

# CHAPTER 6

## FORESTS AND ENVIRONMENT

### FOREST

6.01 Forests play a vital role in maintaining ecological stability and contributing significantly to the State economy, particularly in the rural sector. Forestry activities contribute a lot to the food security and livelihood for people living around forests. The pressure of human population and livestock on forests for firewood, wood for household purposes and fodder is much more and beyond the carrying capacity of existing forests and these forests are under continuous threat of de-forestation and degradation. The rapid deforestation and degradation of forests has created serious problems for the overall eco-system and livelihood of forest dependant population. Therefore, deforestation needs to be arrested and suitable measures devised for rapid reforestation and restoration of degraded forests.

6.02 The State has a recorded forest area measuring 58136.907 sq. km., i.e. 37.34% of the total geographical area. This includes 26,329.12 sq km. (45.29%) of reserved forests, 11687.12sq. km. (20.10%) of demarcated and protected forests, 3,838.78 sq km. (6.60%) of un-demarcated protected forests, 20.55 sq km. (0.04%) of un-classified forests and 16,261.34 sq km (27.97%) of

other forests (village forests, Khesra forests etc.).

6.03 As per the "State of Forest Report, 2003" published by the Forest Survey of India, the State has only 48,366 sq kms of forest cover including 207 sq. km of mangrove forest. Of this, 28,170 sq km is dense forest (with crown density greater than 40%) and 20,196 sq km is open forest (with crown density between 10% to 40%) and scrub area 4,574 sq. km. In addition to the above, there is additional 6,381 sq km of area under tree cover. Thus, while the recorded forest area constitutes about 37.34% of the total geographical area of the State, actual forest cover exists over only 31.06%. Out of this, 12.97% is open forest. In regard to forest cover, there has been wide disparity between districts. While forests are generally located in districts situated in Eastern ghat, Central Table Land and Northern Plateau, the coastal districts are deprived of good forest potential. The National Forest Policy stipulates that 33% of geographical area should be under forest cover. The State Government has, however, taken up afforestation programmes including development of village forests, and introduction of social and farm forestry in the coastal belt.

**FORESTRY SECTOR VISION 2020**

6.04 Forest Department has finalized their vision 2020. The elements of the Forestry Vbim 2020 include:

- *Improved forest extent and conditions*
- *Sustainable forest management*
- *Increased flow of NTFPs and wood*
- *Local governance & participatory forestry*
- *Biodiversity conservation strategies*
- *Higher Allocations, investment, insurance & incentives for better forest management.*

6.05 The forestry sector objective in the 11<sup>th</sup> Five Year Plan and Annual Plan, 2007-08 is to promote sustainable forest management in the state with a higher goal of supporting rural livelihoods. Recognizing the crucial linkage between rural livelihoods and conservation of forest resources in the particular context of Orissa, the plan specifically focuses on conservation and development of forests and optimal use of forest resources in a sustainable manner. The immediate goal of forestry in the State is to protect the existing dense forests with their rich bio-diversity and wildlife from degradation and to restore through appropriate treatment of their vigour for natural regeneration. The forest policy, rules and regulations in force will also be fine-tuned and modified wherever required during the Eleventh Plan period to make the policy and institutional environment conducive for Joint Forest Management of degraded forests.

6.06 the forestry sector development in the Eleventh Five Year Plan will adopt an approach combining elements of asset

creation, institutional development and social development to promote sustainable forest management practices. The Plan will support development of forest resources in the State with focus on:

- i) *Conserving, protecting and developing 27,882 sq. km of dense forests.*
- ii) *Regenerating and developing 20,196 sq. km of open forests.*
- iii) *Afforesting and reforesting 5,782 sq. km of scrub forests.*
- iv) *Promoting Eco-tourism and Eco-development in the protected area and*
- v) *Building capacity of the Forest Department and Village level institutions to take up protection and management of the assigned forests.*

**FOREST PLANTATIONS**

6.07 According to the Forest Survey of India, present forest cover in the State is 31% as against 33% of the total geographical area mandated by the National Forest Policy, 1988. Thus, there is an imperative need to accelerate efforts for afforestation and regeneration of the degraded forests for achieving the mandated 33% forest cover and also to reforest the degraded forests with less than 10% crown density in the recorded forest area measuring 4,574 sq. km.

6.08 During 2006-07, the afforestation programme has been implemented in the State under State Plan, Central Plan and other schemes over a total area of 25,742 ha. Out of these, 8500 hectare has been covered under Revised Long Term Action Plan (RLTAP). Besides 30 RKM avenue plantation

and 120 ha. Block-plantation near Titilagarh were taken up to combat heat wave conditions in the area. Afforestation over 10,687 ha. under 'National Afforestation Programme', 1,200 ha. under 12<sup>th</sup> Finance Commission Grant and 1573 hectares under Economic Plantation have also been taken up during 2006-07.

**ECONOMIC PLANTATIONS**

6.9 The value of the growing stock of our forests is substantially lower in comparison to other States. This situation can be improved by raising plantations of economically important species like Teak, Bija, Sissoo, Rose Wood and Red Sanders etc. on suitable sites on a sustained basis. This will ensure substantially higher production of valuable timber in future. About 4,000 ha. of suitable degraded barren land in the Non-KBK-Non-JBIC districts will be treated under this programme every year. Besides, 20,000 ha. of Teak plantation will be raised during the 11<sup>th</sup> Five Year Plan period. An outlay of Rs.18.00 crore has been proposed for the Eleventh Plan Period including Rs.4.50 crore for 2007-08.

**MEDICINAL PLANTS**

6.10 During 2006-07, State Medicinal Plant Board (SMPB), Orissa has recommended 258 proposals to National Medicinal Plant Board (NMPB) for providing financial assistance. NMPB has sanctioned 19 proposals on contractual farming during 2006-07. NMPB

has released Rs.11.31 lakh as consolidated amount towards subsidy.

6.11 NMPB has also sanctioned establishment of herbal garden in 32 schools and released Rs.4.48 lakh during 2006-07. Besides, Medicinal Plant Service Programme under World Bank assistance is in operation in 7 districts, viz., Bolangir, Baragarh, Sambalpur, Sundargarh, Deogarh, Keonjhar & Anugul.

**ORISSA STATE VANASPATI VAN SOCIETY**

6.12 A scheme "Vanspati Van project" is being implemented in Gandhamardan Hill Range of Bolangir district and Baragarh Forest Division. The project period of the programme is 5 years, i.e. 2003-04 to 2007-08 with financial outlay of Rs.5.00 crore. An amount of Rs.1.55 crore have been released and Rs.1.42 crore has been spent for the scheme by the end of December, 2006. 200 hectares of in Situ preservation, 300 ha. in situ conservation, 32 ha. of ex situ demonstration plot and capacity building in 25 VSS have been achieved by the end of December, 2006.

**AREA ORIENTED FUELWOOD & FODDER PROJECT SCHEME**

6.13 The Area Oriented Fuel and Fodder Plantation Scheme (AOFFP) is a Centrally Sponsored Plan scheme with a funding pattern of 50:50 between the Centre and the State. The main objective of the scheme is to

augment production of fuel wood and fodder species through regeneration of degraded forests and adjoining lands by associating the local people in planning, implementation and management under Joint Forest Management (JFM).

**KENDU LEAF**

6.14 Kendu Leaf (KL) trade offers large employment opportunities in rural Orissa at a point of time when other employment avenues are non-existent. As per the State Government's decision, Forest Department does collection, processing, bagging and storage of Kendu leaves and Orissa Forest Development Corporation (OFDC) finances the entire operational cost of production of KL and conducts sale of K.L. as the sole selling agent on behalf of State Government. Kendu Leaf Organization operated 7601 collection centres (Phadies) spread over 23 western and central districts of the State for purchase of KL collected by pluckers. There are 993 Kendu leaf central go-downs in the state for storage of processed and phal kendu leaf bags.

6.15 During 2006-07 (2006 KL crop year), against the target of 4.20 lakh quintals KL production, 3.87 lakh quintals (both processed and phal) were produced and about 4.66 lakh quintals KL were sold at the cost of Rs.257.92 crore. During 2006-07, about 7.57 lakh pluckers have been benefited from Kendu leaf collection and 486 MT of food commodities under WFP have been supplied to the binding

labourers in two districts i.e. Kalahandi and Kandhamal. It has been decided to enhance the purchased price from 21.5 to 23 paisa per Kerry comprising 20 leaves from 2007 kendu leaf crop year which would benefit about 8 lakh pluckers.

**DIVERSION OF FOREST LAND AND COMPENSATORY AFFORESTATION**

6.16 For diversion of forest land for non-forest uses, it is mandatory to obtain prior permission from Government of India under Sec-2 of Forest Conservation Act, 1980. Since implementation of the Act, till the end of 2006-07 Govt. of India have accorded permission to 324 projects diverting 33,136 ha of forest land including 17 projects and 886.212 ha. during 2006-07. While giving permission, Govt. of India have stipulated for under-taking compensatory afforestation in lieu of forest areas diverted for non-forestry purposes. Accordingly, an amount of Rs.63.06 crore has been deposited by various agencies and by the end of September, 2006 Compensatory Afforestation have been undertaken over an area of 30,427 ha including forest and non forest land. During 2006-07, Govt. of India has cleared 17 projects (6 Irrigation projects, 13 mining projects, 1 Railway project and 2 projects each for industry, road and energy) involving diversion of 886.212 ha of forest land.

6.17 Pursuant to the commitment of the State Government to regularize Pre-1980

encroachment / forest villages in favour of the encroachers, proposals in respect of 17 districts involving the cases of 3,754 families, and 3,328.42 ha of forest land to be settled in their favour have been submitted to Govt. of India. The State Govt. moved Hon'ble Supreme Court in November, 2004 for giving direction to Govt. of India for regularization of Pre-1980 eligible encroachments in the State. Orders of the Apex court have since been received. The matter is being further processed.

### **FOREST PROTECTION**

6.18 With growing population, there has been tremendous pressure on forests both for forest produce as well as forest land. Illegal removal of forest produce is prevalent almost in all districts. However, the basin of River Mahanadi spread over Angul, Sambalpur, Cuttack, Nayagarh and Boudh districts, Similipal Forests in Mayurbhanj district, the forests of Rayagada, Koraput, Malkangiri and regions adjoining Orissa-Andhra Pradesh border and the forest corridors on the Inter-State Orissa- Jharkhanda and Orissa-Chhatisgarh border attract increasing illegal removals of forest produce.

6.19 Forest Department has been keeping a close vigil over forest offences and taking action for booking offenders. During 2006-07, about 6680 cum of timber valued at Rs.4.71 crore was seized as against 16,200 cum of timber valued at Rs.8.00 crore seized in 2005-

06 (up to November). Similarly, 42,880 forest offence cases were registered involving 39,104 offenders during 2006-07 as against 45,180 cases were registered involving 7390 offenders during 2005-06. Nineteen units of APR Forces have been posted in different Territorial Forest Divisions in vulnerable areas and Central Range Police Force (CRPF) has been deployed in the Dhuanali and Barbara Reserve Forest of Khurda Forest Division which is a patch of rich and unique forest with Teak plantation from the pre-independence time. Besides, 265 Forest Check gates have been established in the State to regulate the transit of forest produce and 739 VHF sets have been installed in different territorial ranges and vulnerable areas. Draft Rules for use of fire arms by Forest Officers are under consideration of State Government.

### **JOINT FOREST MANAGEMENT**

6.20 One of the salient features of the National Forest Policy, 1988 is to associate people actively in protection, conservation and management of forests. The State Govt. brought out a resolution in August, 1988 to introduce a scheme of protection of peripheral reserve forests with participation of the people of adjoining villages. The process has been further fine-tuned from time to time, ending with September, 1996 resolution.

6.21 In accordance with the 1993 JFM Resolution of the Government 9813 numbers of Vana Samrakshana Samities (VSS) are

functioning in the state by the end of September, 2006 for protecting and regenerating an area of about 8,953.87 sq. km. of degraded forests through JFM.

**FOREST REVENUE**

6.22 Forests are an important source of non-tax revenue for the State Government. Figure 6.1 and Table 6.1 show the revenue receipts from forest produce in Orissa since 2001-02. It is observed that revenue receipts from forest produce show a fluctuating trend with 2006-07 being the highest revenue earning year. During 2005-06, the revenue receipt was Rs.57.72 crore which increased to Rs.125.31 crore during 2006-07. Further it is also revealed that revenue receipt from the Kendu Leaf trade is being highest among other forest produces. During 2006-07, out of total Rs.125.31 crore revenue receipts, about 81.5% was earned from Kendu leaf trade.

**Table – 6.1**  
**Revenue Receipts from Forest Produces in Orissa.**

(Rs. in Crore)

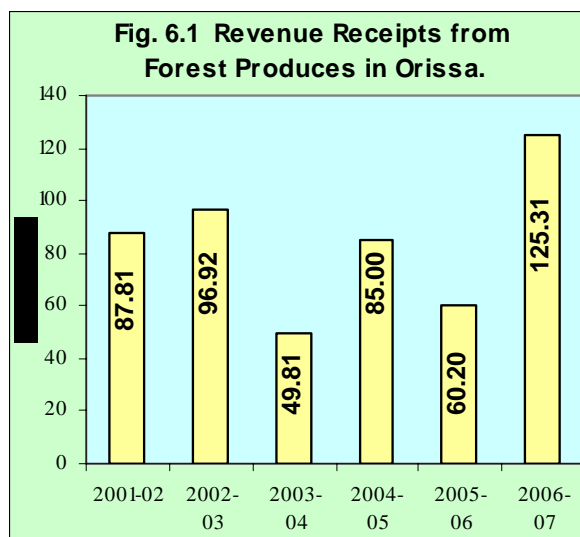
Item	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Timber and firewood	9.36	9.15	3.70	8.94	6.65	9.84
Bamboo	2.03	0.07	1.45	1.58	4.21	5.05
Kendu leaf	69.00	75.00	31.00	24.25	40.14	102.10
Others	7.42	12.7	13.66	50.23	6.72	8.32
<b>Total</b>	<b>87.81</b>	<b>96.92</b>	<b>49.81</b>	<b>85.00</b>	<b>57.72</b>	<b>125.31</b>

N.B.- Figures of 2006-07 not received  
Source: P.C.C.F., Orissa.

**ORISSA FOREST DEVELOPMENT CORPORATION (OFDC)**

6.23 Orissa Forest Development Corporation was formed on 01.10.1990 by taking over the assets and liabilities of erstwhile Similipal Forest Development Corporation (formed in December 1979), Orissa Plantation Development Corporation (formed in August 1985) and Orissa Forest Corporation (formed in 1962). At present the Corporation has 20 commercial units under 4 zones along with its Head Office at Bhubaneswar. The main activities of the Corporation include sale of timber, fire wood, bamboo, sal seeds, kendu leaf, honey, pickles and other products.

6.24 The Corporation has taken up the responsibility of supplying firewood, bamboo and house building materials to public, mostly obtained from salvage of dead and wind fallen timber and U.D. case materials, through its 172 Retail Sale Depots all over Orissa. The Corporation finances the entire operational cost of production of Kendu leaf and carries



Source: P.C.C.F., Orissa.

out marketing of Kendu leaf as an agent of the State Government.

6.25 The Corporation has sold 24,372 cum of round timber, 16,556 MT of firewood to the public during 2006-07 and earned revenue of Rs.25.26 crore approximately. Besides, 4.66 lakh qtls. of Kendu leaf valued at Rs.257.92 crore and 3,889 MT of sal seeds valued at Rs. 0.72 crore have also been sold during 2006-07.

6.26 Bamboo in the State was nationalized with effect from 1988. M/s J. K. Paper Ltd., Rayagada and M/s BILT (Sewa), Jeyopore have been entrusted with the harvesting of bamboo as raw materials procurer from 2004-05 with a purpose to increase the employment opportunities in the rural areas of the State for sustainable management of forest and supply of raw materials to paper industries in the State. During 2006-07, about 1.10 lakh sale units of bamboo were produced and 0.75 lakh sale unit have been sold for Rs.5.63 crore.

**Table 6.2**  
**Production and Revenue Collection from Forest Produce by OFDC.**

Item	Units	2005-06			2006-07		
		Produce	Quantity sold	Revenue collected (Rs. in crore)	Produce	Quantity sold	Revenue collected (Rs. in lakh)
Timber round	Cum	15791	18413	1667.67	23692	24372	2288.96
Fire wood	MT	15599	17735	213.25	19391	16556	236.98
Bamboo	SU	139517	139406	1046.38	110284	75000	562.50
Kendu leaf	Qtls	370211	472840	14675.85	387492	466285	25792.22
Sal Seeds	MT	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Source: Orissa Forest Development Corporation, Bhubaneswar.

**WILD LIFE**

6.27 Orissa with its diversified topography and climate has been the abode of a variety of wildlife species. But due to increasing biotic interference and dwindling forest cover, there has been a rapid decline in wildlife population in the State. In order to protect and preserve wild life, 18 Wildlife Sanctuaries and 2 National Parks have been established, which together comprises 4.25% of the geographical area and 11% of the total forest area of the state. Besides, three elephant reserves namely, (i) Mayurbhanj, (ii) Sambalpur (Badarama-Khalasuni) and (iii) Mahanadi have also been constituted.

6.28 Eighty-four (84) species of reptiles, 446 species of birds and 65 species of mammals have been identified in protected areas. Wild life status surveys and census are periodically carried out by forest personnel with active participation of various non-official enumerators. Table 6.3 specifies some important species and their number as per status surveys and census reports for different years, besides the captive stock at Nandankanan Zoological Park.

6.29 Three Elephant Reserves (ERs) namely Mayurbhanj ER, Mahanadi ER and Sambalpur ER were notified in the State in the

years 2001 and 2002. These Reserves are meant to define prime elephant habitats and to launch various management interventions for conservation of elephants. The extent of notified and proposed forest blocks in these three reserves is 4,129 sq km. and the geographical area covered by these three reserves is 8,509 sq. km. Constitution of two

more elephant reserves, i.e., Brahmani-Baitarani ER and South Orissa ER as well as expansion of the Mahanadi and Sambalpur elephant reserves for providing better habitat conditions to elephants and for reducing the problems of elephant depredation are being contemplated.

**Table 6.3**  
**Wildlife Population in the State.**

Name of species	Number	Census Year	Remarks
Tiger	192	2004-05	In the wild (entire State)
Leopard	487	-do-	-do-
Elephant	1862	Till May, 2007	-do-
Water Birds	9.88 lakh	2006-07	Chilka lake ,Bagagahan Bhitarkanika Sanctuary & Hirakud
Olive Ridley Sea Turtles	1.46 lakh	2006-07	Gahiramatha and Rushikulya
Irrawady Dolphin	135	2006-07	Chilka lake
Black Buck	1101	2006-07	Balipadar – Bhetnoi & Buguda area of Ganjam district
Mugger	168	2006-07	Satakosia & Similipal Tiger Reserve
Salt Water Crocodile	1497	2006-07	In Bhitarkanika river mouth

Source: Chief Warden, Wildlife, Orissa, Bhubaneswar.

6.30 The State Government has received approval of government of India for declaration of 2<sup>nd</sup> Tiger Reserves in the state comprising of Sunabeda sanctuary and adjoining forest areas to its south in Nuapada district.

6.31 As per Tiger Census conducted in 5<sup>th</sup> – 10<sup>th</sup> January, 2004, there were 192 tigers and 487 leopards in the State as against 173 tigers and 457 leopards counted in 2002 Census. Out of 192 tigers and 487 leopards, 101 tigers and 127 leopards were found in Similipal area.

6.32 As per the elephant survey conducted in April, 2004 there were about 1511 elephants in the state, and have increased to 1862 in May, 2007. Mayurbhanj Elephant Reserve and Mahanadi Elephant Reserve together constitute about 60% of total elephants found in the state. A comprehensive plan for management of elephants in the state during 2006-07 and Eleventh Five Year Plan has been prepared.

6.33 The Bhitarkanika Wild Life Sanctuary and the Bhitarkanika National Park are spread over an area of 672 sq. km and 145 sq. km respectively. The Gahirmatha Marine Sanctuary covering an area of 1,435 sq. km is



the largest nesting ground for Olive Ridley sea turtles in the world. During 2006-07, 1.46 lakh Olive Ridley sea turtles came to Gahirmatha beach and Rushikulya river mouth for nesting and laying eggs. The number of salt water crocodiles which was 672 during the year 1998 in Bhitarkanika river mouth has increased to 1497 during the census year 2006-07.

6.34 The Chilka (Nalabana) Wild Life Sanctuary was started in December, 1987 over an area of 15.58 sq. km. which is not only an ideal habitat for migratory birds but also for the endangered Irrawady Dolphin. It attracts migratory birds from far off countries during Winter Season every year. There was a good congregation of migratory water fowl in the Chilika lake during this year due to excellent protection afforded to bird species in the lake. Steps are taken to safeguard the visiting birds from any infection due to avian flue. As per the Census conducted in January, 2007, 8.25 lakh birds belonging to 107 species were counted.

6.35 State Government has taken measures for wildlife protection in the state. During 2006-07, 104 incidents of poaching, deliberate electrocution, poisoning and trapping have been reported out of which 78 cases have been detected and cases have been filed against 181 accused, as against 193 incidents, 72 detected cases and judicial

cases filed against 232 accused people during 2005-06.

6.36 During 2006-07, about 92 human death and 141 injuries were recorded due to wildlife attacks. Besides, crop damage over an area of 4,835.6 ha. land by elephants have also been recorded during the year and an amount of Rs.179.07 lakh compensation has been paid for the purpose.

#### ***Nandankanan Zoological Park***

6.37 Amidst lush green forests along the banks of Kanjia lake lies Nandankanan, a beautiful zoological park that got its name from "Nandan Van" meaning the "Garden of Gods". The zoological park is set in a beautiful natural setting and is one of the finest parks in the country. Unlike conventional zoos, this zoo has got a very good natural habitat and the park is unique of its kind. The zoological park together with the lake and Botanical Garden has been declared as Nandankanan wild life sanctuary. The Nandankanan zoological park was established in December, 1960 while it was declared as wildlife sanctuary in August'1979. The area of Nandankanan zoological park is 3.62 sq km including 0.66 sq. km of Kanjia Lake and the area of Nandankanan wild life sanctuary is 4.37 sq km. The park has a collection of about 1253 specimens of animals and birds representing 125 species (98 reptiles of 25 species, 674 birds of 60 species and 481 mammals of 40 species). Besides, Tiger

safari, Lion safari, an Aquarium, Toy train, Boating and Aerial ropeway are some of the attraction of the zoo. Nandankanan has been identified as one of the four centres in India by the Central Zoo Authority to undertake captive breeding programme of the endangered Indian white backed vultures, gyps Bengalese's.

6.38 Table 6.4 indicates year –wise visitors visited the park and revenue collected during 10<sup>th</sup> Plan period. Table 6.4 indicates that, while the numbers of visitors to the Park increased from 13.06 lakh during 2005-06 to 15.08 lakh in 2006-07, the revenue collection increased from Rs.1.46 crore to Rs.1.77 crore during the same period. In other words, while the number of visitors to the zoo increased by 15.5% over 2005-06, revenue collection increased by 21.2%. An outlay of Rs.5.00 crore has been proposed for development of Nandankanan Zoo during 11<sup>th</sup> plan period including Rs.1.00 crore for 2007-08 respectively.

**WORLD FOOD PROGRAMME PROJECT**

6.39 Under this programme, food rations are being provided to labourers engaged in different forestry activities for improving their nutritional status. In order to avail benefits under the programme, a labourer is required to voluntary contribute Rs. 9/- from his daily wage for getting a food packet of 2.5 kg of rice and 200 grams of pulses. The generated funds are utilized towards meeting the needs of local communities by implementation of micro plan projects and creating public infrastructure such as provision of drinking water, storage go-down, concrete roads, renovation of ponds and promotion of pisciculture and renovation of old tanks. During 2006-07, about 4562 MT of rice and 275 MT of pulses were utilized under this project till November, 2006 and welfare funds to the tune of Rs.274.48 lakh have been utilized out of generated funds for execution of micro projects as approved by S.L.C.C.

**Table – 6.4**  
**Number of visitors & revenue collected by Nandankanan, Orissa.**

Year	No. of visitors (in lakh nos.)	Revenue collection (Rs.in Cr.)
2001-02	11.99	0.81
2002-03	12.99	0.90
2003-04	13.37	0.89
2004-05	12.41	1.12
2005-06	13.06	1.46
2006-07	15.08	1.77

Source: Directorate of Nandankanan.

## ECOLOGY AND ENVIRONMENT

6.40 The Environment Wing of the Forest and Environment Department has the following objectives:

- i *To act as the nodal agency for environmental management and conservation.*
- ii *To implement Pollution Control Acts and Rules.*
- iii *To assess environmental impacts of development projects and industries.*
- iv *To protect ecologically fragile sites, natural living resources and endangered ecosystems including wetlands and grass land and mangroves.*
- v *To restore, develop, protect and maintain ecologically sensitive sites and selected nature reserves / locations.*
- vi *To promote environmental awareness and environmental education.*
- vii *To promote research, education and training on environmental conservation and protection.*
- viii *To co-ordinate activities for conservation and management of Chilka and Ansupa lakes, and mangrove areas of the State.*

6.41 The following important activities were undertaken by the Environment wing of the State Government.

6.42 State Government has constituted three member 'Appellate Authorities' under Water Act, Air Act and Bio medical Waste Rules to hear appeals preferred against any order made by State Pollution Control Board. These Authorities have started functioning.

### **ENVIRONMENTAL EDUCATION & AWARENESS DEVELOPMENT**

6.43 State Government have constantly endeavoured to promote awareness on environment conservation and protection through District Environment Societies and 4,500 Eco-clubs over the entire State. State Government have conferred 23 "Prakruti Mitra" and 22 "Prakruti Bandhu" awards to selected voluntary organizations / individuals / villages institutions for their meritorious work in environmental conservation on World Environment Day, 2005. So far 408 "Prakruti Mitra" and 265 "Prakruti Bandhu" awards have been conferred.

### **STATE POLLUTION CONTROL BOARD (SPCB)**

6.44 The State Pollution Control Board (SPCB) was constituted in 1983 and is functioning under Forest and Environment Department, Govt. of Orissa. The Board is entrusted with the responsibility to execute and ensure proper implementation of Environmental Acts, particularly the Water (Prevention and Control of Pollution) Act, 1974, Air (Prevention and Control of Pollution) Act, 1981 and the Environment (Protection) Act, 1986 as amended from time to time, and various rules framed thereunder. The Board is also expected to execute and ensure proper implementation of environmental Policy of the Union and the State Government.

6.45 During 2006-07, the Board has received 727 applications for consent to establish and 400 pending proposals were carried forward from 2005-06. Out of these 1127 applications, consent have been given in favour of 621 industries.

6.46 After declaration of the entire State of Orissa as Air Pollution Control Area in 2002, all the brick kilns have to obtain consent to establish within 90 days of notification. During 2006-07, 18 applications including one carried forwarded from 2005-06 have been received and permission was granted in favour of 5 cases.

6.47 Similarly, 119 applications were received during 2006-07 to establish stone crushers, out of which permission to 72 units have been accorded during 2006-07.

6.48 During 2006-07, there were 103 cases including 48 spilled over cases from 2005-06 for public hearing. Out of this, 77 public hearing have been conducted for major industries / mining / development projects.

6.49 As per the provision of Hazardous Waste (Management & Handling) Rules, 1989 and Amendment made in 2003, the Board ensures proper management of hazardous waste through authorized administration. During 2006-07, about 132 authorization applications have been received, of which authorization was granted in favour of 83 units

and show cause notice have been issued to 16 Hazardous Waste generating units.

6.50 Bio-medical Wastes generated in different health care establishments need to be disposed off safely without any adverse impact to the human health and environment. The OSPCB being declared as the prescribed authority for the State for enforcement of the rules and regulations for the waste management through authorized administration. During 2006-07, out of 836 health care establishments, the Board has brought 774 establishments under authorized administration. Balance 62 units have been exempted either due to closure or for providing treatment to less than 1,000 patients per month. Out of these 774 establishments, 156 establishments have their own treatment facilities, 138 establishments are utilizing Common Bio Medical Waste Treatment and Disposal Facilities (CBWTF) and the balance 476 establishment have no adequate facilities.

6.51 Under Municipal Solid Waste (Management & Handling) Rules, 2000, the Board has so far granted authorization in favour of 17 local bodies out of which 11 ULBs have valid authorizations.

6.52 In order to plan a comprehensive programme for prevention and control of pollution, the Board has undertaken the following activities during 2006.

- *The board has initiated action for preparing a Regional Environment Management plan for Angul-Talcher – Meramundali area. The work is expected to start shortly. Similarly study is also proposed for Joda-Barbil area for which steps are being initiated.*
- *Monitoring of Water qualities in 62 stations of 6 major rivers of the state (Mahanadi, Brahmani, Baitarani, Rushikulya, Subarnarekha and Nagavali). 32 water quality parameters are being regularly monitored in each of those stations.*
- *Water quality study of Brahmani river at the up stream of Rengali to assess suitability of fish propagation and at Rushikulya and Devi river Muhans connection with protection of Olive Ridley sea turtles.*
- *Monitoring of ground water quality of three towns (Cuttack, Bhubaneswar and Puri) at 15 stations and at the peripheral areas of NALCO Smelter, Angul and Phosphatic Fertilizer Units at Paradeep, to assess Fluoride concentration.*
- *Monitoring to ambient air quality in 9 important towns and industrial areas like, Angul, Rourkela, Rayagada, Bhubaneswar, Berhampur, Cuttack, Sambalpur, Keonjhar and Balasore. Air quality is being monitored in 17 stations in the above 9 towns in respect of four parameters namely, Suspended particulate Matter, Sulphur Dioxide and Nitrogen Oxides.*
- *Monitoring of noise pollution level on Deepawali in 9 nos. of cities / towns (Angul, Rourkela, Rayagada, Cuttack, Bhubaneswar, Balasore, Berhampur, Sambalpur and Keonjhar) and impact of idol immersion in water quality during Dhshera at Cuttack and Bhubaneswar.*
- *Two cities, Cuttack and Bhubaneswar, were surveyed for assessment of vehicular pollution.*
- *Baseline Environmental study of proposed Alumina Refinery, thermal power plant and bauxite mining at Lanjigarh, Kalahandi.*

6.53 Besides, the following Awareness Programmes are also undertaken by Orissa State Pollution Control Board.

- *The board has collaborated with different organization in a number of seminars / workshops for public awareness regarding environmental protection. An interaction meet was organised at Bileipada (Keonjhar district) with representatives from industries, mines, and other stake holders to discuss the present environmental status of the area and other environmental issues in Joda-Barbil.*
- *The board regularly publishes advertisements related to environmental issues in different periodicals / news papers / souvenirs.*
- *Board imparted training to high school teachers on “Environment & Pollution Control”. One such programme was organised in Cuttack and another will be organised shortly in Rayagada.*
- *48 nos. of Police Havildars from various districts of Orissa were imparted training on vehicular pollution monitoring and its control, noise monitoring.*

#### **CHILKA DEVELOPMENT AUTHORITY (CDA)**

6.54 The Chilka Development Authority (CDA), established in November, 1992 as an autonomous body, is attending to various problems of the lake including its conservation and all-round development. The lake is facing a number of problems, viz, siltation, shifting of Chilka mouth, loss of salinity, extensive weed growth and depletion of fishery resources.

6.55 Chilika Development Authority (CDA) has initiated measures for catchments amelioration under Action Plan integrated

sustainable Management of Chilika Lagoon” with financial support from Ministry of environment, Govt. of India. During 2006-07 maintenance operation of plantation raised during 2005-06 was taken up. Besides, erosion protection work, installation of vegetative hedges, stabilization of ravine area etc. have been taken up during 2006-07.

6.56 CDA has taken initiative for development of 10 Micro watersheds in Banapur block of Khurda district with the funds support of Ministry of Rural Development, Govt. of India through DRDA, Khurda. The project period is 5 years (20.10.2004 to 20.10.2009) with project cost of Rs.3.00 crore. It covers 38 villages with population 7759 in the catchments of Chilika lagoon. The total area of Micro watershed being 8426 ha. with treatable area 5000 ha. During 2006-07, plantation over 50 ha. in the degraded portion of forest land in micro watershed project have been completed. Besides, a collaborative project wise use of the natural resources of Chilika Lagoon through stakeholder participation and documentation of emerging lesson with the fund support of India Canada Environment Facility is also under implementation.

6.57 CDA has successfully conducted the first national training programme for wetland managers in August, 2006 in which participants from different states were attended. Besides, CDA has also

successfully conducted orientation training to local boatmen at Balugaon for eco-tourism through community participation in Chilika Lagoon. The 12<sup>th</sup> Finance Commission have recommended Rs.30.00 crore as special problem grant for consolidation and strengthening of eco restoration of Chilika lagoon. The work is in progress.

### **REGIONAL PLANT RESOURCE CENTRE (RPRC)**

6.58 Regional Plant Resources Centre (RPRC) has well defined focus areas of Research and Development, i.e. Taxonomy and Conservation, Bio-Technology, Forestry and Horticulture. The following activities have been taken up during 2006-07.

- *RPRC has completed 19 research projects and another 15 projects are in operation.*
- *It has produced 2.60 lakh tissue culture banana plants during 2006-07 and distributed among the farmers.*
- *It has a large scale ornamental Nursery plants, cacti, palms, Bamboos and medicinal plants.*
- *Twenty five research papers have been published during 2006-07 in various Nutritional International journals.*
- *RPRC is now working as a lead institute of Similipal Biosphere reserve.*
- *RPRC has taken up land scaping and garden development at Regional Museum of Natural History at Acharya Vihar, Energy park of OREDA, Orissa Forestry Sector Development project at Ghatikia, and Cacti Garden at Rastrapati Bhawan, new Delhi.*
- *RPRC sub centre at Sanghagera in Keonjhar district conserves all the*

*medicinal flora and preserve the wild habitats of this area. It takes active part in promoting tissue culture banana plant in Keonjhar district.*

**CENTRE FOR ENVIRONMENTAL STUDIES**

6.59 Center for Environmental Studies (CES), a registered society, came in to existence in 2000 with an objective to promote environmental awareness in the State. CES is the Regional Resource Agency for the National Environment Awareness Campaign (NEAC) and nodal agency for the National Green Crops.

6.60 Under the NEAC programme, CES released grants to NGOs working in the area of environmental conservation. Starting from 2001-02 till the end of 2006-07, 2990 NGOs, including 314 NGOs during 2006-07, were supported to undertake activities related to action oriented environmental awareness.

6.61 By the end of 2004-05, 4500 Eco clubs have been established in all the 30 districts of the state. Subsequently from the year 2005-06, another 100 Eco-clubs have been added in each district increasing the number of Eco clubs from 150 to 250. CES provides resource materials for dissemination of environmental knowledge and facilitates activities among members of Eco clubs.

6.62 As a part of ENVIS programme CES has created a database on the state of Environment Report of Orissa. It also maintains a website on the aspects of State of Environment in Orissa. The centre has been selected by the Ministers of Environment and Forest (MOEF) to prepare Indian State level Basic Environmental Information Database (ISBEID) in association with National Informatics Centre, New Delhi.

**NATIONAL FOOD FOR WORK PROGRAMME (NFFWP)**

6.63 National Food For Work Programme (NFFWP) has been launched in the State. Through this programme, works like construction of water harvesting structures, plantation and rehabilitation of degraded forest, distribution of seedlings etc. are being taken up by utilizing food grain received from Central Government. During 2006-07, the expenditure made under the programme stood at Rs.48.30 lakh and 307.145 MT food grain have been utilized. Besides, 182.97 MT food grain and Rs.168.79 lakh have been utilized under NREGS scheme during 2006-07 (up to November, 2006) against the allocation of 207.67 MT food grain and Rs.496.70 lakh.

