

CHAPTER II - A & B

REVIEW OF OVERALL PERFORMANCE

5. A REVIEW OF PERFORMANCE DURING 8TH FIVE YEAR PLAN AND GOALS SET FOR THE 9TH PLAN

(I) The Ministry of Environment & Forests was allocated an outlay of Rs.1200 crores for its 8th Plan 1992-97. The actual expenditure in 1992-93 was Rs.274.65 crores, in 1993-94 it was Rs.303.52 crores, in 1994-95 Rs.328.25 crores, in 1995-96, Rs.296.64 crores and in 1996-97 it was Rs.428.84 crores, making a total of Rs.1631.90 crores. The sector-wise and year wise details of outlays/expenditure is as follows:

Table-A: Sector wise/Year wise approved Outlays & Expenditure under VIIIth Plan.

(Rs. in Crores)

Sector	8 th Plan Outlay Original	Outlay 1992-93	Expdt. 92-93	Outlay 93-94	Expdt. 93-94	Outlay 94-95	Expdt. 94-95	Outlay 95-96	Expdt. 95-96	Outlay 96-97	Expdt. 96-97
1	2	3	4	5	6	7	8	9	10	11	12
Environment	325	48.00	45.09	70.00	71.15	79.00	103.52	80.00	63.00	125.00	124.18
NRCB	350	55.00	54.19	65.00	64.91	78.00	31.34	79.00	42.09	106.00	121.53
NAEB	275	115.00	114.45*	98.00	90.33	103.00	103.13	104.00	93.18	90.00	87.55
Forests & Wildlife	250	62.00	60.92	85.00	77.13	100.00	90.26	107.50	98.37	148.40	95.58
Total	1200	280.00	274.65	318.00	303.52	360.00	328.25	370.50	296.64	469.40	428.84

* During 1992-93, the then National Wastelands Development Board was bifurcated into two separate Boards. NWDB was transferred to Department of Wastelands Development and NAEB was retained in Ministry of Environment & Forests. The allocation of Rs.115.00 crores was for both the boards. The expenditure of Rs. 114.45 crores relates to both the Boards. Expenditure under NAEB was Rs.72.736 crores during 92-93.

Table-B: Sector-wise Plan outlay & Expenditure in percentage under the VIIIth Plan

(Rs. in Crores)

Sector	8th Plan Outlay Original	Total Outlay Revised	Total Expdt.	Allocations (% increase over original outlay)	Expdt. (% increase over original outlay)
1	2	3	4	5	6

Environment	325.00	402.00	406.95	23.69	25.21
NRCD	350.00	383.00	314.07	9.42	(-)10.27
NAEB	275.00	510.00	488.64	85.45	77.68
Forests & Wildlife	250.00	502.90	422.24	101.16	68.90
Total	1200.00	1797.90	1631.90	49.82%	36.00%

Notes:

- Increase in outlays/expenditure over original approved Plan outlay in case of NAEB is due to the fact that the major schemes of NAEB were got approved from CCEA at enhanced outlays for 8th FYP so as to increase area coverage under afforestation/Eco-development activities.
- Increase in outlays/expenditure over original approved Plan outlay in case of Environment is due to the fact that year-wise outlays for certain schemes like Environmental Impact Assessment, Industrial Pollution Control Project, Conservation & Survey etc. were approved by Planning Commission at increased levels.
- Increase in outlays/expenditure over original approved Plan outlay in case of Forest and Wildlife is due to the fact that the major schemes like World Bank aided Forestry Research Education Extension Scheme of ICFRE, Eco-Development in and around Protected Areas, Project Tiger, Development of National Parks and Sanctuaries, Project Elephant etc. were approved at enhanced level in VIII Plan due to increased activities.
- Under NRCD, during VIIIth Plan, except GAP Phase I which was 100% central funded, all schemes are implemented on a 50:50 sharing basis.

6. OUTLAY FOR THE NINTH PLAN AND ANNUAL PLANS 1997-98, 1998-99, 1999-2000 and 2000-2001.

Overall Plan outlay/expenditure
sector-wise

(Rs. in Crores)

Year	Environment	NRCD	Forests & Wildlife	NAEB	Total
9 th Plan approved outlay	887.00	766.84	860.00	500.00	3013.84
1997-98 Outlay	198.00	109.00	144.70	92.00	543.70
Expenditure	115.37	99.44	122.70	69.19	406.70
1998-99 Outlay	210.91	191.70	209.13	92.35	704.09
Expenditure	144.00	107.48	174.24	72.05	497.77
1999-2000 Outlay	191.50	200.00	215.00	93.50	700.00
Expenditure	118.11	157.24	178.10	86.45	539.90
2000-2001 Outlay	229.90	210.05	258.05	152.00	850.00

NRCD - National River Conservation Directorate,

NAEB- National Afforestation and Eco-Development Board.

7. The scheme wise details of outlay, expenditure, physical targets and achievements during the 8th Plan period in all the sectors as above, and, the outlay and the goals set for 9th Plan are as below:

8. INDIRA GANDHI NATIONAL FOREST ACADEMY (IGNFA), DEHRA DUN

The IGNFA is responsible for in-house training for Indian Forest Service Probationers. Its achievements during the VIII Plan and goals for the IX Plan are as under:-

(Rs. in Crores)

Programme	VIII Plan Outlay	Expenditure	Physical Targets	Achievements	9 th Plan Outlay	Goals set for 9 th Plan.
Training of IFS Probationers.	7.03	7.03	*	Fully Achieved	15.00	**

* Training of IFS Probationers recruited from 1992-98

Compulsory courses for in-service IFS officers.

Induction Training Programme .

**Training of IFS Probationers.

Modernization of Academy.

Upgradation of Computer Lab.

Construction of Pavilion.

Improvement of Hostel facilities.

9. STATE FOREST SERVICE AND RANGERS COLLEGES

This Institute caters to the training requirement of SFS Officers of different States. Its achievements during the VIIIth Plan and goals for the IXth Plan are as under:

(Rs. in Crores)

Programme	VIII Plan Outlay	Expdt.	Physical Targets.	Physical Achievements	Ninth Plan Outlay	Goals set for Ninth Plan	Achievements so far
SFS & Rangers Colleges	4.05	3.97			6.00		
Training of SFS Officers			15 courses	12 courses		15 courses	3 courses
Training of Forest Rangers			5 courses	5 courses		2 courses	--
Special Refresher Course for In-service SFS Officers			59 courses	59 courses		55 courses	32 courses
Course on Computer Application in Forestry for In-service SFS Officers			17 courses	17 courses		34 courses	27 courses

Course on Social Forestry & Sustainable Rural Development			2 courses	2 courses		5 courses	7 courses
Thematic Course on Bio-diversity Conservation			1 course	1 course		5 courses	9 courses
Promotion related courses for ACFs and Forest Rangers			--	--		8 course (4 courses for ACFs and 4 for Forest Rangers)	3 courses (For Forest Rangers)

10. INDIAN INSTITUTE OF FOREST MANAGEMENT (IIFM), BHOPAL

IIFM, Bhopal is an autonomous Institution under the Ministry established for the development of managerial capacity in the forestry sector. Its achievements during VIIIth Plan and goals for the Ninth Plan are as under:-

(Rs. in Crores)

S. No.	Programme	VIII Plan Outlay	Expdt	Physical Targets.	Physical Achievements	Ninth Plan Outlay	Goals set for Ninth Plan
	IIFM	6.50	10.34			12.50	
a)	Management Development Programme (MDP)/ Courses & Seminars			MDP 109 Nos. 5+3 batches	MDP 79 Nos. 5+3 batches		131MDP and 19 workshops
b)	Post-Graduate Diploma in Forestry Management (PGDFM)			PGDFM 5 batches	PGDFM 5 batches		Every year 35 students in PGDFM, 5 seats to SAARC students, 5 seats for foreign nationals/NRIs,
c)	M.Phil level Course on Resource Management (MRM).			MRM 3 batches	MRM 3 batches		20 persons in MRM. Ph.D.Programmes 10 numbers

11. INDIAN COUNCIL OF FORESTRY RESEARCH & EDUCATION (ICFRE), DEHRADUN.

This is an autonomous body under this Ministry for research and education activities relating to forestry. It has 8 institutes and 3 satellite centres spread all over the country. Its achievement during VIII Plan and goals for Ninth Plan are as under:-

(Rs. in Crores)

S.No.	Programme	VIII Plan Outlay	Expdt.	Physical Target/Achievements	Ninth Plan Outlay	Goals for Ninth Plan
1.	Research a) General Component	90.00	110.44	*	260.00 (including externally aided component)	**
	b) Externally Aided Component	90.00	56.69	*		**
2	Education & Training	4.00	4.49	*	8.00	**

***ICFRE(HQ)**

ICFRE(HQ) provides necessary guidance, finance, co-ordination and monitoring to its Institutes. Various administrative and technical issues regarding forestry research education & extension are coordinated. These works included allotment of budget, finance, administrative and service matter; recruitment and deputation of staff; monitoring evaluation, supervision and control of externally aided projects, etc; education under forest related matters was imparted through various PG Diploma courses and fellowships and research associateship were awarded. The relevant extension materials and important research findings were published. The important research activities in different research Institutes of the Council for the plan period were as follows:-

- i) **Forest Research Institute, Dehradun** – Market price monitoring of 14 timber species from 10 markets and publication of information; Development of packing boxes from poplars; Evaluation of gluing techniques and preservation treatment; Factory trials of making pencil from poplar logs; Developing designs of furniture from various woods; Studies on storage on leguminous species of food and medicinal value; Ecological monitoring on regeneration, mortality and bio-diversity in Garhwal Himalayas. Recycling of waste paper; studies on nursery and plantation diseases on woods; Development of bio-pesticide from Karanj seed.
- ii) **Institute of Forest Genetics and Tree Breeding, Coimbatore** – Study of reproductive biology of important agroforestry and plantation tree species and mass multiplication of selected genotypes of agroforestry species for increasing the productivity; Estimation of nutrient cycling in different plantation ecosystem.
- iii) **Institute of Wood Science & Technology, Bangalore** - Surveys on sandal provenances and collection of seed from different areas for provenances trials and establish clonal seed orchards of superior genotypes; developed tissue culture protocol for sandal and study the sandal wood pathogen. Study variation in wood and oil of sandal from various provenances.
- iv) **Tropical Forest Research Institute, Jabalpur** – Collection of germplasm of non timber forest species e.g. grass, superior edible fruit giving trees in the forest, medicinal and aromatic plants of Central India and evaluate these for higher yields; study of allelopathic effects of agroforestry trees on agricultural crop; Survey and identify VAM fungi, rhizobium and frankia associate with different tree species and evaluate their effect on productivity of the species.
- v) **Arid Forest Research Institute, Jodhpur** - Screen the local tree species for tolerance of moisture stress; Evaluate and develop irrigation water management for tree species and in different agroforestry systems to maximise productivity; Develop tissue culture protocol in propagation of superior genotypes of fodder yield trees, etc.

- vi) **Institute of Rain and Moist Deciduous Forest Research, Jorhat** - Survey and examine variation in seed formation, viability and germination of important agro-forestry species; Develop necessary nursery technology for local agroforestry species.
- vii) **Himalayan Forest Research Institute, Shimla** - Evaluate the suitability of plant species for cold desert areas and develop effective establishment techniques; Eco-rehabilitation of mined damaged areas; Survey and establishment of 1000 ha. seed stands and seed production areas.
- viii) **Institute of Forest Productivity, Ranchi** - Maintenance of four new brood lac farms alongwith improvement trials with the introduction of new strains of lac insect and hosts, market data collection on lac and dissemination of information to the public.
- ix) **Institute of Social Forestry and Eco-Rehabilitation, Allahabad** - Agro-forestry on demonstration sites with soil amendments and site preparation application of bio-fertilisers and collection of growth data; Socio-ecological survey on 10 locations in Vindhyan hill tracts and Gangetic plains.
- x) **Institute of Forestry Research and Human Resource Development, Chhindwara** - Human resource development programmes for developing skilled manpower in forestry sector.

** Important research activities in different Institutes of the Council for the IXth Plan have been outlined below:

- i) **Forest Research Institute, Dehra Dun** - Planting stock improvement programme of Poplar, Chirpine, Eucalyptus, Sisoo, Teak, etc; Investigation into seed viability, germination and longevity of some important species of upper Gangetic plains; Preparation of volume and yield tables of *Dalbergia sisoo* and Poplars; Economics of *Tectona grandis* plantations in Tarai region; Enhancing in vitro auxillary bud proliferation and shoot multiplication; Seed pathology of Bamboo spp., *Dalbergia sissoo*, *Anthocephalus chinensis*, Acacia spp., Albizia spp. and Eucalyptus spp. etc.; Studies on nursery and plantation diseases and their management; Study of phytonematodes with special reference to root knot nematodes; Surveillance and monitoring of insect pests, their seasonal abundance, pest activity and management of light trap techniques, etc.; Studies on bio-fertilizers; Geological, geomorphological and micro-morphological studies of skeltal and Sodic soil and their management; Chemical composition and optimisation of the conventional pulping process through biometrics studies on non wood i.e. rice straw; Bleaching of alkali-oxygen delignified kraft pulp from *Eucalyptus teretricornis* and *Anthocephalus indicus*; Development of adhesives from renewable sources; Studies on Jatropha seed oil; Comparative studies on nitrogen fixing ability of different provenances and clones of *Dalbergia sissoo*; Studies on rare endangered plants; Regeneration, mortality and species diversity in Sal forests of UP; Reclamation and ecological monitoring of mined areas - iron ore mine in Saranda Bonai range; Development of technology of sawing and seasoning of lower girth Eucalyptus log; Coupling of solar and dehumidification drying for seasoning of wood; Development of technology for eco-friendly preservative; Production of restructured wood from lops and tops of Poplar and Lantana, etc.
- ii) **Institute of Forest Genetics & Tree Breeding, Coimbatore** - Genetic upgradation and planting stock enhancement of selected plant material of teak through macro-propagation techniques; Collection of seeds from SPA and maintenance of seedlings; Monitoring of seed orchards of MPT species and seed production areas; Identification and selection of provenances of *Acacia nilotica* and *Albizia lebbek* from southern states and progeny trial of Teak with 10 different clones at Nilambur; Genetic improvement of *Acacia nilotica*, *Casurina equisetifolia* and *Tectona grandis* etc.; Growth and performance analysis of clones and half-sibs of *C. equisetifolia*; International provenance trial of *Azadirachta indica*, provenance trial of *Pongamia pinnata* and *Jatropha curcas*; Training and demonstration courses for officials, school teachers and NGOs, etc; Collection of field data of teak plantations of Coimbatore, Pollachi and Thanjavur divisions and climatological data and its analysis; Establishment of pasture and silvi-pasture system in the selected fields, recording of growth measurement of trees and agricultural crop as monitorable indicators, analysis of existing agroforestry system in the different microwatersheds; Establishment of agri-silvi and silvi-pasture and block planting models; Reproductive biology and breeding systems in tropical tree species; Selection of salinity tolerant clones of Casurina growth and performance analysis of clones and half-sibs of Eucalyptus; Physiological and protein patterns in their clones; Mass multiplication of Bamboos; Preliminary studies on finger printing of clones of *C. equisetifolia*; Maintenance of germplasm of

- Eucalyptus clones in the tissue culture laboratory; Standardization of optimum storage condition for *Azadirachta indica*; Studies on the seedlife of *Casurina equisetifolia* and its germination capacity and seed handling procedures etc.; Standardization of germination methods in *Tectona grandis* and evaluation of vigour for seeds and pretreatment requirement of miscellaneous species; Establishment of Seed Bank; Allelopathic effect of forestry species on seed germination, etc.
- iii) **Institute of Wood Science and Technology, Bangalore-** Study of anatomy of important species for the purpose of identification; Development of computer assisted wood identification; Upgradation in CALPRO software and addition of database of another 25 timbers; Assessment of wood quality of different clones of *Eucalyptus tereticornis* and evaluation of physical and mechanical properties of *Eucalyptus grandis* and *Acacia auriculiformis*; Preparation of cement bonded particle boards and evaluation of strength properties of wood polymer composites; Training in field identification and grading of timber to in-service officials; Development of mathematical drawing model and studies on effect of temperature, moisture on weathering, wood deformation; Durability studies of timber treatability of timbers used in catamarans and leachability of water borne preservatives in treated woods; Scientific gum tapping of Jhingan and its use as a substitute for Jiggat used as an adhesive in agarbathi; Studies on red sanders wood extracts (chemical and spectroscopic) and scientific removal of *Machilus macrantha* and *Cinnamomum* bark to achieve maximum regeneration without damage to trees; Studies on ecology, bio-deterioration, afforestation and conservation of mangroves along Goa, Karnataka and Andhra coast; Maintenance of experimental field stations of Sandal, collection of Sandal seeds from CSOs and supply of seeds and seedlings to farmers, NGOs and State forest departments etc; Development of nursery practices including in-vivo and in-vitro propagation techniques for mass production of high quality planting stock and development of suitable silvicultural and management practices for Sandal and farm forestry, etc.
- iv) **Tropical Forest Research Institute, Jabalpur -** Maintenance of provenance trials; Establishment and maintenance of SSPAs, CSOs, multiplication garden of teak and development of model research nursery; Survey, identification and selection of plus trees of Teak, Casurina and Safed Siris; Clonal multiplication of superior/elite trees for establishment of production populations; Bio-chemical studies of plant/trees sample collected from and around lime kiln area and factors responsible for tolerance in these species; Survey, identification and collection of Bamboo, Tendu and grasses from MP, Maharashtra and Orissa for their multiplication and distribution; Studies on identification and control of seed microflora of Teak, Neem, Bamboos, Sissoo, Safed Siris and Casurina, etc.; Studies on different aged iron and lime stone mined overburdens; Laboratory analysis of soil and plant samples collected from mined areas; Identification of insect pests on forestry seeds in nurseries and plantations and assessment of damage; Phonological studies on teak and collection of meteorological data of the region and quality propagules for vegetative propagation of ornamental and fruit yielding species; Survey and collection of ethnobotanical data; Documentation and conservation of plants used by the tribals; Impact of tribal culture on vegetation; Studies on bio-diversity of Satpura National Park and in forests covered under JFM working in Orissa and MP; Finding out appropriate agroforestry model for Bamboo cultivation for improvement of the productivity of the degraded lands with soil and water conservation measures; Studies of MPT species commonly grown in agroforestry practice; Development of agroforestry models for various agro-ecological regions and laying out of experiments on agri-silvi, silvi-horti, agri-horti models; and studies on productivity enhancement through management for people's participation. etc.
- v) **Arid Forest Research Institute, Jodhpur -** Investigation of soil water relationship in various site conditions for important tree species of arid zone; Screening of superior genotypes of Babul, Aonla and Anjan and development of tissue culture protocol for their propagation; Evaluation of different tree species for high yields in forestry plantations and agroforestry areas in the IGNP command area; Survey and collection of different provenances of drought tolerant and salinity resistant fodder-species-leaves of arid zone and their behavior on different treatments of lopping; Establishment of seed production areas, clonal seed orchards and vegetative multiplication gardens; International Neem provenance trials; Study on bio-pesticide, bio-fertilizer, etc.
- vi) **Institute of Rain & Moist Deciduous Forest Research, Jorhat -** Management of shifting cultivation; Effect of shifting cultivation on the vegetation pattern, microbial population and soil nutrients in Northeast India; Development of agro-forestry model; Survey and collection of Bamboo blight disease, isolation, culture and identification of pathogens, pathogenicity tests, isolation work; Studies on VAM inoculum as bio-fertilizer and mycorrhizal association in the forest sites of North-eastern region of India with special reference to Assam; Development of methodology for mass propagation of Bamboos and Canes through tissue culture; Restoration and reclamation of abundant mined areas of Assam coal fields by planting

- various indigenously available species through rhizomes, cuttings and seedlings; Studies on seed production areas, selection of plus trees, collection of seeds, establishment of vegetative multiplication garden, germination and viability tests and creation of a seed bank; Ethno-botanical studies, etc.
- vii) **Himalayan Forest Research Institute, Shimla** - Planting stock improvement programme - identification and location of seed stands and their development into seed production areas; Establishment of vegetative multiplication garden; Studies on Himalayan pines-identification, screening, selection and collection of germplasm of *Pinus roxburghii*; Increasing productivity of man-made forests; Cold desert afforestation and pasture establishment - selection of suitable species for planting, including trees, shrubs and grasses and develop effective establishment techniques; Regeneration of coniferous and broad-leaved forests; Examine the effect of the introduction of Poplars into degraded coniferous forests; Agroforestry/silvipasture in the lower hills - selection of species and develop appropriate models with people's participation; Introduction and performance trials on some broad-leaved tree species for afforestation and agroforestry etc.
- viii) **Institute of Forest Productivity, Ranchi** – Establishment and maintenance of seed production areas, Seedling seed and clonal seed orchards for the priority species in Bihar and West Bengal; Provenance trials of Eucalyptus, Gamhar, Neem and Sissoo, etc.; Establishment of vegetative multiplication garden; Hydrological studies; Nursery techniques of NWFP; Maintenance of lac forms alongwith improvement trials and introduction of new strains of lac insects and hosts; Assessment of plant growth and productivity in forests and plantation ecosystems, and studies on vegetative propagation of bamboo, etc.
- ix) **Institute of Social Forestry and Eco-Rehabilitation, Allahabad** - Agroforestry models for wasteland; Environmental rehabilitation of Vindhyan hills and Gangetic plains; Enhancement of productivity of ecosystems; Under planting stock improvement programme establishment and maintenance of SPA, SSPA and CSO; Training and demonstration programme, etc
- x) **Institute of Forestry Human Resource Development, Chhindwara** - Imparting training in advanced forestry technology; Studies on Socio-economic aspects and joint forest management; Identification of key pests and their control measures; Photochemical analysis of medicinal plants and NWFP species; etc.
- xi) **Forest Research Centre, Hyderabad** -Building construction at new site; Planting stock improvement programme; Studies on mangrove forests, non-wood forest products, Biodiversity conservation; Training to forest officials, NGOs and farmers.

12. INDIAN PLYWOOD INDUSTRIES RESEARCH & TRAINING INSTITUTE (IPIRTI), BANGALORE

The Indian Plywood Industries Research and Training Institute(IPIRTI) is an autonomous body of the Ministry of Environment and Forests, Government of India. It was established in 1962 as Indian Plywood Manufacturers Research Association (IPMRA) at the initiative of the plywood industry with participation of the Council of Scientific and Industrial Research (CSIR). The Institute was re-designated as Indian Plywood Industries Research Institute in 1970. The administrative control of the Institute was transferred to the Ministry of Environment & Forests in 1990. The objectives of the Institute are:-

- i) Undertaking Research to enlarge service life of wood and wood products, optimise/ economise wood volume in end use and reduce wastage in conversion as well as application.
- ii) Development of technology to use non-durable and smaller girth log.
- iii) To impart training to improve skills, upgrade product quality and optimise production cost.
- iv) To advise on standardisation of wood and wood products and policy issues relating to development of mechanical wood industries.
- v) Address the information needs of users.

(Rs. in Crores)

Programme	VIII Plan Outlay	Expdt.	Physical Targets/Achievements	Ninth Plan Outlay	Goals set for Ninth Plan
IPIRTI	2.16	2.21	*	4.50	**

* The Institute's Research & Development focus during VIII Plan period was on the following key areas:

- i) Optimum utilization of small diameter logs (in particular plantation timbers) in the production of lumber and plywood.
- ii) Formulation of adhesives replacing non-renewable with renewable materials.
- iii) Development of economical methods to treat wood and wood based panels with preservatives.
- iv) Evaluation and standardization of plywood woods for engineering applications.
- v) Developing non-destructive tests (NDT) for wood and wood panel products.
- vi) Promotion of Total Quality Management (TQM) tools for better quality and higher productivity.
- vii) Investigation and rotary cutting, drying and gluing characteristics of commonly used imported species.
- viii) Organizing short-term courses in critical areas and PG Diploma Course in Mechanical Wood Industries Technology.

The Institute is credited with the development of technologies, goal directed R & D Programmes, purposeful efforts to effect improvements in the existing process techniques. The forces of competition and changes in technologies needed were considered in formulating R & D Programmes.

** The Ninth Plan R & D and Training programmes of the Institute continue to place emphasis on conservation of wood by upgradation of technology and intensive manpower training. The Institute R & D focus during the Ninth plan period is as follows:

- i) Further strengthening of mechanical Wood Industries Research and Training facilities at IPIRTI specially for production of panel products and sawn wood from small diameter logs.
- ii) Establishment of Research & Training facilities in particle board for efficient utilization of fast growing plantation wood, wood residues from wood industry and other lignocellulose agro-residues.
- iii) Establishment of Research & Training facilities for development of Bamboo mat and other Bamboo Composites.
- iv) Establishment of Research and Training facilities in Finger jointing and laminating plant for better utilization of sawn wood from small diameter plantation timbers and wood residues for different end use applications.
- v) Establishment of a outreach station in North Western India to cater to R & D needs of North and North-western States of the country including Haryana, Punjab, Himachal Pradesh, J & K, U.P., Rajasthan & Gujarat.
- vi) Establishment of National Information Centre on wood and wood products (NICWOOD).
- vii) Upgradation of infrastructural facilities at the Institute campus by constructing Residential quarters for the staff in a phased manner.
- viii) Establishment of wood seasoning facility as part of research and training activity.
- ix) Completion of the extension building of the existing pilot plant to facilitate establishment of R & D facilities in particle board and finger jointing and laminating.
- x) Research and design of furniture based on panel materials.
- xi) Formulating strategies for improving processes, performance and quality through continuous improvement and measurement for total quality.
- xii) Continue R & D work on finding wood alternatives by plantation grown timber and bamboo.
- xiii) Establishment of facilities for evaluating strength characteristics of large size wood and wood based panels nondestructively.

- xiv) Further strengthening of training activities in the areas of particle board and MDF, with due emphasis on critical areas of production technology.
- xv) Organizing in-plant training at the factory premises.
- xvi) Strengthening of infrastructural facilities in IPIRTI Internet services and consolidating information on wood, plywood and other wood composites as also wood alternatives.
- xvii) Organising short term training programmes for IFS Officers (compulsory).

SURVEY AND UTILISATION OF FOREST RESOURCES

13. FOREST SURVEY OF INDIA (FSI):

The FSI is responsible for survey and utilisation of forest resources in India and its achievements during the VIII Plan and outlay proposed for the IX Plan are as under:

(Rs. in Crores)

S.No.	Programme	VIII Plan Outlay	Expenditure	Ninth Plan Outlay
1.	Application of Remote Sensing Techniques in Survey of Forests.	19.21	13.79	15.00

The physical targets and achievements of FSI during the VIII Plan and the goals set for the IX Plan are as under:-

(Rs. in Crores)

S. No.	Programme	Units	Physical Targets	Physical Achievements	Goals for Ninth Plan
1.	Forest Inventory	Area in Sq. Km.	1,27,057	1,67,571	1,70,000
2.	Data Processing	-do-	1,20,043	1,15,481	1,70,000
3.	Thematic Mapping	1:50,000 scale	1,300	1301	670
4.	Vegetation Mapping	1:250,000 scale	909	911	905
5.	Training	No. of Persons Trained	420	613	450
6.	Special Study	--	6	13	20

14. FOREST CONSERVATION

Under the Scheme "Strengthening of Forestry Division", six Regional Offices are implementing the Forest Conservation Act and monitoring of environmental clearances accorded by the Ministry under Environment Protection Act. The physical and financial achievements during the VIII Plan and goals set for IX Plan are as under:-

(Rs.in Crores)

S. No.	Programme	VIII Plan	Expdt.	Physical Targets	Achievement	Ninth Plan	Goals set for
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		Outlay				Outlay	Ninth Plan
1.	Strengthening of Forest Division:	9.55	9.56			20.00	
	a) Monitoring of Forest Conservation Projects/Cases			4370	4194 1196 (site inspection)		4750
	b) No. of FCA projects approved upto 5 ha.			--	1431		
	c) No. of FCA projects processed above 5 ha. to 20 ha.			--	615		
	d) Monitoring of Environment Clearance Projects/Cases.			2140	2527		2000

15. FOREST PROTECTION AND REGENERATION

The Scheme "Association of Scheduled Tribes and Rural Poor in Regeneration of Degraded Forests" was started in 1992-93 on pilot basis with 37 projects in 9 States, namely, Andhra Pradesh, Bihar, Gujarat, Madhya Pradesh, Maharashtra, Rajasthan, Orissa, West Bengal and Karnataka. Its achievement during the VIII Plan and goals set for the IX plan are as under:-

(Rs.in Crores)

Programme	VIII Plan Outlay	Expdt.	Physical Targets	Physical Achievements	Ninth Plan Outlay	Ninth Plan Physical Target
Association of Scheduled Tribe & Rural Poor	7.35	7.36	10.550 ha. Rehabilitation of degraded Forest lands	8330 ha. of degraded forests were rehabilitated and remaining 2240 ha. were covered during 97-98 as spill over works.	15.00	15677 ha. Rehabilitation of Degraded forest land. - Maintenance of assets created during 8 th Plan.

During the VIII Plan, a Central Sponsored Scheme, "Modern Forest Fire Control Methods in India" was continued. The project was implemented in 11 States during VIII Plan. Its achievement

during the VIII Plan and goals set for IX Plan are as under:-

(Rs. in crores)

Programme	VIII Plan Outlay	Expdt.	Physical Targets	Physical Achievements	Ninth Plan Outlay	Goals set for IXth Plan

Modern Forest Fire Control Methods in India	7.37	7.37	To assist 11 States to develop necessary infrastructure to control forest fire	11 States were assisted	40.00	To assist all the States to develop necessary infrastructure to control forest fire.
National Forestry Action Programme	--	--	--	--	0.50	*

* Goals set for IXth Plan

1. Formulation of SFAPs.
2. Compile SFAPs and formulate NFAP.
3. Present NFAP to donor agencies.
4. Formulate concept papers to secure external funding for implementation of NFAP. Obtain concept papers from all the State Governments/UT.
5. Appoint Consultants for NE States.
6. Preparation of concept paper North Eastern States, Sikkim and J&K.
7. Develop Web site for NFAP.
8. Organise Donor conference to secure funding.
9. Organise National workshop on boundary demarcation at Mumbai.
10. Organise National Workshop on NTFP at New Delhi.
11. Consultation with the Donor agencies both bilateral and multilateral.

Achievements for IXth Plan

1. SFAPs formulated.
2. SFAPs compiled and NFAP formulated.
3. Donors conference organised in September, 1999 and NFAP presented.
4. 12 projects formulated, 6 sent to World Bank, 1 to JBIC, 1 to EEC. Four projects under scrutiny.
5. Consultants appointed for North Eastern States, Sikkim and J&K.
6. Concept papers formulated for North East States and Sikkim.
7. Web site for NFAP developed and will be operationalised in December, 2000.
8. Donors conference scheduled for April, 2001.
9. National Workshop on boundary demarcation planned in Mumbai during February, 2001.
10. National Workshop on NTFP scheduled to be organised at New Delhi in January, 2001.
11. Consultation with the Donor agencies both bilateral and multilateral.
12. ICFRE, IGNSA, IIFM, IPRITI and FSI have been asked to formulate umbrella projects for external assistance for research, HRD, Survey and demarcation, maps procurement, working plans, utilisation, marketing etc.
13. Planning Commission and States Governments have been requested to step up allocation to forestry sector.
14. States have been asked to submit proposals under the various ongoing CSS schemes of the Ministry to step up allocation.

16. WILDLIFE

Ministry of Environment & Forests oversees implementation of Wildlife (Protection) Act, provides assistance to State Governments for development and protection of National Parks and Wildlife Sanctuaries and deals with matters relating to Wildlife Institute of India (WII), Dehradun and Convention on International Trade in Endangered Species (CITES).

17. WILDLIFE INSTITUTE OF INDIA (WII)

WII was established in 1982 under the erstwhile Ministry of Agriculture and Co-operation and subsequently brought under the Ministry of Environment and Forests. The main mandate of the Institute is to impart training to government and non-government personnel to carry out research and advise on matters of conservation and management of wildlife resources. In April, 1986, autonomous status was granted to this Institute for developing its professional role in bio-diversity conservation for South and South East Asian Region.

The Institute conducts three principal courses viz., the 3 months' certificate, the 9th months' diploma and 2 years M.Sc. in Wildlife Biology on a regular basis.

During 8th Plan about 370 students/Forest Officers/others were trained by WII in different courses conducted by it. Its achievements during 8th Plan and goals set for 9th Plan are given below:

(Rs.in Crores)

Programme	8 th Plan Outlay	Expdt.	Physical targets (no. of persons)	Achievements (no. of persons)	9 th Plan Outlay	Goals set for 9 th Plan. (No. of persons)
WII	17.57	16.21			18.00	
a) M.Sc. courses in Wildlife Sciences			50	26		65
b) P.G. Dip. Course in Wildlife Management.			150	86		110
c) Certificate Course in Wildlife Management.			150	83		110
d) Field Workshop/ Short Courses			300	175		1500

18. STRENGTHENING OF WILDLIFE DIVISION AND CONSULTANCIES FOR SPECIAL TASKS

The Scheme was started from 1986 with activities like Strengthening of Wildlife Division and Regional Offices in Delhi, Mumbai, Calcutta and Chennai with adequate manpower and development of infrastructure for better enforcement of Wildlife (Protection) Act, CITES, etc. Three sub-regional offices at Guwahati, Amritsar (shifted from Pathankot) and Cochin were started. The achievement of

the Scheme during the VIII Plan and Goals set for the IX Plan are as under:

(Rs. in Crores)

Scheme	8 th Plan Outlay	Expdt.	Physical Targets/ Achievements	9 th Plan Outlay	Goals set for 9 th Plan.
Strengthening of Wildlife Division	3.50	2.71	*	6.00	**

* Physical target are not given as the scheme aims at strengthening the functions of the Central Wildlife Organisation and Regional and Sub-regional Offices. It also aims at enforcement of Wildlife (Protection) Act 1972 and the provisions of CITES. The Central as well as Regional Offices have been able to achieve the objectives to a great extent. Large number of seizures of wildlife and its derivatives have been made which would otherwise have

found their route in the international market. The offices also implement the provisions of CITES with respect to trade in wildlife and its derivatives.

Dr. Salim Ali and Dr. Kailash Sankhla National Fellowship Awards have been commissioned during the year 1995. These awards are given in alternate year.

**

1. Strengthening of Central Unit Regional and Sub-regional Offices.
2. Upgradation of existing three Sub-regional Offices and creation of four new Regional Offices at Imphal, Hyderabad, Varanasi and Ahmedabad.
3. Consultancies for Special Tasks.

Achievements of 9th Plan

Physical target are not given as the scheme aims at strengthening the functions of the Central Wildlife Organisation and Regional and Sub-regional Offices. It also aims at enforcement of Wildlife (Protection) Act, 1972 and the provisions of CITES.

19. NATIONAL PARKS AND SANCTUARIES

The objective of the Scheme is to assist the State governments and UTs in the development of their National Parks and Sanctuaries and encourage them to extend protected area network. The Scheme provides financial assistance for habitat development of Wildlife and Bio-diversity Conservation, to create infrastructure facilities for better protection and management. 100% assistance is provided under this Scheme for identified items of non-recurring expenditure in case of National Parks and Sanctuaries. 50% assistance is also provided in respect of certain identified recurring items

of expenditure in respect of National Parks only. Its achievement during the 8th Plan and goals set for the 9th Plan are as under:

(Rs.in Crores)

Scheme	8 th Plan Outlay	Actual Expdt.	Physical Targets	Achieve - ments	9 th Plan Outlay	Goals set for 9 th Plan.
Develop- ment of National Parks and Sanctuaries.	49.50	49.50	250 National Parks and Sanctuaries to be covered and provided assistance.	220 National Parks and Sanctuaries were provided assistance.	70.00	To provide financial assistance to all National Parks and Sanctuaries in States/UTs for protection of endangered species and Conservation of Wildlife.

20. CENTRAL ZOO AUTHORITY (CZA)

The Central Zoo Authority (CZA) was constituted by the Government of India in February, 1992 with a view to enforce minimum standards for upkeep and health care of animals in zoos. This was done through an amendment of the Wildlife (Protection) Act, 1972.

The achievements of CZA during the VIII Plan and goals set for the IX Plan are as under:-

(Rs. in Crores)

Name of the Scheme	Eighth Plan Outlay	Actual Expdt.	Physical Targets	Physical Achievements	Ninth Plan Outlay	Goals set for Ninth Plan
Central Zoo Authority	12.00	12.00	*	**	40.00	***

*

To evaluate zoo with reference to norms and standards specified under the Recognition of Zoo Rules, 1992 and provide technical and financial support to zoos having potential to achieve the desired standards.

To recognize or de-recognize zoos under the provisions of Wildlife (Protection) Act.

**

- i) During the VIII Five Year Plan, 213 zoos were evaluated with regard to specified standards and norms and 151 zoos were granted recognition and 62 zoos were refused recognition.
- ii) A total of 49 zoos were given financial assistance for their improvement to enable them to meet the standards specified under the Rules.
- iii) Various training courses and workshops were organised for capacity building of the zoo personnel and zoo management. Ten number of Zoo Directors and Veterinarians were sent for training in zoo management to U.K. Two research projects were awarded to CCMB on DNA Finger Printing of Wild Animals and
- iv) A database was created on Zoos of India. Updating of the data is being continued.

To achieve the standards and norms set-forth under the Recognition of Zoo rules, 1992; to provide grants for animal housing and veterinary care; capacity building; research activities; and creation of rescue facility in the off display area of the zoos.

21. ANIMAL WELFARE BOARD OF INDIA (AWBI)

Various animal welfare organisations along with the Board take steps to generate public awareness, AWBI receives grants-in-aid from Government of India and in turn provides assistance to various organisations in the country for rescue/shelter homes, animal birth control, vehicles, medicines and veterinary care, etc. AWBI also imparts training to representatives of various Animal Welfare Organisations and public in animal care, laws and various other disciplines. Its achievements during the VIII Plan and goals set for the IX Plan are as under:

(Rs.in Crores)

Name of the Scheme	VIII Plan outlay	Expdt.	Physical Target/ achievements	Ninth Plan outlay	Goals set for Ninth Plan
Animal Welfare Board of India	6.50	6.40	*	15.50	<p>Number of trainers 150. Number of Hon. Animal Welfare Officer-12000. Number of training centres-1000.</p> <p>Rescue Homes for Animals – Number of Organisations to be benefited – 300.</p> <p>ABC operations – 1,00,000 Number of Centers – 30 Construction of Office Building of AWBI.</p> <p>Research & Development</p>

*Physical Targets

- a) Humane Education
- b) Rescue home for animals including water troughs and water facilities.
- c) Animal birth control operations

*Achievements

- a) Number of trainers 97. Number of Honorary Animal Welfare Officers 9500; Number of Training Centres 600.
- b) Number of organisations benefited 250.

c) Number of operations 70,000. Number of centres 20.

Scheme has been transferred to the Ministry of Social Welfare and Empowerment w.e.f. 3.9.98.

22. PROJECT TIGER (PT)

The Centrally Sponsored Plan Scheme 'Project Tiger' was launched on 1st April, 1973. Initially, nine tiger reserves were created. Presently, there are 27 tiger reserves in 14 States covering an area of 37761 sq. kms. The achievements of the Scheme during the VIII Plan and goals set for the IX Plan are as under:-

(Rs. in Crores)

Scheme	8 th Plan Outlay	Expdt.	Physical Targets	Physical Achievements	Ninth Plan Outlay	Goals set for Ninth Plan.
Project Tiger	40.00	38.90	*	**	75.00	6 New Tiger reserves are to be identified and included in the Project Tiger scheme in addition to providing central assistance to 23 tiger reserves created upto the end of the Eight Plan. Creation of Strike Force in six Tiger Reserve facing militancy and Extremists activity.

*Physical Targets

To assist Tiger Reserves for conservation and protection of tigers habitat improvement, forest protection, construction of staff quarters, office building, wireless network, etc.

**Physical Achievements

Central assistance was given to 23 Tiger Reserves and the following targets were achieved:

- Habitat Development – 6425 Hc.
- Fire Protection – 300 Kms of new fire lines.
- Development – 40 Nos.-Anicuts, 85 Nos- Tanks/Ponds, 200 Nos.- water-holes, 50 Nos. Tubewells
- Construction of Building – 545 of various categories of buildings.
- Construction of Roads – 350 Kms.
- Wireless Network – 50 Nos. Wireless Stations, 100 Nos. wireless Sets and 400 Nos. W.T. Sets.
- Replacement of Vehicles – Jeep/Cars 50 Nos., Motor Cycles 40 Nos. and others 10 Nos.
- Protection – 125 Nos. of Arms
- Nature Interpretation Centres – 28 Nos.

23. PROJECT ELEPHANT

The Scheme was started in 1991-92. The achievement during the VIII Plan and goals set for the IX Plan are as under:-

(Rs. in Crores)

Scheme	VIII Plan Outlay	Expdt.	Physical Targets	Physical Achievements	Ninth Plan outlay	Goals for the Ninth Plan.
Project Elephant.	23.00	19.51	To assist 12 States for Conservation of elephants.	Assisted 13 States for conservation	35.00	To assist 12 States for conservation of

				of elephants.		elephants.
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24. ECO-DEVELOPMENT SCHEME IN AND AROUND PROTECTED AREAS:

The objectives of the Scheme is to provide alternative sources of sustenance to the communities on the fringes of National Parks and Sanctuaries and to improve the ecological productivity of the buffer zones of Protected Areas through the introduction of sustainable economic activities and also to provide assistance for preparation of plans for Eco-development, soil conservation, alternative energy sources, efficient utilisation of biomass, etc. Its achievement during the 8th Plan and goals for the 9th Plan are as under:

(Rs in Crores)

Scheme	8 th Plan Outlay	Expdt.	Physical Targets	Achievements.	9 th Plan Outlay	Goals set for 9 th Plan.
Eco-development Around Protected Areas	22.98	22.20	80 national Parks and Sanctuaries and 23 Project Tiger areas to be covered.	70 National Parks and Sanctuaries and 23 Project Tiger areas covered under the scheme. They were provided assistance for biomass generation and non-conventional energy resources.	175.00 (including India Eco Development Project)	80 National Parks & Sanctuaries and 24 Project Tiger areas will be covered (excluding 5 Tiger Reserves being assisted under the Externally Aided Scheme) for biomass generation and non-conventional energy resources.
India: Eco-development Project.	6.16	2.36	The Project Preparation Facility funds of US \$2 million was provided as loan by IDA to take up demonstration activities viz. Improved management, village eco-development, environment education awareness campaign, etc. in 7 protected areas where the main scheme would be implemented during the 9 th Plan.	Infrastructure development facilities were taken up in the Central Coordination Unit in the PT Division in the Ministry. Concerned State Governments were provided assistance for taking up development activities in the 7 protected areas.		The Project Agreement was signed on 30/9/96 and became effective from 27/12/96. The Project will be implemented by the concerned States to achieve improved protected area management, village eco-development, environmental education awareness campaigns, etc. in the 7 identified areas viz. Gir, Nagarhole, Ranthambore, Periyar, Buxa, Palamau and Pench.

25. BENEFICIARY ORIENTED SCHEME FOR TRIBAL DEVELOPMENT:

The Scheme was launched during 1989-90 with an objective of rehabilitation of tribal families affected under the relocation plan of national parks and sanctuaries including project tiger reserves. The achievement during the VIII Plan and goals set for the IX Plan are as under:-

(Rs in Crores)

Scheme	VIII Plan Outlay	Expdt.	Physical Targets	Physical achievements	IX Plan outlay	Goals set for Ninth Plan.
Beneficiary Oriented Scheme for Tribal	3.50	2.40	Relocation of tribal families outside the	Out of 423 tribal families proposed for relocation outside the	19.00	1000 tribal families are proposed to be relocated

Tribal Development.			protected areas.	protected areas, relocation of 226 families completed.		outside protected areas.
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26. NATIONAL ZOOLOGICAL PARK, NEW DELHI

The Scheme is being continued since 1955-56 with the objective of conserving and breeding rare and endangered animals, to conduct research regarding behaviour, reproduction and nutrition, to educate and entertain people about preservation of wildlife. It also provides assistance and guidance to other zoos in the country.

(Rs. in Crores)

Name of the Scheme	8 th Plan Outlay	Actual Expdt.	Physical Target	Physical Achievements	9 th Plan Outlay	Goals set for 9 th Plan
NATIONAL ZOOLOGICAL PARK	1.95	1.30	*	**	5.00	***

*

Improvement of Kangaroo, Water ducks, Sangai, Cheetah, Leopard, Jaguar encl. and incinerator. Rewiring and repair of staff quarters, recycling plan, construction of stand of barriers, quarantine works and hoarding desilting and cleaning of moats etc.

**

All the above mentioned works have been completed.

1. Moated enclosure for primates, chimpanzee/orangutan.
2. Major renovation and modification to suit the retirement of animals.
3. Restructuring of the moat and other structure.
4. Making new rests, cubicles/medical treatment cells and major renovation etc.
5. Construction of residential accommodation for staff.

27. NATIONAL AFFORESTATION & ECO-DEVELOPMENT BOARD

The National Afforestation & Eco-Development Board (NAEB) was set up in August 1992. Its main functions are:

- (a) Ecological restoration of degraded forest areas and adjoining lands
- (b) Research and extension of research findings to disseminate new and proper technologies;
- (c) Create general awareness to foster a people's movement for promoting afforestation and Eco-development

(Rs in Crores)

Scheme/Activity	8th Plan Outlay	Financial Achievements for 8th Plan	Physical Targets for 8 th Plan	Physical Achievements for 8th Plan	IXth Plan outlay	Goals set for IXth Plan
Integrated Afforestation and Eco- Development Projects scheme	200.00	203.12	3,79,558 ha.	2,98,981 ha.	247.00	1,77,000 ha.
Fuelwood/Fodder Projects Scheme	158.00	154.19	4,20,084 ha.	4,04,218 ha.	135.00	3,67,000 ha.

Non-Timber Forests Produce (including Medicinal Plants) Scheme	55.00	56.47	1,00,000 ha.	1,08,000 ha.	80.50	74,000 ha.
Seed Development Scheme	9.00	7.81	-	25 States assisted	6.00	All States to be assisted
Grants-in-Aid Scheme (for Voluntary Agencies)	9.50	7.51	-	338 Projects sanctioned	8.00	NGO projects to be sanctioned
Aerial Seeding Scheme	6.00	2.49	This scheme is in abeyance since 1994-95			
<u>20 Point Programme</u>						
a) Seedling Distribution			625.85 crores	557.90 crores		
b) Area coverage Others			5522200 ha.	5067031 ha.		

28. BOTANICAL SURVEY OF INDIA (BSI)

Botanical Survey of India is a Subordinate Office of this Ministry with Headquarters at Calcutta and Circles and Field Offices at 9 centres in the country. The primary objectives of BSI are to explore plant resources of the country, to inventories and monitor phytodiversity, to document phytodiversity in the form of Flora of India, State Floras, District Floras and Floras of Fragile Eco-systems, protected areas etc., to identified species, populations and Eco-systems which are under threat and need conservation including endemic, to undertake Ex-situ conservation of critically threatened taxa in the Botanical gardens through conventional and bio-technological methods and to explore the bio-perspectives of the plant wealth of the country for sustainable utilisation through ethnobotanical studies etc. The achievements of BSI during the 8th Plan and goals set for the 9th Plan are as follows:

(Rs. in Crores)

Schemes	VIII Plan Outlay	Expdt.	Physical Targets	Physical Achievements	Ninth Plan Outlay	Goals set for Ninth Plan
<u>Botanical Survey of India:</u>	12.41	11.84			32.00	
Survey of Natural Resources (no. of tours)			207	135		Exploration tours – 650
b) Endangered Species (no. of Red Data Sheets to be compiled)			790	610		Coverage of species under threat in publication Red Data Book (ca. 750)
c) Scientific evaluation of selected useful plants (nos.)			15	10		

d) National database of type specimen.			2770	2770		Preservation of specimens (ca.60,000)
e) Listing of Live Specimen Collection			15,200	15045		Collection of specimens (80,000)
f) Publication.			31	31		Publication (ca.250)

29. ZOOLOGICAL SURVEY OF INDIA (ZSI)

Zoological Survey of India was established primarily to explore and inventories the faunal diversity of the country and to collect and document baseline data in respect of taxonomy, geographical distribution, bio-ecology of various animal groups. The primary objectives are 1. Exploration and survey of Fauna resources, 2. Taxonomic studies, 3. Status survey of Endangered species, 4. Status survey of conservation areas, 5. Publication of results through departmental books and journals 6. Publication of Fauna of India series, 7. Maintenance and development of National zoological collections. The achievements of ZSI during the 8th Plan and the goals set for the 9th Plans are as follows:

(Rs. in Crores)

Scheme	VIII Plan Outlay	Expdt	Physical Targets	Physical Achievements	Ninth Plan Outlay
Zoological Survey of India: Survey of States Fauna.	11.83	12.30	Survey of 8 states.	99 Surveys in 8 states to explore Faunal resources, 60 districts were covered. Faunal resources of Orissa, West Bengal & Delhi completed.	32.00
Ecosystem Studies Himalayan Ecosystem Desert Ecosystem Tropical Rain Forests Ecosystem Freshwater Ecosystem Marine Ecosystem			States of Himachal Pradesh, Sikkim, Arunachal Pradesh, J&K, Gujarat, Rajasthan, Tripura, Manipur, Nagaland, Mizoram Kerala and Andamans.	187 Surveys in different states completed. Faunal diversity of Sikkim documented. Inventorisation of Faunal component & Publication of Data taken.	
Survey of Conservation areas including Tiger Reserves			Important conservation areas of the country	69 Surveys in different conservation areas of Prambiculam, Melghat, Gulf of Mannar, Tadoba, deserts, Valmiki Tiger Reserves.	
Taxonomic studies			Taxonomic studies of conservation areas and Ecosystems	Fauna of West Bengal, Meghalaya, Nilgiri, Nanda Devi, Manas Tiger Reserves, Ujini Wetlands completed	
Status of Endangered Species			Status surveys of selected species	Status survey of Capped Langur, Hoolock Gibben, Desert Cat, Chinkara, Hispid	

				Hara, Golden Langur, Nilgiri Langur, Leaf Monkey, Rhesus Monkey, Hanuman Langur completed.	
Red Data Book on Vertebrates			Preparation of publications	Completed	*
Fauna of India				2 volumes published, 3 sent for publication and 2 volumes made press ready	
Computerization			Type & Other Regd. Collections	ENVIS Centre Estd. 40 sps. Of Schedule-1 animals completed.	
Documentation & Publication				Records of ZSI 1991-95 Annual Reports-85-94 Bibliography 27-30 State Fauna of W.B. Hoogly-Matla Estuary Rushikulya Estuary Chilka Wetland Rajaji National Park Status Survey of 3 species.	
Training & Extension				7 Training Programmes on Taxidermy, Collection & Preservation, Wildlife Conservation, Snail, Flukes & Man conducted.	
EIA Programmes				33 EIA Studies Undertaken.	

Goals for 9th Plan

Survey of States Fauna.

8 states

Studies on Selected Eco-systems

7 Eco-systems

Survey of Conservation Areas

20% of the Total Conservation Areas

Taxonomic studies of Fauna

6 States and 5 Eco-systems.

Status of Endangered Species

20 species

Preparation of Red Data Book and Fauna of India Project

Invertebrate part 1 & 8 Volumes of India

Computerization of Faunal Diversity including National Zoological Collection

Type data of General collections

Documentation & Publication

State Fauna Series, Ecosystems, Faunal Diversity document, Annual Reports, Bibliography, Handbooks & Monographs.

Training & Extension Services

7 Training Courses.

Achievements of 9th Plan

Survey of States Fauna.

112 in 8 States covering 48 districts so far.

Studies on Selected Eco-systems

5 ecosystem already taken up Under Action Plan

Survey of Conservation Areas

Survey & inventorisation of Fauna of 5 Conservation Areas taken up under Action Plan

Taxonomic studies of Fauna

Fauna of Sikkim, Manipur, Nagaland, Mizoram completed. Fauna of 3 Wetland and 1 Biosphere & 1 Desert under publication.

Status of Endangered Species

2 species completed, 2 more taken up under Action Plan.

Preparation of Red Data Book and Fauna of India Project

Red Data Book on Vertebrate Completed, Invertebrate, Part-1 under Process. 2 volumes of Fauna of India, Manuscript under Printing stage.

Computerization of Faunal Diversity including National Zoological Collection

Computerization of Type Collection is under progress.

Documentation & Publication

Records ZSI -97 published. Annual Reports - 94-95 made Press Ready. Bibliography Vol.30 Published. State Fauna of Meghalaya, West Bengal (Remaining Parts) published. Occasional Papers Nos.170-177 published.

Training & Extension Services

6 Training courses completed in different disciplines of Zoology.

30. ENVIRONMENTAL EDUCATION, AWARENESS & TRAINING

(Rs. in Crores)

Name of the Scheme	8 th Plan Outlay	Actual Expdt.	Ixth Plan Outlay	Physical Target/Achievements	Goals set for IXth Plan
Environment Education & training	17.65	15.09	32.00	No quantitative targets were set for the schemes as such. However, the targets set for various programmes under the scheme have been successfully achieved.	It is not possible to set any quantitative targets for these schemes. However, the existing programmes will be continued. Though no quantitative targets are set for the scheme, the targets set for various programmes under these schemes are achieved.
Seminars/Symposia/Workshops	1.40	0.89	1.50		

31. ENVIRONMENTAL INFORMATION SYSTEM (ENVIS)

(Rs. in Crores)

Scheme/Activity	8 th Plan Outlay	Actual Expdt.	IX Plan Outlay
ENVIS	5.50	5.81	18.00

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Targets:

- i) During Eighth Plan period, nine new ENVIS Centres on various subject areas were to be set up to develop the ENVIS network.
- ii) A quarterly document namely, 'Paryavaran Abstracts' reporting research in the field of environment in the Indian context was to be published in every year during the plan period.
- iii) Annual Report of the Ministry to be published by ENVIS every year.
- iv) Networking among all the centres to be established for electronic communication with the ENVIS Focal Point in dissemination of information.
- v) Query-answer service to be provided to the users.

Achievements:

- i) All the nine new ENVIS Centres, in various subject areas on environment, were set up during the plan period.
- ii) Paryavaran Abstracts were published as per schedule during the plan period.
- iii) Annual Report of the Ministry was published by the ENVIS in each year during the plan period.
- iv) Efforts were made by the ENVIS for establishing E-mail service in order to have a direct electronic communication with its network partners. 17 ENVIS centres were provided with modem and hardware support to install E-mail facilities during the plan period.
- v) The ENVIS network responded to about 30,000 queries in environment and its related fields during the plan period and provided substantive information to its users.

Goals set for IXth Plan

In addition to the existing centres, a few centres under the priority areas, not covered so far, would be set up during the ninth plan period. All ENVIS Centres would be strengthened for developing the Homepage in their assigned areas for accessing information by the users concerned. In order to promote an online information, all ENVIS centres will be networked with the Focal Point in the Ministry and vice versa. It is also envisaged that all the ENVIS Centres will develop their web sites, in their respective subject areas, so that all users concerned could access the information directly from the Centres through internet.

Achievements

Homepage for 17 centres have been developed. The remaining Centres are in the process of developing their home-page and web-site so that this could be browsed through internet by the user-concerned directly for getting their information feed-back.

32. CENTRES OF EXCELLENCE

(Rs. in Crores)

Name of the Scheme	8 th Plan Outlay	Expdt.	Ixth Plan Outlay	Goals set for Ixth Plan
CENTRES OF EXCELLENCE	23.00	20.08	22.20	To strengthen awareness, research & training in the priority areas of environmental science through existing seven centres of excellence and to augment infrastructural and other facilities in these Centres.

33. NATIONAL NATURAL RESOURCES OF MANAGEMENT SYSTEMS (NNRMS)

(Rs. in Crores)

Scheme/Activity	8 th Plan Outlay Plan	Expdt. Plan	IX Plan Outlay Plan
NNRMS	4.10	3.81	4.00

Targets:

Projects belonging 15 areas identified by the Bio-resource Committee were to be considered..

Achievements:

Out of 56 thrust areas, 20 areas have since been covered and 30 projects sanctioned.

Goals set for IXth Plan

The thrust areas identified by the Bio-resource Committee will be covered in a phased manner and corresponding research projects will be supported for application of remote sensing technologies in the field of environmental sciences for optimal utilisation of the natural resources.

Achievements

Out of 56 areas, about 30 thrust areas have been identified and 14 new research projects, in addition to the on-going projects, have been supported under this Scheme.

34. PARYAVARAN VAHINI

(Rs. in Crores)

Scheme/Acti vity	8 th Plan Outlay	Expdt.	IX Plan Outlay
Paryavaran Vahini	4.50	1.67	0.50

Target:

One Paryavaran Vahini has been constituted in each district which was selected on the basis of high incidence of pollution, density of tribal population and forest cover. 140 districts were identified for the setting up of Paryavaran Vahini.

Achievements:

Only 135 districts finally selected where Paryavaran Vahinis were set up. Token grant of Rs.200/- p.m. was given to the each member of Vahini. As per the decision of the Ministry, the scheme is likely to be transferred to the various States without any financial commitment of the Ministry. The Planning Commission has already been communicated in this regard.

Goals set for Ixth Plan

As per the decision of the Ministry, the scheme is likely to be transferred to the various States without any financial commitment of the Ministry. The Planning Commission has already been communicated in this regard. Decision of the Planning Commission is yet to be received by the Ministry.

35. GRANTS-IN-AID TO PROFESSIONAL SOCIETIES

(Rs. in Crores)

Scheme/Activity	8 th Plan Outlay	Expdt.	IX Plan Outlay
Grants-in-aid to Professional Societies	0.50	0.23	0.50

Targets :

Though no numerical figure was targeted, efforts were made to provide financial support to the Professional Societies and other appropriate institutions for developing activities and projects in the field of environment as well as to develop exhibition galleries and educational programmes relevant to the ecology.

Achievements:

During the plan period about eight institutions were supported and no other worth supporting proposals were received in the Ministry.

Goals set for IXth Plan

Though numerical number for supporting the professional societies are not earmarked but efforts will be made to support various professional societies and other educational institutions to develop their activities and projects in the field of environment as well as to develop exhibition galleries and educational programmes relevant to ecology, wildlife and environment.

Achievements

Proposals from various organisations have been received and are being considered by a Committee for providing assistance under this Scheme. The guidelines and the proforma for submission of the projects have been finalised and circulated to all concerned for submitting the project proposals.

36. ENVIRONMENT IMPACT ASSESSMENT

(Rs. in Crores)

Name of the Scheme	8 th Plan Outlay	Actual Expdt.	Physical Targets	Achievements	Ixth Plan Outlay	Goals set for IXth Plan
Environmental Impact Assessment (Including Clean Technologies)	15.00	14.25	The objective of Impact Assessment division is to assess the Impact of any development Project from Environment angle which is referred to this Ministry. Therefore there is no physical target/achievement.		27.00	The objective of Impact Assessment division is to assess the Impact of any development Project from Environment angle which is referred to this Ministry. EIA is a continuous process & procedures have been evolved for appraisal.

37. ENVIRONMENTAL AUDIT,CLEAN TECHNOLOGY, ENVIRONMENTAL STATISTIC AND MAPPING

(Rs. in Crores)

Scheme/ Activity	8th Plan Outlay	Actual Expdt.	Targets/ Achievements	IX Plan Outlay	Goals set for Ninth Plan
Environmental Audit	0.50	0.50	*	0.60	**
Environment Statistics and Mapping	0.50	0.50		0.60	

Adoption of Clean Technologies in Small Scale Industries	0.50	0.50		0.60	
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* 8th Plan Physical Targets/Achievements

Environmental Audit

Physical Targets:

Promotion, sector-wise training programmes sector-specific manuals.

Achievements:

Modular Environmental audit manuals prepared; 20 sector-wise training programmes conducted. Sector-manuals in r/o Sugar, Lube oil Re-refining industry have been prepared.

Environmental Statistics and Mapping

Physical Targets:

- i) Preparation of district-wise zoning atlas for siting of industries.
- ii) Preparation of water quality atlas of India.
- iii) Preparation of Environment quality mapping in the industrial locations of Kakinada and Visakhapatnam.

Achievements:

- i) Atlases for the following districts were prepared: Ghaziabad Panchmahal Goalpara, Kamarup & Singhbhum.
- ii) Water quality atlas of India prepared.
- iii) Environment quality mapping in the industrial locations of Kakinada and Visakhapatnam prepared.

Adoption of Clean Technologies in Small Industries

Physical Targets:

Training and awareness programme, preparation of sector specific manuals, Waste Minimisation demonstration studies.

Achievements:

About 40 training and awareness programme conducted, sector specific manuals on pulp & paper pesticide formulations & textiles prepared. Demonstration studies in Electro-plating conducted.

****Goals set for IXth Plan**

Environmental Audit.

Promotion of concept of environmental audit and for reducing pollution load in industry.

Achievements: Sectorwise training programmes and preparation of sector-specific manuals in selected sectors, Sectoral analysis of information given in ES.

Environmental Statistics and Mapping.

Preparation of environmental maps depicting polluting data relating to air, water, soil and noise for the metro cities and polluted areas.

Achievements: Environment atlas for metrocities in India has been prepared.

Adoption of Clean Technologies in Small Scale Industries.

Training and awareness programmes, sector specific manuals, Waste Minimisation studies.

Achievements: About 60 training programmes conducted. Sector specific manuals and WM demonstration studies in textile processing units, edible oil industry, dye and dye intermediate industry, bulk drug industry were undertaken.

38. ASSISTANCE FOR ABATEMENT OF POLLUTION

(Rs. in Crores)

Scheme/Activity	8th Plan Outlay	Actual Expdt.	Physical Targets	Physical Achievements	IXth Plan Outlay	Goals set for IXth Plan
Assistance for Abatement of Pollution	7.00	8.22	--	--	10.00	Financial assistance for supporting equipment, studies, projects etc. to various SPCBs/UT PCCs etc. to meet the objectives of the Policy Statement for Abatement of Pollution.

39. NATIONAL MUSEUM OF NATURAL HISTORY (NMNH)

(Rs. in Crores)

Programme	VIIIth Plan Outlay	Expdt.	Physical Targets/Achievements	Ninth Plan Outlay	Goals set for Ninth Plan.
NMNH	10.00	7.19	*	18.00	**

* Inauguration of the Regional Museum at Mysore. Completion of the 1st phase of the building of the RMNH, Bhopal. Collection of specimens for RMNH at Mysore and Bhopal. Construction of first phase of building at Bhubaneswar.

** Acquisition of land and construction of building of NMNH.

Renovation and updating of existing NMNH Galleries.

Completion of 2nd phase of galleries of RMNH, Mysore, Bhopal and 1st Phase at Bhubaneswar.

40. CIVIL CONSTRUCTION UNIT

(Rs. in Crores)

Item	VIIIth Plan Outlay	Expdt.	Physical Target (No. of works)	Achievements (No. of works)	IXth Plan Outlay	Goals set for IXth Plan (No. of	Achievements
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						works)	
Forestry & Wild Life	4.95	5.45	19	14	16.20	71	35
Environment	18.50	16.36	44	32	28.00	98	82
Environment Education Training and Extension	2.00	4.82	4	2	9.00	27	5
Civil Works	3.00	3.75	-	-	7.00	-	-
Grand Total	28.45	30.38	67	48	60.20	196	122

41. NATIONAL RIVER CONSERVATION DIRECTORATE

(Rs. in Crores)

Scheme/Activity	8th Plan Outlay	Expdt.	Target	Achievements	IX Plan Outlay	Goals set for Ninth Plan/Achievements*
National River Conservation Directorate.						<p>The goal of the NRCP is to reduce pollution in the major rivers by executing pollution abatement measures such as interception & diversion and treatment of domestic sewage, undertaking river front works etc. The projected target of Rs.25 crores for NLCP is likely to be achieved.</p> <p><u>Achievements:</u></p> <p>The following no. of schemes have been completed under the IX Plan so far:</p> <p>GAP-I 5 GAP-II 87 NRCP 57</p>
1) Ganga Action Plan I	193.01	152.15	76 Schemes	65 schemes	14.50	
2) Ganga Action Plan II	149.00	131.75	176 Schemes	8 schemes	650.84	
3) NRCP	41.00	30.54	110 schemes	--	76.00	
4) NLCP	--	--	--	--	25.00	
5) Ganga Trust Fund	--	--	--	--	0.50	

OBJECTIVES

The main objective of the river action plans is to improve the water quality of the rivers to the desired class/standards by preventing pollution load reaching the river by undertaking works like (i) interception & diversion works to capture the raw sewage flowing into the river through open drains and divert them for treatment, (ii) sewage treatment plant for treating the diverted sewage, (iii) low cost sanitation works to prevent open defecation on river banks, (iv) electric and improved wood based crematoria to conserve the use of wood and help in ensuring proper cremation of bodies brought to the burning ghat, (v) river front development works such as improvement of bathing ghats etc. and (vi) other minor misc. works.

Reasons for Short fall of 8th Plan

The major reasons for delay in completion of schemes are:

- a) Such a project was taken up for the first time in the country and adequate technical expertise was initially lacking.
- b) Difficulties in acquiring land for some schemes under the project and number of litigation cases.
- c) Diversion of funds released for the various schemes under the project.
- d) Contractual disputes in several cases.

ACHIEVEMENTS IN THE 8TH PLAN

□ Ganga Action Plan Phase-I

Out of 261 schemes sanctioned, 250 schemes had been completed by the end of the 8th plan. A sewage treatment capacity of 683 mld was created under the programme . Out of the project outlay of Rs. 462.04 crores, an amount of about Rs. 447 crores was spent on the programme.

□ Ganga Action Plan Phase-II

The total project cost of GAP Phase-II is Rs. 1276.26 crores which includes the following components.

- Under Yamuna Action Plan , out of the project outlay of Rs.496.45 crores an expenditure of Rs.116.79 crores had been incurred by the end of the 8th plan. 136 schemes were sanctioned and 11 were completed.
- Under Gomati Action Plan, out of the project outlay of Rs.58.11 crores an expenditure of the Rs.5.40 crores had been incurred. 19 schemes were sanctioned.
- Under Damodar Action Plan, out of the project outlay of Rs.22.41 crores an expenditure of the Rs.0.32 crores had been incurred.
- Under Ganga Action Plan Phase-II, out of the project outlay of Rs.652.90 crores an expenditure of the Rs.9.24 crores had been incurred. 12 schemes were sanctioned

National River Conservation Plan

Under this action plan, out of the total project outlay of Rs.1198.57 crores, an expenditure of the Rs.30.54 crores had been incurred. 110 no. of Detailed Project Reports were sanctioned under this action plan.

Goals set for the 9th Plan

The Yamuna Action Plan which is an important component of the Ganga Action Plan to be completed by 2002 A.D.. The other components of the Ganga Action Plan are also to be pursued for completion in the Ninth Plan.

2. Considerable progress towards ensuring the early completion of the NRCP to be achieved.

42. WETLAND CONSERVATION PROGRAMME

(Rs. in crores)

Name of Activity	8 th Plan outlay	Expdt.	Physical Targets	Achieve - ments	9 th Plan outlay	Physical Targets	Achieve - ments
WETLAND CONSERVATION PROGRAMME	6.80	6.60	*	**	16.00	***	****

*8 Plan Physical Targets:

- Release of funds to the State Governments for the implementation of Management Action Plan(MAP) of identified wetlands. MAP include various activities like data collection and survey, control of encroachment, eutrophication abatement, aquatic weed control, identification of wetlands, wetland mapping, landscape planning, hydrology, wildlife conservation, fisheries development and environmental awareness.
- Sanctioning of research projects received from various agencies/institutions.
- Convening of meetings of National Committee on Wetlands.
- Convening of meetings of Research Committee on Wetlands.
- Organising of Workshops and Training Programmes.
- To participate in the meeting of Contracting Parties and Standing Committee under Ramsar Convention.
- Preparation of guidelines of MAPs of Wetlands.

**** Achievements During 8th Plan:**

- The Management Action Plans(MAPs) in regard to Loktak(Manipur), Wullar, Tso Murari and Tisgul Tso (J&K), Harike, Kanjli and Ropar(Punjab), Renuka, Pongdam and Chandertal(HP), Kabar(Bihar), Deepar Beel(Assam), Nal Sarovar(Gujarat) were sanctioned with the release of funds to the concerned State Governments.
- Ten research projects were sanctioned under Wetland Programme.
- 7 meetings of National Committee on Wetlands were held during five year plan.
- 7 meetings of Research Sub-Committee on Wetlands were held during 8th five year plan.
- A training programme on wetland conservation and management was held in May, 1992 which was attended by Wetland functionaries of State Governments concerned with the management and conservation of wetlands. Several workshops were held in collaboration with WWF, India and British Council on Bio-diversity conservation and other issues related to wetlands.
- A technical Advisory Committee for Loktak Lake was constituted to prepare MAP. A comprehensive management action plan for Loktak Lake was prepared.
- India is a signatory to convention on wetlands of international importance, especially on Water Fowl Habitat, generally referred to Ramsar Convention(1971). Six wetlands viz. Chilka(Orissa), Keoladev, Ghana National Park and Sambhar (Rajasthan), Wullar(J&K), Loktak(Manipur), Harike (Punjab) have been designated as Ramsar sites from India. India was a member of the Standing Committee of Ramsar Convention representing the Asian region upto 1996. The significant achievement regarding Ramsar Convention in 1995 was hosting Asian Regional meeting of Contracting Parties (CoPs) from 23-25 March in Delhi. This meeting was attended by CoPs from 23-25 March'99 in Delhi from Asian Region, NGOS, AND Experts. Two workshops were held during the conferences and based on the deliberations on the Conference, Delhi declaration was adopted. India also attended the meeting of Standing Committee of Ramsar Convention held in Brisbane and 6th CoP meeting of Contracting Parties held in Brisbane in March'96.
- Guidelines for preparation of MAP for wetlands were prepared.

***** Targets for 9th Plan:**

- Preparation of MAP and release of funds to the State Governments in respect of identified wetlands. MAP include various activities like data collection and survey, control of encroachment, eutrophication abatement, aquatic weed control, identification of wetlands, wetland mapping, landscape planning, hydrology, wildlife conservation, fisheries development and environmental awareness.
- Convening of meeting of National Committee on Wetlands.
- Sanctioning of research project in the field of wetlands.
- Organisation of workshop for evaluation of progress of ongoing research projects.
- Monitoring of MAP of identified wetlands.
- Convening of meeting of Research Sub-Committee of Wetlands.
- Identification of new wetlands of national importance.
- Designation of new Ramsar sites in addition to 6 wetlands of International importance already identified.
- To participate in the meetings of CoP and Standing Committee under Ramsar Convention.
- To update directory of wetlands using remote sensing data and ground truth information.
- To declare all the identified 20 wetlands as Ramsar sites.
- To seek external assistance for conservation of wetlands.

**** Achievements so far during 9th Plan:

- MAP for Renuka, Pongdam, Chandertal(HP), Loktak(Manipur), Wullar(J&K), Kolleru(AP) and Rudrasagar(Tripura) were sanctioned. So far, an amount of Rs.7.50 crores released against the total outlay of Rs.16 crore during the 9th five year Plan.
- Three meetings of the National Committee on Wetland were held during the first two years of 9th five year plan.
- Two research project on wetlands sanctioned.
- Four meetings of the National Committee on Wetland were held during the first two years of 9th five year plan.
- Two research project on wetlands sanctioned. Four research projects approved for funding are under process.
- A Technical Advisory Committee has been constituted to deal with management issues of Loktak Lake.
- MAPs were monitored in respect of 9 wetlands.
- Four meetings of the research sub-committee on wetlands have been held.
- One more wetland vis. Rudrasagar identified as wetland of national importance from Tripura, increasing the list to 20 wetlands. Financial assistance provided to the Govt. of Tripura for conservation and management of Rudrasagar.
- The information is being collected from the concerned State Government along with Ramsar data sheet and a map of the wetlands would be prepared, after receiving the required information. Thereafter it will be sent to the Ramsar Convention for necessary action.
- Being signatory to the Ramsar convention on wetlands of international importance, India attended 7th CoP meeting in Costa Rica during May, 1999. World Bank showed interest in giving financial assistance for conservation of lakes/wetlands in Rajasthan/Punjab. A concept paper has been sent to the World Bank. The Terms of Reference (TOR) to finance the project were also finalised.
- UNDP/GEF project on conservation and sustainable use of globally significant threatened wetlands in India developed by Salim Ali Centre of Ornithology and Natural History(SACON) has been approved. It is now being projected for PEF-B assistance to get more financial assistance as a large project.
- Proposal for assistance on conservation of wetlands sent to European Commission. Their response is awaited.
- Ministry received small grants fund amounting to 40000 Swiss francs for economic valuation of Harike in Punjab. This project is being implemented by WISA in collaboration with State Council for Science & Technology, Government of Punjab.

43. CENTRAL POLLUTION CONTROL BOARD

(Rs. in Crores)

Scheme/Activity	8th Plan Outlay	Expdt.	Physical Targets	Physical Achievements	IXth Plan Outlay	Goals set for Ninth Plan
Central Pollution Control Board	16.00	20.83	*	**	32.00	***

* Physical Targets

To undertake survey and monitoring for assessment of water and air quality, undertake analysis of pollutants, organise training programmes, develop standards and guidelines, compliance of industries to the prescribed standards, inventorisation of hazardous waste generating industries and organise mass awareness programmes.

** Achievements

Regular surveys carried out for assessment of pollution from stationary and mobile sources and air and water quality monitoring programmes were taken up with SPCB/PCC. Samples analyzed for air, water and soil analytical quality control tests were organised for the laboratories of SPCBs. Standards have been developed in respect of important category of industries and also developed guidelines for the assistance to the industries. Training programmes were organised for SPCB/PCC and for industries personnel. The training programmes were taken up under the World Bank Programme. Regular follow-ups were taken in respect of 17 categories of highly polluting industries and follow up actions maintained with the State Boards in respect of implementation of action points for restoration of environmental quality in critically polluted areas. CPCB participated in various exhibitions organised by different agencies. Technical Reports were brought out, disseminating information on various aspects relating to prevention and control of pollution. Inventorisation of hazardous waste generating industries taken up in different States.

***Goals sets for Ninth Plan

Environmental monitoring, assessment of pollution environmental standards and action plans, Enforcement of pollution abatement programmes, Promotion of infrastructure and capacity upgradation programmes.

Achievements

The goals set for IXth Plan are being achieved in a phased manner, which includes; Continuation of on-going programme of water and air quality monitoring. Pollution control in highly polluting industries and industries discharging wastewater into rivers. Implementation of action points in respect of problem areas. Review of standards and development of standards and guidelines in respect of industries and other sources. Continuation of on going programmes on hazardous waste inventorisation.

44. ASSISTANCE TO BOTANIC GARDENS

This scheme is aimed at conservation and propagation of plant and genetic resources. Its achievements during the Eighth Plan and goals for the Ninth Plan are as under:

(Rs. in Crores)

Programme	VIII Plan Outlay	Expenditure	Physical Targets	Physical Achievements	Ninth Plan Outlay	Goals set for Ninth Plan
Assistance for Regional Botanical Gardens	1.50	3.18	One time financial assistance to existing botanical gardens for improving their infrastructural facilities to facilitate ex-situ conservation of rare and endangered plants species.	40 Botanical Gardens were provided financial support.	18.00 *	To provide financial assistance to about 50 botanical gardens for improvements of infrastructural facilities.

*Includes provision for National Botanic Garden, Noida.

Achievements of 9th Plan

75 Botanical Gardens were provided financial support.

45. RESEARCH AND ECOLOGICAL REGENERATION(R&D)

(Rs. in Crores)

Scheme/Activity	8th Plan Outlay	Expdt.	Physical Target	Physical Achievements	Ixth Plan Outlay*
RESEARCH AND DEVELOPMENT	18.00	15.85	Initiation of new projects: 200 Servicing of ongoing projects:808 (cumulative) Review & monitoring of ongoing projects: 740 (cumulative) Dissemination of research results: publication of executive summaries	This is a continuing scheme. The objectives are promotion of research in multidisciplinary aspects of environment protection, conservation and development with capacity building. During the period 197 projects were initiated. A total of 740 projects were reviewed. Servicing of ongoing projects – 808 (cumulative). A Compendium of executive summaries was published.	17.00

*Goals set for Ixth Plan: The scheme will be continued.

Achievements: During the period 1997 to 2000 (31.10.2000) 105 new projects were initiated. 110 projects were completed and 105 projects remained operational. A total of 325 (cumulative) projects were reviewed and evaluated.

46. G.B. PANT INSTITUTE OF HIMALAYAN ENVIRONMENT & DEVELOPMENT

(Rs. in Crores)

Programme	VIII Plan Outlay	Expdt.	Physical Targets	Physical Achievements	Ninth Plan Outlay
G.B. Pant Institute of Himalayan Environment & Development	22.23	21.32	1. Initiation of strong R&D programmes in identified areas. 2. Construction of building complex at Katarmal (HQs) and initiation of construction at Kullu (HP)and Panthang (Sikkim).	1. Six core programmes Were fully operational. 2. Building at HQ Completed except for some spillover in the 9 th Plan Period. 50% works at Kullu completed, work at Panthang initiated.	36.00

Goals set for IXth Plan

1. Strengthening of six R&D Core programmes initiated in the preceding plan period at HQs and through 4 units. Initiation of a major new programme on indigenous knowledge systems.
2. Completion of phase I of construction at Katarmal (HQs), Kullu (HP) and Panthang(Sikkim).

Remarks

1. Programmes approved by the Science Advisory Committee and Board of Governors of the Institute. Seventh Core Programme already initiated.
2. Targets will be achieved within the plan period.

47. INTEGRATED ACTION ORIENTED R&D AND EXTENSION PROJECTS IN HIMALAYAN REGION.

(Rs. in Crores)

Programme	VIII Plan Outlay	Expdt .	Physical Targets	Achievements	Ninth Plan Outlay	Goals set for 9 th Plan
Integrated Action Oriented Research Programme for the Himalayan Region	1.76	1.79	To support location specific activities throughout the Indian Himalayan Region.	56 Projects were sanctioned and 32 projects were completed	1.50	Continuation of support to ongoing projects and initiation of new location specific projects throughout Indian Himalayan Region.

Remarks

All on-going projects would be completed during the plan period and several new projects would be initiated. Dissemination of findings would be augmented.

48. HAZARDOUS SUBSTANCES MANAGEMENT

(Rs in crore)

Programme	VIII Plan Outlay	Expenditure	Targets/ Achievement	IXth Plan Outlay	Goals set for IXth Plan	Achievement so far
Hazardous Substance Management	12.40	9.16	*	22.00	**	***

*Target/Achievements:

- i) Establishment of Management Structure in 18 States.
- ii) Red Book updated.
- iii) New Regulation notified.
- iv) Amendment to the Rules.
- v) Implementation of Acts and Rules in progress.
- vi) Guidelines prepared.
- vii) Developmental Projects taken.
- viii) Training on Chemical Accidents conducted.
- ix) Data Base on Chemical Set-up.
- x) Financial Assistance provided to 16 states for identification of Hazardous Waste Disposal

- Sites.
- xi) Pilot Projects on Solid Waste Management initiated.
 - xii) World Bank Assisted Project on Industrial Safety & Disaster Prevention and Hazardous Waste Management initiated in 4 States.

****Goals set for IXth Plan**

- i) Strengthening of HSM structure in the States.
- ii) Accident prevention and emergency preparedness.
- iii) Crisis Management during chemical accidents.
- iv) Notification of new regulations and amendments.
- v) Implementation of the notified Rules on chemicals, Hazardous Waste, Bio-Medical Waste, Micro-organisms etc.
- vi) Hazardous waste management site identification, site remediation and establishment of disposal facilities.
- vii) Management of municipal, solid industrial waste and Bio-Medical Waste.
- viii) Training of Personnel and Public Awareness.
- ix) Publication of Documents and Establishment of Database on Hazardous Substances.

*****Achievements so far**

- i) HSM structures created and are being strengthened.
- ii) Off-site Plans prepared in 12 Districts.
- iii) Central Crisis Group and Co-ordination Committee Constituted, meetings conducted.
- iv) Notifications for new regulations, namely Bio-Medical Waste Rules, Plastic Bags, Fly Ash utilisation and Lead Acid Battery (M&H) Rules.
- v) Draft Rules on Solid Waste Management published and amendments to the HW Rules and Chemical Rules are being notified.
- vi) 15 HW sites have been identified.
- vii) Financial assistance provided for Establishment of TSDF at TTC, Maharashtra.
- viii) Steps being taken for establishment of more TSDFs.
- ix) Registration of the units for processing of wastes have been taken up..
- x) Training being conducted.
- xi) Pilot Plants for use of Municipal and Industrial Solid Waste are being set up.

49. BIODIVERSITY CONSERVATION

(Rs. in Crores)

Activity	8 th plan outlay	Expdt.	Physical targets	Achievements	IX Plan outlay
Bio-diversity Conservation	1.50	0.95	Initiating preparation of Status Report, National Action Plan and legislation on bio-diversity	Discussion held on preparation of Status Report, National Plan and Legislation on Bio-diversity	5.00

Goals set for IX Plan

- To facilitate implementation of National Action Plan on Bio-diversity.
- Formulation of legislation on bio-diversity.
- Implementation of decisions of Conference of the Parties (CoP) to the CBD.
- Participation in negotiations for Cartagena Protocol on Biosafety.
- Signing and ratification of the Biosafety Protocol.

Achievements of IXth Plan

- A framework document on National Policy and Macrolevel Action Strategy on Biodiversity has been prepared and published. A UNDP/GEF project on Biodiversity Strategy and Action Plan (BSAP) is being implemented for preparing detailed microlevel action plans.
- Biodiversity bill 2000 was introduced in the Parliament. The bill has been referred to Department related Parliamentary Standing Committee on Science, Technology, Environment and Forests for examination and report.
- Follow up action is being taken for implementing the decisions of the CoP.
- Participated in the negotiation meetings.
- Prepared Cabinet Note seeking approval for signing the Protocol.

50. CONSERVATION AND MANAGEMENT OF MANGROVES AND CORAL REEFS

The Scheme on Conservation and Management of Mangroves and Coral Reefs was initiated in 1986 with the objectives of conservation and protection of the Mangrove Eco-system from further degradation; afforestation of degraded Mangroves areas; Maintenance of genetic diversity especially of the threatened and endemic species and creation of awareness among the people on importance of Mangrove Ecosystem and the need for conservation. The achievement of the scheme during the 8th Plan and goals set for 9th Plan are given below:

(Rs. in Crores)

Programme	VIII Plan Outlay	Expdt.	Physical Targets	Physical Achievements	Ninth Plan Outlay	Goals set for Ninth Plan
Conservation & Management of Mangroves and Coral Reefs	4.50	3.60	15 MAPs on Mangroves & 4 MAPs on Coral Reefs	12 MAPs on Mangroves & 4 MAPs on Coral Reefs.	13.20	30 Management Action Plans for Conservation of Mangroves & 4 MAPs on Coral Reefs
Research Projects on Mangroves and Coral Reefs	-	-	-	-	1.80	20 Research Projects and funding of ongoing projects

IXth Plan Achievements

Physical

24 MAPs on Mangroves and 4 MAPs on Coral Reefs and 12 Research Projects on Mangroves & Coral Reefs to be undertaken.

Financial

MAPs – Rs.8.47 crores

Research Projects on Management and Coral Reefs-Rs 0.55 crores

51. BIOSPHERE RESERVE

(Rs. in Crores)

Programme	VIII Plan Outlay	Expdt.	Physical Targets	Physical Achievements	Ninth Plan Outlay	Goals set for Ninth Plan
Biosphere Reserves	12.00	11.69	Funding to state Govts.	Proposals submitted by the	15.00	To designate 4 new sites as Biosphere

			for identified items of activities in 8 Biosphere Reserve and initiation of new research projects in those reserves.	State Governments were funded for approved items of activities in 8 Biosphere Reserves. 32 research projects were also funded.		Reserves and to assist State Governments for existing Biosphere Reserves and financial assistance for R&D in these reserves.
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IXth Plans Achievements:

Physical: 4 new Biosphere Reserves were set up. Management activities in 12 existing BRs were supported. 47 new research projects were sponsored.

Financial: Rs.12.76 crores

52. INTERNATIONAL COOPERATION

(Rs. in Crores)

Name of the Activity	8th Plan Outlay	Expdt.	IX Plan Outlay	Goals set for Ninth Plan
International Co-operation	49.18	122.89 (Excess is due to implementation of Externally Aided Project, India Canada Environment Facilities (ICEF))	131.00 *	Existing activities and contributions to International Organisations will continue. Implementation of externally aided projects funded by India Canada Environment Facility, UNDP-CCF Programme.

* Including Rs.100 crores for India Environment Capacity Building project(EAP).

Target/Achievements

In IC Division the expenditure is, mainly on Foreign Travel, Contributions to UN and other International organisations and on the Externally Aided Projects, i.e., ICEF, projects under the UNDP/CCF and the World Bank assisted Delhi Urban Environment Management & Infrastructure Improvement Project.

53. ENVIRONMENTAL POLICY AND LAW

(Rs. in Crores)

Scheme/Activity	8th Plan Outlay	Expdt.	IX Plan Outlay	Physical Targets/ Achievements	Goals set for Ixth Plan
1. Environment Policy & Law Scheme Activities: a) Environment Policy & Legislation b) Eco-mark	0.25	0.15	3.00 (including Environment Commission and Tribunals)	*	Existing activities will continue. Publicity programmes.

scheme					Publication of notification and development of criteria. Preparation of a Comprehensive National Environment Policy. Holding seminars and preparation of Position Paper.
c) Comprehensive National Environment Policy					
d) Trade & Environment					
2. National Environment Tribunal	-	-	-	-	Setting up of benches of the NETA.

* Physical Target:

- a) Enactment of Acts. Publication of Notification under pollution Acts.
- b) Launch of publicity campaign. Development of criteria.

Physical Achievements:

- a) Enacted:
National Environment Tribunal Act.
National Environment Appellate Authority Act.
10 notification published.
- b) 10 Project were awarded.
19 notification published.

**54. INDUSTRIAL POLLUTION CONTROL PROJECTS:
(EXTERNALLY AIDED SCHEMES)**

WORLD BANK AIDED INDUSTRIAL POLLUTION PREVENTION PROJECT

(Rs. in Crores)

Name of the Scheme	VIII Plan Outlay	Actual Expdt.	VIIIth Plan Targets/Achievements	IX Plan Outlay	Goals set for IX Plan
World Bank aided	90.00	64.4	*	96.00	The Phase-I has ended on 31.3.1999.

<p>Industrial Pollution Control Project.</p> <p>a) Industrial Pollution Control Project (Phase-I).</p> <p>b) Industrial Pollution Prevention Project (Phase-II).</p>					<ul style="list-style-type: none"> - Procurement of equipment's for 4 SPCBs, viz., Andhra Pradesh, Karnataka, MP and Rajasthan. - Provision of facilities for the labs in the SPCBs of the four States mentioned above. - Imparting of training to the personnel of PCBs. - Provision of funds to industries for waste water Recycling projects. - Provision of funds to Gujarat for software Procurement and training under the GIS Project. Identification of waste minimization circle for Large and small industries. Identification and Training of Consultants.
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Physical Targets for VIIIth Plan

1. World Bank aided Industrial Pollution Control Project.

- Procurement of equipment for 4 SPCBs viz. UP, Tamil Nadu, Gujarat & Maharashtra.
- Construction of Labs for 4 SPCBs.
- Training for SPCB personnel.
- Construction of CETPs.
- Award of Demonstration Projects.
- Award of projects under TA component.

*

Physical Achievements for VIIIth Plan

- Equipments have been procured under IFB 1A and B.
- Laboratories have been constructed at UP, TN and Maharashtra SPCBs
- Training has been imparted to PCB personnel in the various subjects of Environment Management
- 83 CETPs have been constructed
- 12 Demonstration projects have been completed
- 21 small projects have been sanctioned under this component

55. CLEAN TECHNOLOGY

(Rs. in Crores)

Name of the Scheme	VIIIth Plan Outlay	Actual Expdt.	Physical Targets/ Achievements	IXth Plan Outlay	Goals set for Ninth Plan
CLEAN TECHNOLOGY	15.00	14.26	Completion of 2 Carrying Capacity Studies, Initiating	20.00	

1. Environmental Impact Assessment			new projects on Life Cycle Analysis, Natural Resource Accounting & Demonstration Projects.		New Sectoral Studies
2. Development and Promotion of Clean Technology					Demonstration Projects, Data bases.

56. REIMBURSEMENT OF WATER CESS

(Rs. in Crores)

Name of the Activity	Outlay	Actual Expdt.	Physical Targets	Physical Achievements	IXth Plan outlay	Goals set for IXth Plan
REIMBURSEMENT OF WATER CESS (Non-Plan Scheme)	106.85	144.78	--	--	--	Since the expenditure is being met from the Non-Plan budget and is made on the basis of the collection and deposit of Water Cess in the Consolidated Fund of India, no outlay has been proposed for IXth Plan

57. TAJ PROTECTION MISSION

(Rs. in Crores)

Scheme/ Activity	8 th Plan Outlay	Expdt.	Target/ Achievements	IX Plan Outlay	Goals set for Ninth Plan	Achievements
Taj Protection Mission	--	--	--	200.00	Ten schemes have been formulated under this project for overall improvement of Environment in and around the Taj Mahal. Five new projects have been prepared and are being approved by Central Government.	All schemes under this project are at various stages of completion. For new five projects EFC clearance and CCEA approval is being obtained.

58. TAXONOMY CAPACITY BUILDING PROJECT

(Rs. in Crores)

Scheme/ Activity	8 th Plan Outlay	Expdt	Target/ Achievements	IX Plan Outlay	Goals set for Ninth Plan	Achievements
TAXONOMY CAPACITY BUILDING	--	--	--	7.50	To build capacity in taxonomy in priority gap areas	Programme initiated in 1999-2000. Funds released to 11 Centres for Research

59. ENVIRONMENTAL MANAGEMENT CAPACITY BUILDING TECHNICAL ASSISTANCE PROJECT (WORLD BANK AIDED)

The project started in September 1997 only and hence no review of overall performance during Eighth Plan is called for.

(Rs. in Crores)

Name of the Activity	Ixth Plan Outlay	Goals set for IXth Plan	Achievements
ENVIRONMENTAL MANAGEMENT CAPACITY BUILDING TECHNICAL ASSISTANCE PROJEC	115	*	**

*Goals set for IXth Plan

The main objectives under the project are formulation of Environmental Research programmes by setting priority areas, strengthening of teaching and research in environmental economics, decentralization of environmental education, strengthening environmental legal capacity of the Ministry, enhance capacity of number of mining institutions to improve monitoring compliance of environmental policy and standards, proposed new sites for new industrial estates, upgrade India's air pollution monitoring, support environment related programmes in Gujarat to mitigate adverse environmental impacts of environmental problems.

**Achievements

Project implementation plans for all the sub-components included in the project have been prepared and approved by the World Bank. These plans are in various stages of implementation. Procurement of national and international consultants has been finalized including requirement of equipment and staff. Some equipments have already been procured and consultants appointed.

60. INDIAN INSTITUTE OF BIO-DIVERSITY (IIB)

The Institute is proposed to be set up at Itanagar, Arunachal Pradesh as an autonomous institute of this Ministry under Societies Registration Act to design and conduct research on various aspects of Bio-diversity. The goals set for the 9th Plan are as under:

(Rs. in Crores)

Name of the Activity	VIIIth Plan Outlay	Actual Expdt.	Physical Targets/ Achievements	IXth Plan Outlay	Goals set for Ninth Plan
INDIAN INSTITUTE OF BIO-IVERSITY	--	--	--	10.00	Physical: To develop infrastructure facilities and building. To appoint Director and staff. To finalise SFC, Cabinet. Note and Memorandum of Association.