2

Conservation

Environmental Conservation

Conservation of Biosphere Reserves

Introduction

Biosphere Reserves are areas of terrestrial and coastal ecosystems which are internationally recognized within the framework of UNESCO's Man and Biosphere (MAB) programme. These Reserves are required to meet a minimal set of criteria and adhere to a minimal set of conditions before being admitted to the World Network of Biosphere Reserves designated by UNESCO. The world's major ecosystem types and landscapes are represented in this network, which is devoted to conserving biological diversity, promoting research and monitoring as well as seeking to provide models of sustainable development in the service of human kind.

Objectives

These Reserves are rich in biological and cultural diversity and encompass unique features of exceptionally pristine nature. The goal is to facilitate conservation of representative landscapes and their immense biological diversity and cultural heritage, foster economic and human development which is culturally and ecologically sustainable and to provide support for research, monitoring education and information exchange. The scheme is a pioneering effort at pursuing the increasingly difficult yet urgent task of conserving ecological diversity under mounting pressures.

Progress of Activities undertaken

- The Ministry has provided financial assistance to the respective State Governments for conservation and management of fourteen Biosphere Reserves designated so far. In addition, research and development projects are also supported in these Reserves. Four Biosphere Reserves namely Sunderbans (West Bengal), Gulf of Mannar (Tamil Nadu), Nilgiri (Tamil Nadu, Kerala and Karnataka) and Nanda Devi (Uttaranchal) have been included in the World Network of Biosphere Reserves so far. Efforts are being made for getting remaining Biosphere Reserves included in the World Network of Biosphere Reserves. A list of Biosphere Reserves set up so far along with their area and location is given in Table-3.
- During the year five research projects were completed which provided baseline data helpful in the scientific management of these Reserves. Six new research projects were also initiated during the year.
- The stake holders consultations was held and required proposal received in respect of Biosphere Reserve of Gulf of Kutchch (Gujarat). The notification is being issued after finalization of guidelines for regulatory regime.

Fig 21. Plantation programme in Manas Biosphere Researve

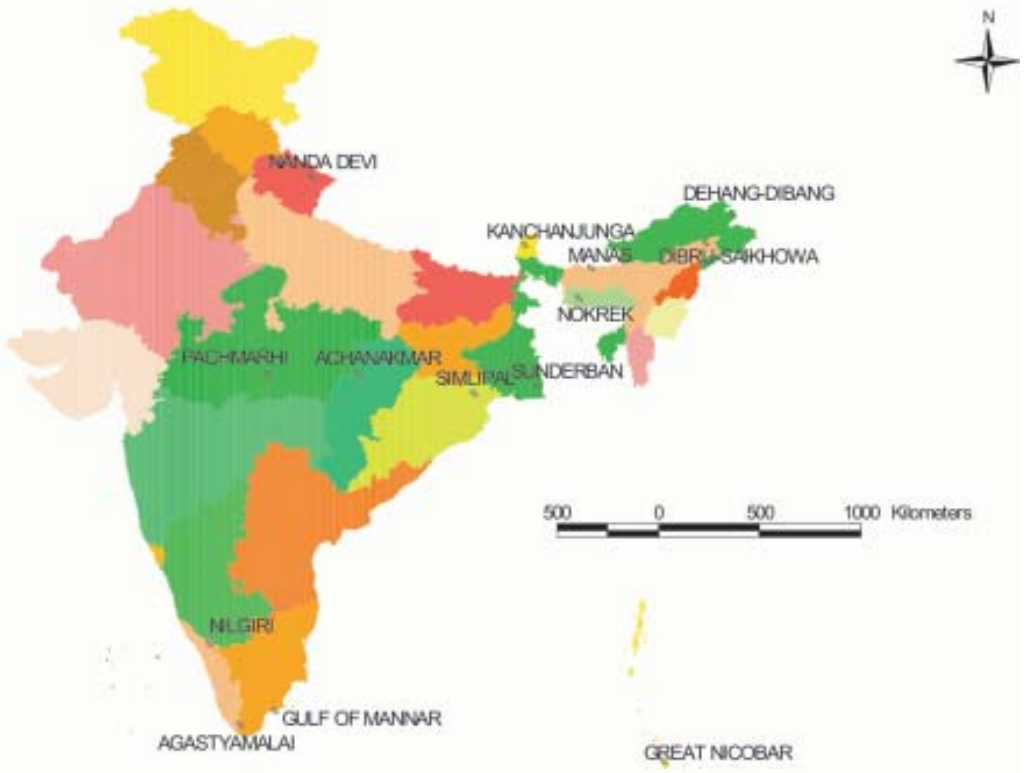

Fig 22. Biosphere Reserves in India

✦ A series of regional workshops for review of progress and for identification of new sites continued to be held during the year. While works done by state of Madhya Pradesh, Chattisgarh, Orissa, and West Bengal was reviewed in the regional workshop held in Raipur, the performance of all Southern states was reviewed in the workshop held at Thiruvananthapuram following which the area of Agasthiyamalai Biosphere Reserve was expanded to include Tamil Nadu portion of the Agasthiyamalai hills.

✦ The activities of Western region were reviewed in workshop held in Bhuj (Gujarat) in June 2005, where work done by states of coastal Biosphere reserves like Sundarban, Gulf of Mannar and pipeline proposals of Western state of Gujarat and Maharashtra were discussed.

✦ Another workshop to assess work done by Biosphere reserves located in North East Region was held from 19-22 November, 2005 at Gangtok. A number of new potential sites were identified in Mizoram and Arunachal Pradesh. Nagaland, also assured to identity suitable sites for Biosphere reserve.

✦ The guidelines for scheme on Biosphere reserve have also been extensively revised and a clear enumeration of regulatory regime is being incorporated.

Mangroves and Coral Reefs

Conservation of Mangroves

Introduction

Mangroves plants are those which survive high salinity, tidal extremes, strong wind velocity, high temperature and muddy anaerobic soil – a combination of conditions hostile for other plants. Mangroves are successfully adapted in colonizing saline intertidal zone at the interface between the land and sea along the deltas, shallow lagoons, mud flats, bays and backwaters in tropical and subtropical shelters coast lines. Mangroves not only protect the coastal communities from the fury of cyclones and coastal storms, but also promote sustainable fisheries and prevent sea erosion. In addition, they provide medicine and fuelwood. They also serve as the home of a wide range of flora and fauna.

Table-3: List of Biosphere Reserves

S.No.	Name of the biosphere Reserve & total geographical area (km^2)	Date of Notification	Location (State)
1.	*Nilgiri (5520)	1.8.86	Part of Wynad, Nagarhole, Bandipur and Madumalai, Nilambur, Silent Valley and Siruvani hills (Tamil Nadu, Kerala and Karnataka)
2.	*Nanda Devi (2236.74)	18.1.88	Part of Chamoli, Pithoragarh & Almora Districts (Uttar Pradesh)
3.	Nokrek (820)	1.9.88	Part of Garo Hills (Meghalaya)
4.	Manas (2837)	14.3.89	Part of Kokrajhar, Bongaigaon, Barpeta, Nalbari, Kamprup and Darang Districts (Assam)
5.	*Sunderbans (9630)	29.3.89	Part of delta of Ganges & Brahamaputra river system (West Bengal)
6.	*Gulf of Mannar (10500)	18.2.89	Indian part of Gulf of Mannar between India and Sri Lanka (Tamil Nadu)
7.	Great Nicobar (885)	6.1.89	Southern most islands of Andaman and Nicobar (A&N Islands)
8.	Similipal (4374)	21.6.94	Part of Mayurbhanj district (Orissa)
9.	Dibru-Saikhowa (765)	28.7.97	Part of Dibrugarh and Tinsukia districts (Assam)
10.	Dehang Debang (5111.5)	02.09.98	Part of Siang and Debang valley in Arunachal Pradesh
11.	Kanchanjunga (2619.92)	07.02.2000	Parts of North and West Sikkim
12.	Pachmari (4926.28)	03.03.99	Parts of Betur, Hoshangabad and Chindwara, Distt. Of Madhya Pradesh
13.	Agasthyamalai (1701)	12.11.2001 (area expanded on 30.3.2005)	Parts of Thirunelveli and Kenya Kumari Districts in Tamil Nadu and Thiruvananthapuram, Kollam and Pathanmthitta.
14.	Achanakmar-Amarkantak (3835.51)	30.03.2005	Parts of Anupur and Dindori distt. of MP and parts of Bilaspur distt. of Chattisgarh State.

Site with * have been recognized by UNESCO on World Network of Biosphere Reserves

Progress of Activities

The Ministry launched Mangrove Conservation Programme in 1987. The Ministry has so far identified 38 mangrove areas for intensive conservation and management in the country (list of these mangrove areas is given at Table-4). These areas are identified on the recommendation of National Committee on Mangroves & Coral Reefs on the basis of their unique ecosystems, biodiversity etc. Cent percent central assistance is given under Management Action Plans (MAPs) for undertaking activities like raising mangrove plantations, protection, catchments area treatment, siltation control, pollution abatement, biodiversity conservation, sustainable resource utilization, survey & demarcation, education & awareness etc. This is further supplemented by research and developmental activities which can give scientific inputs for smooth execution of Management Action Plans.

Table-4: State-wise list of Mangroves areas identified by the Ministry

State / UT	Mangrove Area
West Bengal	1. Sunderbans
Orissa	2. Bhaitarkanika, 3. Mahanadi, 4. Subernarekha, 5. Devi, 6. Dhamra, 7. MGRC, 8. Chilka
Andhra Pradesh	9. Coringa, 10. East Godavari, 11. Krishna
Tamil Nadu	12. Pichavram, 13. Muthupet, 14. Ramnad, 15. Pulicat, 16. Kazhuveli
Andaman & Nicobar	17. North Andamans, 18. Nicobar
Kerala	19. Vembanad, 20. Kannur
Karnataka	21. Coondapur, 22. Dakshin Kannada / Honnavar, 23. Mangalore Forest Divisions, 24. Karwar
Goa	25. Goa
Maharashtra	26. Achra-Ratnagiri, 27. Devgarh-Vijay Dur, 28. Veldur, 29. Kundalika-Ravdana, 30. Mumbra-Diva, 31.Vikroli, 32. Shreevardhan, 33. Vaitarna, 34. Vasasi-Manori, 35. Malvan
Gujarat	36. Gulf of Kutchh, 37. Gulf of Khambat, 38.Dumas-Ubhrat

✦ A meeting of the National Committee on Mangroves & Coral Reefs was held on 5th December, 2005 at Jamnagar, Gujarat. Three new National Mangrove sites viz. one each in Kerala, Gujarat, and Karnataka have been identified and thus the number of National Mangrove sites has arisen from 35 to 38 during the current year.

Fig 23. *Nypha fruiticans* – a common mangrove palm

Fig 24. A view of Pichavaram mangroves, Tamil Nadu

The National Committee also reviewed the progress of implementation of Management Action Plan on Mangroves in Gujarat, Tamil Nadu. The Committee also discussed the Untawale Report on Costing Norms for Implementation of Management Action Plans (MAPs) on Mangroves. The National Committee formed a Sub-Committee to revisit the cost norms suggested in the Untawale Report with a view to suggest a reason, if any, in the existing cost norms for various topographical conditions in the Coastal States/UTs.

- During the year six states viz. West Bengal, Orissa, Tamil Nadu, Karnataka, Goa, Gujarat have been financially assisted by the Ministry for intensive conservation and management of Mangroves. The draft guidelines of mangroves were discussed para-wise in detail. There was a broad consensus on the draft exhaustive guidelines which are being further refined and are under finalization.
- A National Management Genetic Resources Centre has been established by the Ministry in Orissa. Sunderbans (West Bengal) has been included in the World list of Biosphere Reserves by UNESCO. Two mangrove species *Rhizophora annamalyana* occurring in Pichavaram (Tamil Nadu) and *Heritiera kanikensis* occurring only in Bhitarkanika (Orissa) are endemic to India.

Conservation of Coral Reefs

Introduction

The National Committee on Mangroves and Coral Reefs had earlier recommended intensive Conservation and Management of Corals in four areas, namely, Andaman & Nicobar Islands, Lakshadweep Islands, Gulf of Kutchch and Gulf of Mannar. The programme is continuing since 1987.

Progress of Activities

- Management Action Plans are under implementation in all the four areas through financial assistance

Fig 25. Coral Reef at Rutand, Andaman Island

extended by the Ministry to the respective States/UTs.

✦ In order to focus attention on various facets of Coral Reefs of India, the Ministry has constituted a working group with eminent scientists on its membership. The first meeting of the working group was held on 13th October, 2005 in the Ministry. The working group deliberated on various aspects of coral reef conservation and management in the country and made several recommendations.

✦ The National Coral Reef Research Centre at Port Blair is continuing its activities of bio-physical monitoring related to health of coral reefs.

All India Coordinated Project on Capacity Building in Taxonomy (AICOPTAX)

Introduction

India is one of the mega biodiversity nations of the world and it has a variety of ecological habitats with large variations in species of plants, animals and micro organisms. On account of such diverse ecosystems present in the country, a rich bio-diversity is to be identified, classified and nurtured for present as well as future generations. So far about 90,000 species of animals and 47,000 species of plants have been identified and described. A large number of animals and plants are yet to be explored, identified and described.

Taxonomy helps in exploration, identification and description of living organisms. A sound taxonomic base is a pre-requisite for environmental assessment, ecological research, effective conservation, management and sustainable use of biological resources.

Objective

As a signatory to the Convention on Biological Diversity (CBD) held in Rio de Janerio in 1992, India has committed itself to capacity building in taxonomy and taken up exploration and preparation of an inventory of living organisms. The Ministry has set up an All India Coordinated Project on capacity building in Taxonomy.

Activities undertaken

✦ The Project has organized specialist groups drawn from Universities, Botanical and Zoological Surveys of India to take up taxonomic work on animal viruses, bacteria and archaea, algae, fungi, lichens, bryophytes, pteriodophytes, gymnosperms, palms,

grasses, bamboos, orchids, helminthes and nematodes, microlepidoptera and mollusca. Training in plant and animal bio-systematics has also been recognized as an important component. The project has been continued in 79 units during the year and financial assistance has been provided to various units for undertaking taxonomic research work.

- The taxonomic issues that need to be addressed in this century are mostly those that require interfacing of systematics and other disciplines such as bioprospecting, conservation biology, ecosystem management, bioremediation assessment of conservation status of species and roles of species in communities and ecosystems.

The entire AICOPTAX scheme was reviewed through a review workshop held on 19th -20th May, 2005 at Coimbatore. This was followed by the meeting of the Steering Committee which carefully gauged the progress made under each and every project and made project related recommendations as appropriate.

Fig 26. *Sassurea obvallata* – Brahma Kamal – an alpine medicinal herb

Assistance to Botanical Gardens

Introduction

Fig 27. A rare endemic plant (*Kundsteleria keralensis*) of Western Ghats in flowering

The scheme on assistance to botanical gardens and centers for *ex-situ* conservation was initiated in 1992 to augment *ex-situ* conservation of rare endemic plants. One time financial assistance is provided to the existing botanical gardens for improvement of their infrastructural facilities to facilitate *ex-situ* conservation of rare endemic plants. The achievements made in these botanic gardens are periodically monitored with the help of Botanical Survey of India.

The Ministry has constituted an Expert Group to identify and recommend proposals received under the scheme. The Botanical Survey of India helps in identification of rare endemic plants requiring *ex-situ* conservation

Progress of Activities

During the year, 28 Botanical Gardens have been approved for funding taking the total number of Gardens to the level of 245.

The guidelines for the scheme were comprehensively revised based on the perception of these gardens being centres of awareness creation, and not just research activities.

Conservation of Medicinal Plants

Objective

To undertake activities and to provide assistance to organizations interested in conservation of medicinal plants.

Progress/achievement during the year

A UNDP-CCF-II project is targeted to be implemented in nine states viz., Kerala, Tamil Nadu, Karnataka, Andhra Pradesh, Orissa, West Bengal, Rajasthan, Maharashtra, Madhya Pradesh, with the following objectives:

- ✦ To assist nine project states to conserve wild population of medicinal plants.
- ✦ To revitalize the indigenous health care knowledge, and
- ✦ To enhance the health & livelihood security.

Three projects are being implemented in the states of Gujarat, Rajasthan and Jammu and Kashmir in cooperation with State Forest Department/NGO. These projects are aimed towards documentation and conservation of medicinal plants.

Biodiversity Conservation

Introduction and objective

Biodiversity is the variability among living organisms and ecological complexes of which they are part, including diversity within and between species and ecosystems. Biodiversity has direct consumptive value in food, agriculture, medicine and in industry.

A scheme on biodiversity conservation was initiated earlier to ensure coordination among various agencies dealing with the issues related to conservation of biodiversity and to review, monitor and evolve adequate policy instruments for the same.

Progress of Activities undertaken

Convention on Biological Diversity

- ✦ The Convention on Biological Diversity (CBD), one of the key agreements adopted during the Earth Summit held in Rio de Janeiro in 1992, is the first comprehensive global agreement which addresses all aspects relating to biodiversity. The CBD, which has near universal membership with 188 countries as its Parties, sets out commitments for maintaining the world's ecological underpinnings, while pursuing economic development. India is a Party to the CBD. The Convention, while reaffirming sovereign rights of nations over their biological resources, establishes three main goals: the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits from the use of genetic resources. India is a Party to the CBD.
- ✦ Seven meetings of the Conference of the Parties (CoP) to the CBD have been held so far. The eighth meeting of CoP is scheduled to be held in Curitiba, Brazil from March 20–31, 2006. In preparation of CoP-8, during the year, India has participated actively in the meetings organized under the aegis of the CBD.
- ✦ In preparation for CoP-8, India has sent several submissions on various issues in response to requests by CBD Secretariat to the Parties. These include:
  - ✧ indicators for forest biodiversity,
  - ✧ case studies on incentive measures,

- ✧ case studies on sustainable use of inland waters,
- ✧ review of implementation of the Convention,
- ✧ definitions on incentive measures,
- ✧ review of implementation of work programme on protected areas,
- ✧ ecological criteria for identification of potential marine areas for protection,
- ✧ development of tool kits for protected areas,
- ✧ operations of the Convention,
- ✧ review of draft guidelines on biodiversity inclusive EIA etc.

Fig 28. White ginger *(Hedychium coronarium)* at Renuka Wildlife Sanctuary, Himachal Pradesh

- ✦ During the year, India has prepared the Third National Report to the Convention on Biological Diversity, following extensive consultations with the members of the Consultative Group on Biodiversity issues, other experts, concerned Ministries and other organizations. A National Workshop for preparation of the Third National Report was also organized in Gurgaon on May 20-21, 2005. This Report after obtaining necessary approvals will be submitted to the CBD Secretariat.
- ✦ Five meetings of the Consultative Group on Biodiversity issues have been held so far to advise the Government for preparing briefs for international meetings under the CBD, Cartagena Protocol on Biosafety and Ramsar Convention, National Report to the CBD and other related matters.

Group of Like Minded Megadiverse Countries (LMMCs)

Seventeen countries i.e. Bolivia, Brazil, China, Colombia, Costa Rica, Democratic Republic of Congo, Ecuador, India, Indonesia, Kenya, Madagascar, Malaysia, Mexico, Peru, Philippines, South Africa, and Venezuela, rich in biological diversity and associated traditional knowledge have formed the Group of Like Minded Megadiverse Countries (LMMC). The LMMC Group holds nearly 70% of global biodiversity and is a duly recognized negotiating block in the UN and other international fora. India was invited to take over Presidency of the LMMC on 19th February 2004 during the Ministerial meeting of the group in Kuala Lumpur in the margins of CoP-7 meeting of Convention on Biological Diversity, for a period of two years.

Fig 29. Himalayan Lotus in Nandadevi National Park

India in its capacity as the Chair of the LMMCs, had organized an Expert and Ministerial level meeting of the LMMCs in New Delhi from 17-21 January 2005, under the patronage of the Hon'ble Minister of Environment & Forests as President of LMMC. The report of the LMMC meeting held in New Delhi was printed and released by the Minister of State for Environment & Forests, on the occasion of the World Environment Day on 5th June 2005.

Fig 30. Monal, State bird of Himachal Pradesh

Following a landmark decision of the CoP-7 to negotiate an international regime on access and benefit sharing, India as the President of the LMMCs, is navigating the negotiations and coordinating among the LMMCs for articulating a common position of LMMCs for the access and benefit sharing regime. India is also hosting the Secretariat of the LMMCs.

Major achievements/progress during the year

✦ The Third National Report to the CBD has been prepared after extensive consultations.

✦ Briefs for Indian delegations were prepared for participating in various meetings organized under the aegis of CBD, through discussions in meetings of the Consultative Group on biodiversity issues.

✦ India has participated actively in the meetings organized by CBD Secretariat, so as to incorporate the country's position on various issues in the recommendations/ decisions / reports of the meetings.

✦ In response to requests from CBD Secretariat to Parties, India has submitted information on several issues. The information submitted by Parties will be appropriately incorporated in the documents prepared by the CBD Secretariat for consideration in various meetings.

✦ Report of meeting of LMMCs organized in New Delhi in January 2005 by India as President of LMMCs was printed and released.

✦ India is coordinating with the LMMCs for working out a common position for the negotiations for developing an international regime on access and benefit sharing.

Budget allocation

The budget allocation for CBD/LMMC during 2005-06 was Rs.18.50 lakhs.

Biological Diversity Act, 2002 (No. 18 of 2003)

Brief Introduction and Objectives

To regulate access to genetic resources and associated knowledge and ensure benefit sharing arrangements, apart from developing policies and programmes for long term conservation and protection of biological resources and associated knowledge.

Activities undertaken so far

In order to facilitate implementation of the Act, National Biodiversity Authority has been set up at Chennai. Biological Diversity Rules have been notified.

Progress made during the year

The Authority has held two meetings during the year and taken a number of decisions including setting up of expert committees to frame guidelines on various aspects of Access and Benefit sharing as related to Genetic Resources and Associated Knowledge. The authority also organized a number of a seminar, symposia involving various stake holders to educate and create awareness in regard to provisions of the act.

Fig 31. Jatropha plant used for biofuel

State Wise Status

In compliance to the provisions of the Act, nine states namely the States of Karnataka, Goa, Punjab, Madhya Pradesh, Arunachal Pradesh, Nagaland, Himachal Pradesh, Kerala and West Bengal have already established State Level Biodiversity Boards. Other States are in process of establishing State Boards. Local level Bio-diversity Management Committees are also required to be established to deal with any matter concerning conservation of Biological Diversity, its sustainable use and fair and equitable sharing of benefits arising out of the use of biological resources and associated knowledge.

Comparison of progress in compared to previous year

During the year, Recruitment Regulations and format for Annual Report and Audit of the National Biodiversity Authority were finalized.

Regulatory/Rules

Detailed rules/regulations under the Act have been notified to facilitate audit, preparation of Annual Report and recruitment of staff for National Biodiversity Authority.

Budget Allocation

The budget allocation during the year 2005-06 of the programme was Rs.192.00 lakh.

The Cartagena Protocol on Biosafety

Introduction and objective

The Cartagena Protocol on Biosafety, the first international regulatory framework for safe transfer, handling and use of Living Modified Organisms (LMOs) was negotiated under the aegis of the Convention on Biological Diversity.

The Protocol seeks to protect biological diversity from the potential risks posed by living modified organisms resulting from modern biotechnology. It establishes an advance informed agreement (AIA) procedure for ensuring that countries are provided with the information necessary to make informed decisions before agreeing to the import of such organisms into their territory. It further incorporates procedure for import of LMOs with respect to Food Feed and Product (FFP), Risk Assessment and Risk Management Framework and Capacity Building.

The Protocol contains reference to a precautionary approach. The Protocol also establishes a Biosafety Clearing House to facilitate the exchange of information on living modified organisms and to assist

countries in the implementation of the Protocol.

Progress of Activities

✦ The Protocol, was adopted on 29th January, 2000. The protocol has been signed by 103 countries (except USA). India signed the Biosafety Protocol on 23rd January, 2001 and acceded to the Protocol on 17th January, 2003. The protocol has come into force on 11th September, 2003, So far 131 countries have ratified the protocol.

✦ Even though the text of the protocol has been adopted, some aspects of the protocol's regime remain to be elaborated. The first meeting of the Conference of the Parties Serving as the Members of the Parties (COP-MOP-1) was held at Kuala Lumpur during 23rd -27th February 2004. A decision was taken in the above meeting to hold the second and third meting of the conference of parties serving as the meeting of the parties (COP-MOP-2 & COP-MOP-3) on an annual basis to expedite the process of addressing various issues of the protocol, which is required for its effective implementation.

Fig 32. Barheaded Geese *(Anser indicus)* a winter visitor of Pong Dam Wetland, Himachal Pradesh

✦ Pursuant to decision BS-I/13 of COP–MOP–I, the second meeting of the Conference of Parties serving as the meeting of the Parties to the Cartagena Protocol (COP-MOP-2) was held in Montreal, Canada from 30th May to 3rd June 2005 at the premises of the International Civil Aviation Organization (ICAO). The meeting was held back to back with the first meeting of the Ad Hoc Open Ended Working Group on Liability and Redress under the Protocol which was held at the same venue from 25th - 27th May, 2005.

✦ The meeting adopted important decisions on substantive issues related to Notification, Risk Assessment, Handling Transport, packaging and identification of LMOs, Compliance, Socio-economic considerations, Public Participation and Liability and

Fig 33. *Antilope cervicapra* commonly known as black buck, needs conservation and protection

Redress. Various follow up on the decisions taken have been initiated through consultation with the Core Expert Group on Biodiversity constituted by the Ministry for advising on matters related to the Convention on biological diversity. Preparatory work for the third meeting of the COP-MOP –3, scheduled in March 2006 at Curitiba, Brazil has been initiated.

The Genetic Engineering Approval Committee (Biosafety Regulatory Framework in India)

Introduction

The Ministry had constituted a Task Force on Recombinant Pharma Sector under the chairmanship of R.A. Mashelkar, DG, CSIR for streamlining the procedures for recombinant Pharma industry. The final report was submitted to the Ministry on 13th September 2005. The recommendations of the Task Force were adopted in the inter-ministerial meeting held on 23rd January 2006.

Fig 34. Bt. Cotton (*Bacillus thuringiensis*) approved by GEAC for commercial cultivation in three zones in the country.

Objectives

The salient features of the recommendations include step-

wise protocol for five scenarios, timelines for taking decisions, Constitution of a Standing Advisory Committee etc.

Progress made during the year

The Meetings of the Genetic Engineering Approval Committee (GEAC) are being held in every second Wednesday of the month as per the guidelines on best practices for environmental regulations adopted by the Ministry. During Kharif 2005, the GEAC has approved environmental release of 20 Bt cotton hybrids for commercial cultivation. Bt cotton was approved for the first time for commercial cultivation in the North zone. The GEAC has also approved large-scale trials of a number of Bt cotton varieties containing cry 1 Ac gene MON 531 developed by various companies. The GEAC has also approved Bt cotton hybrids containing new genes for large-scale trials.

National Biodiversity Strategy and Action Plan (NBSAP)

Brief objective

Preparation of a planning document relating to ecological security and livelihood.

Progress/achievement during the year

A project for preparation of planning documents relating ecological security and livelihood of people depending on natural resources was completed. A consultative and participatory approach was adopted by the executing agencies. It is planned to develop a National Action Plan for conservation of biodiversity and its sustainable use. A draft National Action Plan (NAP) has been prepared taking inputs from various sources including Draft NEP, Consultants report on NBSAP etc. The draft is under consideration of the Ministry.

GEF-World Bank Capacity Building Project on Biosafety

Objective

The capacity building project will enhance the India's national capacity in order to implement the Cartagena Protocol on Biosafety. India already has in place biosafety regulatory framework in the form of the Rules for Manufacture, Use, Import, Export and Storage of Hazardous Micro-organism/Genetically Engineered Organisms or cells, 1989 notified under the Environment (Protection) Act, 1986. This project will address the capacity building needs of the country for implementing the national biosafety framework related to the transboundary movement of LMOs in the context of the Cartagena Protocol and coordination of the implementation of the Biosafety Clearing House (BCH).

Specifically, the project will develop national capacities in biosafety required to: (i) strengthen the legislative framework and operational mechanisms for biosafety management in India; (ii) enhance capacity for risk assessment and monitoring; (iii) establish the biosafety database system and Biosafety Clearing House Mechanism; (iv) support centers of excellence and a network for research, risk assessment, and monitoring; and (v) establish the Project Coordination and Monitoring Unit (PCMU). The development of national capacities in these areas will enhance the national capabilities for implementation of the biosafety issues. .

Progress/achievements made during the year

- The four identified institutions are being strengthened in terms of equipment and manpower so as to enable them to enhance their capability, handling the Living Modified Organisms (LMOs).
- A project specific website has been launched, which could be accessed at URL: http://www.envfor.nic.in/divisions/csurv/biosafety/default.htm . The first issue of

the Biosafety Newsletter has been published and can be seen in the project website.

- Training programmes have been conducted to enhance the capacity of the policy makers, technical personal at Central and State Governments/Agencies. A Biosafety Clearing House website (www.indbch.nic.in) is being launched for information dissemination in the field of LMOs and also in compliance to the Cartagena Protocol on Biosafety.
- A training need assessment survey has been carried out to identify the gaps and needs for carrying out for training programmes in biosafety. Two meetings of the Steering Committee have so far been held under the Chairmanship of the Special Secretary. The World Bank Supervision Mission has also visited the MoEF and reviewed the progress of the project.

Fig 35. Lesser Adjutant Stork in forest ecosystem

Budget allocation

An amount of Rs.444 lakhs (US$ 1 million) has been earmarked under the Project.

Implementing Organisations

The following four institutions identified for strengthening of laboratories under the project:

- National Bureau of Plant Genetic Resources (NBPGR).
- National Research Centre on Plant Biotechnology (NRCPB).
- Central Food Technological Research Institute (CFTRI).
- G.B. Pant Agricultural University.

Forest Conservation

Objective

The mandate of the Forest Conservation Division is to implement the Forest (Conservation) Act, 1980, which was enacted on 25th October, 1980. This Act deals with grant of forestry clearances for diversion of forest lands for non-forestry purposes in respect of development projects like power, roads, railways, irrigation, mining, schools, defence, drinking water, resettlement & rehabilitation of people etc. This Act is regulatory in nature, not prohibitory.

Activities undertaken

- Since its enactement in 1980 till 31st December, 2005, about 12,535 developmental projects involving 10.09 lakh hectares forest area have been granted forestry clearance. These include the projects for power generation, irrigation, construction of roads, railway lines, transmission lines, drinking water supply projects, village electricity, schools, hospitals etc. Out of these, 1070

developmental projects of various categories involving 85643.87 hectares of forest land, have been granted forestry clearance under the Forest (Conservation) Act, 1980 during the year (upto 31st December, 2005).

✦ Further, to boost the development of underdeveloped area, one time clearance has been granted on 3rd January, 2005 under Forest (Conservation) Act, 1980 for public utility developmental projects involving not more than one hectare of forest land, to be executed by Government Department namely, schools, dispensary/hospital, electric and telecommunication lines, drinking water, water/rainwater harvesting structures, minor irrigation canal, non-conventional sources of energy, skill up-gradation/vocational training centre, power substations, communication posts and police establishments like police stations/outposts/border outposts/watch towers, in sensitive areas.

✦ In tribal areas, general approval under Section-2 of the Forest (Conservation) Act, 1980 has been accorded for underground laying of electric cable and wires to individual household, drinking water supply/water pipelines, telephone lines which involve felling of trees not exceeding 50 numbers per project and are outside the National Parks and Sanctuaries and are laid along the road and validity of the general approval has been extended up to 15th October, 2007.

✦ To provide better means of communication and accessibility to the nearest market to tribal and rural people, it has been conveyed to the State/Union Territory (UT) Governments through a set of detailed guidelines issued under this Act, that for up-gradation of roads constructed in forest areas prior to 1980, from 'Kutchcha to Pucca', without widening, prior permission of Central Government under Forest (Conservation) Act, 1980 is not required. However, if any such projects fall in a National Park/Sanctuary, prior permission of National Board of Wildlife (NBWL) and the Supreme Court is essential.

✦ To provide better living conditions to the tribal and rural people, Central government has issued general approval under Forest (Conservation) Act, 1980 on 9th June 2005, to permit the right holders recognized under Indian Forest Act, 1927, to collect the stones/slates/boulders etc. from forest areas for their bona fide domestic use subject to certain conditions. No commercial use is permitted under this dispensation.

✦ Government is committed to protect the rights of tribal and forest dwellers, other than in-eligible encroachers, on forest lands. Directions have been issued to the State/UT Governments, in this regard not to evict the tribal and forest dwellers, other than in-eligible encroachers, from forest lands till the process of verification of their rights is complete. Fresh guidelines for verification/recognition of rights of tribal forest dwellers on forest land for settlement of disputed claims have also been issued on 3rd November, 2005. These guidelines provide for constitution of village level, block level and district level Committees, procedure to be followed, nature of admissible evidence and criteria for accepting claims for settlement of rights.

✦ The procedure for forestry clearance has been simplified by Forest (Conservation) Rules, 2003. Under the rules, Central Government has fixed time limit of 60 days to take decision on a proposal seeking forestry clearance.

✦ Good practices have been adopted to ensure transparency in the system of forestry clearances. Dates of meetings to be held every month in the Ministry and its Regional Offices have been fixed. Rules, guidelines, status of proposals, approvals are displayed on the Website.

Regional Offices

Introduction

The Ministry has six Regional Offices located at Bangalore, Bhopal, Bhubaneshwar, Lucknow, Shillong and Chandigarh with its headquarter in the Ministry at New Delhi. (Annexure-II-A)

Objectives

The primary function of the Regional Offices are to monitor and evaluate the ongoing forestry projects and schemes with specific emphasis on conservation of forests and follow up action on the implementation of conditions and safeguards laid down by the Ministry which granting clearance to development projects under FCA/EPA. The Regional Chief Conservators of Forests are empowered to decide cases for diversion of forest land for non-forestry purposes upto the extent of five ha. except mining and regularization of encroachment.

Progress of Activities

Region-wise target and achievement of monitoring of approved projects under the Forest (Conservation) Act, 1980 and EPA, 1986 during the financial year 2005-06 are given in Table-5.

Table-5. Statement showing Region wise physical/financial targets and achievement for monitoring of approved project under FC (A) 1980 and EPA 1986 for the year 2005-06 (upto 31.12.2005)

(Rs. in crores)
Phy. in No.

	Physical Targets				Financial Target			
	FCA		EPA		Revenue		Capital	
	Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
2005-06	735	100%	500	100%	4.60	100%	1.18	100%

Physical Targets Region-Wise

S.No.	Regional Offices	FCA	Achievement	EPA	Achievement
1	Bangalore	151	100%	151	100%
2	Bhopal	88	100%	100	100%
3	Bhubaneswar	152	100%	80	100%
4	Chandigarh	92	100%	67	100%
5	Lucknow	160	100%	112	100%
6	Shillong	88	100%	60	100%
	Total	735	100%	570	100%

Forest Policy

Objectives

The Forest Policy Division provides policy support in respect of forestry matters, and reviews the forest policy and its relations to policies of other relevant sectors. Various legal issues viz. the state/central bills related with the forestry matters that required the assent of the the President of India are examined by the Division.

Activities Undertaken

Overriding effect of Forest (Conservation) Act, 1980

The Forest (Conservation) Act, 1980 is regulatory Act and is a special Act having overriding effect over all other Acts in the cases related to diversion of Forest land for non-forestry purposes. This has been

concurred by the Ministry of Law and Justice, Government of India.

Indian Forest (Punjab Amendment) Act, 2004

Comments/concurrence of the Ministry was given, on the Indian Forest (Punjab) Act, 2004.

Guidelines for Felling and Transit Regulations for Tree Species Grown on Non-Forest Private Lands

The National Forest Policy, 1988 lays down that one third of the geographical area of the country should be under forest/tree cover. The Tenth Five Year Plan mandate is to increase the forest and tree cover in the country to 33% of the geographical area by 2012. This target requires additional 9.97% of the geographical area of the country, i.e. 33.60 million hectare to be brought under forest and tree cover. Since almost 85% of the potential lands for additional tree planting would fall outside the notified forestlands, the involvement of non-government sector, including private individuals, is most crucial for achieving the objective. A balance is also needed between regulation and promotion of forestry in private sector. In view of the necessity and importance of achieving the targets, the matter has been considered by the Central Government and accordingly the guidelines for the simplification of felling and transit regulations of trees grown on Non-Forest private lands have been framed. The State/UT governments have been requested to consider the guidelines for augmenting the pace of the tree plantation on private lands.

Conferring ownership of Minor Forest Produce to Forest dependent Communities

The Panchayats (Extension to Scheduled Areas) Act endows ownership of Minor Forest Produce (MFP) with Gram Sabha in scheduled areas. Provision for benefit sharing mechanism with forest dwelling communities through JFMCs exists and the States of Madhya Pradesh, Chhattisgarh, Gujarat, Jharkhand and Maharashtra already have legislation to share benefits of MFP with Panchayats or through Cooperative societies.

There are conflicts between JFMCs and Panchayats with regards to sharing of benefits and ownership of MFP. The Common Minimum Programme of the Union Government also envisages that the State Governments will be urged to make those people from the weaker sections who work in forests. The Ministry has prepared model legislation for conferring ownerships of Minor Forest Products to forest dependent communities in consultation with States/UTs, which is presently with Ministry of Law for vetting.

National Forest Commission

The Ministry constituted the National Forest Commission on 7th February, 2003, to review the working of Forests and Wildlife Sector with the following terms of reference:

- ✦ Review and assess the existing policy and legal framework and their impact in a holistic manner from the ecological, scientific, economic, social and cultural view point.
- ✦ Examine the current status of forest administration and the forestry institutions both on all India and State level to meet the emerging needs of the civil society.
- ✦ Make recommendations indicating policy options for achieving sustainable forest and wildlife management and development, bio-diversity conservation and ecological security.
- ✦ Suggest ways and means to make forest administration more effective with a view to help to achieve the above policy options.
- ✦ Establish meaningful partnership and interface between forestry management and local communities including tribals.

Accordingly four sub committees under National Forest Commission have been constituted on 18th August, 2004 to report on the above terms of reference of National

Forest Commission. The term of the National Forest Commission has been extended upto 31st March, 2006.

Integrated Forest Protection Scheme

Introduction

Integrated Forest Protection Scheme (IFPS) has been formulated by the merger of two schemes of the 9th Five Year Plan namely 'Forest Fire Control and Management' and 'Bridging up of Infrastructural Gaps in the Forestry Sector in the North Eastern Region and Sikkim'. It is operational from 2002-03. The scheme covers all the States and UT's for the 10th Five Year Plan period.

Objectives

The main components of the scheme are:

- Infrastructure Development
  - Working plan preparation/Survey and Demarcation
  - Strengthening of Infrastructure for Forest Protection
- Forest Fire Control and Management

The Central Sector Component of the Scheme is implemented by the Forest Protection Division of the Ministry in association with Forest Survey of India, Dehradun and other Central Institutions like Indian Council of Forestry Research and Education, Dehradun, Indian Institute of Forest Management, Bhopal, National Centre for Medium Range Weather Forecasting.

The State Sector Component of the Scheme is being implemented by the Forest Departments of the concerned State Governments and UT's.

Fig 36. A panoramic view of Zanskar Valley, Himalayas

Activities undertaken

The Central Assistance is provided for various activities which will help to protect and improve the existing forest. The major items include communication, mobility, fire fighting measures, construction of offices and residences particularly of the front line staff, technology upgradation and skill development, survey and demarcation and writing of working plans, assistance to JFMC's etc.

Budget Allocation

The budget allocation of the scheme for 2005-06 is Rs.32.93 crore of which Rs.12.00 crore is earmarked for the North Eastern Sector.

Wildlife Conservation

Progress of Activities

Progress of activities under different programmes of Wildlife Conservation is as follows:

National Board for Wildlife

Fig 37. Roosting of bats *(Pteropus giganticus)*, Rajmahal, Jharkhand

The 2nd meeting of the National Board for Wildlife (NBWL) was held on 17th March 2005 at New Delhi, under the Chairmanship of Hon'ble Prime Minister. The important decisions taken during the meeting included setting up of a Tiger Task Force; Setting up of a Task Force for Trans-boundary Protected Areas, Setting up of Committees for revision of floral and faunal species included in the Schedules of the Wildlife (Protection) Act, 1972; ban on gifting of wild animals by Heads of State; conservation of vultures in the country by phasing out the use of veterinary drug 'diclofenac' and setting up of a National Wildlife Crime Control Bureau. The meetings of the Standing Committee of NBWL were also held to consider proposals for diversion of forest lands within Protected Areas of the country for non forestry purposes and for deliberating on issues pertaining to wildlife management in the country.

Development of National Parks and Sanctuaries

Financial and technical assistance was provided to 316 Protected Areas of the country under the Centrally Sponsored Scheme "Development of National Parks and Sanctuaries". A scheme for "Protection of Wildlife Outside Protected Areas" has been given in principal approval by the Planning Commission and will be implemented from 2006-07.

International Conference on Vulture Conservation

There has been a global concern over decline in the population of vultures, especially the *Gyps* species, in the entire Indian sub continent. Due to the rapid decline, all the three *Gyps* species have been listed as Critically Endangered by the International Union of Conservation of Natural Resources (IUCN). Ministry has initiated ameliorative actions to prevent further decline and also for conservation through captive breeding of vultures. The meeting of National Board for Wildlife held during March, 2005 under the Chairmanship of Hon'ble Prime Minister of India also recommended banning of the veterinary drug "diclofenac". An International Workshop on Vulture Conservation was organized for strengthening conservation efforts on a regional level for curbing this decline.

Fig 38. Red Headed Vulture *(Sarcogyps calvus)* at Desert National Park, Rajasthan

International Conservation on Wildlife Conservation

- India is a signatory to a number of International Conventions of Conservation of Wildlife. The Ministry hosted an international conference at New Delhi from 10th to 13th June 2005, to discuss the draft Action Plan for the migratory birds of Central Asian Flyway and conservation of Siberian Cranes. The meeting was convened under the Convention on Conservation of Migratory Species (CMS). All range countries of the Central Asian Flyway and renowned International conservation agencies participated in the meeting. A Siberian Crane Network of the Range States has been set up

with India as a member and Keoladeo National Park as one of the sites identified. The eighth COP of CMS was held in Nairobi, Kenya, where India's role and efforts for the Central Asian Flyway were lauded.

✦ India is a signatory to the Convention on International Trade in Endangered Species (CITES). Being an alternate member of the Standing Committee from the Asian region, an Indian delegation attended the meeting at Geneva.

Fig 39. Pangolin coil up at slightest possible threat (inset)

✦ During the 29th Session of the World Heritage Committee held at Durban, inclusion of 'Valley of Flowers' National Park, Uttaranchal, to the list of World Heritage Sites was unanimously approved, as an extension to the Nanda Devi National Park, Uttaranchal. The renowned Kaziranga National Park, Manas National Park (Assam), Sunderbans (West Bengal), Keoladeo National Park (Rajasthan) and the Nanda Devi National Park (Uttaranchal) are already listed as natural World Heritage Sites.

An MOU has been signed to establish a country office of The World Conservation Union, IUCN, in India.

Avian Influenza

India is a major non-breeding (wintering) grounds for different waterbird populations from the north east (China) and west (from Caspian Sea eastwards across Siberia and Central Asia). Populations from different regions can freely interact while in India. In the wake of global threat of bird flu all States were directed to step up surveillance of areas frequented by migratory birds. A Cell has been constituted for monitoring the threat with respect to migratory birds. Consultations are being carried out with Department of Animal Husbandry, Ministry of Health and other concerned agencies in this regard.

Animal Welfare

Introduction

The Animal Welfare Division in the Ministry is entrusted with the implementation of the Provisions of the Prevention of Cruelty to Animals Act, 1960 (59 of 1960). Plan Schemes are in operation for implementation of the statutory obligations bestowed under this Act. Two statutory organizations viz. Animal Welfare Board of India (AWBI) and Committee for the Purpose of Supervision and Control of Experiments on Animals (CPCSEA) are also set up under this Act. The Mandate of Animal Welfare Division is to prevent the infliction of unnecessary pain or suffering on animals. To accomplish this mission three-pronged approach is being adopted by the Division.

Objectives

Regulatory

The main task of the Division is to implement effectively the various provisions of Prevention of Cruelty to Animals Act, 1960. Under this Act, a number of Rules have been framed for various purposes. Some of the important Rules framed are:

- Performing Animals Rules, 1973 & Performing Animals (Registration) Rules, 1972
- Transport of Animals Rules, 1978 & 2001
- Prevention of Cruelty (Slaughter Houses) Rules, 2000
- Prevention of cruelty to Animals (Establishment and Regulation of Society for Prevention of Cruelty to Animals) Rules, 2001
- Animal Birth Control (Dogs) Rules, 2001; and
- Breeding of and Experiments on Animals (Control and Supervision) Rules, 1998 as amended in February, 2001.

Activities Undertaken under Regulatory Objectives

The following action has been taken for ensuring more effective regulation/implementation of these Rules:

- Rules under the Prevention of Cruelty to Animals Act, 1960 which were notified by Animal Welfare Division, have been laid on the table of both Houses of Parliament during 2003-04.
- Five proformae for monitoring compliance of Transport Rules, Slaughter House Rules, Performing Animals and Registration Rules, Registration of Cattle Premises Rules and Draught and Pack Rules have been sent to all State Departments of Animal Husbandry, Home, Urban Development and Transport for furnishing quarterly performance report.
- The cases of mass killing of the dogs by Municipalities like Madurai, Kancheepuram, Coimbatore, Vizag, Kakinada, Warangal, Palaghat, Darjeeling etc. illegal slaughter of animals, use of animals in circuses, cruelty to elephants, cruelty to animals in films, cruelty in zoo and animal sacrifice were reported to the Animal Welfare Board of India. Necessary steps were immediately taken by the Board for taking stringent action against the offenders. The Board won several cases against animal cruelties and offenders were punished. The Animal Welfare Board of India received complaints in 2003 that the Gemini Circus was exhibiting banned animals (tigers, lions, panthers, monkeys and bears). The Board had written letter to the Gemini Circus to hand over these banned animals to Zoological Parks. The Gemini Circus agreed to hand over the banned animals.
- During the year, the Animal Welfare Board of India received complaints about 13 cruelty cases. Preventive actions were taken by the Board contacting the District Collectors and Superintendent of Police to mitigate the sufferings of animals.

Developmental

The Division releases funds to the Animal Welfare Board of India for further disbursement of Animal Welfare Organizations (AWOs) for construction of Shelter Houses, Dispensaries etc. for stray, infirm & abandoned animals. It also releases funds to the Animal Welfare Board of India (AWBI) for further disbursement of AWOs/Society for Prevention of Cruelty to Animals (SPCA) grants for ambulances & vehicles in connection with treatment and transportation of sick, injured and rescued animals and for implementation of programme for sterilization and immunization of dogs.

Progress of Activities under Developmental Objectives

Scheme for Shelter Houses for Looking after the Animals – The objective of this scheme is to establish and maintain shelter houses for distressed animals in the country. Primarily NGOs, SPCAs are given grant up to Rs.22.50 lakhs for construction of boundary wall, Shelters, water tank, drains In-house Dispensary, Medical Equipment, and contingencies etc.

During the year out of targeted 32 Shelter Houses, 31 have been.

Scheme for Animal Birth Control and Immunization of Stray Dogs – The scheme is meant for controlling the population of stray dogs by sterilization & reducing incidences of Rabies by immunization. The NGOs and SPCAs working in collaboration with local bodies are eligible for this grant. The scheme has had the desired impact specially in large cities like, New Delhi, Mumbai, Ahmedabad, Panaji, Vishakhapatnam, Pune, Kolkata, Chennai, Bangalore and Hyderabad and there has been a perceptible improvement in controlling the dog population.

This is Centrally Sponsored Scheme under which financial assistance is give @ Rs.370/- per dog for pre & post operative care including medicines & ARV and Rs.75/- per dog for catching and relocation of the dog. The aid is released in two equal instalments.

During the year over 66000 dogs have been sterilized and immunized.

Scheme for Provision of Ambulance Services to Animals in Distress – Under this scheme the animal welfare organizations are given grant for purchase of suitable vehicle for transportation, rescue and also for providing emergency services to animals in distress. The availability of ambulance serves many purposes:

- ✦ To ensure that immediate attention is given to sick, injured and animals in distress.
- ✦ To act as an outreach for poor people who have large animals that are accident cases or disease affected.
- ✦ To act as mobiles clinics to hold camps where animals in a village can be vaccinated and treated.
- ✦ To pick up unwanted or hostile animals from colonies.
- ✦ To implement the anti-rabies programme by taking away dogs and then releasing them after sterilization and immunization.
- ✦ To transport animals to the veterinary hospital when their owners cannot do so.

The above Scheme is a Centrally Sponsored Scheme and the NGOs are assisted to the extent of 90% of project cost of purchase of a suitable vehicle and equipment and fitting thereon. The maximum amount of grant-in-aid is limited to Rs.3.50 lakhs for purchase of vehicle and Rs.1.00 lakhs for equipments and fitting thereon.

During the year 20 ambulances have been given to the AWOs till 7th March, 2006.

Scheme for Relief to Animals During Natural Calamities and Unforeseen Circumstances – Every year, there are natural calamities in the form of floods, droughts or earthquakes. In such circumstances there is an immediate requirement for provision of fodder, adequate shelter, medical attention etc. for the affected animals or otherwise they are smuggled across the borders for slaughter.

Other Schemes

The Animal Welfare Board of India is engaged in the task of spreading humane education i.e. showing love and compassion towards animals as enshrined in Article 51A(g) of the Constitution of India.

Under Educational Programmes, two zonal training workshops for CPCSEA nominees were also organized at Chennai and Mumbai in February, 2005 and October, 2005 respectively. Further, the Committee for Purpose of Control & Supervision of Experiments on Animals (CPCSEA) organized a national symposium on "Alternative Teaching and Research Method on Animals experimentation in Veterinary Survey in collaboration with Indian Society for Veterinary Surveys at Indian Veterinary Research Institute (IVRI), Izatnagar, U.P. from 9th–11th November, 2005.

During the year, the Board brought out special issues of the quarterly journals 'Animal Citizen' and "Jeev Sarthy" on various important issues like Humane Education for school children and How to set up a SPCA/AWO, misuse of oxytocin, Tsunami etc. The Board is also publishing a monthly "Newsletter" covering important animal welfare news like High Court judgements, cases of cruelty to animals etc.

The regular publication of Newsletters of AWBI have also been carried for dissemination of information.

The following three schemes are directly implemented by Animal Welfare Division

National Institute of Animal Welfare (NIAW) – Proposal was mooted to establish National Institute of Animal Welfare (NIAW) in village Sikri, District Faridabad, Haryana with the objective of imparting education and training in animal welfare on diversified basis comprising animal management, their behaviour and ethics. The aim is to create an enabling environment for fulfillment of the statutory requirements as laid down in the Prevention of Cruelty to Animals Act, 1960. The construction work of NIAW building and external bulk services has been completed and the courses are to be started shortly. To begin with, it has been decided to start with in-service and other training courses. A road map is also being prepared for Degree, Diploma and other courses. The NIAW has been operationalized with commencement of in services and other training programme w.e.f. 2nd January, 2006.

Animal Welfare Board of India (AWBI) – This is statutory body under Section 4 of the Prevention of Cruelty to Animals Act 1960, with head quarters at Chennai. Its basic mandate is to advise the Government on animal welfare issues, and create awareness in animal welfare.

Animal Welfare Board of India (AWBI) gives financial assistance to eligible Animal Welfare Organisations for regular schemes viz. maintenance of animal shelters, medicines, purchase of medical equipment and for conducting of veterinary camp etc.

The number of recognized animal welfare organizations has increased to 2180 upto March, 2005. The Board has been granting recognition to AWOs. For the current financial year 2005-2006, the Board has accorded recognition to 82 organizations. Thus the total number of recognized AWOs has reached to 2262.

Animal Welfare Fortnight from 14th to 30th January, 2005 and World Day for Animals on 4th October, 2005 were celebrated throughout the country by various AWOs/SPCAs, Animal Husbandry Department and Animals lovers. First aid was provided by the Board to sick and injured animals and stray animals were also fed by the Board on this occasions.

The AWBI has granted permission to perform animals in films and ad film to 103 film companies and also the Board issued certificates to 13 Circus companies under the Performing Animals (Registration) Rules, 2001.

In recognition of the meritorious work of the Board in the last one year in the direction of mitigating animal sufferings, the National magazine "Public Sector Today" conferred the Rajiv Gandhi National Golden Award 2005 to the Animal Welfare Board of India.

Committee for Purpose of Control & Supervision of Experiments on Animals (CPCSEA) – This is also

a statutory body under Section 15 of Prevention of Cruelty to Animals Act, 1960 with head quarters at Chennai. The mandate of this Committee is to ensure that while conducting various types of experiments, in connection with medical research or education, animals are not subjected to avoidable pain or suffering. The main function of this Committee is to register institutions carrying out animal experimentation and/or breeding; to consider approval of animal house facility; and to permit conduct of animal experimentation.

So far 922 Units have been registered with this Committee. More than sixty clearances with regard to animal experimentation have been given. Two zonal training workshops for CPCSEA nominees were also organized at Chennai and Mumbai in February, 2005 and October, 2005 respectively. Further, the CPCSEA has organized a national symposium on "Alternative Teaching and Research Method on Animals experimentation in Veterinary Survey in Collaboration with Indian Society for Veterinary Surveys at Indian Veterinary Research Institute(IVRI), Izatnagar, U.P. during 2005.

Budget Allocation

The budget estimate under Animal Welfare for its various schemes is Rs.19.00 crores during 2005-06 which has been reduced to Rs.16.16 crores at RE stage.

Project Tiger

Introduction and objective

Project Tiger was launched in 1973 with an objective "to ensure maintenance of a viable population of Tigers in India for scientific, economic, aesthetic, cultural and ecological values, and to preserve for all times, areas of biological importance as a national heritage for the benefit, education and enjoyment of the people". The Project has been successfully implemented, and at present there are 28 Tiger Reserves in 17 states, covering an area of 37,761 sq. km. as shown in Table-6. The selection of reserves was guided by the need to conserve unique ecosystem/habitat types across the geographic distribution of tigers in the country.

The network of Tiger Reserves include high mountainous terrains of Arunachal Pradesh, the heavy rainfall areas of Assam and West Bengal, the estuarine mangroves of Sunderbans, the dry forests of Rajasthan, the foothills of the Himalayas in Uttaranchal, Uttar Pradesh and Bihar, the Central Indian Highlands of Madhya Pradesh ,Chattisgarh, and Maharashtra, the plateau of Chota Nagpur (Jharkhand), the hilly tropical and evergreen forests of Orissa, the evergreen forests of Western Ghats in Kerala and Karnataka, the dry deciduous forests of Andhra Pradesh and the Southern moist deciduous forests of Tamil Nadu. 'Project Tiger' is undisputedly the custodian of major gene pool of the country and a repository of some of the most valuable ecosystem and habitats for wildlife.

Fig 40. A tiger in its habitat in Tadoba National Park, Maharashtra

The tiger reserves are constituted for the purpose of management on a 'core' – 'buffer' strategy. In the core area, forestry operations, collection

Table-6. Tiger Reserves

S.No.	Year of creation	Name of Tiger Reserve	State	Total area (in Sq. Kms.)
1	1973-74	Bandipur	Karnataka	866
	1999-2000	Nagarhole-(extension)		643
2	1973-74	Corbett	Uttar Pradesh	1316
3	1973-74	Kanha	Madhya Pradesh	1945
4	1973-74	Manas	Assam	2840
5	1973-74	Melghat	Maharashtra	1677
6	1973-74	Palamau	Bihar	1026
7	1973-74	Ranthambore	Rajasthan	1334
8	1973-74	Similipal	Orissa	2750
9	1973-74	Sunderbans	West Bengal	2585
10	1978-79	Periyar	Kerala	777
11	1978-79	Sariska	Rajasthan	866
12	1982-83	Buxa	West Bengal	759
13	1982-83	Indravati	Madhya Pradesh	2799
14	1982-83	Nagarjunsagar	Andhra Pradesh	3568
15	1982-83	Namdapha	Arunachal Pradesh	1985
16	1987-88	Dudhwa	Uttar Pradesh	811
	1999-2000	Katerniaghat-(extension)		551
17	1988-89	Kalakad-Mundanthurai	Tamil Nadu	800
18	1989-90	Valmiki	Bihar	840
19	1992-93	Pench	Madhya Pradesh	758
20	1993-94	Tadoba-Andheri	Maharashtra	620
21	1993-94	Bandhavgarh	Madhya Pradesh	1162
22	1994-95	Panna	Madhya Pradesh	542
23	1994-95	Dampha	Mizoram	500
24	1998-99	Bhadra	Karnataka	492
25	1998-99	Pench	Maharashtra	257
26	1999-2000	Pakui	Arunachal Pradesh	862
28	1999-2000	Nameri	Assam	344
28	1999-2000	Bori, Satpura, Panchmari	Madhya Pradesh	1486
Total				**37761**

of non-timber forest produce, grazing, human settlement and other biotic disturbances are not allowed, and is singularly oriented towards conservation. The buffer zone is managed as a 'multiple use area', with conservation oriented land use, having the twin objectives of ensuring habitat supplement to the spillover population of wild animals from the core, apart from providing site specific eco-developmental inputs to stake holder communities. The main thrust of the project is protection and mitigation of deleterious human impacts with a view to comprehensively revive the natural ecosystems in the reserves. During the X Plan the major thrust would be further enlarge and diversify the activities and consolidate the progress made under the scheme hitherto.

Progress/ Achievements made (as on 31st January,2006)

- ✦ Protection, conservation and management of Tiger reserves in Tiger range states were undertaken.
- ✦ Primary data collection pertaining to all India Estimation of Tiger, co-predator and prey animals was carried out using the enhanced methodology standardized by the Project Tiger Directorate in collaboration with the Wildlife Institute of India (WII). Both internal as well external peers were involved in the process.
- ✦ The Tiger Reserves were monitored by a panel of experts using 45 criteria based on the format of World Commission on Protected Areas (IUCN), which was peer reviewed by the IUCN.

Physical Achievements

Funding support provided to 23 Tigers reserves for protection, conservation and management of Tiger reserves.

Four North Eastern States were financially supported for protection, conservation and management of Tiger reserves.

State-wise status

State-wise release of financial assistance is given in Table-7.

Regulatory Acts/Rules governing the programme

A bill has been introduced in parliament to amend the Wildlife Protection Act, 1972 for providing Statuary Authority to Project Tiger.

Budget Allocation of the Scheme

An amount of Rs.32.00 crore has been allocated under this Centrally Sponsored Scheme during the financial year 2005-06.

Implementing organization along with details

Funding support under the scheme is provided to state

Table-7. State-Wise Release of financial assistance

(Rs. in Lakhs)

Sl. No.	Name of Tiger Range State	2005-06
1.	Andhra Pradesh	61.0426
2.	Arunachal Pradesh	111.428
3.	Assam	86.4896
4.	Bihar	6.4918
5.	Chattisgarh	24.3343
6.	Karnataka	362.0546
7.	Kerala	110.9608
8.	Jarkhand	164.1784
9.	Madhya Pradesh	661.6376
10.	Maharashtra	285.44
11.	Mizoram	52.156
12.	Orissa	107.0024
13.	Rajasthan	168.9858
14.	Tamil Nadu	136.9528
15.	Uttanchal	158.9212
16.	Uttar Pradesh	162.8782
17.	West Bengal	215.02358
	Total	**2875.97768**

government concern having Tiger Reserves through annual plan of operation. State Forest department implements the activities as per the approved annual plan of operation. State government provides 50% financial support for recurring items.

Biodiversity Conservation Rural Living and Improvement Project (BCRLIP) – Externally aided Project

The objective of the project is to conserve biodiversity, while improving rural livelihoods through testing and establishing decentralized participatory approaches across a range of globally and nationally important landscapes under different management regimes. (six landscapes)

Activities undertaken so far

Consultancy services for preparation of Project document has been awarded.

Progress/Achievements made during the year

LOI has been issued for award of consultancy services for social and environmental assessment.

Budget Allocation

The budget allocation of the Scheme is Rs.100 lakhs (Plan).

Project Elephant

Introduction & Objectives

Project Elephant was launched in February, 1992 to assist States having free ranging populations of wild elephants to ensure long term survival of identified viable populations of elephants in their natural habitats. The Project is being implemented in 13 States, viz Andhra Pradesh, Arunachal Pradesh, Assam, Jharkhand, Karnataka, Kerala, Meghalaya, Nagaland, Orissa, Tamil Nadu, Uttaranchal, Uttar Pradesh and West Bengal. States are being given financial as well as technical assistance in achieving the objectives of the Project. Help is also provided to other States with small populations of elephants for the purpose

Fig 41. Elephant herd in Kaziranga National Park

of census, training of field staff and mitigation of human- elephant conflict.

Activities undertaken

- ✦ Strengthening of measures for protection of wild elephants from poachers.
- ✦ Development of scientific and planned management for conservation of elephants habitats and viable population of wild Asiatic elephants in India.
- ✦ Ecological restoration of existing natural habitats and migratory routes of elephants.
- ✦ Promotion of measures for mitigation of man-elephant conflict in problem areas and moderating pressures of human and live stock on crucial elephant habitats.
- ✦ Eco-development
- ✦ Veterinary care
- ✦ Research on elephant issues relating to elephant conservation.
- ✦ Public education and awareness programme
- ✦ Capacity building of field staff, mahouts and veterinarians.

Progress / Achievements during the year

- ✦ Financial assistance was provided to the elephant range states including NE States for the purpose of habitat management, mitigation of man-elephant conflict, payment of ex-gratia relief for loss of life human and crop caused by wild elephants, strengthening of anti-poaching measures, capacity building of the field staff, registration of domesticated elephants using microchips etc.
- ✦ 25 ERs notified by various state governments till 2005 and consent given for three – Baitarani and South Orissa in Orissa and Ganga – Jamuna in U.P.
- ✦ List of Elephant Reserves with area and elephant population is given in Table-8.
- ✦ Steering Committee of PE reconstituted
- ✦ First time enumeration of elephants in all ERs done with two sampling methods – Block and line Transact –Dung Count
- ✦ Arrangements for refresher courses for elephant veterinarians were made with the help of Kerala Agricultural University (Trichur).
- ✦ Training programme for mahouts were organized in Assam and Kerala.
- ✦ Four year research project on "Efficacy of immuno-contraceptives on domesticated Asian cow elephants" sanctioned to Assam Agricultural University in collaboration with the State Forest Departments of Assam and West Bengal with the technical support of the International Elephant Foundation.
- ✦ Programme has been initiated for the regular and systematic monitoring of wild elephants under the MIKE (Monitoring of Illegal Killing of Elephants) and under CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora). Ten sensitive sites have been identified for this purpose in different parts of the country. India was elected as the chairperson of the sub-regional steering committee of MIKE for South Asia.
- ✦ A Wildlife Crime Cell was set up under the Project Elephant Division to prepare a database on wildlife offences and strengthen informer network in some sensitive areas in the country. A training programme for the frontline staff of the State Forest Departments in criminal investigation techniques was organized with the help of National Institute of Criminology & Forensic Sciences in New Delhi in January, 2005.
- ✦ Elephant Day was celebrated during the Wildlife Week (October 2005) in all the Elephant Reserves in the country.

Table-8. List of Elephant Reserves

Sl. No.	Elephant Range	Elephant Reserve	State	Total Area (Sq. Km)	P.A. (Sq. Km)	Elephant Population
I	Eastern India (South West Bengal-Jharkhand-Orissa)	1.Mayurjharna ER (24.10.02)	W. Bengal	414	-	56
		2. Singhbhum ER (26.0.01)	Jharkhand	4530	193	300
		3. Mayurbhanj ER (29.9.01)	Orissa	3214	1309	512
		4. Mahanadi ER (20.7.02)❖	Orissa	1038	964	204
		5. Sambalpur ER (27.3.02)❖	Orissa	427	427	284
		6. Baitarni ER#	Orissa	1755	-	145
		7. South Orissa ER^	Orissa	4216	750	185
	Total			**15594**	**3643**	**1650+**
II	North Brahamputra (Arunachal – Assam)	8. Kameng ER (19.6.02)	Arunachal	1892	748	377
		9. Sonitpur ER (6.3.03)	Assam	1420	420	577
	Total			**3312**	**1168**	**954**
III	South Brahamutra (Assam – Arunachal)	10. Dihing-Patkai ER (17.4.03)	Assam	937	345	457
		11. Deomali (South Arunachal) ER^	Arunachal	900+		150+
	Total			**1,837+**	**345**	**600+**
IV	Kaziranga (Assam – Nagaland)	12. Kaziranga – Karbi Anglong ER (17.4.03)	Assam	3270	1073	1000
		13. Dhansiri-Lungding ER (19.4.03)	Assam	2740		430
		14. Intanki ER (28.2.05)	Nagaland	202	202	28
	Total			**6212**	**1275**	**1,458**
V	Eastern Dooars (Assam – W. Bengal)	15. Chirang-Ripu ER (7.3.03)	Assam	2600	526+	807
		16. Eastern Dooars ER (28.8.02)	W. Bengal	978	484	165
	Total			**3,578**	**1010**	**972**
VI	E. Himalayas (Meghalaya)	17. Garo Hills ER (31.10.01)	Meghalaya	3,500	402	878
		18. Khasi Hills ER^	Meghalaya			
	Total					
VII	Nilgiri – Eastern Ghat (Karnataka-Kerala-Tamil Nadu-Andhra)	19. Mysore ER (25.11.02)	Karnataka	6724	3103	5838
		20. Wayanad Er (2.4.02)	Kerala	1200	394	961
		21. Nilgiri ER (19.9.03)	Tamil Nadu	4663	716	1938
		22. Rayala ER (9.12.03)	Andhra	766	525	74
	Total			**13335**	**4738**	**8811**
VIII	South Nilgiri (Kerala – Tamil Nadu)	23. Nilambur ER (2.4.02)	Kerala	1419	90	886
		24. Coimbatore ER (19.9.03)	Tamil Nadu	566	482	132
	Total			**1985**	**572**	**1018**
IX	Western Ghat (Tamil Nadu – Kerala)	25. Anamalai ER (19.9.03)	Tamil Nadu	1457	300	680
		26. Anamudi ER (2.4.02)	Kerala	3728	780	750
	Total			**5185**	**1080**	**1430**
X	Periyar (Kerala – Tamil Nadu)	27. Periyar (2.4.02)	Kerala	3742	1058	1268
		28. Srivilliputtur ER (19.9.03)	Tamil Nadu	1249	568	223
	Total			**4991**	**1626**	**1491**
XI	Northern India (Uttaranchal – U.P.)	29. Shivalik ER (28.10.02)	Uttaranchal	5405	1340	1391
		30. Ganga-Jamuna ER^	U.P.	744	-	40
	Total			**6149**	**1340**	**1431**
	Total			**58,900+**	**16,400+**	**20,150+**

Approved by Government of India, but not yet notified by the State Government

❖ Proposal for extension approved by Government of India, but not yet notified by the State Government

✾ Under consideration

Central Zoo Authority

Introduction & Objective

Central Zoo Authority (CZA) was created by the Government of India through an amendment of the Wildlife (Protection) Act, in 1992.

Objective

The main objective of CZA was to enforce minimum standards and norms for upkeep and healthcare of animals in Indian Zoos and to restrain mushrooming of unplanned and ill conceived zoos that were cropping up as adjuncts to public parks, industrial complexes and wayside.

The CZA is a 12 Member body headed by a Chairman. The Minister, Environment & Forests, is presently ex-officio Chairman of the Authority and the Chief Executive Officer of the Authority as Member Secretary.

To carry out the function of the Authority, two Committees, namely, Administrative Committee to decide on administrative and budgetary issues and Technical Committee to take decisions on all technical matters, have been constituted. Three Sub-Committees, on Zoo Designing, Conservation Breeding and Research & Education have also been created involving experts to give suggestions and recommendations on technical issues.

Activities undertaken

Recognition of Zoo Rules, 1992

In order to evaluate and provide accreditation to the zoos in the country, the Recognition of Zoo Rules, 1992 were framed under the Wildlife (Protection) Act. There are 51 standards and norms which have been prescribed for compliance by the zoos. The Rules prescribe type of housing facility to be provided for the animals, healthcare, hygiene, feeding and overall upkeep of the animals, the minimum number of trained personnel to be posted in the zoo and visitor facilities. Keeping in view of the growing advancement in the field of captive animal management, these Rules were amended from time to time, last being in 2004.

National Zoo Policy

- To give proper direction and thrust to the management of Zoos in the country, the National Zoo Policy was framed and adopted by the Government in 1998. The main objective of the Zoos under the National Zoo Policy is to complement and strengthen the national efforts in conservation of rich bio-diversity of the country, particularly the wild fauna. Zoos can achieve this by supporting the conservation of endangered species by giving species, which have no chance of survival in wild, a last chance through coordinated breeding under *ex-situ* conditions and raise stocks for rehabilitating them in wild as and when it is appropriate and desirable.
- Zoos are also required to inspire amongst visitors empathy for wild animals, an understanding and awareness about the need for conservation of natural resources and for maintaining the ecological balance. Opportunities for carrying out scientific studies useful for conservation in general and creation of data base for sharing between the agencies involved in *in-situ* and *ex-situ* conservation are also the objectives enshrined in the policy.
- The Zoos also continue to function as rescue centres for rescued/ orphaned wild animals subject to the availability of appropriate housing and upkeep infrastructure. Where appropriate housing and upkeep is not available, the Government would ascertain setting up rescue facilities in off display areas of the Zoo subject to the availability of land. The National Zoo policy also details the strategy Zoos need to adopt for achieving the goals enshrined in it.

Classification and accreditation of Zoos

- In order to decide standards and norms for recognition of zoos and monitoring and evaluating their performance, the Zoos have been classified into four categories, namely, Large, Medium, Small and Mini on the basis of number of animals, species, endangered species and number of animals of endangered species exhibited.

Out of 418 applications received by the Central Zoo Authority, only 342 are qualified as Zoos. The details of zoos evaluated and recognized are given in Table-9.

Table-9. Details of recognised zoos.

Category	Application received	Zoo in existence/ Evaluated	Recognized	Recognition cancelled or not recognized
Large	19	19	19	-
Medium	12	12	12	-
Small	27	27	27	-
Mini Zoos	360	284	101	183
Total	**418**	**342**	**159**	**183**

Out of 183 Zoos, which were not granted recognition, 92 Zoos (Deer Parks and Mobile Zoos) have already been closed on ground.

- After the amendment of the Wildlife (Protection) Act in 2003, Rescue Centres and Circuses have also been brought under the definition of Zoo. A total of 57 Rescue Centres and 26 Circuses have applied to the Authority for seeking accreditation. These facilities are being evaluated by the Authority.
- Fourteen Zoos, which were having inappropriate housing and existing in very small areas have extended at their existing site or have moved to alternative larger naturalistic areas.

Release of financial assistance for improvement of Zoos

- The CZA also provides some financial assistance for improvement/ development of the public sectors Zoos in India. Preparation of master plan, creation of better housing for Zoo animal, Conservation Breeding Centres, Rescue Centres, veterinary facilities and research activities are funded on 100% basis. But expenditure on other developmental works, signages etc. is shared between the CZA and the Zoo operators on 50:50 basis.

Conservation Breeding of Endangered Species

- Apart from functioning as Centres of Conservation Education, Conservation breeding of endangered species, which have no chance of survival in wild, through coordinated breeding under *ex-situ* conditions and raising stock for rehabilitating them in wild is the objective of the Zoos in India. There are many ongoing conservation breeding programmes in off-display conservation breeding centres of the Zoos or specially created facilities for the purposes in the country. Conservation breeding programmes for Snow leopard and Red panda in Darjeeling Zoo, Asiatic lion in Junagarh, Lion tailed macaque in Chennai, Pygmy hog in Guwahati and Western Tragopan in Himachal Pradesh are some of the ongoing programmes.
- A Sub-Committee on Conservation Breeding has been set up in the CZA during 2005. The Sub-Committee will monitor and give suggestions/ recommendations to the Technical Committee on the issue.

Rescue and Rehabilitation

Rescue of circus and orphaned animals

The Government has banned use of lions, tigers, leopards, bears and monkeys for performing purposes in Circuses in the country. The Circuses and Rescue Centres have also been brought under the definition of 'Zoos' in India. The CZA has created seven Rescue Centres in the off-display areas of the existing Zoos for rehabilitation of the circus animals. More than 400 Lions and Tigers in addition to many Leopards, Bears and Monkeys from the Circuses have already been rehabilitated in the Rescue Centres. Around 100 more Lions and Tigers are in the process of rehabilitation.

The CZA has very recently decided to fund creation of planned composite rescue centres in the off-display areas of at least one of the existing Zoo/ Rescue Centre in each State of the country for rehabilitation of animals of different wild animal species rescued because of man-animal conflicts, straying of animals into human habitations, orphaned young, injured animals and animal seized from Circuses, street performers and miscreants.

Rescue and rehabilitation of animals seized from traders

The CZA took initiative and coordinated with the CITES Authorities in India and South-East Asia in rescue operation of around 2,000 Star tortoises, which were smuggled out the country. These Tortoises were initially rehabilitated in the Nehru Zoological Park, Hyderabad. Strategy for their final rehabilitation in the wild has also been drawn up as per the IUCN protocol.

Health care of wild animals in Zoos

All the Zoos in India are equipped with small veterinary units along with veterinary personnels required under the Recognition of Zoo Rules, 1992.

With a view to provide specialized disease diagnostic and referral facilities to the Zoos in the country, the CZA is providing financial assistance to the veterinary colleges/ universities/ hospitals in each State. Indian Veterinary Research Institute, Bareilly is being developed as a national referral centre to provide super specialty service to the Indian Zoos to deal with the issue of health care of wild animals in captivity. A study on disease diagnosis and cure of wild animals in Indian Zoo has been negotiated to be awarded to the Indian Veterinary Research Institute, Bareilly.

Research, Education and Training

To bring in holistic development of Zoos in India and to infuse more technical and scientific culture in operation of our Zoos, the CZA has decided to initiate scientific studies in some areas of Zoo management involving Scientists/ Institutions working in the field of wildlife conservation or related fields of animal science. Some of the areas/ field along with the institutions dealing with the issues taken up for conducting such studies are:

- ✧ Zoo Design and Architecture – School of Planning & Architecture, New Delhi;
- ✧ Standardization of Animal Diet in Captive Conditions – National Institute of Animal Nutrition and Physiology, Bangalore;
- ✧ Disease Diagnosis & Cure – Indian Veterinary Research Institute, Bareilly;
- ✧ Use of Bio-Technological Interventions – Centre for Cellular & Molecular Biology, Hyderabad;
- ✧ Zoo Education & Interpretation – Centre for Environmental Education, Ahmedabad; and

- ✧ Training for Zoo Personnels, Stakeholders and Policymakers – Wildlife Institute of India, Dehradun. Wildlife Institute of India, Dehradun

- ✦ The CZA has also decided to grant Small Grants Fellowships for initiating research activities at the Zoo level to address to the local issues related to *ex-situ* wildlife conservation. The Authority has also initiated an Annual CZA Award in appreciation of most innovative works in Indian Zoo.
- ✦ In order to infuse new technology in the field of assisted reproduction and molecular characterization of endangered species, a Laboratory (Laboratory for Conservation of Endangered Species – LaCONES) has been established at Hyderabad in collaboration with various organizations.
- ✦ Research activities in the field of Assisted Reproduction (AR) have been initiated in vultures. Births through AR technique has achieved in ungulates like black buck and spotted deer. Efforts to breed large Cats through AR technique are also under way.
- ✦ The CZA has also initiated a programme for developing National Zoo Education Master Plan and individual Zoo Education Master Plan including provision of training to Zoo Educators with Centre for Environmental Education, Ahmedabad.
- ✦ The CZA provides financial assistance to public sector Zoos in India for creation of signages and printing of Zoo literature etc. on 50:50 basis.
- ✦ The CZA organized various training programmes, workshop and seminars for upgrading the professional skills of the zoo personnel.

Achievements made during the year

- ✦ During the year, three large zoos, two medium zoos, two small, 97 mini zoos/ rescue centres and one circus were evaluated. Recognition has been granted to 16 mini zoos/ rescue centres. Recognition has been suspended in case of two medium zoos, one small zoo and nine mini zoos.
- ✦ Rs.11.37 crore has been released to various zoos in the country for improvement of housing, veterinary and upkeep facilities for the wild animals.
- ✦ Some new species for their conservation breeding in Indian Zoos like Wild Dog, Mouse deer, Hoolock Gibbon, Snow Leopard etc. have been identified.
- ✦ During the year, 50 lions and tigers from the circuses were rehabilitated in the Rescue Centres being supported by the Central Zoo Authority.

Research

It has been decided to provide financial assistance to the few institutes/ organizations to take up research activities.

The Authority is also instituted a small grant fellowship to encourage scientific research in zoos.

Central Zoo Authority kept on pursuing the State Government to close down the badly managed zoos. Financial assistance of Rs.819.92 lakh were provide to 20 zoos for qualitative improvement in housing, upkeep and veterinary care of animals etc. Rs.236.26 lakh were provided to meet the expenses towards feed and upkeep of rescued circus animals kept in Rescue Centres. In order to generate additional facility to accommodate 30 more animals rescued from circuses Rs.81.00 lakh were provided to Visakhapatnam Zoo.

The financial support for upgradation of clinical and diagnostic facilities of certain Veterinary Colleges which was started with an idea to generate specialized clinical and diagnostic facilities for zoo animals was also kept continued during the year and financial assistance of Rs.5.35 lakh was provided to

IVRI. Training Courses and Workshops were organized for upgrading skills of the Zoo Personnel. During the year Rs.10.00 lakh was spent for this purpose. One Zoo Director and one Veterinarian were also sent to U.K. for specialized training to Zoo Mangement.

State wise status

The progresses made by the states in utilization of grants released to them for modernization of the zoos are given in the Table-10.

Table-10. Details of grants released to zoos

(Rs. in lakh)

Sl.No.	State Name	Name of the Zoo	Released
1	Andhra Pradesh	Sri Venkateswara Zoological Park, Tirupati	92.29
		Tirupati Rescue Centre	15.00
		Vishakhapatnam Rescue Centre	106.00
		Nehru Zoological Park, Hyderabad	50.00
2	Arunachal Pradesh	Itanagar Biological Park, Naharalagur	69.49
3	Delhi	National Zoological Park, New Delhi	101.08
4	Gujarat	Indroda Nature Park, Surat	41.52
		Sayaji Bagh Zoo, Vadodra	16.12
5	Haryana	Rohtak Zoo, Rohtak	50.00
6	Himachal Pradesh	Sarahan Pheasantry, Sarahan	30.00
7	Jharkhand	Bhagwan Birsa Biological Park, Ranchi	9.00
8	Karnataka	Tiger & Lion Safari, Shimoga	21.00
		Sri Chamarajendra Zoological Garden, Mysore	25.75
		Bannerghatta Rescue Centre, Bangalore	75.00
9	Kerala	Thiruvananthapuram Zoo, Thiruvananthapuram	30.00
10	Madhya Pradesh	Van Vihar National Park, Bhopal	25.00
		Kamala Nehru Prani Sangrahalay Zoo, Indore	40.35
11	Maharashtra	Rajiv Gandhi Zoological Park, Pune	50.00
12	Mizoram	Aizawl Zoo, Mizoram	50.00
13	Orissa	Nandankanan Zoological Park, Bhubaneshwar	54.00
14	Rajasthan	Nahargarh Rescue Centre, Jaipur	43.30
15	Sikkim	H.Z.P. Gangtok	38.50
16	Tamil Nadu	Vandalur Rescue Centre, Chennai	48.44
17	Uttar Pradesh	Lucknow Zoological Park, Lucknow	19.43
18	Uttaranchal	Nainital Zoo, Nainital	6.39
19	West Bengal	South Kharibari	29.52
	Total		**1137.18**

Budget allocation

The Ministry had provided Rs.17.72 crore as grant-in-aid to the Authority during the current financial year 2005-06.

National Zoological Park

Introduction

On the recommendation of the Indian Board for Wildlife in 1952, the Government of India set-up a Zoological Park in the capital in the year 1959 for the conservation and captive breeding of rare fauna and to educate and provide recreation to the people.

Objectives

Major objectives of the zoo are conservation and captive breeding of endangered species; educate and awareness about wildlife and research work thereon, maintaining the healthy and hygienic condition for zoo inmates and to provide basic facilities and amenities to the visitors.

Activities undertaken

National Zoological Park had been successful so far in breeding the indigenous as well as exotic species such as the Lion, Brow-antlered deer, the one horned Indian Rhinoceros, Hippopotamus, White Tiger, Crocodile, African Wild Buffalo, Lechwe, Emu, and number of Pheasant species etc. The main sources of acquisition of animals and birds are through (i) organized breeding programme, (ii) exchange of animals between zoos, (iii) gift, (iv) confiscated animals by the government agencies.

The Park has been evaluated by the Central Zoo Authority (CZA) as per the provisions of the Recognition of Zoo Rules, 1992. The recommendations of the CZA are being implemented to achieve the objective of the Zoo. The following works have also been undertaken.

- Various awareness programmes have been conducted.
- Programme of conservation and breeding of rare and endangered indigenous species was executed.
- Conducted research on behaviour, reproduction and management aspect of animals in captivity by involving students of University/Colleges etc.
- Provided assistance and technical guidance to other zoos of the country.
- Carried out developmental activities in various enclosures to stimulate the wilderness conditions for captive animals as per their physiological requirements.
- Preparation of literature and materials for providing information to public.
- Improvements were carried out in drainage, water supply, and veterinary care facilities.

Fig 42. The newly born calf of giraffe with mother at National Zoological Park, Delhi

Achievements made during the year

- The Wildlife Week was celebrated by involving over 1000 students from various schools of the NCT of Delhi.

- ✦ Teachers Orientation Course was conducted.
- ✦ Guided Tours for the Forestry personnel, Wild lifers and students of the school was organized.
- ✦ Van Mahotsava was celebrated.
- ✦ Publication of Guide map, Annual Reports, Stickers etc.
- ✦ Preparation of various types of signages.

Fig 43. Students participating in the on-the-spot painting competition at National Zoological Park, New Delhi.

- ✦ Maintaining the healthy and hygienic environment for zoo animals.
- ✦ Upkeep of animals and their enclosures.
- ✦ Exchange of various animals with Indian Zoo for breeding & display.

Implementing organizations

The National Zoological Park scheme of the Ministry was merged with the Central Zoo Authority during the Tenth Plan. Now the Central Zoo Authority is providing fund from its own allocation for the capital construction and major renovation work through the Central Construction Unit of the Ministry. The maintenance works are being taken care of by the Central Public Works Department through its own fund. The Central Zoo Authority team has evaluated for grant under recognition zoo rules 1992. The recommendation of the Central Zoo Authority is being implemented to achieve the objective of the zoo.