commission on Sustainable Development (CSD) was set up in 1993 under UN Economic and Social Council of the United Nations (ECOSOC) for the purpose of review of progress of implementation of the Agenda 21.

- ◆ Ministry of External Affairs is the nodal Ministry for the CSD matters. However this Ministry plays the role for providing technical support and for implementation of Agenda 21
- ◆ The UN Commission on Sustainable Development (CSD), in its 11th Session held during 2003, encouraged nations to provide their national reports to the Commission during its review sessions. In the 11th Session, CSD had also devised a multi-year programme of work beyond 2003 (11th CSD) with two years cycle. In the two years cycle of programme, the first year will be "Review Session" and second year will be the "Policy Session". During the Review Session, country has to submit its national report to the Commission. As the first year of the second implementation cycle, the 14th Session of the CSD was convened in New York from May 1-12, 2006 which reviewed the progress in the thematic areas viz: Energy for Sustainable Development; Industrial Development; Air pollution/ Atmosphere; and Climate Change. Details of the CSD Meetings is available at http://www.un.org/esa/sustdev/documents/docs_csd14.htm. This Ministry as well as Ministry of External Affairs participated in the above Session. The Indian delegation was lead by the Hon'ble Minister of State for Environment and Forests.
- ◆ On this occasion, India has submitted its National Report entitled "Energy for the Future-Making Development Sustainable" to the Commission on the above mentioned thematic areas. The Report highlights energy consumption in India, policies and programmes to improve access to modern energy, use of renewable energy, clean energy technologies, energy conservation and efficiency efforts, energy security, enabling environment for industrial development, industrial development and natural resource management, India's commitment to clean air, legislation, standards and key policies, auto fuel policy, phasing out ozone depleting substances, India's role in the clean development mechanism, India's vulnerability

to climate change etc.

United Nations Environment Programme (UNEP)

- ◆ The United Nations Environment Programme (UNEP), established in 1972 with its headquarters at Nairobi, Kenya. UNEP, works to encourage sustainable development through sound environmental practices everywhere. Its activities cover a wide range of issues, the promotion of environmental science and information, to an early warning and emergency response capacity to deal with environmental disasters and emergencies.
- ◆ The 24th Session of UNEP Governing Council/ Global Ministerial Environment Forum (GMEF) was held from February 5-9, 2007 in Nairobi, Kenya. The Indian delegation was led by Hon'ble Minister for Environment and Forests.
- ◆ The Governing Council/ GMEF concluded its work by adopting 15 decisions on issues relating inter-alia to: the world environmental situation, international environmental governance, chemicals, South-South Cooperation, Waste Management, 2010-2020 UN Decades for Deserts and fight against Desertification, UNEP's updated Water Policy and Strategy, and Support to Africa in Environmental Management and Protection. The GC/GMEF also approved the budget and work programme for the 2008-09 biennium.
- ◆ The above session of UNEP's Governing Council/Global Ministerial Environment Forum ended on a high note with governments from 140 countries adopting 16 key decisions ranging from tackling toxic mercury pollution, water policy and municipal waste, to the Bali Strategic Plan for Technology Support and Capacity Building. The meeting also sent a clear signal of renewed determination to address UN Reform including strengthening international environment governance and to identify ways of maximizing the opportunities and minimizing the risks of globalization.

Global Environment Facility (GEF)

- ◆ The Global Environment Facility (GEF), an international funding mechanism with 177 countries as members, acts as a major catalyst for improving the global environment. The mandate of the GEF is to fund projects while making the connection between local and global environmental challenges and between national and international conservation efforts in six focal areas viz: climate change, biodiversity, land degradation, international waters, persistent organic pollutants and ozone layer depletion. The GEF is a project co-financier providing "new and additional" funds to address global environmental issues. All other costs of the project are considered to be baseline and are covered from the other funding sources. GEF projects are implemented through its three Implementing Agencies (United Nations Development Programme (UNDP), World Bank (WB) and UNEP) and seven Executing Agencies.
- ◆ Since 1991, GEF has evolved from a pilot program to an effective, transparent entity allocating US\$ 6.2 billion, supplemented by more than US\$ 20 billion in co-financing, for more than 1,800 projects in 140 developing countries and more than 3,000 small grants. India is the founder member of GEF and is both a donor and recipient. Since 1991, India has contributed US\$ 42 million (1991 – 2010) to the GEF Trust Fund while accessing about US\$ 184 million (1991 - June 2006) of GEF grant supplemented by a co-financing of US\$ 997 million for 24 national full size and medium size projects related to biodiversity and climate change focal areas. Under GEF Resource Allocation Framework, India has the opportunity to access more than US\$ 150 million (July 2006 – June 2010) of GEF grant.
- ◆ The Ministry is the designated GEF Operational Focal Point in India. It is primarily responsible for the in-country coordination of GEF projects and other operational activities as well as participating in the GEF Council meetings at Washington twice a year. The Department of Economic

Affairs is the GEF Political Focal Point in India responsible for GEF governance and policy related issues.

- ◆ The GEF Empowered Committee chaired by the Secretary (E&F) with the support of the GEF Cell under IC&SD Division of the Ministry, facilitates in project identification, formulation, implementation and monitoring of GEF activities in India. The Committee meets on a quarterly basis and the full size and medium size project proposals / concept notes could be submitted to the GEF Cell on a rolling basis throughout the year.
- ◆ Launched in 1992, GEF Small Grants Program (SGP) complements GEF full- and medium-sized project funding, by providing a window for the direct participation of NGOs, local communities, and other grassroots organizations. On behalf of Ministry, SGP in India is being hosted and coordinated by the Centre for Environment Education. The National Steering Committee chaired by the Joint Secretary (In-charge) and GEF Operational Focal Point India, approves the projects on a quarterly basis. The project proposals/ concept notes could be submitted to the CEE's regional cells on a rolling basis throughout the year. Since 1996, SGP India has funded 185 projects worth of US\$ 3.8 million of GEF Grant while generating US\$ 4.2 million as project co-financing.
- ◆ In January 2007, the new GEF CEO/ Chairperson, Ms. Monique Barbut visited India to discuss issues of mutual interest and to strengthen GEF processes in India.

State of Environment (SoE) Reporting

- ◆ The scheme of preparation of State of Environment Reporting in each State/UT was launched during the Tenth Five Year Plan with the objective of highlighting the upstream and downstream linkages with environmental issues besides creating a baseline document in the form of SoE Reports.
- ◆ Following Institutions (as Nodal Host Institutions) are assisting the States/UTs in bringing out their respective SoEs:

- ◆ Development Alternatives, B-33/2, Institutional Area, Tara Crescent, New Mehrauli Road, New Delhi-16.
- ◆ Tata Energy Research Institute, Darbari Seth Block, Habitat Centre, New Delhi-3.
- ◆ Environment Protection, Training and Research Institute, 91/4, Gachibowli, Hyderabad-500 032.
- ◆ Administrative Staff college of India, Bella Vista, Hyderabad-500 082.

- ◆ The primary goal of the SoE Report is to design and operationalise a participatory and scientifically rigorous SOE reporting system in India that enables informed database, policy/strategy formulation, decision making and follow up action. Beside data collection, the SOE Report suggests solutions to dovetail with policy and strategy formulation.
- ◆ The period of preparation of the State of Environment (SoE) Reports in each State/UT stretches from 2002 to 2007 in the 10th Five Year Plan with a total outlay of Rs. 6.0 crores. So far an amount of Rs. 5.60 crores has been spent under the scheme. The scheme is almost at completion stage. The States/UTs were sensitized and built their capacity with the cent percent Central Assistance under the scheme in order to publish their upstream and downstream linkages with environmental issues/scenario in the form of document. Total 32 States/UTs were to publish their SOE Reports. Almost all the State/UTs have brought their respective SoE Reports.
- ◆ In addition, some of the responsive States/ UTs viz: Punjab, Nagaland, Kerala, Gujarat, Tamil nadu, Uttrakhand and Assam have also initiated SoE Plus Process which include preparation of other static and interactive products from among SoE Atlas, SoE Photo Catalogue, SoE Video, SoE CD and SoE Website.
- ◆ Having realized, during the preparation of State of Environment Reports, the importance of having a national atlas on brown, green and blue issues, development

of an Interactive Atlas for India has also been initiated as a part of the process of preparation of State of Environment Reports with a total outlay of Rs. 34.72 lakhs. The Atlas will be useful for evolving national strategies on brown, green and blue issues. State of Environment Reporting has become an excellent management tool to ascertain the extent of problem and corrective action required to be taken in a particular state within a given geo-physical region. The Reporting system has provided the public, government, non-government organizations and decision makers with accurate, timely and accessible information on the state of current environment and future outlook for a region's environment.

- ◆ In order to sharing views amongst stakeholders in preparation of SoE Reports, this Ministry has organized two Regional Workshops at Chandigarh and Hyderabad respectively. One of the beneficial aspects of the SoE Reporting is that it is helpful for States/UTs for preparation of their annual plan.
- ◆ In view of growing environmental stress and the need to conserve natural resources, it is necessary to continue the scheme in the 11th Five Year Plan for carrying out the various activities under the scheme which include regular updatation of data of the Interactive Atlas for India, Sensitization of States/UTs of J&K, Arunachal Pradesh, Tripura, Lakhshadweep for bringing out primary SoE Reports, publication of SoE Reports of Delhi, Karnataka and Uttar Pradesh which were not taken up during the 10th Plan, as the states had their Reports from other source Identification of environmental degradations in respective States/UTs and policy frame working for mitigating the same.

Delhi Sustainable Development Summit (DSDS), 2007

- ◆ During the year, TERI organized the DSDS 2007 with the support of this Ministry from January 22-24, 2007 in New Delhi which focused on the theme of "Meeting the

Millennium Development Goals-Exploring the Natural Resources Dimensions". The event was inaugurated by Hon'ble Minister for Environment and Forests on January 22, 2007.

- ◆ The DSDS has emerged as an important annual event, inspiring leaders and mobilizing public opinion on the objectives of the MDGs (Millennium Development Goals). In the opening session of DSDS 2007, speakers noted that policy formulations are already beginning to stress the tenuous links between environmental concerns, economic development and social justice. Since climate change is an ongoing process and there are multi-dimensional impacts associated with it, there is need to develop adequate and appropriate coping strategies for better adaption of civilizations to climate change.
- ◆ The Ministry of Environment and Forests has also partnered with TERI in organizing an important side event during the DSDS 2007. The event aimed at mainstreaming environment in the construction sector and addressed unsustainable practices prevalent in the sector. The event provided an opportunity to share and learn from each other's experiences and table best practices among the states/ other stakeholders.

South Asia Cooperative Environment Programme (SACEP)

SACEP was set up in 1982 with headquarters in Colombo. It deals with regional strategy for Environmental Management (Agenda 21 issue). Secretary (E&F) is the Nodal Focal Point for India. The SACEP holds its Governing Council (GC) meetings, which concentrate on current regional issues as well as global concerns. The 10th Governing Council of SACEP was held on January 25, 2007 in Kathmandu. The meeting deliberated on matters relating to institutional matters, project status and work programme. This is the silver jubilee year of the inception of the organization. To strengthen SACEP, India has enhanced its annual contribution to it and has also contributed US \$200,000 to its corpus fund.

SAARC (South Asian Association for Regional Co-operation)

SAARC has seven countries of the region as members, viz., Nepal, India, Bangladesh, Bhutan, Pakistan, Maldives and Sri Lanka. So far, seven Environment Ministers Conferences have been held under SAARC, which also has a Committee on Environment, Meteorology and Forest, for working out the detailed plan of action in these areas and implementing the same. Strengthening regional cooperation in environment was the focus of the SAARC meetings. Other important proposals discussed in the meeting were proposals for establishment of SAARC Forestry Centre in Bhutan, strengthening SAARC Meteorological Centre, Regional Environmental Treaty, etc.

Bilateral Co-operation

This Ministry has bilateral MoUs / Agreements with 12 countries viz. Austria, China, Germany, Iran, Israel, Netherlands, Russia, Tajikistan, Turkmenistan, USA, UK & Vietnam. These MoUs / Agreements cover a wide array of environmental issues. In addition to formal bilateral agreement there are cooperative activities with a host of other countries as detailed below:

- ◆ European Commission: The strategy of EC is their sectoral emphasis on Education and Health with environment linkages as they pertain to these two sectors. The Second Meeting of the India-EU Environment Forum was held on December 7, 2006 in New Delhi. Waste Management was the main theme of discussion with specific focus on Management of Urban Solid Waste and Hazardous waste.
- ◆ The initiatives under the Joint Statement on India-UK High Level Dialogue on Sustainable Development were carried forward in a time bound manner with the formation of working groups on the four identified areas of cooperation viz. Wildlife, Corporate Social Responsibility, Sustainable Forestry and Desertification. The 3rd meeting of India- Finland Joint Working Group on Environment was held on January 31, 2006 at New Delhi, which discussed areas of

cooperation between the two countries and future course of action.

- ◆ The Terms of Reference for setting up a Joint Working Group on Environment with Norway has been signed on December 15, 2006 in New Delhi paving the way for further cooperation between the two countries.
- ◆ The Memorandum of Understanding (MoU) in the field of Environment signed between Ministry of Environment and Forests, Government of India and United States Environment protection Agency (USEPA) in January 2002 provides a framework for policy and technical cooperation between this Ministry and the USEPA on the basis of common concern for the protection off environment as well as to pursue sustainable development. The activities covered under this MoU reflect adequately our environmental concerns viz. environmental governance, air and water quality management, management of toxic chemicals and hazardous wastes. Projects relate to areas such as environmental health, environmental management system, environmental risk assessment and risk management, public access to environmental information, public participation in environmental decision-making environmental education, strengthening of the environmental law regime and implementation of international environmental agreements. The MoU is expected to be renewed this year after expiry of five years.
- ◆ A new bilateral agreement with Mauritius in the field of environmental cooperation was entered into after the approval of the Cabinet was accorded on November 23, 2006.

World Bank assisted Country Environmental Analysis

The Country Environment Analysis, a joint effort between this Ministry and the World Bank, has been finalized with substantive inputs from Ministry of Industry, Road & Highways and Power. The Study seeks to identify and recommend institutional development and capacity building

measures that strengthen monitoring and enforcement of environment of environmental compliance and enhance environmental performance in the three sectors. The work particularly focuses on assessing implementation experiences from selected case studies in these sectors to draw lessons of good practice and of existing barriers to good environmental performance and compliance.

- ◆ The objective of the CEA is to support the implementation of the National Environment Policy and other environmental Acts by assessing major institutional barriers to good environmental performance and compliance. Specifically, the study will examine gaps in institutional arrangements, processes and incentives governing the integration of environmental considerations in the planning, design and implementation of development projects and activities in the three key sectors: power, highways and industry. The main thrust of the study will be on identifying policy measure, capacity building areas and institutional reforms needed to strengthen monitoring and enforcement, and provide incentives for better environmental and ecological performance in the context of accelerated infrastructure and industrial growth in the country.
- ◆ The main outcomes of the India CEA will be specific and actionable recommendations, developed jointly with government counterparts at the national and state levels and by way of a broad-based consultative process, on how to influence sectoral decision making and performance towards more environmentally sustainable development practices.

India-Canada Environment Facility (ICEF)

The India-Canada Environment Facility (ICEF) is a joint initiative of the Government of India and the Government of Canada created by signing of a Memorandum of Understanding (MoU) between the two Governments on October 20, 1992 for the purpose of undertaking projects related to the environment. The funding is provided by the Canadian International Development

Agency and it is managed jointly by representatives from both Governments. The primary focus of the ICEF is to enhance the capacity of Indian institutions and organizations to promote and deliver sustainable development programs addressing the environment.

- ◆ A total of 34 projects and 15 Small Grant Initiatives have been approved so far which is worth Rs. 251.5 crore. The project is now expected to end in December 2007, as a result of the bilateral assistance guidelines of Ministry of Finance restricting financial assistance.

Advisory Services in Environmental Management (ASEM)

- ◆ This is an umbrella project under the aegis of Indo-German technical collaboration covering present and future projects being supported by the Government of Germany in the environment sector. The initial funding was Euro three million for the first phase of project (2002-2005) and for the second phase (2005-2008) apart from three million Euros initially committed, an additional amount of Euro 1.7 millions has been agreed to recently.
- ◆ ASEM focuses on six major thrust areas namely, Environmental Planning, Waste Management, Sustainable Small Industries/ Cleaner Technologies, Clean Production and Products, Clean Development Mechanisms. The project has developed well in the field of Eco-cities, Eco-industrial Estates, Eco-Industrial Parks for Electroplating Industries of Madurai, waste management, Sustainable Small Industry & Clean Development Mechanism and e-waste management. Under the Human Resource Development Programme of the project, relevant trainings and workshops were organised in the identified thrust areas.

Training abroad

- ◆ Capacity building of officers in the field of environment and forestry abroad is carried out by the IC & SD Division. A data bank of officers of various State Governments, SPCBs, Environment Departments, etc. is

maintained by this Division for this purpose. A total number of 25 officials attended various foreign trainings during the year in the fields such as Natural Resource Management, Climate Change, Eco-industrial Estates Development, Environmental Management, Trace Organics Analysis, Environmental Health, etc. The officers were also sent on international training keeping in view the functional requirements with due representation to state governments, etc.

Facilitation of international meetings

The Ministry through IC&SD Division also facilitates funding and other arrangements in respect of the Ministry's delegation for various important international meetings in the fields of sustainable development, bilateral and multilateral cooperation, negotiations in UN bodies, participation in international workshops and seminars, etc. It also caters to all foreign delegations coming to the Ministry for furthering bilateral cooperation.

International Co-operation in Forestry Sector Bilateral Cooperation between India and China

An Agreement on Forestry Cooperation between the Ministry of Environments and Forests, Republic of India and the State Forestry Administration of the Peoples Republic of China has been signed during the visit of H.E. Mr. Hu Jintao, President of the Peoples Republic of China on November 21, 2006. The areas of cooperation as per the Agreement between the two countries are as follows:

- ◆ Prevention and management of desertification
- ◆ Development and utilization of forestry resources
- ◆ Supporting technological cooperation between research organization, forestry institutions and other units
- ◆ Prevention of plant diseases, insects and pests and intrusion by external organisms
- ◆ Prevention and control of forest fire
- ◆ Co-operation on wood based industry,

sustainable forestry enterprise, trade and policies

- ◆ Enhancing livelihood opportunities of local communities through NTFP
- ◆ Exchange of and communication on information of wildlife conservation and illegal wildlife trade

International Arrangement on Forests for sustainable development of all types of forests

- ◆ The sixth session of the United Nations Forum on Forests (UNFF-6) was held from February 13-24, 2006 at UN headquarters in New York. Nearly 600 participants from more than 100 member countries attended the two-week session where delegates addressed unfinished business from UNFF-5 regarding the development of the international arrangement on forests. The following four global objectives were agreed:

- ◇ **Global Objective 1:** Reverse the loss of forest cover worldwide through SFM, including protection, restoration, Afforestation and reforestation, and increase efforts to prevent forest degradation.
- ◇ **Global Objective 2:** Enhance forest-based economic, social and environmental benefits and the contribution of forests to the achievement of internationally agreed developmental goals, including those contained in the Millennium Declaration, in particular with respect to poverty eradication and environmental sustainability, including by improving the livelihoods of forest dependent people.
- ◇ **Global Objective 3:** Increase significantly the area of protected forests worldwide and other areas of sustainably managed forests, and increase the proportion of forest products from sustainably managed forests.
- ◇ **Global Objective 4:** Reverse the decline in ODA for SFM and mobilize

significantly increased new and additional financial resources from all sources for the implementation of SFM.

- ◆ The United Nations Forum on Forests will hold its sixth session at United Nations Headquarters in New York from February 13-24, 2007. The Forum will resume negotiations on the review of the effectiveness of the International Arrangement on Forests (IAF) and the future direction of the intergovernmental body, which were initiated during the fifth session held in May 2005.
- ◆ As part of the sixth session, a side event on February 13, 2007, entitled “Contributions of Civil Society to Sustainable Forest Management: From Policy Development to Implementation”, will provide an opportunity to engage Member States in a discussion on the benefits of cooperation with civil society. It will also provide examples of best practices for such collaboration at the local, national and regional levels, and consider ways and means of improving the use of substantive contributions of major groups to the Forum.

Climate Change

Adaptation and Capacity Building Project on Climate Change

Introduction and Objective

- ◆ Climate Change is one of the most important global environmental problems. The average temperature of the earth's surface has risen by 0.6 degrees C since the late 1800s. It is forecasted to increase by another 1.4 to 5.8 degrees C by the year 2100. Even if the minimum predicted increase takes place, it will be larger than any century long trend in the last 10,000 years. The sea level rose on an average by 10 to 20 cm during the 20th century, and an additional increase of 9-88 cm is forecasted by the year 2100. The Third Assessment Report (TAR) of the Intergovernmental panel on climate change published in 2001 further states that there is new and stronger evidence that most of the warming over the last 50 years is attributable to human activities.

- ◆ Climate Change Division is the nodal point in the Ministry to undertake the various programmes on Climate Change.

United Nations Framework Convention on Climate Change (UNFCCC)

- ◆ Recognizing threats posed by Climate Change, most countries joined an International Treaty, the United Nations Framework Convention on Climate Change (UNFCCC), to begin to consider what can be done to reduce global warming and cope with whatever temperature increases are inevitable. India is a Party to the United Nations Framework Convention on Climate Change (UNFCCC), which was adopted in May 1992 and came into force on March 21, 1994.
- ◆ The objective of the Convention is to achieve stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level is to be achieved within a time frame sufficient to allow eco systems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner. The Convention enjoins upon the Parties to protect the climate system on the basis of equity and in accordance with their “common but differentiated responsibilities” and respective capabilities. To give more concrete action plan to combat climate change, Parties to the Convention in 1997 adopted the Kyoto Protocol in recognition of necessity for strengthening developed country commitments under the Convention in furtherance to the objectives of the Convention. The Kyoto Protocol commits the developed countries, including economies in transition to reduce emissions of greenhouse gases by an average of 5.2% below 1990 levels during 2008-2012. The Kyoto Protocol came into force on February 16, 2005. India is a party to the Kyoto Protocol.

Progress of Activities undertaken

- ◆ Under the scheme “Adaptation and Capacity

building project on Climate Change” funding is provided to the projects relating to climate change including five new projects relating to modeling exercise to support Government of India with sound economic and rigorous scientific results. In addition, awareness programmes, seminars, workshops, meetings are organized for dissemination of information relating to climate change and Clean Development Mechanism (CDM).

- ◆ Under the Clean Development Mechanism (CDM) of the Kyoto Protocol, a developed country with quantified emission limitation and reduction commitments would take up the greenhouse gas reduction project in a developing country. The Government of India has set up the National CDM Authority in December 2003 with its office in the Ministry. The National CDM Authority evaluates and recommends CDM projects for host country approval. The CDM aims to assist developing countries in achieving sustainable development by promoting environmentally friendly investment from industrialized country government and businesses. India has the potential to offer many projects in the field of energy efficiency, municipal and industrial waste, bio-mass cogeneration, besides renewables, such as wind, small hydro, etc. The resulting certified emission reductions could be used by developed country Parties to help meet their emission reduction targets. CDM projects should result in real, measurable and long term benefits in terms of climate change mitigation.
- ◆ Meetings of National CDM Authority were held periodically to consider the CDM Projects for grant of Host Country approval. Till February 28, 2006, the National CDM Authority has approved 526 projects in the field Biomass based Cogeneration, Energy efficiency, Municipal Solid Waste; Renewables such as Wind, Small Hydro projects etc. These projects would generate 357 million Certified Emission Reductions (CERs) by the year 2012, if all these projects successfully get registered with the CDM

Executive Board. Thus, Clean Development Mechanism is expected to bring financial and technological resources to the country.

- ◆ India submitted its initial National Communication to the UNFCCC in June 2004 well ahead of schedule at the Subsidiary Body Meetings of the UNFCCC in Bonn. The elements of initial National Communication included an inventory of Greenhouse gas emissions – Carbon dioxide, Methane and Nitrous Oxide for the base year 1994; a preliminary national assessment of vulnerability due to climate change on Indian Water Resources, Agriculture, Forestry, Natural eco systems, coastal area, health, energy and infrastructure besides other elements. The initial analysis has revealed that climate change scenario may have adverse effects of severity of droughts and intensity of floods in various parts of the country and provides general description of steps taken or envisaged to implement the Convention. India is required to prepare and communicate its second National Communication containing updated information for the base year 2000. This activity has been initiated, first, by developing a full scale project containing details of the scope of all the elements of reporting in the second National Communication. It is contemplated to formulate the framework of all the elements of reporting in a way, that this address the technical gaps, financial and capacity constraints identified during the preparation of the initial communication. India is now required to submit its second National Communication and the Ministry is at advanced stage of launching the preparation of the same.
- ◆ As preparatory to articulate policies and develop the strategy, the Ministry being the nodal Ministry for Climate Change, Secretary (E&F) chairs an inter-ministerial and inter-agency Consultative Group for Climate Change negotiations, which also includes eminent national experts in different fields. The Group includes the key central Ministries: Power, Petroleum and Natural

- Gas, Coal, MNES, Agriculture, Science & Technology, Water Resources, Planning Commission, MEA, etc. Preparatory meetings continue throughout the year (since preparation for each negotiating event starts a year in advance). Apart from this Core Group, there are Sub Groups such as Political Sub Group on Climate Change and Modeling Sub Group on Climate Change which meets at regular intervals.
- ◆ An Inter-Ministerial delegation from India participated the 24th Session of Subsidiary Body meetings to the United Nations Framework Convention on Climate Change (UNFCCC) and the First Session of the Ad-hoc Working Group (AWG) on further commitments for Annex-I Parties under the Kyoto Protocol from May 18-26, 2006.
 - ◆ An Indian delegation participated in the second Ministerial Meeting on the Gleneagles Dialogue on Climate Change, Clean Energy and Sustainable Development on October 3-4, 2006 at Monterrey, Mexico. This meeting was attended by Ministers and senior officers from the sectors of energy and environment from Australia, Brazil, China, India, Indonesia, Mexico, Nigeria, Poland, South Africa, South Korea and Spain. The discussions during the meeting focused on the challenges of tackling the causes of dangerous climate change in our energy production and consumption systems and development pathways and need to promote economic growth and to adapt to unavoidable impacts.
 - ◆ A delegation consisting of representatives of different Ministries participated in the Policy Implementation Committee Meeting of the Asia-Pacific Partnership on Clean Development and Climate (APPCDC) held on October 12-13, 2006 in Jeju, Korea. The Partnership consists of Australia, China, India, the Republic of Korea and the United States of America. The Policy and Implementation Committee (PIC) of the Asia-Pacific Partnership on Clean Development and Climate approved an initial set of projects and activities contained in eight sector-based Action Plans. The Partnership had established public-private Task Forces in eight key sectors:
 - ◇ cleaner fossil energy
 - ◇ renewable energy and distributed generation
 - ◇ power generation and transmission
 - ◇ steel
 - ◇ aluminum
 - ◇ cement
 - ◇ coal mining
 - ◇ buildings and appliances
 - ◆ The Action Plans approved in Jeju provide a foundation for the Partnership's work, as well as an initial set of actions that Partners intend to implement. These activities represent a significant first step toward a more comprehensive set of actions to address clean development and climate goals. A press briefing on APPCDC was also held at New Delhi on November 1, 2006.
 - ◆ An Inter-Ministerial delegation from India participated in the 12th Conference of Parties (COP-12) to the UNFCCC and the second Meeting of Parties (MOP-2) to the Kyoto Protocol held in Nairobi, Kenya from November 6-17, 2006. This Conference was an important event as a number of major decisions were reached in this COP/MOP that is important from the point of view of developing countries, including India. There was an agreement on the norms for the functioning of the Adaptation Fund to provide assistance to developing countries to adapt to the adverse impacts of climate change. A Five Year Programme of work on Impacts, Vulnerability and Adaptation to Climate Change was also agreed. Another favorable decision has been the agreement on guidance for the further implementation and improvement of the Clean Development Mechanism. This ensures that many more CDM Projects from India would be able to register with the CDM Executive Board. Another important development of this Conference was the acceptance of a blue print

for negotiating the next phase of commitments for reduction of Greenhouse Gases (GHG) by developed Annex-I Parties during post 2012. A review of the implementation of the Protocol was also carried out. It was also agreed to hold the next review of the protocol in 2008.

- ◆ A Workshop on Adaptation to Climate Change was organised in New Delhi on December 7-8, 2006.

Indo-UK Collaborative Research Programme – Phase - II (Impacts and Adaptation) on Impact of Climate Change in India

- ◆ The emerging scientific understanding that human induced changes in the present climate system may affect the climate and consequently different sectors of economy in the country with corresponding impacts on agriculture, water, forestry and human health. In recognition of the same, and to deal more research to understand the possible magnitude and potential consequences of the projected climate change and its impacts on the country, a joint collaborative research programme between the Government of United Kingdom, Department of Environment, Food and Rural Affairs and the Ministry of Environment & Forests, Government of India was undertaken. The objective of the research programme was improvement of climate scenarios, quantifying and reducing uncertainty in the impacts, and introducing consideration of elements of adaptation in a regional project, with some stakeholder involvement.
- ◆ The Phase-II of Indo-UK collaborative research on climate change under the aegis of Structured Dialogue on Climate Change was initiated under the Programme. Hon'ble Union Minister of Environment & Forests and U.K. Secretary of State, Department of Environment, Food and Rural Affairs (DEFRA), Government of UK launched the Phase-II of the collaborative Research Programme on Climate Change – Impacts and adaptation.
- ◆ The Ministry of Environment and Forests (MOEF), India and the UK Department of Environment, Food and Rural Affairs (DEFRA) will jointly undertake a three year research programme on the impacts and adaptation to climate change in India. The project has been built on India's existing expertise to assess the sectoral impacts of climate change; reduce the uncertainties in current climate change prediction models; and contribute to the science of climate change.
- ◆ Indian scientists will carry out studies for developing a comprehensive picture of the possible future impacts of climate change in India. DEFRA (UK) will fund the research studies and programme management in collaboration with Indian and UK researchers. The research programme includes improvement of Indian climate Scenarios and assessment of impacts on water resources, agriculture, forests and human health.
- ◆ The Programme for Phase-II consist firstly in the national level assessment of impacts *inter-alia* improvement in climate change scenarios and revision of impact assessment at the national level and secondly adaptation responses to climate change for specific sectors through a regional project to build capacities in India to adapting to climate change. The regional project would concentrate on sectors such as water resources, agriculture, forestry and health. In addition, the Phase-II envisages training and institutional capacity building through establishment of links between Indian and UK Institutions for developing training opportunities relevant to the study.

The National Level Assessment of Impacts would address the following :

- ◆ **Improvement in the climate change scenarios:** The aim will be to improve the climate change scenarios for India. This could involve quantification of uncertainties through consideration of ensembles of model simulations, assessment of the effect of model resolution, and comparison of different model simulations.

- ◆ **Revision of impacts assessment at the national level.** The aim will be to revise the maps of impacts based on the revised scenarios for 2050. This will be focused on sectors where significant change is identified. An integrated approach will be taken to ensure consistency of impacts between sectors.
- ◆ **The State Level Project on the Adaptation Responses to Climate Change for Specific Sectors :** This component entails studies in the form of a regional project to build capacity in India on adapting to climate change and will concentrate on the sectors viz. water resources, agriculture, forestry and human health.
- ◆ A Steering Committee co-chaired by the representatives of Ministry and DEFRA will oversee the development and implementation of the Phase-II programme.
- ◆ A workshop was held on January 23, 2007 at New Delhi with the aim of developing and design study and the various elements of work besides receiving the inputs of the stakeholders.
- ◆ Ozone Layer in 1985 and the Montreal Protocol on Substances that Deplete the Ozone Layer 1987 along with its four Amendments. In India, provisions of the Montreal Protocol and its London Amendment came into effect from September 17, 1992. India also ratified the Copenhagen Amendment (1992), the Montreal Amendment (1997) and the Beijing Amendment (1999) on March 3, 2003.
- ◆ India produces CFC-11, CFC-12, CFC-113, HCFC-22, Carbontetrachloride (CTC) and has stopped production of Halon-1211, Halon-1301, methyl chloroform and methyl bromide. These Ozone Depleting Substances (ODS) are used in refrigeration & air conditioning, foams, fire fighting, electronics, aerosol fumigation applications.
- ◆ The Government of India has entrusted the work relating the ozone layer protection and implementation of the Montreal Protocol to the Ministry.
- ◆ The Ministry has set up the Ozone Cell as a national unit to look after and to render necessary services to implement the Protocol and its ODS phase-out programme in India.

Ozone Layer Protection

Introduction and Objectives

- ◆ Ozone, a tri-atomic molecule is formed naturally in the upper level of the Earth's atmosphere by high-energy Ultraviolet (UV) radiation from the Sun. The radiation breaks down oxygen molecules, releasing free atoms, some of which bond with other oxygen molecules to form ozone. About 90 per cent of all ozone formed in this way lies between 15 and 55 kilometers above the Earth's surface, called the Stratosphere.
- ◆ The stratospheric Ozone Layer absorbs all the harmful Ultraviolet (UV) radiation emanating from the Sun. It protects plant and animal life from UV radiation. UV radiation has the potential to cause skin cancer, eye damage, suppress body's immune system, decrease crop yield, causes damage to forests in early seventies, led to the adoption of the Vienna Convention for the Protection of the
- ◆ A detailed India Country Programme for phase out of ODS was prepared in 1993 to ensure the phase out of ODS according to the national industrial development strategy, without undue burden to the consumers and the industry and for accessing the Protocol's Financial Mechanism in accordance with the requirements stipulated in the Montreal Protocol. The Country Program has been updated in 2006. The Executive Committee at its 49th meeting held in July 2006 approved the Country Program Update for India.
- ◆ India ratified the Copenhagen Amendment (1992), the Montreal Amendment (1997) and the Beijing Amendment (1999) on March 3, 2003.
- ◆ Three hundred fifty seven investment and non-investment projects/activities have been

Activities undertaken so far

prepared and submitted to the Multilateral Fund for approval since 1993. This includes the national phase-out of Chloro Fluoro Carbon (CFC) production and consumption, halon production and consumption and CTC production and consumption plan.

- ◆ Ozone Rules have been developed.
- ◆ Fiscal measures have been adopted.
- ◆ Awareness activities such as International Ozone Day and Technical Workshops etc. were organized since 1995.
- ◆ Participated in the meetings of the Executive Committee, Meeting of the Parties and other related meetings.
- ◆ Data on production, export, import of Ozone Depleting Substances was submitted to the Ozone Secretariat for the period 1992-2005.
- ◆ Project Management Unit was set up to implement the CFC and CTC National Phase-out Plans.
- ◆ Training Programs for customs and other enforcement officers were organized.
- ◆ Information material like "VATIS" and "Montreal Protocol : India's Success Story" was brought out.
- ◆ India hosted the 18th Meeting of the Parties (MOP), 50th meeting of the Executive Committee and other related meetings of the Montreal Protocol in New Delhi from October 25 – November 10, 2006.

Achievements made

- ◆ India has so far met the following compliance dates as per the control schedule of the Montreal Protocol : -
 - ◇ Freeze of CFC production in July'99 to phase out 22588 ODP tonnes
 - ◇ Phase out of CFC in the Consumption Sector on January 1, 2003.
 - ◇ Freeze of Halon Production on January 1, 2001
 - ◇ Total phase-out of halon production and consumption
 - ◇ 50% reduction target of CFC

production and consumption in 2005 have been achieved.

- ◇ 85% reduction target of CTC production and consumption in 2005 have been achieved.
- ◆ In the consumption sector, 269 projects covering 750 enterprises in the aerosol, foam, halon, refrigeration and air-conditioning and solvent sector have been assisted in the change over to non-ODS technology of which 210 projects have already been completed and all the National ODS Phase-out Plans are under various stages of implementation.
- ◆ The Executive Committee at its 48th, 49th and 50th meeting approved US\$ 18 million for implementation of 2006 annual work programmes of CFC Production Sector Phase-out Project, National CFC Phase-out Plan and CTC National Phase-out Plan.

Awareness activities

- ◇ The UN General Assembly on January 23, 1995 adopted a resolution 49/114 which proclaims 16th September as the International Day for the Preservation of the Ozone Layer, to commemorate the signing of the Montreal Protocol on the Substances that Deplete the Ozone Layer which was signed on September 16, 1987.
- ◇ The Twelfth International Day for the Preservation of the Ozone Layer was celebrated in Delhi on September 16, 2006. The theme of this year's International Ozone Day was "Protect the Ozone Layer: Save Life on Earth". Hon'ble Minister of State for Environment and Forests presided over the function and Director, National Environment Engineering Research Institute (NEERI), Nagpur delivered the Keynote address.
- ◇ A number of competitions were organized in cooperation with Consultancy Development Centre (CDC), New Delhi to mark this occasion which include Poster Design Competition, Painting Competition,

Quiz on Ozone Science, Skit Competition, Model Making Competition and Slogan Writing Competition. On this occasion, a film titled "Ozzy Ozone" was telecast on Doordarshan's National Channel during prime time on September 16, 2006. The 8th edition of the "Montreal Protocol: India's Success Story", poster and sticker were also released on this occasion.

- ✧ National Academy of Customs, Excise and Narcotics (NACEN) in consultation with Ozone Cell conducted three Workshops for customs and other enforcement officers (Group A) at Kochi, Delhi and Mumbai during the year 2006.
 - ✧ Project Management Unit of the Ozone Cell in consultation with NACEN has conducted four Training Workshops for State Government Agencies (Group B) at Chennai-Tamilnadu, Ahemadabad-Gujarat, Bhubaneshwar-Orissa and Kochi-Kerala during the year.
 - ✧ Sector Phase-out Plan Unit (Ozone Cell) in collaboration with UNDP conducted two Technical Workshops for foam and commercial refrigeration in Chandigarh and Chennai.
- ◆ **Regulatory Measures**
- ✧ The Ozone Depleting Substances (Regulation and Control) Rules, 2000 under the Environment (Protection) Act, 1986 was notified in the Gazette of India on July 19, 2000. These Rules set the deadlines for phasing out of various ODS, besides regulating production, trade, import and export of ODS and the product containing ODS. The Ozone Depleting Substances (Regulation and Control) Rules, 2000 were amended in 2001, 2003, 2004 and 2005 to facilitate implementation of ODS phase-out by enterprises in various sectors. Draft Rules called the Ozone Depleting Substances (Regulation and Control)

Amendments Rules, 2006 was notified on September 20, 2006 seeking objections or suggestions with in 60 days from the date of publication for necessary consideration by the Government.

◆ **Fiscal Measures**

- ✧ Customs and excise duty exemption have been extended for Multilateral Fund assisted ODS phase-out projects and for establishment of new capacity or expansion of capacity with non-ODS technology during the financial year 2006-2007.
- ✧ India hosted the 18th Meeting of the Parties (MOP) to the Montreal Protocol on Substances that Deplete the Ozone Layer, 50th Executive Committee of the Multilateral Fund and associated meetings from October 25 –November 10, 2006 in New Delhi. Hon'ble Minister of Environment and Forests inaugurated the Preparatory Segment of the 18th MOP. Delegates from 132 countries participated in the MOP. Hon'ble Prime Minister inaugurated the High Level Segment of the 18th MOP to the Montreal Protocol on November 2, 2006 and addressed the Delegates. Hon'ble Minister of Environment and Forests while welcoming the participants expressed confidence that the spirit of co-operation that had always prevailed in the MOP would ensure a successful outcome. The 18th MOP endorsed the election of India as member of the Implementation Committee of the MOP for the year 2007 and 2008.
- ✧ The 50th Executive Committee of the Multilateral Fund for implementation of the Montreal Protocol was inaugurated by Hon'ble Minister of State for Environment and Forests on November 6, 2006. At this meeting, the 2006 annual plan for NCCoPP and release of US \$1.056 million have been approved for India.