



**DEPARTMENT OF FORESTS, ENVIRONMENT &  
WILDLIFE MANAGEMENT**



**ANNUAL ADMINISTRATIVE REPORT FOR THE YEAR  
2008-2009**



MESSAGE:



**BHIM PD DHUNGEL**  
Hon'ble Forest Minister

**MINISTER**

*Tourism, Forests, Environment & Wildlife Management,  
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*Forest is very vital natural resources and forestry is the major land use in the State and nearly 83% of the total geographical area of the State is under the administrative control of the State Forest Department.*

*We are concerned with development of the State but at the same time we cannot ignore our environment and the Government has always been guided by this spirit. Thus, we have evolved a balanced strategy of pursuing a comprehensive goal of eco-friendly development in the State through sustainable utilization of our natural resources.*

*Sikkim has always been in the forefront of environmental movement, whether it is placing a ban on the use of plastic or banning commercial felling or launching people specific pro-environment programme such as State Green Mission.*

*“Ten minutes to Greenery” a noble idea conceived & initiated by the Hon'ble Chief Minister Dr.Pawan Chamling was observed on 15<sup>th</sup> July, 2009 in Sikkim & I am proud to say that everyone participated in the programme by planting saplings thus making a record of planting 6.10 lakhs seedlings within 10 minutes.*

*In Wildlife Conservation front, more than 31% of the total geographical area of the State is brought under Protected Area Network. The foundation stone of Sidkeong Tulku Bird Park was laid by the Hon'ble Chief Minister on 21<sup>st</sup> February 2009.*

*The State Government is determined to make Sikkim a total organic State by 2015. We are already pursuing a development model based on the principle of “Low Carbon Economy” that the world is constantly trying to adopt.*

*Thus, amidst increasing global concerns and the disturbing reports of Global Warming & Climate Change worldwide, Sikkim under the able leadership of Dr.Pawan Chamling has always played a responsible role in whatever small or big way possible with sustained commitment towards protection of Environment.*

***(Bhim Pd.Dhungel),  
Hon'ble Forest Minister***



FORWARD:



*S.T.Lachungpa  
PCCF-Cum-Secretary*

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*Forest Department was set up and Reserved & Goucharan Forests surveyed & demarcated by the then Chogyal Sidkeong Tulku in 1909. Since then, Forest Department has come a long way – a hundred years exactly. During this period, besides other major changes, Forest Department has gone through one significant change & which speaks of volume for itself- it has now become a people-centric department mainly due to the steps taken by the Government during the last 15 years. Appropriately, the Department now has been rechristened as Forests, Environment & Wildlife Management Department.*

*Sikkim with the area of 7096 Sq.Km. and comprising only of 0.2% of India's total geographical areas is a home to roughly one third of the nation's biodiversity. In addition, forest cover with 46% of the State's geographical area is an important source of livelihood for the State's primarily rural population. Thus the environment & ecosystem are Sikkim's valuable natural resources. The Department of Forests, Environment & Wildlife Management which oversees both the forestry sector & biodiversity conservation has worked hard to conserve there valuable assets.*

*The Government of Sikkim has always maintained a policy of consistency between protections of environmental with development. Thus our endeavor has always been for eco-friendly development.*

*The last decade has seen a significant increase in green initiatives towards achieving the national goal of 66% coverage. The State Green Mission launched by the Hon'ble Chief Minister in 2006 has started showing its efforts and now we have more green avenues & surroundings. But perhaps its greatest achievement is the awareness among the people about the need to protect and conserve our rich natural resources.*

*Among the many steps taken by the Government aimed at resurrecting the fragile eco-system are constitution of Environment Commission 2005.inclusion of wetland in National Wetland Conservation Programme, transformation of Sikkim into a Total Organic State by 2015, adoption of low carbon economy, ban on grazing in forest area, ban on use of non-biodegradable materials.*

*For scientific management of forests of the State, Working Plan are being prepared in most democratic manner taking into account the aspiration of the people especially those living in the tringes of the forests.*

*Sikkim has become the 1<sup>st</sup>.State in the country to constitute a high level team for the study of high altitude glaciers in the light of the prevailing global warming scenario.*

*The team comprising of Shri B.K.Tewari, Additional Director of Forests (Planning & Administration), Mrs.M.H.Subba, Assistant Director-I (Plng. & Sts.) & Shri Y.S.Mukhia, Statistical Inspector under the guidance of Shri Manjit Singh, IFS, Additional Principal Chief Conservator of Forest (Planning & Administration) deserves appreciation to bringing out Annual Administrative Report of 2008-2009.*

*(S.T.Lachungpa)IFS,  
PCCF-Cum-Secretary*

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## CHAPTER -1

### INTRODUCTION

Sikkim is a small mountainous state in the Eastern Himalayan region extending approximately 114 km from North to South and 64 km. from East to West, having a total area of 7096 sq. km. only. The State is situated between 88<sup>0</sup> 00' 58" and 88<sup>0</sup> 55' 25" East longitudes and 27<sup>0</sup> 04' and 28<sup>0</sup> 07' 48" North latitudes. It is surrounded by vast stretches of Tibetan plateau in North; Chumbi Valley & Kingdom of Bhutan in the East; Darjeeling District of West Bengal in South and Kingdom of Nepal in West.. Over one third of the total area of the state remains covered by snow in winter. And a population of 5.42 lakhs on 2001, the bulk of which resides in rural areas and is heavily dependent on forest resources. The entire state comprises of hilly terrain with forests on hilltops and valleys. Over 81% of the total geographical area of the state is under the administrative control of the forest department. Sikkim is endowed with a variety of natural flora and fauna and is a paradise of nature lover, botanist, environmentalist, conservationist and trekkers. The state houses over 400 species of flowering plants, 300 species of ferns and its allies, 11 species of oaks, 8 species of tree ferns, 40 species of Primulas and 29 species of Bamboo belonging to 9 genera.. The faunal wealth of Sikkim comprises of 144 species of mammals, 600 species of birds, 400 species butterflies and moths and many species of reptiles. Several species of medicinal plants and herbs are found throughout the state.

### DEMOGRAPHIC PROFILE

**Table 1.1**

SL.NO.	Population (Census 2001)	Sikkim	North	East	South	West
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Total Population in Sikkim	Males	288484	23414	132917	68241	63912
	Females	252367	17616	112123	63284	59344
	<b>Total</b>	<b>540851</b>	<b>41030</b>	<b>245040</b>	<b>131525</b>	<b>123256</b>
Rural Persons	Males	255774	22643	104150	66096	62885
	Females	225207	17616	88038	61483	58547
	<b>Total</b>	<b>480981</b>	<b>39782</b>	<b>192188</b>	<b>127579</b>	<b>121423</b>
Urban Persons	Males	32710	771	28767	2145	1027
	Females	27160	477	24085	1801	797
	<b>Total</b>	<b>59870</b>	<b>1248</b>	<b>52852</b>	<b>3946</b>	<b>1824</b>
Projected Population for the year 2007	<b>Total Persons</b>	<b>612123</b>	<b>46435</b>	<b>277332</b>	<b>148856</b>	<b>139500</b>
Area (Sq.Km.)		7096	4226	954	750	1166
Density of Population(Census 2001)		76	10	257	157	1106
Literacy Rate Excluding 0-6 age group (Census 2001)		69.68	69.11	75.57	68.12	59.31

## CHAPTER -2

### **KEY STATISTICS OF SIKKIM**

Geographical Area	7096 sq.km.
Capital	Gangtok
No. of Districts	4
No. of Sub-Divisions	9
Climate	Tropical, Temperate and Alpine
State Flower	Nobile Orchid- <i>Dendrobium nobile</i>
State Tree	<i>Rhododendron niveum</i>
State Animal	Red Panda – <i>Ailurus fulgens</i>
State Bird	Blood Pheasant – <i>Ithaginis cruentus</i>
Protected Area Network	2183.10 sq.km (30.77%)
No. of important Mountains & Peaks	28
No. of Glaciers	84
No. of Lakes (Wetlands)	227
No. of Hot Springs	9
No. of Rivers & Streams	104
Major Rivers of the State	Teesta and Rangit

### No. of Species:

Flowering Plants – 500	Mammals – 144
Rhododendron – 36	Birds – 552
Orchids – 550	Reptiles – 33
Conifers – 16	Amphibians – 16
Ferns & allies – 362	Fishes – 48
Tree Ferns – 9	Butterflies – 650
Bamboos – 28	
Oaks – 11	
Medicinal Plants – 424	
Recorded Forest Area	5841.39 sq.km. (82.32%)
	Reserve Forests – 5452.39 sq.km.
	Protected Forests (Khasmal)-285 sq.km.
	Protected Forests (Goucharan)-104 sq.km.
Forest Land with Tree Cover-	3289 sq.km. (46.35%)
	Forest Cover – 3262 sq.km. (45.97%)
	Tree Cover -27 sq.km. (0.38%)
Forest Cover -	Very Dense Forest – 498 sq.km.
	Moderately Dense Forest – 1912 sq.km.
	Open Forest - 852 sq.km.
	Scrub - 363 sq.km.

(Compiled by ENVIS)



## **CHAPTER – 3**

### **NEWS AND EVENTS 2008-2009.**

#### **State Green Mission Phase III Launched:**

Hon'ble Chief Minister, Dr.Pawan Chamling launched the third phase of State Green Mission, “a mission masses” to further expand its bio-diversity and give fillip to eco-tourism.

The State government had earlier in 2006 launched the Green Mission project in a bid to strengthen its rich bio-diversity which had led to an increase of two per cent in its forest cover from 44% to about 46%. The government then carried out a follow-up exercise under the Green Mission II in which over 10 lakh saplings were planted at an expenditure of Rs.2 crore. About 80% of the saplings planted in all blocks of the state under the project have survived resulting in a significant increase in the vegetation. The third phase is targeted to cover 310 km of avenue and 15 hectares of block plantation.

### **NATIONAL ENVIRONMENT AWARENESS CAMPAIGN 2008-2009 ON THE THEME “CLIMATE CHANGE”.**

Sponsored by the Ministry of Environment & Forests, Government of India and hosted by ENVIS Centre, Forest, Environment & Wildlife Management Department, Government of Sikkim, the national Environment Awareness Campaign 2008-09 on the theme ‘Climate Change’ has successfully been implemented in the state with the participation of 29 environmental NGOs.

A campaign began with the sensitization workshop held at Forest Conference Hall on 11<sup>th</sup>.February, 2009. Participated by several senior officers of the department and NGOs, the workshop focused on the several issues like carbon trading, global warming and its impact, waste management, natural resources and the changing trend of Sikkim Himalaya. The technical session by Mr.C.Lachungpa, IFS, CCF (LU&E) gave a strong message to the participating NGOs so as to encourage themselves despite meagre financial grant-in-aid and act as building blocks in environment conservation in the society.

The zeal among the NGOs in betterment of their area was reflected in the interactive session. The presence of the HMF Shri S.B.Subedi gave the workshop a good momentum. The whole workshop turned out to be fruitful since the main motive of the workshop was realized.

Organized by the State Forest, Environment & Wildlife Management Department, the function was also chaired by the advisors to the Chief Minister, HODs of various Departments, officials from the Forest, Environment & wildlife Management Department, Pahchayats, NGOs and Students.

### **WORLD WETLANDS DAY 2009 CELEBRATED:**

**Theme- : Upstreams-downstreams – Wetlands connect us all”**

The importance of wetland conservation for livelihood sustenance vis-à-vis maintenance of eco-system; state-wide awareness, sensitization, extension and educational programmes were conducted by the DFO, Land Use & Environment Division in all the districts in collaboration and participation with project developers and local community during the Wetland Conservation Day Celebration on 2<sup>nd</sup>.February, 2009.

### **GLOBAL CLIMATE SUMMIT**

#### **FINDING SOLUTIONS THROUGH REGIONAL AND GLOBAL ACTION**

Hosted by the Hon'ble Governor of California, Mr. Arnold Schwarzenegger and co-hosted by the U.S. Governors, the Governors' Global Climate Summit focused on finding practical and sustainable solutions to fight against the Global Climate Change crises and promote international action by forging international partnerships and advancing specific, practical cooperation by the industrial, energy, transportation and forestry sectors. The summit was participated by the Governors and Representatives of United States of America, Brazil, Canada, Republic of Indonesia, United Mexican States, china and India.

Dr.Pawan Chamling, the Hon'ble Chief Minister of Sikkim- India has been the only political leader from India to have been formally invited by the California Governor. Arnold Schwarzenegger to take part in the Summit thus representing the entire country. The Chief Minister's global reputation of green governance and his tremendous commitment towards combating great environmental challenges at the Himalayas have shown colours in the global scenario and have been gratefully acknowledged as one of the global environmental leaders. At the Summit, the Chief Minister made an in-depth presentation that manifested firm commitments of the country to combat climate change challenges.

(Compiled by ENVIS)

## **CHAPTER-4**

### **Chronological order of Main events in Sikkim Forestry:**

Centenary celebration of Sikkim forestry was launched by the Hon'ble Chief Minister Dr.Pawan Chamling at Rabdenste, West Sikkim on 21<sup>st</sup> February, 2009. On the occasion, the Chief Minister laid the foundation stone of Sidkeong Tulku Bird Park.

#### **MILESTONES (1909 TO 2009)**

##### **1909:**

Forest Department set up. Reserve and Goucharan forests surveyed and demarcated. Forest Manual, a statute book for department adopted for operationalisation, Sidkeong Tulku the then Crown Prince of Sikkim pioneered the step ably aided by Dillu Singh Ghale, the Bengal Forest Officer on deputation to Sikkim.

##### **1919:**

Rai Sahab Bhim Bahadur Pradhan joins Forest Department and becomes Forest Manager after five years of service.

##### **1930:**

German Scientist Ernest Schaefer expedition to Sikkim and identification to SHAP of Himalayan Thar at Phimphu, North Sikkim as distinct variety, Advocacy for its total protection.

##### **1945-46:**

Forests vested to the Darbar from under the ownership of landlords in different districts, a task ably implemented by Atal Singh Dewan, Range Officer.

##### **1952:**

First Cadastral survey to demarcate Revenue and Forests Lands.

##### **1956:**

Till 1956 forest were managed by one forest manager, one R.O. & 2/3 of F.G.s post Conservator, DFOs /R.O.s created. Demarcation up to Ranges & Blocks for Administration.

##### **1972:**

Indian Peafowl introduced into lowland Sal Forests, South Sikkim.

##### **1975:**

Indian Forest Service Extended to Sikkim

##### **1976:**

\*State Forest Service created.

\*Four Territorial Divisions, Three Functional Sub-Divisions created.

\*Extension of Indian Wildlife (Protection) Act, 1972 to Sikkim.

##### **1977:**

Khangchendzonga National Park (KNP) of area 850 sq.km. declared.

##### **1978:**

Sericulture Sub-Division created.

**1980:**

Forest Conservation Act, 1980 extended to Sikkim.

**1984:**

Kyongnosla Alpine Sanctuary and Fambong Lho Wildlife Sanctuary, East Sikkim, Singba Rhododendron Sanctuary, North Sikkim declared.

**1987:**

\*Remote Sensing Cell created, 1988

\*Maenam Wildlife Sanctuary, South Sikkim, declared.

**1988:**

State formulates and adopts Sikkim Forests, Water Courses and Road Reserve (Preservation and Protection) Act, 1988.

**1988-89:**

\*Extension of Indian Forest Act 1927 to Sikkim.

\*Directorate of Land Use & Env. merged into Forest Department.

\*Wood Working Centre handed over to Education Department.

\*Forest survey of India completes Forest Resources Survey of all districts.

**1992:**

Himalayan Zoological Park creation started.

**1993:**

New Forest Annexe building construction works started.

**1995:**

\* Sikkim Democratic Front (SDF) Government announces and adopts “Harit Kranti Dashak” for greener Sikkim through people’s participation

\* Cattle grazing in Reserve Forests, an age old practice that has led to the depletion of forest wealth, banned.

\* Joint Director Fisheries up graded to Director Fisheries.

**1996:**

Sikkim State Forest Service Cadre was reviewed and the cadre strength was increased to 75. 1 post of Additional Director, 4 posts of Joint Director, 8 posts of Deputy Conservator of Forests and 4 posts of Assistant Conservator of Forests were created.

**1997:**

\*Indian Forest Service Cadre was reduced to 30 from 36.

\*Ban on use of non-biodegradable materials like plastics, polypags etc.

\*KNP extended from 850 to 1784 sq.km. (25.10% of total geographical area).

**1998:**

\* State award “Rajya Van Sanrakshan Evam Paryavaran Puraskar” constituted.

\* Rathong Chu hydro-electric project and 170 sq.km. proposed firing range in North Sikkim, abandoned.

\* Barsay Rhododendron Sanctuary, West Sikkim declared.

\* Introduction of participatory forest management involving active peoples participation through Joint Forest Management Committees (EDCs) (26<sup>th</sup> June, 1998).

**1999:**

- \* Dr.Pawan Kumar Chamling, Chief Minister of Sikkim adjudged Greenest Chief Minister of India by Delhi based Centre for Science and Environment.
- \* Government adopts new nomenclature 'Forest, Environment and Wildlife Management Department' in tune with changing focus and shift approach and objective.
- \* Smriti Van (Memorial Forests) concept by Hon'ble Chief Minister at Bulbuley above Gangtok to take Forestry programme to people's level. All state of people, individuals, institutions, clubs, societies and non-governmental organizations participate by planting trees in memory of children, marriage, death etc. at a common venue and care, own and nurture trees to maturity, Smriti Vans now at each Panchayat Unit.
- \* Government formulates, adopts State Forests, Environment and Land Use Policy in view of growing concern for protection of forests, environment and wildlife vis-a vis increased developmental tempo.

**2000:**

- \* Khangchendzonga Biosphere Reserve with area 2619.92 sq.km declared.
- Total wildlife protected area 30.77% of total geographical area which is highest in the country.
- \* Eco Clubs and Green fund for schools and colleges.

**2001:**

- \* Sacred peaks, caves, rocks, lakes, 'chhortens' and hot springs notified.
- \* Scaling of important peaks including the Mount Khangchendzonga banned.
- \* Network of JFMC/EDCs and Watershed Development Committees (WDCs) created.
- \* State Biodiversity Park at Tendong, South Sikkim established.

**2002:**

- \* Environmental Education introduced in Schools from nursery to class-VIII.
- \* State Medicinal Plant Board (SMPB) set up to concretize action plan of medicinal plants in the State with Hon'ble Chief Minister as Chairman.
- \* Herbal Gardens created in different Panchayats Units.
- \* Sikkim to go organic, ban on chemical fertilizers, pesticides.
- \* Pangolakha Wildlife Sanctuary, East Sikkim declared.

**2003:**

- \* Eleven Important Bird Areas (IBAs) in Sikkim identified and recognized by Government.
- \* Government of India, through its scientific wing, the Forest Survey of India records increase of forest cover in the state by 2% between the period 1994-2003, the result of department's relentless regeneration efforts and the Government's intense policy focus.

**2004:**

- \* Green indicators, 2004 a report developed by Noida-based groups find the Forest Protection Index of Sikkim to be the highest in the country (0.903).
- \* First State in Himalayas to use Global Positioning System (GPS) to survey and demarcate Reserve Forest boundaries.

**2005:**

- \* Sikkim Ecology Fund and Environment Cess Act, 2005 framed. This Act provides for levy of Cess on industries, traders and consumers for articles which pollute environment.
- \* Ben on killing of wildlife strengthened.

**2006:**

- \* ENVIS (Environmental Information System) Centre established and website ([www.sikenvis.nic.in](http://www.sikenvis.nic.in)) launched to reach information on status of environment and its related issues to wider level.
- \* Regulation of trekking Rules, 2006 notified.
- \* Kitam Bird Sanctuary, South Sikkim declared.
- \* State Green Mission launched to integrate people with nature and invoke mass support for the cause.
- \* Constitution of State Biodiversity Board to oversee and manage the rich biodiversity of the State.
- \* State Biodiversity Board Strategy and Action Plan (SBSAP) documented.
- \* Wetland Conservation Programme formulated and six wetland complexes included in National Wetland Conservation Programme.

**2007:**

- \* State Glacial Commission formulated.
- \* National Bamboo Mission launched.

**2008:**

- \* State of Environment (SoE) Report, the first of its kind in the state published.
- \* Eco-Tourism Directorate created.
- \* Hamro Van media venture on local cable TV launched for awareness.
- \* Chogyal Palden Thendup Namgyal Park, Gangtok, created.
- \* Sikkim Forests, Water Courses and Road Reserve(Preservation and Protection) Act 1988 got assent from President of India (16 May 2008).

**2009:**

- \* Awarded following appreciation from Centre for Development Finance, a prominent NGO.
- \* First in Natural Resources Management.
- \* First in performance in Land Use and setting up of State Council for Climate Change.
- \* Second best ranking in Environmental Sustainability Index.
- \*Tinkitam Fairieanum Conservation Reserve, South Sikkim for the protection of Orchid Paphiopedilum Fairieanum and its environment under declaration.
- \* Working Plan under completion, Wildlife Management Plans under implementation. Terms of Reference (TOR) signed between department and Japanese International Eco-Tourism and Natural Resources Conservation.

## Chapter - 5

### AREA STATISTICS FOR SIKKIM- TOTAL STATE (IN SQ. KMS.)

SL. No	CLASS	RESERVE FOREST	REVENUE BLOCK	TOTAL	%OF TOTAL
1.	CROP LAND (TERRACED./SEMI TERRACED)	0.00	604.85	604.85	8.52
2.	FALLOW/ SCRUB IN REVENUE BLOCKS	0.00	155.69	155.69	2.19
3.	SAL DENSE FOREST	5.30	0.77	6.07	0.09
4.	SAL OPEN FOREST	15.93	1.54	70.47	0.25
5.	SAL DEGRADED FOREST	3.32	0.71	4.03	0.06
6.	MIXED DENSE FOREST	464.46	138.88	603.34	8.50
7.	MIXED OPEN FOREST	433.37	333.38	766.75	10.81
8.	MIXED DEGRADED FOREST	194.56	235.06	429.62	6.05
9.	DENSE CONIFER FOREST	351.94	16.14	368.08	5.19
10.	OPEN CONIFER FOREST	340.63	21.55	362.18	5.10
11.	DEGRADED CONIFER FOREST	156.89	16.30	173.19	2.44
12.	OAK-RHODODENDRON FOREST	100.34	26.24	126.58	1.78
13.	SCRUBS IN RESERVE FOREST	101.87	0.00	101.87	1.44
14.	FOREST BLANKS	90.56	0.00	90.56	1.28
15.	ALPINE SCRUB	611.44	27.72	639.16	9.01
16.	ALPINE PASTURES	431.32	0.00	431.32	6.08
17.	ALPINE BARREN	815.80	2.35	818.15	11.53
18.	SNOW	1018.23	5.41	1023.64	14.43
19.	GLACIERS	208.23	0.00	208.23	2.93
20.	LAKES	32.30	0.70	33.00	0.47
21.	RIVERS/MAJOR STREAMS	31.81	32.50	64.31	0.91
22.	DRY RIVER BEDS	31.49	9.10	40.59	0.57
23.	BUILT -UP AREA	0.30	3.24	3.54	0.05
24.	LAND SLIDE AREAS	5.37	5.16	10.53	0.15
25.	MISCELLANEOUS	6.93	6.30	13.23	0.19
	<b>Total</b>	<b>5452.39</b>	<b>1643.59</b>	<b>7095.98</b>	<b>100.00</b>

Chapter – 6

**FOREST COVER**  
District Wise Forest Cover  
Table- 6.1

District	Geographic area	2005 Assessment				Percent of G.A	Change	Scrub
		Very dense forest	Mod. Dense forest	Open forest	Total			
East Sikkim	954	162	396	121	679	71.17	0	68
North Sikkim	4,226	132	755	439	1,326	31.38	0	208
South Sikkim	750	95	311	123	529	70.53	0	4
West Sikkim	1,166	109	450	169	728	62.44	0	83
<b>Total</b>	<b>7,096</b>	<b>498</b>	<b>1,912</b>	<b>852</b>	<b>3,262</b>	<b>45.97</b>	<b>0</b>	<b>363</b>

Forest & Tree Cover

Table - 6.2

Category	Area	% of Geographical Area
Tree Cover	27	0.38
Forest Cover	3,262	45.97
Forest & Tree Cover	3,289	46.35

Forest cover in the North – Eastern State

Table - 6.3

State/UT	Geographic Area	Forest Cover (2005 Assessment)				Percent of G.A	Change as compared to 2003 Assessment
		Very Dense Forest	Mod.Dense Forest	Open Forest	Total Forest		
Arunachal Pradesh	83,743	14,411	37,977	15,389	67.777	80.93	85
Assam	78,438	1,444	11,387	14,814	27,645	35.24	-90
Manipur	22,327	923	5,541	10,622	17,086	76.53	-173
Meghalaya	22,429	338	6,808	9,842	16,988	75.74	63
Mizoram	21,081	133	6,173	12,378	18,684	88.63	101
Nagaland	16,579	236	5,602	7,881	13,719	82.75	-296
Tripura	10,486	61	4,969	3,125	8,155	77.77	32
Sikkim	7,096	498	1,912	852	3,262	45.97	-



## Chapter - 7

### MANPOWER:

SL.NO.	DESIGNATION	IN POSITION
<b>I</b>	<b>IFS CADRE</b>	
01	PCCF-cum-Secretary	01
02	Additional P.C.C.F.	02
03	Chief Conservator of Forest	03
04	Conservator of Forest	03
05	Deputy Conservator of Forest	04
06	IFS Probationers	02
07	On Higher Study	01
08	On Central Deputation	02
09	On State Deputation	08
<b>A. TOTAL IFS (GAZETTED)</b>		<b>26</b>
<b>II</b>	<b>SFS CADRE</b>	
01	Director	02
02	Additional Director of Forests	03
03	Joint Directors	06
04	Deputy Conservators	28
05	Assistant Conservator of Forests	55
<b>A. Gazetted</b>		<b>94</b>
06	Range Officer	74
07	Block Officer	113
08	Head Forest Guard	50
09	Forest Guard	251
<b>B. Non-Gazetted</b>		<b>488</b>
<b>Total (A+B)</b>		<b>582</b>
<b>III</b>	<b>SERICULTURE</b>	
01	Director	01
02	Joint Director	01
03	Assistant Director	01
<b>A. Gazetted</b>		<b>03</b>
04	Sericulture Range Officer	02
05	Sericulture Block Officer	02
<b>B. Non-Gazetted</b>		<b>04</b>
<b>Total Sericulture (A+B)</b>		<b>07</b>
<b>IV</b>	<b>STATISTICAL SERVICE</b>	
01	Joint Director	01
02	Deputy Director	01
03	Assistant Director	03
<b>A. Gazetted</b>		<b>05</b>
04	Statistical Inspector	05
05	Statistical Investigator	02
<b>B. Non-Gazetted</b>		<b>07</b>
<b>Total (A+B)</b>		<b>12</b>
		<b>624</b>

<b>V</b>	<b>FINANCE AND ACCOUNTS SERVICE</b>		
	01	Additional Director of Accounts	01
	02	Chief Accounts Officer	01
	03	Accounts Officer	02
	<b>A.</b>	<b>Gazetted</b>	<b>04</b>
	04	Senior Accountant	03
	05	Accountant	07
	06	Junior Accountant	26
	07	Accounts Clerk	09
	<b>B. Non-Gazetted</b>	<b>45</b>	
	<b>Total (A+B)</b>	<b>49</b>	
<b>VI</b>	<b>STATE CIVIL SERVICE</b>		
	01	Special Secretary	01
	02	Joint Secretary	01
	03	Under Secretary	02
	<b>A.</b>	<b>Gazetted</b>	<b>04</b>
	04	Office Superintendent	05
	05	Head Assistant	04
	06	Upper Division Clerk	18
	07	Lower Division Clerk	51
	<b>B. Non-Gazetted</b>	<b>78</b>	
	<b>Total (A+B)</b>	<b>82</b>	
<b>VII</b>	<b>OTHERS</b>		
	01	Chief Scientist	01
	02	Senior Research Officer	01
	03	Deputy Director(WL & Zoo)	01
	04	Scientist 'B	01
	05	Assistant Scientific Officer	01
	06	O.S.D.	01
	07	Assistant Engineer (Civil)	01
	08	Assistant Engineer (Environment)	01
	<b>A.</b>	<b>Gazetted</b>	<b>08</b>
	09	Senior Technical Assistant	02
	10	Cartographer	01
	11	Surveyor	01
	12	Assistant surveyor	01
	13	Tracer	01
	14	Draftsmen	03
	15	Junior Engineer (Civil)	02
	16	Tally Clerk	01
	17	Wireless Attendant	01
	18	Supervisor	02
	19	Lab Attendant	01
20	Vet. Compounder	01	
21	Bearer	01	

	22	Chowkidar	25
	23	Cook	02
	24	Peon	49
	25	Mali	21
	26	Driver	42
	27	Pipe Fitter	01
	<b>B. Non-Gazetted</b>		<b>157</b>
	<b>Total (Other A+B)</b>		<b>165</b>
<b>VIII</b>	<b>STENOGRAPHERS SERVICE</b>		
	01	Principal Private Secretary	01
	02	Senior Private Secretary	01
	03	Private Secretary	03
	<b>A. Gazetted</b>		<b>05</b>
	04	Stenographer	07
	<b>B. Non-Gazetted</b>		<b>07</b>
	<b>Total - (A+B)</b>		<b>12</b>

**ABSTRACT:**

<b>SL.NO</b>	<b>PARTICULARS</b>	<b>IN POSITION</b>
1	TOTAL GAZETTED OFFICERS	<b>149</b>
2	TOATL NON-GAZETTED EMPLOYEES	786
3	WORK-CHARGED EMPLOYEES	12
4	ON CONSOLIDATED PAY	05
5	MUSTER ROLL WORKERS	599
6	<b>GRAND TOTAL -</b>	<b>1551</b>

## List of Officers of Forest, Environment and Wildlife Management Department

### IFS Officers

<b>Sl. No.</b>	<b>Name</b>	<b>Designation</b>
1.	Shri S.T.Lachungpa	PCCF-cum-Secretary
2.	Shri N.T.Bhutia	Addl. PCCF Wildlife/Chief Wildlife Warden
3.	Shri M.L.Arrawatia	Secretary Science & Technology
4.	Shri Manjit Singh	Addl. PCCF, Planning & Adm./M & E
5.	Shri Anil Mainra	CCF / Biodiversity, JICA.
6.	Shri Thomas Chandy	CCF (On higher study in Australia)
7.	Shri Arvind Kumar	Resident Commissioner, Sikkim House, New Delhi
8.	Shri A.K.Ganeriwala	Secretary, Rural Management & Dev. Department
9.	Shri S.B.S Bhadauria	Secretary, Tourism Department
10.	Shri M.L.Srivastava	CCF (FCA)
11.	Shri H.B.Sharma	CCF (Utilization)
12.	Mrs. Bharati	CCF On deputation to IGNFA, Dehradun
13.	Shri A.K.Mohanty	CCF (Working Plan)
14.	Shri C.S.Rao	Director, HRDD.
15.	Shri H.P.Pradhan	CCF (Wildlife)
16.	Shri C.Lachungpa	CCF (LU&E) / Nodal Officer (FCA)
17.	Shri Pradeep Kumar	CF (Working Plan / Territorial).
18.	Shri Brijendra Swaroop	MD, SIMFED
19.	Shri Sandeep Tambe	Addl. Secretary, Rural Management & Dev. Department
20.	Shri Karma Zimpa Bhutia	DFO (Working Plan) North-East on dep. From Jharkhand
21.	Shri P.Senthil Kumar	MD Sikkim Milk.
22.	Shri.Anbalagan	C.E.O. STDC.
23.	Miss Monalisha Dash	Divisional Forest Officer (Territorial) North
24.	Shri D.Manjunatha	DFO (Working Plan) South-West
25.	Shri Barapatre Abhay Bhaskar	ACF (T) West Division
26.	Shri M.Ravi Kumar	Probationer, ACT (T) North / BAC Kabi.

**S.F.S.Officers.**

<b>Sl.No</b>	<b>Name</b>	<b>Designation.</b>
01	Shri S.Z.Lucksom	Director of Forests, HZP, RVP, EPC.
02	Shri T.D.Rai	Director of Forests, Silviculture Research.
03	Shri C.S.Pradhan	Addl. Director of Forests, FCA, SMPB, NTFP, Eco-Tourism
04	Shri B.K.Tewari	Addl Director of Forests, P&A./P&G/RVP/TSP & SCSP
05	Shri Gut Lepcha	Addl. Director of Forests, HZP
06	Shri B.P.Pradhan	Joint Director of Forests, JICA Project.
07	Shri B.S.Siktel	Joint Director of Forests, FCA
08	Shri Y.P.Gurung	Joint Director of Forests, RAC, Kerfecktar, Jorethang
09	Shri D.C.Nepal	Joint Director of Forests, RVP/SF
10	Shri N.W.Tamang	Joint Director of Forests, Eco-Tourism/SPIO(HQ)/NTFP
11	Shri J.B.Subba	Joint Director of Forests, KNP/KBR
12	Shri T.R.Bhutia	Divisional Forest Officer, E.P.C.
13	Shri T.Gyatso	Divisional Forest Officer, NTFP/TSP & SCSP.
14	Shri B.S.Sharma	Divisional Forest Officer, Land Use & Env. South
15	Shri S Wangyal	Divisional Forest Officer, IWDP, North
16	Shri D.S.Chhetri	Divisional Forest Officer, Zilla Panchayat/S.F. (South).
17	Shri Karma Legsey	Divisional Forest Officer, Wildlife (East)
18	Shri Udai Gurung	Divisional Forest Officer, (T) South
19	Mrs. Sonam Choden	Divisional Forest Officer, S/F East.
20	Shri B.B.Gurung	Divisional Forest Officer, Territorial, East.
21	Shri S.K.Thatal	Divisional Forest Officer, Wildlife, West.
22	Shri V.K.Rai	Divisional Forest Officer (Social Forestry) North
23	Shri P.K.Yonzon	Divisional Forest Officer (Zilla Panchayat) East
24	Shri N. Sherpa	Divisional Forest Officer Social Forestry (West)
25	Shri C.B.Bhujel	Divisional Forest Officer, Silviculture.
26	Shri B.L.Sharma	Divisional Forest Officer (RVP)
27	Shri M.R.Rai	Divisional Forest Officer (Land Use & Env.) North
28	Shri B.C.Koirala	Divisional Forest Officer (Utilization)
29	Shri Gey Tshering	Divisional Forest Officer, Zilla Panchayat, West
30	Shri R.C.Nirola	Divisional Forest Officer, HZP.

<b>Sl.No</b>	<b>Name</b>	<b>Designation</b>
31.	Shri K.B.Gurung	Divisional Forest Officer, LU&E, East
32.	Shri D.R.Subba	Divisional Forest Officer, Land Use & Env., West
33.	Shri P.D.Bhutia	Divisional Forest Officer, Wildlife, South
34.	Shri B.K.Basnet	Divisional Forest Officer, Parks & Gardens
35.	Shri Binod Yonzon	Divisional Forest Officer (WL) North
36.	Shri Harish Ch. Rai	Divisional Forest Officer, S & D
37.	Shri Phurba Tamang	Divisional Forest Officer, FCA & Engineering Cell
38.	Shri Nombi Bhutia	Divisional Forest Officer, KNP
39.	Shri Lakpa Sherpa	Assistant Conservator of Forests, BAC, Yuksom
40.	Shri M.K.Koirala	Assistant Conservator of Forests, Ravangla (T) South
41.	Shri S.B.Prangden	Assistant Conservator of Forests, Utilisation
42.	Shri Dazom Lachungpa	A. C. F. IWDP, North / BAC, Chungthang.
43.	Mrs. Rajani Bhandari	Assistant Conservator of Forests, (T) Pakyong
44.	Shri Tshering P. Bhutia	Assistant Conservator of Forests, Territorial, Namchi
45.	Miss Urmila Thapa	Assistant Conservator of Forests, (WL) North
46.	Shri Sangey G. Bhutia	Assistant Conservator of Forests, Territorial, Rongli
47.	Miss Kathrine S. Lepcha	Assistant Conservator of Forests, Territorial, Mangan
48.	Shri Blen Tsh. Targain	Assistant Conservator of Forests, KNP, West
49.	Shri Sugen M. Saring	Assistant Conservator of Forests, Wildlife, West
50.	Mrs. Kusum Gurung	Assistant Conservator of Forests, LU&E (East)
51.	Shri Nischal Gautam	Assistant Conservator of Forests, Territorial, Soreng
52.	Miss Dichen Lachungpa	Assistant Conservator of Forests, (T) East
53.	Shri Kharga Bdr. Gautam	Assistant Conservator of Forests, RVP, Samdong
54.	Shri Tashi Tsh. Bhutia	Assistant Conservator of Forests, BAC, Kabi- Tingda
55.	Shri Sonam Pintso Bhutia	Assistant Conservator of Forests, S/F, BAC,Dzongu.
56.	Shri Kharga Bdr. Gurung	Assistant Conservator of Forests, LU&E, West
57.	Shri Sudhir Gurung	Assistant Conservator of Forests, Barsey WL, Soreng
58.	Shri Prem Kumar Rai	Assistant Conservator of Forests, BAC, Regu

<b>Sl No</b>	<b>Name</b>	<b>Designation</b>
59.	Shri Ganesh Kumar Rai	Assistant Conservator of Forests, NTFP
60.	Shri Sanula Bhutia	Assistant Conservator of Forests, KNP, North
61.	Shri Lobzang Bhutia	Assistant Conservator of Forests, (W/P)
62.	Shri Ongyal Tshering Bhutia	Assistant Conservator of Forests, BAC (Temi)
63.	Shri Ashok Kumar Pradhan	Assistant Conservator of Forests, Kyongnosla WL
64.	Shri Devendra Chhetri	Assistant Conservator of Forests, BAC, Rhenock
65.	Shri Krishna Kr. Basnet	Assistant Conservator of Forests, BAC, Yangang
66.	Shri Arjun Kr. Rai	Assistant Conservator of Forests, BAC, Kaluk
67.	Shri Phurba Bhutia	Assistant Conservator of Forests, Stores
68.	Shri Kiran Kumar Gurung	Assistant Conservator of Forests, BAC, Sikip
69.	Shri Dilliram Nirola	Assistant Conservator of Forests, RVP, Bermiok.
70.	Shri Bishnu Kumar Panth	A.C.F. Meanam WLS, Ravangla
71.	Shri Ben Singh Rai	Assistant Conservator of Forests, BAC, Soreng
72.	Shri Kharka Dhoj Subba	Assistant Conservator of Forests, S/F, West
73.	Shri Prem Kumar Chhetri	Assistant Conservator of Forests, S/F, South
74.	Shri Bir Bahadur Subba	A.C.F.BAC, Melli-Sumbuk
75.	Shri Pralhad Pradhan	Assistant Conservator of Forests, Pangolakha WL
76.	Shri Narapati Gautam	Assistant Conservator of Forests, LU&E, South
77.	Shri Mahakal Gurung	Assistant Conservator of Forests, BAC, Dentam
78.	Shri Govind Pradhan	Assistant Conservator of Forests, Wildlife, South
79.	Shri Nehru Prasad Dahal	Assistant Conservator of Forests, HZP
80.	Shri Namgyal Tsh. Bhutia	A. C. F. (T) / LU&E, Chungthang
81.	Shri Ram Prasad Sharma	Assistant Conservator of Forests, LU&E, Mangan
82.	Shri Sangey Kazi	Assistant Conservator of Forests, BAC, Duga
83.	Shri Dhan Kumar Subba	Assistant Conservator of Forests, BAC, Ranka
84.	Shri Anguir Bhutia	Assistant Conservator of Forests, Silviculture
85.	Shri Dhruva Lohagan	Assistant Conservator of Forests, BAC, Mangan

<b>Sl No.</b>	<b>Name</b>	<b>Designation</b>
86.	Shri Dorjee Tamang	Assistant Conservator of Forests, FCA, South
87.	Shri Man Bahadur Subba	Assistant Conservator of Forests, BAC, Daramdin
88.	Shri Karsang Lama	Assistant Conservator of Forests, BAC, Pakyong
89.	Shri Madan Kumar Rai	Assistant Conservator of Forests, Parks & Gardens/ Eco-Tourism.
90.	Shri Kharga Bahadur Subedi	Assistant Conservator of Forests, Social Forestry, East
91.	Shri Abidal Chhetri	Assistant Conservator of Forests, BAC, Gyalshing
92.	Shri Arun Thapa	Assistant Conservator of Forests, Working Plan
93.	Shri Mani Ram Subba	Assistant Conservator of Forests, Fambonghlo WLS



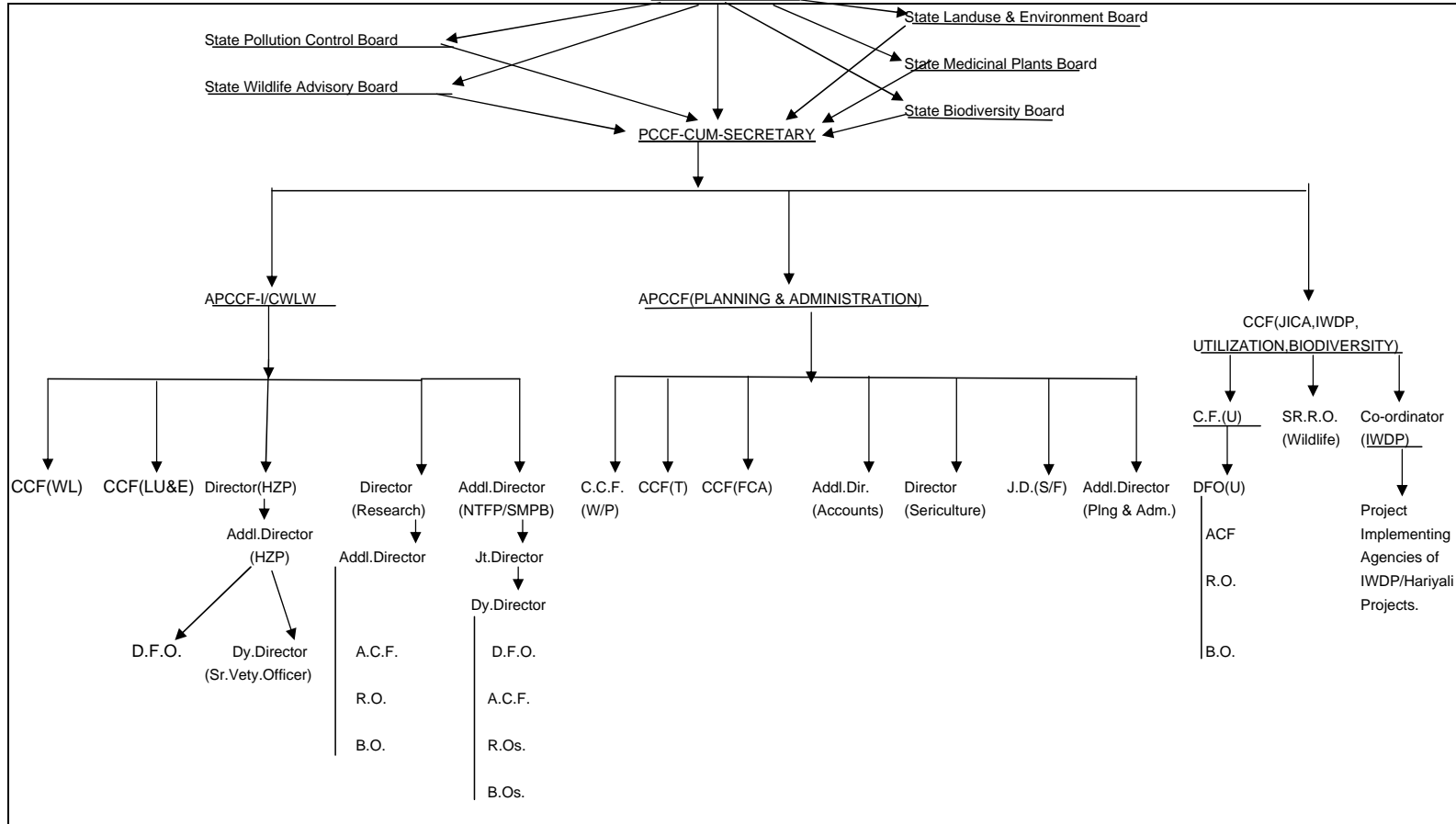
**Officers of Other Services**

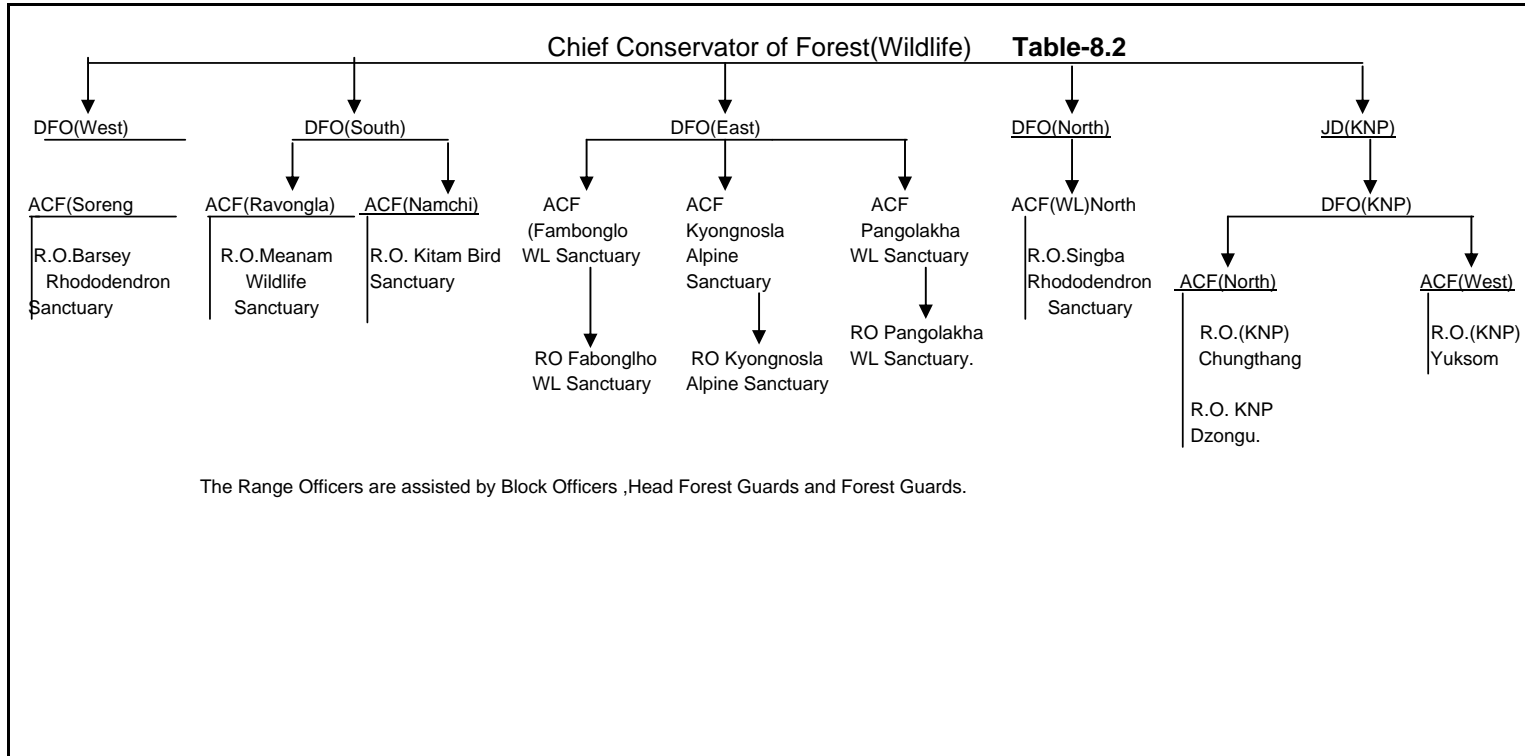
<b>Sl.No</b>	<b>Name</b>	<b>Designation</b>
01.	Shri D.R.Sharma	Director, Sericulture
02.	Shri P.R.Poudyal	Special Secretary
03.	Shri H.P.Sharma	Addl. Director of Accounts
04.	Shri Navin Kumar Chettri	Joint Secretary
05.	Shri H.P.Rai	Joint Director, Sericulture
06.	Mrs. Madu Pradhan	Joint Director, Statistics
07.	Mrs. Usha Lachungpa	Senior Research Officer, Wildlife
08.	Dr. Gopal Pradhan	Chief Scientist, SPCB.
09.	Shri T.Shenga	Chief Accounts Officer
10.	Mrs. Laden Bhutia	Principal Private Secretary
11.	Shri G.N.Pradhan	Deputy Director, Statistics
12.	Dr. M.K.Shivashankar	Deputy Director, Wildlife & Zoo.
13.	Mrs. Radha Koirala	Under Secretary (WL)
14.	Mrs.Sharmistha Rai	Under Secretary (Adm.) HO.
15.	Mrs .Lakpa Doma	Deputy Director, SMPB
16.	Shri K.D.Subedi	Accounts Officer
17.	Mrs. Lakpa Doma Bhutia	Accounts Officer
18.	Mrs. Manu H.Subba	Assistant Director, Statistics
19.	Shri B.K.Chhetri	Assistant Scientific Officer, SPCB
20.	Shri I.B..Acharya	Assistant Director, Sericulture
21.	Mrs. Purnima Karki	Senior Private Secretary
22.	Shri P.G.Bhutia	Assistant Director, Statistics
23.	Shri N.K.Rai	Assistant Director, Statistics
24.	Shri Ranjan Rai	Assistant Engineer, Environment
25.	Shri Kamal Gurung	Assistant Engineer, Civil
26.	Shri Rajiv Rai	Scientist 'B'
27.	Miss Geeta lama	Private Secretary
28.	Shri Chandra Prakash Rai	Private Secretary
29.	Mrs.Sarita Subba	Private Secretary

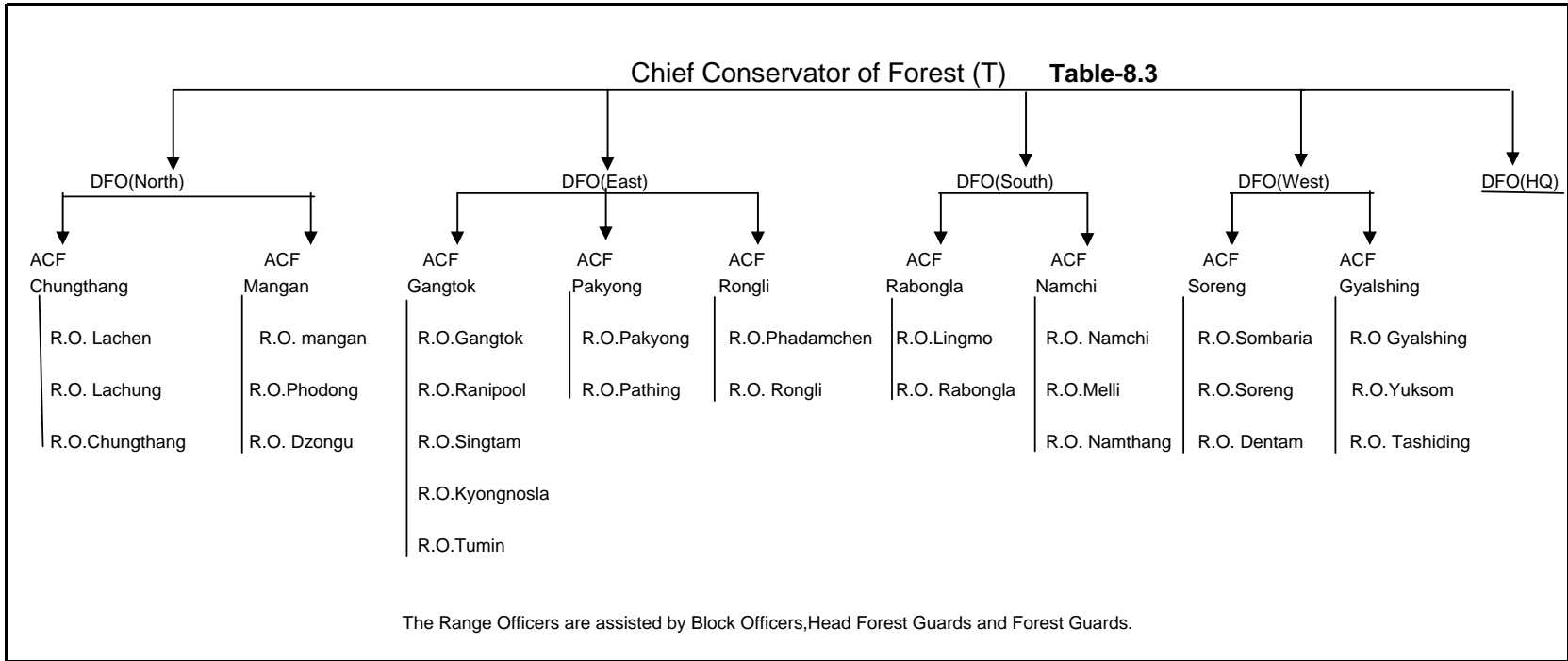
# ORGANISATIONAL CHART

## Chapter - 8

Table-8.1

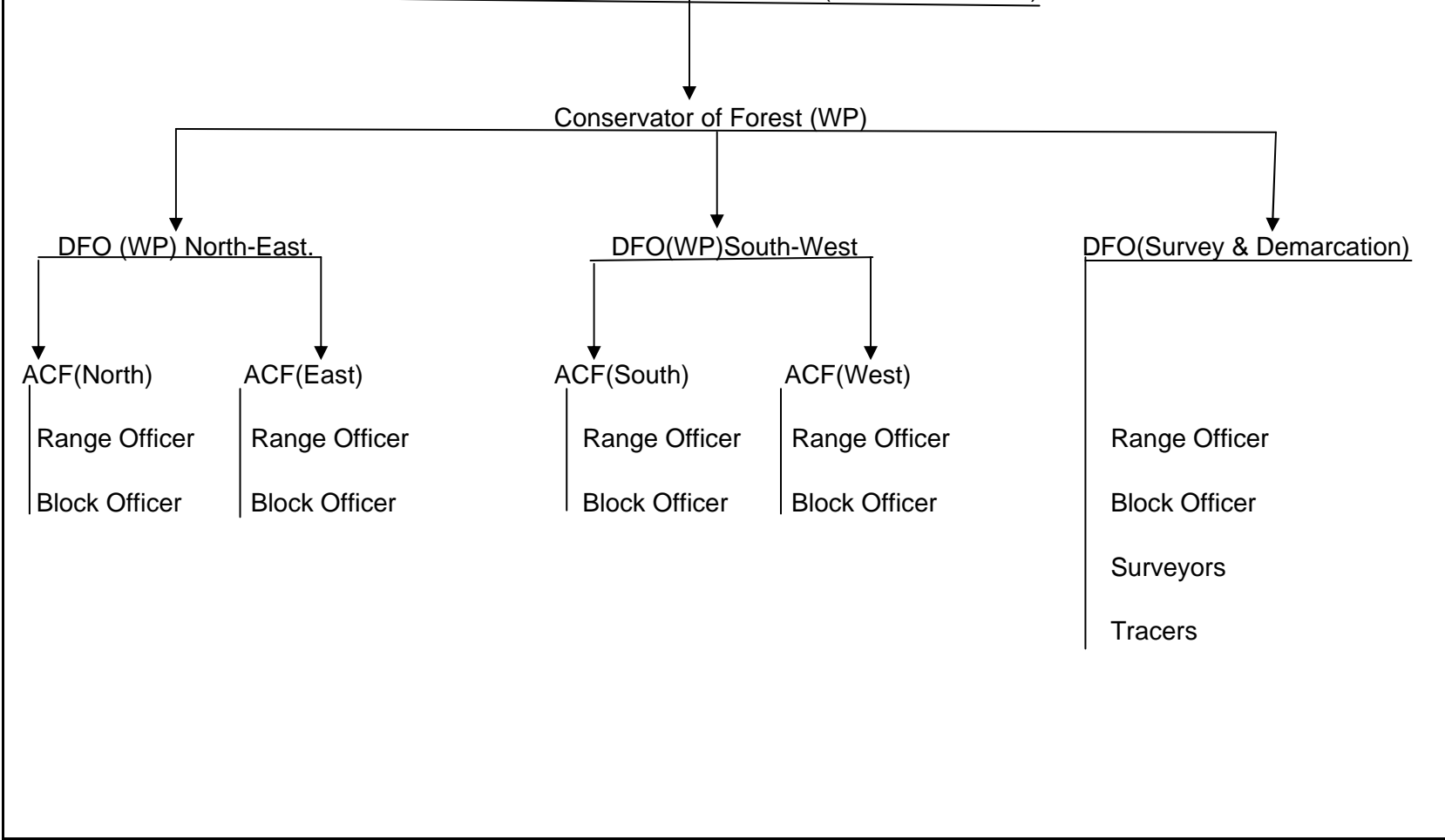




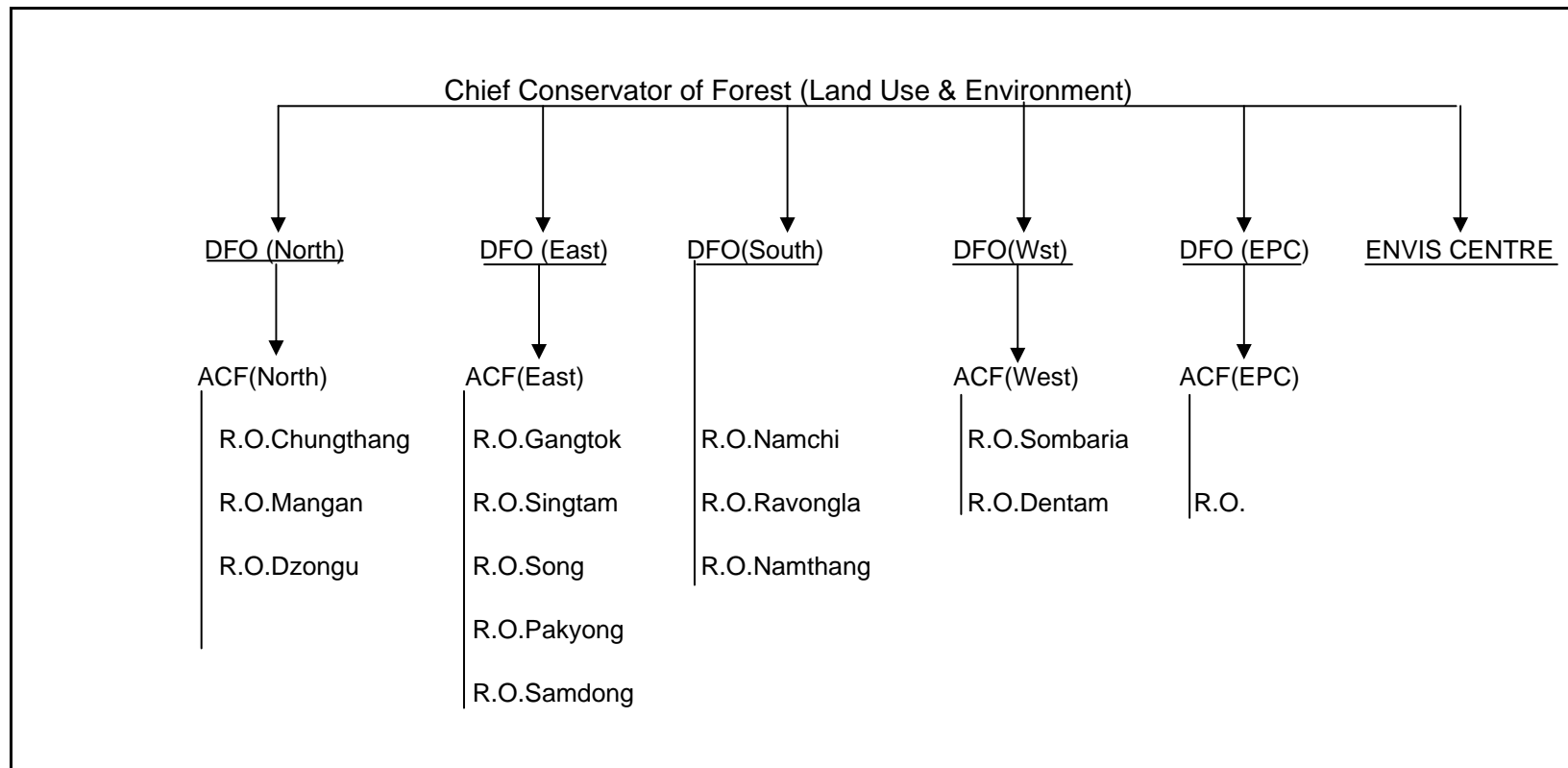


**Table-8.4**

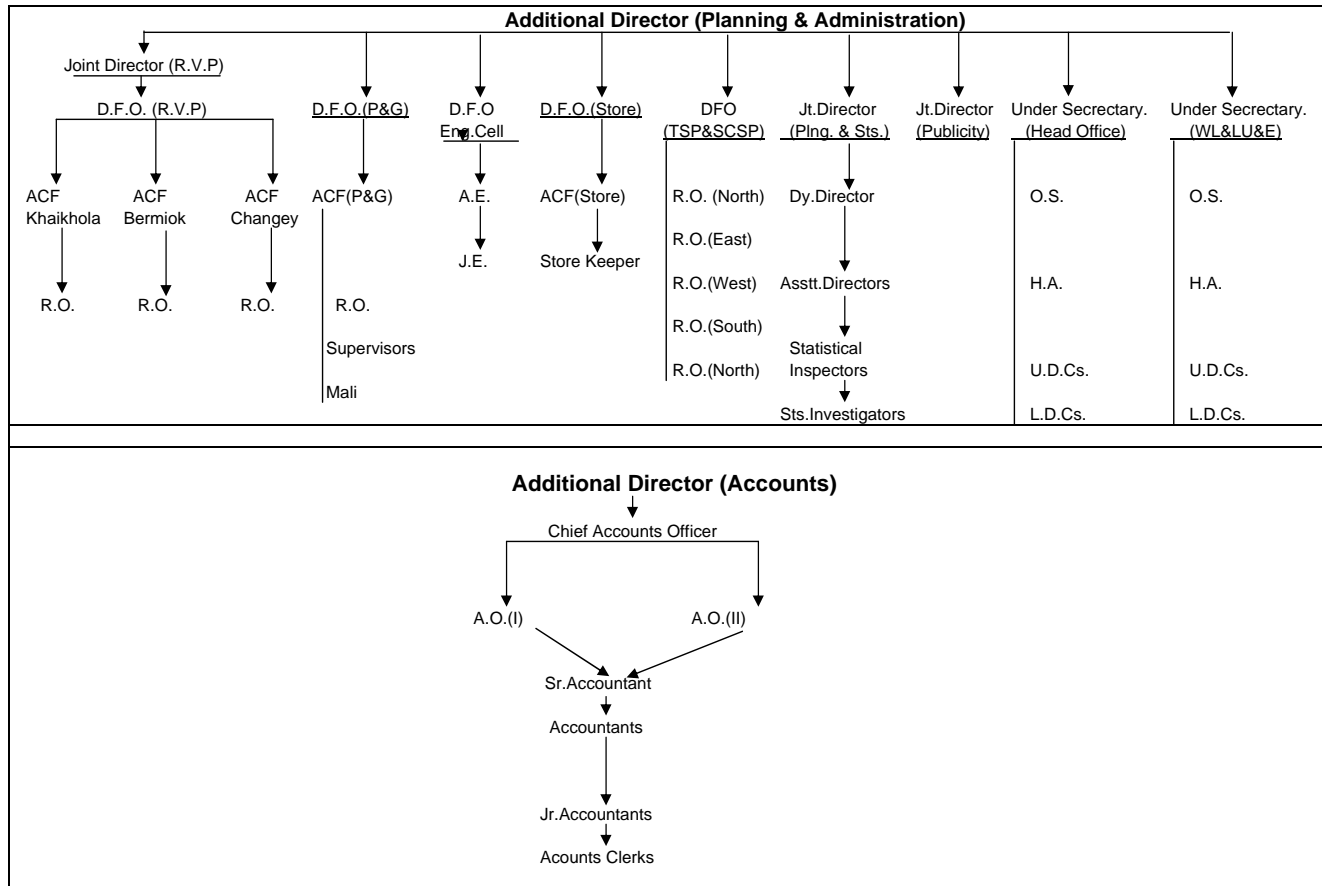
CHIEF CONSERVATOR OF FOREST (WORKING PLAN)



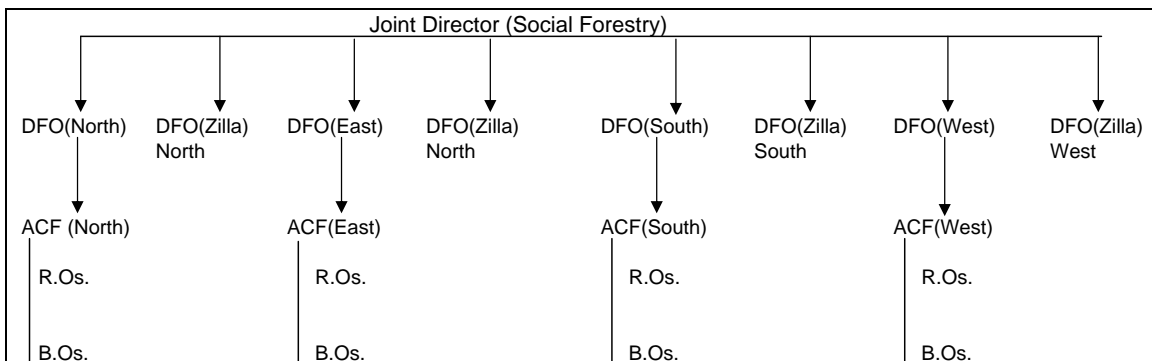
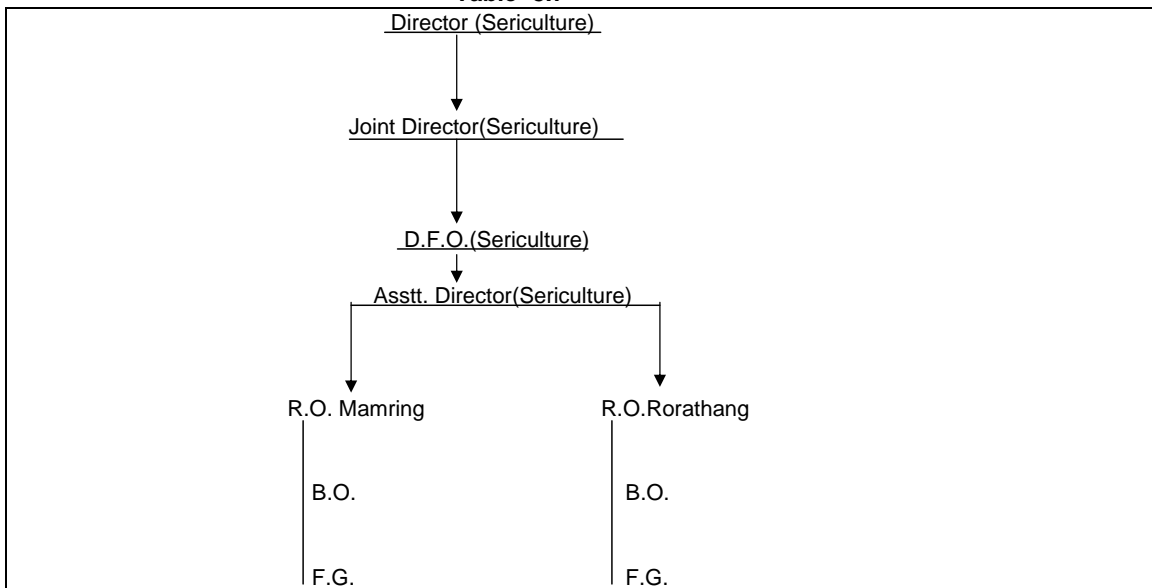
**Table-8.5**



**Table-8.6**



**Table- 8.7**





## Chapter – 9

### Role & Responsibility of different Circles.

#### **1. Territorial Circle.**

**Role:** Protection & Management of Forests.

**Responsibility:** Protection of RF, Khasmal, Gaucharan & Privately owned Forests, Implementation of Sikkim Forest Act, 1988 and Indian Forest Act, 1927. Regulation of transit of Forest Produce like timber, firewood, charcoal, NTFP and Medicinal Plants, Implementation of NAP (National Afforestation Programme) through FDA & JFMCs. Fire protection etc.

#### **2. Social Forestry & RVP.**

**Role:** Afforestation through Society.

**Responsibility:** Afforestation in privately owned forests through villagers. Awareness raising among the people for increase in free cover through Social and Farm Forestry. Maintenance of nurseries for afforestation and distribution of free seedling for planting in non-agricultural private lands. Treatment critical watersheds through integrated vegetative and engineering measures through river valley project schemes funded by Government of India. Watersheds of high & very priority are identified by this circle and projects are submitted to Government of India for sanction. Presently four watersheds in West & in East are under implementation sediment discharge is monitor before and after treatment by creating sediment monitoring stations in representative outlets. This Circle also functions as co-ordinator implementation of Integrated Wastelands Development Projects funded by Government of India in ratio of 91.67 (centre), 8.33 (State). The scheme implemented through the Zilla Panchayat in all districts.

#### **3. Land Use & Environment.**

**Role:** Soil and Water Conservation in Forest Lands.

**Responsibility:** Implementation of Schemes for soil and water Conservation through vegetative and engineering measures in the Watersheds. Raising of nursery for plantation in eroded areas for checking soil erosion. Protection and management of wetlands. Treatment of landslide affected areas. Management of Environment Information System. Catchment area treatment of power projects etc.

#### **4. Wildlife.**

**Role:** Protection of Wildlife.

**Responsibility:** Management of Protected Areas (Pas) for protection and conservation of wildlife, Protection of wildlife outside the PAs. Implementation of Wildlife Protection Act, 1972. Regulation of Transit of wildlife and wildlife products. Preparation & Implementation of Wildlife Management Plans in PAs. Implementation of NAP through FDAs & EDCs.

#### **5. Himalayan Zoological Park.**

**Role:** Ex-situ Conservation of Wild Animals & Birds.

**Responsibility:** Ex-situ Conservation of Wild Animals & Birds for education, research and eco-tourism. Providing similar type of habitat to the Captive animals as that in natural habitat. Study of breeding habits of the rare and endangered wild animals and birds. Monitoring of the health of the animals and treatment of experienced senior veterinarian. Regulation of visitors to the Park.

**6. N.T.F.P.**

**Role:** Cultivation & Management of NTFP & Medicinal Plants inside & outside Forest areas.

**Responsibility:** Implementation of schemes for cultivation of Non Timber Forest Produce and Medicinal Plants inside and outside forest areas in collaboration with National Medicinal Plants Boards and State Medicinal Plants Boards. Creation herbal gardens for demonstration and awareness of the people for motivation and research purpose. Identification of traditional herbal healers and their recognition. Registration & Promotion of contractual farmers for medicinal plants cultivation by providing subsidy and marketing.

**7. Working Plan.**

**Role:** Preparation of Working Plan for Management of Forests.

**Responsibility:** To prepare working plan for Management of Forests like RF, Khasmal, Gaucharan as well privately owned forests in a scientific and sustainable manner for a span of at least 10 years. Compartmentalisation of territorial forests to give district identity for each compartment with natural boundaries. Providing specific management prescription for each compartment for a period of minimum 10 years. Separate working plans for each territorial forest division excluding the wildlife PAs which will be managed through WL Management Plan.

**8. Eco-Tourism & Publicity.**

**Role:** Promotion of Eco-Tourism in Forests & wildlife Protected areas. Publicity matters of Forest Environment & Wildlife Management Department.

**Responsibility:** Sikkim with 0.2% of the countries geographical area has over 26% of the total biodiversity of the country. Sikkim tourism has mainly focused on Eco-tourism like wildlife trekking seeing, wetland Eco-tourism, waterfalls and snow sight seeing tourism, aesthetic tourism. The responsibility of this circle to regulate the ecotourism in co-ordination with Territorial and Wildlife Circles, Management of Saramsa Garden is vested to this Circle. This circle also co-ordinates the publicity activities of the Department.

**9. Research.**

**Role:** To carryout research in Forestry Wildlife.

**Responsibility:** To carryout research for improvement of planting material for afforestation, identification of seed stands plus trees for seed production for nurseries. Modernization of nursery techniques for higher production, hardening before transplanting the seedlings to withstand extreme weather condition, study of growth and character of important tree species, their increment, response to improved techniques etc. by laying sample plots and preservation plots. Research in Wildlife collection and preservation of important, rare and endangered specimens of flora in herbarium.

**10. Parks & Gardens.**

**Role:** Creation and Maintenance of Parks & Gardens & development of Aesthetic and Urban Forestry.

**Responsibility:** Creation and Maintenance of Parks & Gardens & Development of Aesthetic and Urban Forestry, Implementation of Programmer for ecological development of urban and sub-urban areas. Beautification of available vacant lands in town areas by creating ecological parks and gardens. Beautification of venues for international, national and State events / functions.

### **11. TSP & SCSP.**

**Role:** Implantation of Tribal Sub-Plan and Scheduled Cast Sub-Plan.

**Responsibility:** Implementation of Tribal Sub-Plan and Scheduled Caste Sub-Plan. The Planning Commission, Government of India has issued guidelines for setting aside around 25.6% of the total plan budget for the welfare of Scheduled Tribes and Scheduled Castes in the State. Out of the allocated budget by Forest Env. & Wildlife Management department for TSP & SCSP, the circle prepares forestry based schemes which are aimed for the economic development of the STs & SCs in the State and implements the schemes.

### **12. Planning and Statistics**

**Role:** Preparation of Five Year Plans and Annual Plans of the Department. To assist the PCCF-cum-Secretary in training policies and overall administration in the Department.

**Responsibility:** This circle prepares the Five Year Plans and Annual Plans of the Department which are implemented after these are approved by the State Government and the Planning Commission, Government of India. This circle is also responsible for collection compilation and analysis of the information supplied by other circles regarding implementation of the schemes, revenue generation based on which the Annual Administrative Report of the Department is prepared. This circle also prepares periodical reports as and when asked by the Government. This circle co-ordinate with other circles in all the policies and programmes of the Department.

### **13. Regional Administrative Centre.**

**Role:** To address the problems of the people of South & West District.

**Responsibility:** The State Government has established the Regional Administrative Centre (RAC) at Jorethang, South Sikkim for the benefit of the people of South & West District and each department has established office headed by the officer of the level of Additional Secretary/Joint Secretary to address the needs issues and grievances of the people of the two districts pertaining to each department. The Forest Env. & Wildlife Management Department also in the process of establishing the office of one C.F. and one J.D. in the RAC. The CF will be overall in-charge of Territorial & Wildlife Division and the JD will be in-charge of the LU&E, Social Forestry and Zilla Panchayat Divisions located in South & West districts. Both the offices will have a common finance section and common establishment section. Administrative and financial powers will be delegated to both CF & JD to deliver to the requirement of the people of the two districts. One JD and some of the establishment staff have already been posted and posting of CF and other officers, staff is under process.

### **14. Forest Conservation Act, 1980 Cell.**

**Role:** division of Forest Land for non forestry purpose.

**Responsibility:** This Circle deals with the diversion of forest land for non forestry purpose under the Forest (Conservation) Act, 1980. Transfer of forest land and realization of Net Present Value (NPV) of the forest land diverted, realization of compensatory afforestation fund for the forest land diverted, realization of fund for catchment area treatment of power projects is done by this cell. This cell, after completion of all formalities by the Territorial Circle, arranges for clearance of the State Government for the forest land diverted and sends it to the MOEF, Government of India. When final clearance of the land diverted is obtained from GOI, the forest land is handed over to the user agency by Territorial Circle under intimation to the FCA, 1980.

**15. Utilization Circle.**

**Role:** Extraction & Sale of Forest Produce.

**Responsibility:** This Circle deals with felling, extraction, conversion and sale of forest produce Viz. timber, firewood, charcoal, poles etc. from the forest land diverted under FCA, 1980. Felling and extraction of trees posing danger too life & property in thickly populated areas, towns, National Highway is done by this Circle. This circle also deals with the import of forest produce from outside the State. Issue of licences to the timber sale agent and running of the lone sawmill Department is done by this circle.

**16. Personnel management (Establishment Section).**

**Role:** Management of Service records of the Employees.

**Responsibility:** This Section is responsible for the upkeep and maintenance of the personal file of all the Group 'C' & 'D' employees of the Department viz. Range Officers, Head Forest Guards, Forest Guards, staff of Accounts Division, Ministerial Staff, Drivers, Peons, chowkidars (Watchman), Malis(Gardeners), Technical Staff and all other Group 'C & 'D' staff. This section deals with sanction of leave, increments, training, disciplinary action, transfer, and promotion etc. of the group 'C' & 'D' staff of the Department. Appointment of Range Officers, Block Officers, Head Forest Guards and Forest Guards is taken care of by this section.

## CHAPTER-10

### Statement of revenues realised during last Twelve years.

Table - 10.1

Sl.No.	Financial Year	Estimated (in lakhs)	Realised (in lakhs)	Percentage	Remarks
1	1997-1998	170.00	137.76	81.04	Shortfall 18.98 %
2	1998-1999	140.70	159.63	113.45	Excess 13.45 %
3	1999-2000	145.00	411.63	283.61	Excess 183.61 %
4	2000-2001	145.00	639.32	440.91	Excess 340.91 %
5	2001-2002	200.00	664.77	332.39	Excess 232.39 %
6	2002-2003	438.00	7129.72	164.32	Excess 64.32 %
7	2003-2004	550.00	723.4	131.53	Excess 31.53 %
8	2004-2005	550.00	787.45	143.17	Excess 43.17 %
9	2005-2006	700.00	817.66	11.81	Excess 16.81 %
10	2006-2007	800.00	802.00	100.25	Excess .25%
11	2007-2008	700.50	800.26	114.24	Excess 14.24%
12	2008-2009	800.00	848.09	106.01	Excess 6.01%

### STATEMENT OF EXPENDITURE

Table -10.2

SECTORS	ACTUAL EXPENDITURE		
	PLAN	C.S.S	N-PLAN
<b>Soil and water conservation</b>			
2003-04	<b>90.65</b>	NIL	119.97
2004-05	<b>79.59</b>	NIL	133.3
2005-06	<b>88.07</b>	NIL	139.22
2006-07	<b>84.05</b>	NIL	148.37
2007-08	<b>97.07</b>	NIL	149.04
<b>2008-09</b>	<b>90.04</b>	<b>358.14</b>	<b>173.37</b>
<b>Forestry &amp; Wildlife</b>			
2003-04	<b>623.66</b>	<b>352.86</b>	<b>949.91</b>
2004-05	<b>65488</b>	<b>296.23</b>	<b>1092.09</b>
2005-06	<b>662.54</b>	<b>329.96</b>	<b>1195.85</b>
2006-07	<b>946.72</b>	<b>484.61</b>	<b>1189.17</b>
2007-08	<b>1256.45</b>	<b>342.61</b>	<b>1273.47</b>
2008-09	<b>1251.20</b>	<b>284.50</b>	<b>1442.81</b>
<b>Ecology &amp; Environment</b>			
2003-04	<b>29.29</b>	<b>2.26</b>	-
2004-05	<b>28.43</b>	<b>1.56</b>	-
2005-06	<b>30.03</b>	<b>2.26</b>	-
2006-07	<b>36.76</b>	<b>18.10</b>	-
2007-08	<b>52.28</b>	<b>34.35</b>	-
2008-09	<b>52.53</b>	<b>46.98</b>	<b>24.23</b>

## Chapter - 11

### **ENVIS Centre in Sikkim**

ENVIS Centre on State of Environment is established under EPC Division in the year 2002-03. A brief description about the Centre is given below.

Realizing the importance of Environment Information, the Government of India, in December, 1982, established an Environment Information System (ENVIS) as a plan programme. The focus of ENVIS since its inception has been on providing environmental information to decision makers, policy planners, scientists and engineers, research workers, etc. all over the country.

The ENVIS Sikkim Centre is functioning under Forest, Environment and Wildlife Management Department, in the subject area "Status of Environment and Related Issues of Sikkim". The Centre has launched a website with the domain name of [www.sikenvis.nic.in](http://www.sikenvis.nic.in). The website contains information environment related issues including forest and forestry, status of environment, land and water, wildlife, biodiversity, ecotourism, sericulture etc. The website also includes various reports and publications in addition to the legislation on forest and environment. Various programmes relating to forest and environment implemented in the State of Sikkim also being included.

### **Archives of Publication**

Our centre is also responsible to maintain an extensive collection of publications (both the host organization and the centre itself). So far, the collection of our centre is categorized as below:

- ENVIS Quarterly Newsletter
- ENVIS Pamphlets
- National Environment Awareness Campaign
- National Green Corps
- State Green Mission
- Annual Plan Reports
- State of Environment Report.
- State Environment Pollution Report.
- Case Studies of Landslide Treatment & Erosion Control Work in Sikkim
- Newsletters from other network partners.
- Journals of Hill Research.

### **Development of Database**

Our website currently hosts the following online databases:

- ENVIS Library (Extensive database for environment related books and articles).
- Sikkim Government Gazette Notifications.
- Environmental NGOs in Sikkim.
- Database on National Environment Awareness Campaign in Sikkim
- Eco-Clubs under National Green Corps Programme.
- Database of E-newsletter Subscribers.
- Query Statistics.
- Visitor's Feedback.
- Reports and Publications
- Data on FCA, RTI 2005, Forest & Forestry, Biodiversity, Environment, Wildlife, Land & Water, Ecotourism, Sericulture and so on.

## . Publication/Documentation

**Number of Newsletter published: Three**



Vol. II Issue: 1

This issue covers notes from various resource persons on *Bamboo Diseases, Ornithological Wealth of Sikkim, Reptiles of Sikkim and Moths of Sikkim*. This issue also highlights state's achievements in Conservation of our Environment. The abstracts of our recent landmark publication '*State of Environment Report*' have also been included along with awareness column to Save Water

### **Previous Issues**



Vol. I Issue: 1

This first issue covers notes on various programmes and events related to environment carried out within the state such as State Green Mission, National Environment Awareness Campaign, Celebrations on Environment, Solid waste Management, Wetlands of Sikkim, Outcome of the United Nations Climate Change Conference at Nairobi, etc.,



Vol. I Issue: 2

This issue covers notes on Needs for Conservation of Bamboo Genetic Resource of Sikkim, Butterfly Article, notes on Threatened Orchid of Sikkim Himalaya, abstract on the Case Study of Landslide Treatment of South Sikkim, activity highlights of Wildlife Week Celebration 2007 and notes on the event of International Flower Festival 2008.

**Form of Publication (Electronic/Print): Both Electronic and Print**

**Other publications during 2008-09: Eight Nos.**

- i. *State of Environment Report 2007*
- ii. *Awareness material (pamphlet) on National Environment Awareness Campaign 2008-09 on the theme "Climate Change".*
- iii. *Awareness material (pamphlet) on National Bamboo Mission*
- iv. *Awareness material (booklet) on Solid Waste Management*
- v. *State Green Mission Phase III Broacher*
- vi. *Report on "Treatment of Land Slide and Erosion Control " in West Sikkim*
- vii. *Booklet on Forest Centenary Celebrations 2009.*
- viii. *Pamphlet on Sidkeong Tulku Bird Park*

*The above awareness materials were published in view of the demand and current issues of the state.*

## ENVIS Activity Highlights during 2008-09

(1<sup>st</sup> April, 2008 to 31<sup>st</sup> March, 2009)

Sl. No	Particulars	Date
1.	<ul style="list-style-type: none"> <li>➤ <b>Newsletter Feb-Dec 2007 Published.</b></li> <li>➤ Web site optimization (URL: <a href="http://www.sikenvis.nic.in">www.sikenvis.nic.in</a>)</li> <li>➤ Collection/ Compilation of time series data, annual reports related to Environment, Forestry, Wildlife, Biodiversity, Land/ Water, Natural Resources, Pollution, Demography, Agriculture, Horticulture and so on from resource departments of the state.</li> </ul>	April '08
2.	<ul style="list-style-type: none"> <li>➤ <b>State of Environment Report 2007 Published</b></li> <li>➤ Data Entry into ISBEID Modules (Demography, Ecology, Forestry, Ecotourism, Livestock, Climate)</li> </ul>	May '08
3.	<ul style="list-style-type: none"> <li>➤ <b>Event:</b> World Environment Day Observed at Aaritar-Dalepchen, East Sikkim. ENVIS Centre participated.</li> <li>➤ <b>Event:</b> Distribution of financial grants to the participating NGOs for NEAC 2007-08 on the theme "Biodiversity Conservation". ENVIS centre coordinated the programme and distributed resource materials.</li> <li>➤ Compilation of Newsletter: 1<sup>st</sup> quarter.</li> </ul>	June '08
4.	<ul style="list-style-type: none"> <li>➤ Database development and Web site optimization.</li> <li>➤ Pamphlets on National Bamboo Mission and State Green Mission prepared.</li> </ul>	July '08
5.	<ul style="list-style-type: none"> <li>➤ Data Entry into ISBEID Modules (Agriculture, Natural Resources, Forest Resources, Air Pollution, Waste Disposal, Infrastructure)</li> <li>➤ Compilation of proposals received from various NGOs, Institutes, Organizations for participating in NEAC 2008-09 on the theme "Climate Change"</li> </ul>	Aug '08
6.	<ul style="list-style-type: none"> <li>➤ <b>Workshop:</b> Sikkim ENVIS Centre hosted ISBEID Workshop for Northeastern ENVIS Centres at Gangtok, Sikkim.</li> </ul>	4 <sup>th</sup> Sep '08
7.	<ul style="list-style-type: none"> <li>➤ <b>Workshop:</b> Regional Committee meeting of RRAs for presenting the proposals for implementation of NEAC 2008-09 on the theme "Climate Change" at Guwahati, Assam. Sr. Programme Officer and Programme Assistant attended.</li> </ul>	29 <sup>th</sup> Sep – 1st Oct
8.	<ul style="list-style-type: none"> <li>➤ Compilation and designing of EIA &amp; EMP of Rangit II HEP (60 MW). ENVIS Centre assisted the host department and Sikkim Power Ventures Pvt. Ltd. in preparation of the reports.</li> </ul>	Oct '08
9.	<ul style="list-style-type: none"> <li>➤ <b>Field survey &amp; Case Study:</b> Technical Project Associate/Programme Officer in coordination of the DFO, Implementing Agency, conducted field surveys of landslide areas in West Sikkim for preparation of a case study on Treatment of Landslide &amp; Erosion Control under TDET Project – West Sikkim.</li> </ul>	Oct '08 to Dec '08
10.	<ul style="list-style-type: none"> <li>➤ Compilation of data for the preparation of booklet on Forest Centenary Celebrations.</li> <li>➤ <b>Newsletter Vol. II Issue 1 Published highlighting the following achievements:</b> <ul style="list-style-type: none"> <li>➤ Sikkim State Awarded Rashtriya Nirmal Gram Puraskar for being the first State in the country to achieve 100 percent sanitation.</li> <li>➤ Sikkim State awarded 2<sup>nd</sup> Rank in the overall Environmental Sustainable Index (ESI) by the Centre for Development Finance. Sikkim ranked 1<sup>st</sup> in the Performance in Landuse and Natural Resources.</li> </ul> </li> </ul>	Jan '09
11.	<ul style="list-style-type: none"> <li>➤ <b>Workshop:</b> Sikkim ENVIS organized a sensitization workshop for NGOs and Schools on National Environment Awareness Campaign 2008-09 on the theme "Climate Change" at Gangtok, Sikkim.</li> <li>➤ <b>Event:</b> ENVIS Centre participated in the Sikkim Forest Centenary Celebration at Rabdenste, West Sikkim. Resource materials were distributed to the mass at large.</li> </ul>	11 <sup>th</sup> Feb '09 21 <sup>st</sup> Feb '09
12.	<ul style="list-style-type: none"> <li>➤ Preparation of report on the implementation of National Environment Awareness Campaign 2008-09 on the theme "Climate Change".</li> <li>➤ Compilation of events/news items for preparation of Newsletter.</li> <li>➤ <b>Report</b> on Treatment of Landslide &amp; Erosion Control Work in West Sikkim prepared</li> </ul>	Mar '09

\*Note: Besides the activities stated above, ENVIS Centre has been regularly collecting, compiling and updating in suitable formats for storage and dissemination of acquired information in the website [www.sikenvis.nic.in](http://www.sikenvis.nic.in)



## Chapter - 12

### Various Training attended by IFS Officers during 2008

Sl. No	Name	Name of Training.	Venue	Duration	O.O No.
1	Shri Thomas Chandy, CCF(T)	Biotechnology for Forest Conservation	Instt. of Wood Science and Technology, Bangalore.	Jan. 7-11,2008	444/GEN/DOP Dt. 18.12.2007
2	Shri C.Lachungpa CF(LU)	Forestry Projects for Climate Change Mitigation in India.	Scope Complex, New Delhi.	Feb. 21-22,2008	-
3	Shri H.P.Pradhan, CF(WL)	Consolidating Decentralization of Forest Management through Micro Finance based Small and Medium Micro Enterprise involving JFM Committees.	Regional Centre, Agricultural Finance Corporation Ltd. New Delhi.	April 29-30, 2008.	22/GEN/DOP dt.23.04.2008
4	Shri D.Manjunatha, ACF (WP)	Collection Compilation Validation and Dissemination of Forest Statistics.	Kerala Forest Research Instt. Peechi, Kerala.	April 21-25, 2008	-
5	Shri M.L.Arrawatia, Secretary, Science & Technology.	Senior Foresters' Workshop.	IGNFA, Dehradun.	May 28-30, 2008	41/GEN/DOP dt. 30.05.2008.
6	Shri Manjit Singh, APCCF(P&A)	-do-	-do-	-do-	-do-
7	Shri K.Z.Bhutia DFO(WP)	Application on Remote sensing and GIS in effective Forest Planning & Management.	Forest Survey of India (FSI), Dehradun.	May 26-30,2008.	-
8	Shri Brijendra Swroop,DFO(T) West.	Clean Dev. Mechanism and Renewable Energy with Special Reference to Bio Fuels.	Mahatma Gandhi Institute of Rural Energy and Dev. Bangalore.	June 16-20, 2008.	50/GEN/DOP dt. 24.05.2008
9	Shri D. Manjunatha. ACF(WP)	Eco-Tourism Assessment and Development.	Jungle Lodges and Resorts, Bangalore.	June 23-27, 2008.	-

Sl.No.	Name	Name of Training	Venue	Duration	O.O No.
10	Shri Thomas Chandy, CCF(T)	EI-Emotional Intelligence.	H.M.N Gaunekar Instt. Of Management Trg. & Research, Goa.	June 24-25, 2008.	June 24-25, 2008.
11	Shri H.P.Pradhan CF(WL)	Eco-Tourism Assessment and Development.	Jungle Lodges & Resorts, Bangalore.	June 23-27,2008	57/GEN/DOP dt.30.05.2008.
12	Shri H.B.Sharma, CF (RVP/SGM)	-do-	-do-	-do-	-do-
13	Shri D.Manjunatha, ACF(W.PLAN)	Bio prospecting- Role Of the Forest Department's need to play.	Administrative College of India (ASCI), Hyderabad.	June 06-07, 2008	-
14	Mrs Monalisa Dash, DFO (T) North.	Communication and Presentation Skill.	Xavier Instt. Of Management,(XIM) Bhubaneswar.	July 07-11, 2008	78/GEN/DOP dt. 13.06.2008.
15	Dr. P.Senthil Kr. MD, Sikkim Milk.	Effective Financial Management and Audit Sensitization in Forestry SECTOR.	National Academy Of Audit and Accounts (NAAA, Shimla.	July 14-18,2008	78/GEN/DOP 13.06.2008.
16	Shri Pradeep Kr. CF(WP)	Role of Forestry in Conservation, Dev. And Management of Water Resources.	Regional Centre, National Afforestation and Eco Dev. Board, Kolkata.	Dec.1-5, 2008.	279/GEN/DOP Dated 28/11/08.
17	Shri Thomas Chandy, CCF(T)	Environmental Economics and Accounting.	Administrative Staff College of India, Hyderabad.	Sept. 8-12, 2008	146/GEN/DOP Dated 28/8/08
18	Shri Sandeep Tambe, Joint Secretary, RMDD	Wildlife Management: Issues Concerns and Practices.	Wildlife Institute of India, Dehradun.	Oct. 13-17, 2008.	223/GEN/DOP 15/10/2008

**Chapter - 13**

**NURSERIES UNDER FOREST ENVIRONMENT & WILDLIFE MANAGEMENT DEPARTMENT.**

Sl.No.	Name of Circle/Division/Scheme	District	Location	Area (in ha.)	No. of labors.
(1)	(2)	(3)	(4)	(5)	(6)
01	Non Timber Forest Produce Promotional scheme funded by NFPB	East	1 Rateychu Herbal Garden	1.00	2
		North	3 Dombang Herbal Garden,Lachung Zema Herbal Garden,Lachen Thangu Herbal Garden,Lachen	3.00	6
	<b>Sub-total -</b>	<b>4</b>		<b>4.00</b>	<b>8</b>
02	Jari Buti Khosh	East	1 Kyongnosla Herbal Garden	1.00	2
			1 Tamzey Herbal Garden	1.00	2
		West	1 Guransey Nunthaley H.G	1.00	2
		South	1 Samduptse H.G.	1.00	
	<b>Sub-total -</b>	<b>4</b>		<b>4.00</b>	<b>6</b>
	<b>BADP</b>	East	1 Kyongnosla H.G.	<b>1.00</b>	<b>2</b>
	<b>Total -</b>	<b>9</b>		<b>9.00</b>	<b>14</b>
03	Silviculture	East	1 (Saramsa)	5.00	1
			1 Bharikhola	1.50	6
	<b>Total -</b>	<b>2</b>		<b>6.50</b>	<b>7</b>
04	Forest Dev.Agency	East	1Upper Martam Likchu Khola	0.50	3
			North	1 Assam Lingzey	1.50
		South	1 Lingdum	1.00	3
			1 Pangthang	3.60	18
	<b>Total -</b>	<b>4</b>		<b>6.60</b>	<b>30</b>
05	Green Mission	East	1 Baluakhani	0.40	2
			1 Bagey Khola	1.60	7
			1 Burtuk	1.00	4
	<b>Total -</b>	<b>3</b>		<b>3.00</b>	<b>13</b>
06	Bamboo Mission	East	1 Lower Martam	0.50	3
			1 Sangkhola	1.20	6
		North	1 Tanek	1.00	5
			South	1 Mamring	1.00
		West	1 Hingdam	1.00	5
			1 Sirithang	1.00	5
			1 Daramdin	1.00	5
			1 Kaluk	1.00	5
	<b>Total -</b>	<b>8</b>		<b>7.70</b>	<b>39</b>
07	State Plan	East	1 Chamkham, Song	2.00	9
			1 Karthok	1.00	5
	<b>Total -</b>	<b>2</b>		<b>3.00</b>	<b>14</b>
				<b>35.80</b>	<b>124</b>

Sl.No.	Name of Circle/Division/Scheme	District	Location	Area (in ha.)	No. of labors.
(1)	(2)	(3)	(4)	(5)	(6)
08	Green Belt Dev.	East	1 (NHPC Complex)	1.00	5
	<b>Total -</b>	<b>1</b>		<b>1.00</b>	<b>5</b>
09	Sericulture	East	1 Rorathang	6.40	13
		West	1 Nag Dhara	1.20	7
		South	1 Mamring	4.00	11
	<b>Total -</b>	<b>3</b>		<b>11.6</b>	<b>31</b>
10	Catchment Area Treatment	East	1 B-II	2.00	8
			1 Lagyap	2.50	13
			1 Raksey	1.00	5
			1 Gurdum	1.00	4
			1 Laberbotey	1.00	4
			1 Gaon Sangdong	1.00	4
			1 Gor Mathum	1.00	4
	<b>Total -</b>	<b>7</b>		<b>9.50</b>	<b>42</b>
11	Land Use & Environment	East	1 Dhanbari	2.50	12
			1 Dipudara	1.00	4
			1 Burung	1.00	5
		South	1 Mamring	1.00	5
		West	1 Gyalshing	2.00	9
			1 Sumphu	1.20	6
	<b>Total -</b>	<b>6</b>		<b>8.70</b>	<b>41</b>
12	Environment and Pollution Control Board	East	1 Pinetum Nursery at Raj Bhawan	0.40	2
			1 Kyongnosla Nursery	0.40	1
	<b>Total</b>	<b>2</b>		<b>0.80</b>	<b>3</b>
13	Wildlife	West	1 Noonthaley	1.00	4
			1 Terchey	1.20	5
		North	1 Nomnasa	0.50	3
	<b>Total -</b>	<b>3</b>		<b>2.70</b>	<b>12</b>
	<b>Grand Total -</b>			<b>70.10</b>	<b>258</b>

## CHAPTER-14

### FOREST FIRE

Table -14.1

Calendar Year	Number of fire incidents in forest area		Forest area affected by fire				Estimated Loss				Casualties		
	Within Protected Area(PA)	Outside Protected Area(PA)	Within Protected Area(PA)	Total	Outside Protected Area(PA)	Total	Volume in cu.mt.	Value in lakhs	Damage to Plantation Areas	Damage in PAS Area	Human Life	Cattle	Wildlife
2002	4	28	16	32	154	170	2.00	1.00	15.00	1.00	Nil	Nil	Nil
2003	5	18	12	23	110	122	2.00	1.00	9.77	1.00	..	..	..
2004	5	16	18	21	100	118	2.00	1.00	12.16	1.00	..	..	..
2005	6	36	30	42	332	362	3.00	1.50	38.14	1.80	..	..	2
2006	8	50	100	58	308	408	3.00	1.50	37.46	10.00	..	..	2
2007	2	29	25	31	75	100	1.00	0.50	9.50	2.00	..	..	Nil
2008	3	39	8	42	320	328	2.00	1.00	31.00	2.00	..	..	..

### PRODUCTION & VALUE OF SAND, STONE & STONE CHIPS FOR THE LAST THREE YEAR

Table – 14.2

Sl.No	Particular	2005-2006			2006-2007			2007-2008		
		Quantity in cft.	Value in crore	Royalty realized by the Deptt. (in crore)	Quantity in cft.	Value in crore	Royalty realized by the Deptt. (in crore)	Quantity in cft.	Value in crore	Royalty realized by the Deptt. (in crore)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	Sand	49913077	24.96	3.24435	4241714	2.12	2.9692	28317857	14.16	1.98225
2	Stone	41291818	8.26	2.27105	34640667	6.93	2.07844	23126333	11.56	1.38758
3	Stone chips	4129182	3.30	0.45421	3464083	2.77	0.41569	2312667	1.85	0.27752

## Chapter – 15

### FOREST OFFENCE

#### ILLCIT FELLING

Table - 15.1

Year	No. of cases of illicit felling	No. of trees illicitly felled	Loss of Timber (Volume in cu. mt.)	Value of losses (Rs.in lakhs)	No. of Offenders arrested	No. of Vehicles seized	No. of Vehicles confiscated
2002-03	41	41	51.00	5.00	2	1	Nil
2003-04	30	35	35.14	3.33	9	1	Nil
2004-05	40	45	47.29	5.35	6	1	Nil
2005-06	25	65	45.36	3.78	8	2	Nil
2006-07	15	92	83.40	10.10	24	4	Nil
2007-08	15	29	30.00	5.00	8	2	Nil
2008-09	54	72	52	9.00	4	4	Nil

### FOREST LAND ENCROACHMENT

Table - 15.2

Year	Total Area Encroached (in ha.)	Encroachment evicted (in ha.)	Net Area under Encroachment (in ha.)
2002-03	3613	-	3613
2003-04	3613	-	3613
2004-05	3613	156.9374	3456.0626
2005-06	3456.0626	8.00	3448.0626
2006-07	3448.0626	2.00	3446.0686
2007-08	3446.0626	-	3446.0626
2008-09	3446.06	Nil	3446.06

## Chapter - 16

### Afforestation under 20 Point programme:

The 20 point programme (TPP) was launched by the Government of India in the year 1975 and was first revised in 1982, 1986 and recently in 2006-07 with a view to setting up effective monitoring system and thus strengthening the planning & implementation machinery. The restructured TPP -2006 consists of 20 Point & 66 monitorable items where under point No.15 pertains to Environment Protection & Afforestation and covers all the plantation works carried out under different programmes & schemes. Though the primary responsibility of monitoring the individual programme/scheme lies with the Central Ministry / State Government, the Ministry of Statistics & Programme Implementation, will monitor the programme in totality.

<b>15 a – Area covered under plantation (Government Land)</b>					<b>15 b- Seedling planted (Private land). (in lakhs)</b>		
Sl.No	Year	Target	Achievement	% Ach.	Target	Achievement	% Ach.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
01	1971-80		7463.00			6.59	
02	1980-85		3332.65			3.38	
03	1985-86		1666.25			2.79	
04	1986-87		1470.00			2.45	
05	1987-88		1511.25			2.52	
06	1988-89		1616.25			2.69	
07	1989-90		1852.50			3.09	
08	1990-91		3416.25			5.69	
09	1991-92		4622.47			7.90	
10	1992-93		5484.00			9.14	
11	1993-94		5786.70			9.64	
12	1994-95		6900.00			11.50	
13	1995-96		7189.50			11.99	
14	1996-97		7500.00			12.50	
15	1997-98		6356.56			13.05	
16	1998-90		7537.00			2.50	
17	1999-00		6923.00			20.91	
18	2000-01		8048.00			15.15	
19	2001-02	12000	6217.00	51.81	22	12.42	56.45
20	2002-03	7500	3696.00	49.28	22	14.73	66.95
21	2003-04	7500	6125.19	81.67	22	8.66	39.36
22	2004-05	8000	6191.00	77.39	22	10.32	46.91
23	2005-06	12000	8012.87	66.77	15	6.13	40.86
24	2006-07	15000	3550.26	23.66	15	9.75	65.00
25	2007-08*	12000	3456.73	28.80	*78	30.84	39.54
26	2008-09	12000	3862.37	32.2	78	23.04	29.55

\* 2007-08 onwards, only forest land has been accounted for and private land has been excluded.

## CHAPTER- 17

### WORK CARRIED OUT UNDER FOREST DEVELOPMENT AGENCIES, TERRITORIAL CIRCLE AS ON 31.03.2009

Table - 17.1

Sl. No	Name of FDA	Project Period	Total outlay (Rs.in lakh)	Total physical Target (in hac.)	Fund released till date (Rs. in Lakh)	Fund utilized (Rs in lakhs)	Physical Achievement (Area in ha.)
1	North Sikkim FDA	2008-09	112.50	435	75.00	58.60	435
2	East Sikkim FDA	-do-	113.69	500	79.77	61.70	500
3	South Sikkim FDA	-do-	96.74	400	96.74	96.74	370
4	West Sikkim FDA	-do-	112.68	510	81.41	40.87	510
	<b>Total</b>		<b>435.61</b>	<b>1845</b>	<b>332.92</b>	<b>257.91</b>	<b>1815</b>

### NO. OF HOUSEHOLDS COVERED JFMCs AS ON 31.03.2009

Table - 17.2

SL No	Name of FDA	No of JFM CS	Name of Household in Project Village			Name of Household Directly Benefiting								
						From EPA Activities			From Silvicultural Works			From Wages		
			SC	ST	Total	SC	ST	Total	SC	ST	Total	SC	ST	Total
1	North Sikkim FDA	32	31	4364	4430	25	600	625	25	220	245	60	2290	2350
2	East Sikkim FDA	49	648	5338	15686	646	3590	1120	186	1165	2080	526	698	2540
3	South Sikkim FDA	36	1754	4808	16899	365	482	1774	573	996	2876	660	802	5640
4	West Sikkim FDA	38	561	2251	9515	298	1165	4800	345	1298	5400	388	1558	3400
	<b>TOTAL</b>		<b>2994</b>	<b>16761</b>	<b>46530</b>	<b>1334</b>	<b>5837</b>	<b>8319</b>	<b>1129</b>	<b>3679</b>	<b>10601</b>	<b>1634</b>	<b>5348</b>	<b>13930</b>



## Chapter – 18

### NATIONAL BAMBOO MISSION:

Bamboo is known as poor man's timber. It is an important Non Timber Forest Produce. This important plant species of the gramineae family provides ecological, economic and livelihood security to the people. The bamboo has played an important substitute for timber with its short period of rotation. It has been widely used though out the world either in the form of timber, making decorative items, furniture, mats, fencing of compounds etc.

Under the National Bamboo Mission Programme, the State of Sikkim started its plantation in both the forest and private lands. The Department of Forest, Environment & Wildlife Management is executing the plantation of bamboo and raising bamboo seedlings in the nurseries through Joint Forest Management Committee from 2007. The plantation in private land is being executed by the Horticulture and Cash Crop Development Department, Government of Sikkim.

### Work carried out under Bamboo Mission during 2008-09

**Table-18.1**

<b>Sl.No.</b>	<b>Division</b>	<b>Target(ha)</b>	<b>Achievement(ha)</b>	<b>Survival%</b>
1.	East	285	285	
2.	West	415	355	80%
3.	South	330	278.5	
4.	North	614.5	494.5	
<b>Total</b>		<b>1644.5</b>	<b>1413</b>	

## Chapter – 19

### STATE GREEN MISSION 2008-09

The State Government had started Green Mission Programme in the year 2006 with the following aims and basic objectives:-

- i) To create green belt and avenues for meeting aesthetic recreational needs to the people.
- ii) To beautify the areas for tourist attraction.
- iii) To reduce the surface run-off discharge and checking erosion in the downhill side.
- iv) To create a store house of genetic diversity by planting all the indigenous trees, shrubs, herbs, climbers, creepers, conifers and green foliages including fruits and medicinal plants.
- v) To reduce the encroachment of road reserve areas.
- vi) To provide shade to the pedestrian.
- vii) To increase local precipitation due to their aerographic and micro-climatic effects and create conditions favourable for the condensation of the clouds.
- viii) To reduce temperature and increase humidity.
- ix) To reduce noise pollution to the neighbouring household population.
- x) To attract the avifauna, butterflies, squirrels etc and their shelter.
- xi) To promote tourism as a sustainable and eco friendly activity.
- xii) To make the State of Sikkim as a Garden State.
- xiii) Mass Afforestation along the roads and vacant land, streams and water falls, etc.

#### **Physical target and achievements in the IIIrd. Phase SGM (2008-09)**

**Table -19.1**

Sl.No.	District	Area in Km/Ha.	Achievement
		Target	
1	2	3	4
1	South	A-70 B-7 ha	
2.	West	A-90 B-9ha	
3.	North	A-30 B-3ha	A28 B-12ha
4.	East	A-120 B-11ha	
5.	Total	A-300 B-30ha	225.5 B-69.57

#### **Physical targets and achievement in the IIIrd. Phase SGM (2008-2009)**

**Table -19.2**

Sl.No.	District	Tree sps planted	Ornamental sps planted	Total saplings	Survival as 31/3/2009
1	2	3	4	5	6
	East	75243	80254	155497	
2	South	52887	28750	81637	72%
3	West	59249	118372	177621	
4	North	48583	198846	247429	
<b>Total</b>		<b>235962</b>	<b>426222</b>	<b>662184</b>	

**Saplings planted in IIIrd Phase of State Green Mission:**

**Table-19.3**

Sl.No.	District	Sapling ( C )		Planted total saplings (C)	Saplings planted (M)		Total saplings planted (M)	Saplings planted (III – Phase)
		Tree	Orn.		Tree	Orn.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
01	East	29922	43963	73885	45321	36291	81612	155497
02	South	34317	22380	56697	18570	6370	24940	81637
03	West	49375	98644	148019	9874	19728	29602	177621
04	North	40746	178751	219497	7837	20095	27932	247429
	<b>Total -</b>	<b>154360</b>	<b>343738</b>	<b>498098</b>	<b>81602</b>	<b>82484</b>	<b>164086</b>	<b>662184</b>

Avenue plantation (T 310 A 225.5)

Block plantation (T 30 A 69.57)

**Total Saplings planted in Three Years of State Green Mission:**

**Table-19.4**

Sl. No	Division	I Phase	II phase		III Phase		Total saplings (I,II,III) creation	Total saplings (I,II,III) Maint.	Grand Total
		Total sapling ©	Total sapling ©	Total sapling (M)	Total sapling ©	Total sapling (M)			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	2	3	4	5	6	7	8(3+4+6)	9(5+7)	10(8+9)
01	East	265625	211357	62844	73885	81612	550867	144456	695323
02	South	118603	187572	27762	56697	24940	362872	52702	415574
03	West	158389	274577	68646	148019	29602	580985	98248	679233
04	North	33000	340008	6362	219497	27932	592505	34294	626799
	<b>Total -</b>	<b>575617</b>	<b>1013514</b>	<b>165614</b>	<b>498098</b>	<b>164086</b>	<b>2087229</b>	<b>329700</b>	<b>2416929</b>

Three (3) nos. of small gardens were also created under this mission. The location and its details are as follows-

1. Primula Garden: Primula is a flowering herb mostly growing in high altitude areas which adds beauty to the nature during its flowering. The Hon'ble Chief Minister had desired that a Primula garden be created in the district. The Indian Army had constructed martyrdom at Sherathang which was inaugurated by the Hon'ble Chief Minister and the area later was declared as Primula gardens. This garden is located at Sherathang at an altitude of approx 13200 feet from MSL. The garden was developed at a cost of Rs.200000.00 under the State Green Mission Program. At least 6 varieties / species of Primula have been planted in the area and are protected.

## 2. Enchey Monastery Compound:

Enchey Monastery is situated near Dordarshan T.V. Tower at an altitude of 5600 feet and approx 3 Km. from Gangtok. Thousands of devotees visit the monastery every morning to get the blessings of Lord Budha. This is one of the oldest monastery in the district and forms a tourist spot. The surrounding areas were not maintained very well. Garbage generated from the visitors got accumulated in and around the monastery which made Gumpa compound unhealthy. The Forest Department set aside Rs.2.0 lakhs for beautification of the monastery compound under the State Green Mission Program during 2008. The whole amount has been utilized for construction of floral beds along the road leading upto monastery and around the monastery. Planting of ornamental species taken up in the beds. A garbage incinerator is also constructed near the place where incenses are burnt and puja performed.

## 3. Eco-Park at Topakhani:

Under the State Green Mission Program, the beautification works along the road side and curves and turnings were taken up during the 3<sup>rd</sup> Phase of the mission. One of such garden development was taken up at Topakhani near the tunnel on the down hill side of the 31A NH at a cost of Rs.5 lakhs (3 lakhs from Forest Department and 2 lakhs from Tourism Department) and named as Eco-Park. The park provides a resting shed with iron benches with beautiful fencing made up of cement mortar designed in timber fashion. The front wall is decorated with different animals and birds found in Sikkim in attractive colours. The park was inaugurated by Shri Bhim Prasad Dhungel, the Hon'ble Minister for Forest, Env. & Wildlife management, Tourism, Science & Technology and Mines & Geology Department on 10/7/2009 at 8.30 am.

## Chapter - 20

### **RIVER VALLEY PROJECT SCHEME**

The River Valley Project started in the year 1978, has made a tremendous achievement in treating landslides areas by Drainage Line Treatment, Plantation works in Forest Land, Agriculture Land and Waste Land. The functioning of RVP is under central sponsored scheme approved by the State Government and send to the Central Government to the Ministry of Agriculture, NRM Division, New Delhi for its final approval and sanction. It is a 100% central sponsored scheme. In Sikkim various watersheds are taken up for its treatments, all the watershed in Sikkim falls under Teesta Catchments, as per Soil Survey of India.

The continuous two year study of siltation of soil and water current with the help of hydrologic sediment monitoring station which is constructed at Khani Khola near Magitar in East Sikkim helps the Division to prepare the new project proposal of the area according to the priority basis.

Presently RVP division is implementing four numbers of watersheds that is Tb3g-Reshi Khola, that covers the area of Boom Reshi, Tafel, Samdong, Sama Gawn, Detahng, Sribadam, Parang Gawn, etc. Tb4c- Bhutay Khola watershed covers the area of Bermiok, Barhang, Martam, Rungdu, Pechrek and Hee-patal. Tb4f- Changey Khola watershed covers the area of Gayzing, Langang, Khorung, Linchom, Sardung, Sapung, Bangten and Omchung. These three watersheds are being implemented in west Sikkim. Ta3a- Khani khola watershed in east Sikkim covers the area of East Pendam, West Pendam, Central Pendam, etc.

The implementation of scheme is made by the Forest Department along with the public participation, Block panchayats, watershed committee and the villagers. The farmer awareness camps are frequently held in various watershed areas where the distributors of forestry seedlings and horticulture seedlings are done.

The areas are divided into Agriculture land, Wasteland and Forestland according to the need of the land the seasonal plantation is made. During winter season the sausage walls, drainage line treatment, water harvesting tanks, waiting sheds at Rangsang Dovan cremation centre and also at roadside are constructed with the help of watershed committees. Time to time monitoring team monitors the work and release the fund according to the progress made. The fund is sponsored by National Resource Management division, Ministry of Agriculture and Cooperation, Government of India. The fund is released to the State Agriculture Department, which is the Nodal Department of Macro management Mode. Henceforth, the fund is rooted to RVP Division. The ministry of Agriculture, NRM Division sanctions the project for the period of five years and the fund is distributed among various sub-heads, like pay n allowance, entry point activities, SMS, project activities, survey and demarcation, TOT(Transfer of Technology), Contingencies, etc.

The implementation project benefits the public through various ways, mainly creating job opportunities on daily wage basis to local villagers falling under the watershed areas during plantation, construction of sausage walls, dry walls, drainage line treatment. The project also helps the villagers to prevent landslide, soil erosion in private as well as in forest lands. The high yielding variety of horticulture seedlings are distributed to the villagers for healthy fruiting trees, forestry species for timber and fodder seedlings for dairy farming. The monthly progress report in the state as well as Central on the ready formats through internet is intimidated, So that the Department can analyze the monthly progress made by the Division.

River Valley Project Division is maintaining three hectares of nursery at Gai Dhara and Salingay in East Sikkim. The quantity of seedlings is enough for afforestation and road side avenue plantation, within the implemented watershed area.

The RVP Division takes up the area under priority which is in a basic need to be treated. The division will soon be implementing many watersheds in order to uplift the poor and needy people falling under land lock areas, with poor geographical conditions. The Division has now been successfully implementing four numbers of watersheds, one SMS at Khani Khola and more than fifteen Officers and Staff are working at different districts of Sikkim.

### **Information on project under implementation**

1. Name of the Project	I. Reshi Khola watershed development 100% C.S.S II. Bhutay Khola watershed development 100% C.S.S III. Khani Khola watershed development 100% C.S.S IV. Chagay Khola watershed development 100% C.S.S
2. Name of the scheme	Soil conservation for enhancing productivity of degraded lands in the catchments River Valley Project and Flood Prone Rivers.
3. Sponsored by	National Resource Management Division, Ministry of Agriculture and Co-operation, Government of India.
4. Funded by	Macro Management Mode in Agriculture.
5. Project Period	I. 2003-2004 to 2009-2010 (approved in 2003) Tb3g II. 2006-2007 to 2011-2012 (approved in 2006) Tb4c III. 2008-2009 to 2013-2014 (approved in 2007) Ta3a IV. 2008-2009 to 2013-2014 (approved in 2008) Tb4f
6. Commencement	Financial year 2003-2004 Tb3g Financial year 2006-2007 Tb4c Financial year 2008-2009 Ta3a Financial year 2008-2009 Tb4f
7. Watershed Name	Sub-watershed code Tb3g, Tb4c, Ta3a and Tb4f of Teesta Catchment (Classified as high priority watershed by AISLUS)
8. Total Project Cost	Rs.369.19 Lakhs – Tb3g watershed

	Rs.232.48 Lakhs – Tb4c watershed
	Rs.240.71 Lakhs – Ta3a watershed
	Rs.201.18 Lakhs – Tb4f watershed
9. Annual Outlay approved for 2008-2009	254.62 (including spill over of 2007-2008)
10. Total expenditure during 2008-2009	254.17 (project and non-project activities)
11. Villages covered	<p><b>I. Reshi Khola (Tb3g)</b> - covers the area of Boom Reshi, Tafel, Samdong, Sama Gawn, Detahng, Sribadam, Parang Gawn, etc.</p> <p><b>II. Bhutay Khola (Tb4c)</b> - Bermiok, Barthang, Martam, Rungdu, Pechrek and Hee-patal etc.</p> <p><b>III. Khani Khola (Ta3a)</b> - East Pendam, West Pendam, Central Pendam, etc.</p> <p><b>IV. Chagay Khola (Tb4f)</b> - Gayzing, Langang, Khorung, Linchom, Sardung, Sapung, Bangten, Omchung.etc.</p>
12. Species planted during Different afforestation Programmes	Rani Chap, Fusray Chap, Acer, Panisaj, Navera, Lapsi, Tuni, Piply, Lampatay, Arupatay, Khamari, Kaijal, Kawla, Orange, Peach, Plum, Pears, Gauva, Nipper grass, Bar, Gogun etc.
13. Project Headquarter	Office of the Divisional Forest Officer, River Valley Project Division, Forest Environment and Wildlife Management Department, P.S Road Gangtok Sikkim.

## Details of work carried by RVP Division during 2008 – 2009

### Target achievement during 2008-2009

Physical in Hectares, Structures in numbers, Financial Rupees in lakhs

Sl.No	AGRILAND Biological Measures	Rate	Tb3g			Tb4c			Ta3a			Tb4f			Total		
			Phy	Str	Fin	Phy	Str	Fin	Phy	Str	Fin	Phy	Str	Fin	Phy	Str	Fin
A.1	Contour graded bunding	5878	45	-	2.65	30	-	1.76	45	-	2.65	25		1.47	145	-	8.52
A.2	Horticulture Development	3000	-	-	-	204	-	6.12	230	-	6.89	150		4.50	584	-	17.52
A.3	Agro- Forestry	1200	-	-	-	100	-	1.20	150	-	1.80	100		1.20	350	-	4.20
	Sub-Total	-	45	-	2.65	234	-	9.08	375	-	11.34	175		7.17	729	-	30.24
AB	Drainage Line Treatment																
B2	Middle-Reaches (Nos)				-	-	-	-	-	-	-				-	-	-
11	Loose boulder with Vegetative Support	8700	-	-	-	-	16	1.39	-	90	7.83		50	4.35	-	156	13.57
B3	Lower-Reaches (Nos)																
11	Loose boulder with gabion	25600	-	-	-	-	30	7.68	-	30	7.68		10	2.56	-	70	17.92
111	Water Harvesting Structure	188880		-	-	-	1	1.88	-	1	1.88		1	1.88	-	3	5.64
1V	Farm-Ponds	8800	-	-	-	-	10	0.88	-	10	0.88		10	0.88	-	30	2.64
V	Spillway/chut/Retaining wall	59177	-	-	-	-	-	-	-	-	-				-	-	-
	Sub-Total of B	-	-	-	-	-	57	11.83	-	131	18.27		71	9.67	-	259	39.77
	Sub-total of A & B	-	45	-	2.65	234	-	20.91	375	-	29.61	175		16.84	729		70.01



## Target to achievement during 2008-2009

Physical in Hectares, Structures in numbers, Financial Rupees in lakhs

Sl. No	WASTE LAND Biological Measures	Rate	Tb3g			Tb4c			Ta3a			Tb4f			Total		
			Phy	Str	Fin	Phy	Str	Fin	Phy	Str	Fin	Phy	Str	Fin	Phy	Str	Fin
W A. 1	Demarcation	120	-	-	-	146	-	0.17	107		0.13	57		0.06	310		0.37
W A. 2	Closure by Guards	600	-	-	-	6	-	0.04	10	-	0.06	10	-	0.06	26	-	0.16
W A. 3	Contour graded bundings	5878	-	-	-	20	-	1.18	30	-	1.76	10	-	0.59	60	-	3.53
W A. 4	Vegetative Fencing	8564	-	-	-	44	-	3.77	40	-	3.43	10	-	0.86	94	-	8.05
W A. 5	Composite Nursery	4000	-	-	-	94		3.76	23		0.92	28		1.12	145		5.80
W A. 6	Afforestation (Swoing & Planting)	11000	-	-	-	94		10.34	23		2.53	28		3.08	145		15.95
W A. 7	Gap Filling	5564	-	-	-	124	-	6.90	-	-	-	-	-	-	124	-	6.90
W A. 8	Silvipasture Development	8200	-	-	-	19		1.56	28		2.30	12		0.98	59		4.84
W A. 9	Pasture Development	4610	-	-	-	13		0.60	26		1.20	7		0.32	46		2.12
	Sub-Total	-	-	-	-	146		28.32	107		12.33	57		7.07	310		47.72
W B	Drainage Line Treatment																
B1	Middle Reaches (nos)																
11	Loose boulder with Vegetative support	8500	-	-	-	-	20	1.70	-	15	1.28		60	5.10		95	8.08
B3	Lower Reaches																
I	Loose boulder with gabion	25600								20	5.12		10	2.56		30	7.68
II	Spillways/chut/retaining wall	59177								2	1.18		6	3.55		8	4.73
	Sub-total of DLT	-	-	-	-	-	20	1.70		37	7.58		76	11.21		133	20.49
	Sub-total of A & B	-	-	-	-	146		30.02	107		19.91	57		18.28	310		68.21

**Target to achievement during 2008-2009**  
**Physical in Hectares, Structures in numbers, Financial Rupees in lakhs**

Sl. No	FOREST LAND Biological Measures	Rate	Tb3g			Tb4c			Ta3a			Tb4f			Total		
			Phy	Str	Fin	Phy	Str	Fin	Phy	Str	Fin	Phy	Str	Fin	Phy	Str	Fin
FA.1	Demarcation	120	-	-		50	-	0.06	41	-	0.05	129		0.15	220	-	0.26
FA.2	Closure by Guards	600	-	-		15	-	0.09	10	-	0.06	20		0.12	45	-	0.27
FA.3	Veg.Fencing	8564	-	-		30	-	2.57	45	-	3.85	10		0.86	85	-	7.28
FA.4	Composite Nursery	4000	-	-		35	-	1.40	26	-	1.04	70		2.80	131	-	5.24
FA.5	Sowing and Planting	11000	-	-		35		3.85	26	-	2.86	70		7.70	131	-	14.41
FA.6	Contour/S.C. Trenching	4000	30	-	1.20	-		-	20	-	0.80	50		2.00	100	-	4.00
FA.7	Silvipasture Development	8200	-			15		1.20	15	-	1.20	59		4.72	89	-	7.12
FA.8	Gap Filling	5564	30	-	1.67	130	-	7.23	-	-	-				160	-	8.90
	Sub-total	-	30	-	2.87	50		16.40	61		9.86	179		18.35	320		47.48
FB	Drainage line treatment																
B1	Upper Reaches (nos)																
11	Loose boulder with Vegetative support	5200	-			-	15	0.78	-	10	0.52		20	1.04		45	2.34
B2	Middle Reaches (nos)			-													
11	Loose boulder with Vegetative support	8500	-	6	0.51	-	20	1.70	-	8	0.68		30	2.55		64	5.44
	Sub-total of DLT	-	-	6	0.51	-	35	2.48		18	1.20		50	3.59		109	7.78
	Sub-total of A & B	-	30	-	3.38	50	-	18.88	61		11.06	179		21.94	320		55.26

**Abstract**

(Rupees in lakhs)

Water Shed Code	Agri Land Financial	Forest Land Financial	Waste Land Financial	Total Financial
Tb3g	2.65	3.38	-	6.03
Tb4c	20.91	18.88	30.02	69.81
Ta3a	29.61	11.06	19.91	60.59
Tb4f	16.84	21.94	18.28	57.06
Total	70.01	55.26	68.21	193.48

## Chapter- 21

### **FOREST (CONSERVATION) ACT 1980 CELL**

Forest (Conservation) Act, 1980 is a unique piece of legislation, and a regulatory mechanism that reflects the collective will of the nation to protect its rich biodiversity and natural heritage and that permits only unavoidable use of forest land for various developmental purposes. It embodies the firm commitment of the Government of India and the State Government to balance the conservation of forests with the sustainable development need of the country contributing to better environment, health and economy. The remarkable feature of this Act is that it is regulatory and not prohibitory.

Since 1980, Rules and Guidelines have been framed for diversion of forest land for non-forestry purposes. Since its inception, the Act has facilitated developmental activities like construction of power projects, irrigation projects, roads, railways, schools, hospitals, rural electrification, telecommunication, drinking water facilities, mining etc. on forest lands and checked the indiscriminate diversion of pristine forest areas. Between 1950 and 1980, forest lands have been diverted at the rate of 1.50 lakh hectare per annum by the various State Government / UT Administrations. This diversion has however, come down to as low as 0.38 lakh hectare per annum after 1980.

This circle mainly, deals with obtaining forest clearance for projects related to developmental activities under the Forest (Conservation) Act, 1980. Realization of amount for Crop Compensation, Compensatory Afforestation and Net Present Value (NPV) of forest land being diverted for non-forestry purposes is done by this circle. The statement of diversion of forest land for non forestry purposes and progress of Compensatory Afforestation till 31st March 2009 are given below:

**Table-21.1**

Sl. No	Item	DISTRICT -WISE				Total
		North	East	South	West	
1	Number of cases approved for diversion	49	79	80	35	243
2	Total forest land diverted (in ha)	471.97	394.27	358.05	95.45	1319.74
3	Compensatory Afforestation Stipulated (in ha):					
	a) In forest land	1339.03	791.70	580.64	358.55	3069.92
	b) In non-forest land	7.276	0.00	2.70	15.78	25.756
	<b>TOTAL (a+b)</b>	<b>1346.306</b>	<b>791.70</b>	<b>583.34</b>	<b>374.33</b>	<b>3095.676</b>
4	Compensatory Afforestation Completed (in ha):					
	a) In forest land	800.405	583.07	470.76	280.75	2134.985
	b) In non-forest land	2.262	0.00	2.50	13.014	17.776
	<b>TOTAL (a+b)</b>	<b>802.667</b>	<b>583.07</b>	<b>473.26</b>	<b>293.764</b>	<b>2152.761</b>

Out of the 3095.676 Ha of Compensatory Afforestation, stipulated against the diversion of forest land under the Act, only 2152.761 Ha have been achieved as on today, and the balance of 942.915 Ha are still pending to be achieved by the Department. This has been proposed to be achieved as and when the fund is received back from the Ad-hoc CAMPA, Ministry of Environment & Forests, Government of India, as per their recent directives.

## Chapter- 22

### WORKING PLAN CIRCLE



**Compartment map of Sikkim prepared by WP Circle**

Working Plan Circle office is stationed at Head Office, Gangtok which controls and looks after the overall activities for the preparation of working plans/working schemes/management plans and Survey and Demarcation. Presently the Working Plan circle is having following officers and staff to carry out the working plan circle's activities.

#### **Staff Position:**

	<b>WORKING PLAN DIVISION</b>		<b>SURVEY &amp; DEMARCATION DIVISION</b>	
<b>OFFICERS</b>	C.F (WP)	1	DFO	1
	D.F.O (WP) N/E	1		
	D.F.O (WP) S/W	1		
	A.C.F (WP)	1		
<b>FIELD STAFF</b>	R.O	2	R.O	1
	B.O	5 (2 nos under training)	B.O	1
	F.G	2	Surveyor	2
<b>TECHINICAL STAFF</b>	Plg. Asstt.	1	Asst.Sur. M/R	1
	STA	2		
	Cartographer	1		
	IT Asstt.	1		
	Project fellow	1		
<b>OFFICE STAFF</b>	U.D.C	1	LDC	2
	Jr. Acctt.	2	Jr. Acctt.	1
	L.D.C	3	Acctt	1
	Computer operator	2		
	Peon	2		



**Forest inventurisation for carbon assessment**

Territorial Division has already been completed. Activities and achievements of the circle during 2008-09 are enumerated below.

- Preparation of Working Plans for the three districts viz, East, West & North districts is on. The drafts of Working Plans for East & West have been completed. Their presentation in the 2nd Preliminary Working Plan Report Committee is due and would be done in the year 2009-10.



**Working Plan field survey underway at Chungthang**

Participatory Rural Appraisal (PRA) was done to incorporate the views of the public in Working Plans. For making Working Plan exercise democratic the ACFs conducted PRA in different panchayats. Similarly meetings were held in different district headquarters to incorporate views of Land Revenues and other line departments.

**Functions and Achievement:**

The mandate of working plan circle is to prepare the working plans for all the four districts of Sikkim incorporating all the aspects of the scientific management of natural as well as plantation forest of the State. This Circle is in the advanced stage of writing the working plan for the state for next ten years. The Remote Sensing wing of the Circle GIS Lab fully equipped with modern and latest scientific machineries and instruments for generating very useful outputs for management of forest. The Software used in Lab are ArcGIS master lab kit, ERDAS Imagine (8.4 & 9.3 version) and hardware like A0 Plotter and A0 Scanner. The working plan of the South

- For preparing working plans and forest inventory preparation, sample plots were laid throughout the forests in East, West and North Sikkim . Approximately 600 plots, each of 0.1 ha were laid for trees, herb and shrub enumeration. An area of 1100 ha was enumerated completely for thinning/strip removal.



- Activities like training of ACFs and



**Meeting of stake holders with Govt. officials at Mangan**

- Digitization of the entire area under forest administration using GIS technology has been completed. The Reserve forests were divided into compartments for easy and scientific management of forests. GIS based Maps have been prepared for Division, Range and Block levels.



**Weighing fresh samples during vegetation carbon pool assessment**

Demarcation with Boundary Pillars in all the districts using cadastral maps. This time survey of not only Reserve boundary was done but the compartment boundaries too were and demarcated. About 1395 km of has been done in Reserve forests and compartments. 1550 boundary pillars for demarcating the boundaries of Forests and compartments.

- National Vegetation Carbon Pool assessment project is on. Its aim is assess the total amount of carbon in Sikkim Forests. The sample plots are being laid in East, West and South Sikkim. The samples of trees, herbs and shrubs are also being brought to laboratory for making dry weight assessment.



**Demarcation of Reserve Forest Boundaries**

Survey of Forest Boundaries and was done and GPS. Forest surveyed survey were laid Reserve



**Field party leaving for Forest inventory works**

- Sustainable Forest Management (SFM) Cell was opened in the Working Plan Circle. Its aim is to develop practical methods, guidelines and strategies to apply ecosystem approach in the management of natural forest areas. It will also facilitate common understanding of terms and definitions related to Criteria and Indicators for Sustainable Forest Management.

## Chapter- 23

### **PUBLIC GARDEN:**

- i.** Parks & Gardens at Gangtok:-The expenditure incurred for upkeep and maintenance of different Parks & Gardens including the newly created Chogyal Palden Thendup Namgyal Park at Gangtok. A green house for floral nursery has been created at City Garden, Gangtok.
  
- ii.** Creation of Bird Park at Rabdentse – In memory of the 10<sup>th</sup>. Chogyal of Sikkim late Sydkyong Tulku, a walk-in-aviary has been sanctioned at Rabdentse, Gyalshing. Foundation stone of the Park was laid by the HCM on 21<sup>st</sup>.February, 2009. The park with an estimated cost of Rs.684.44 lakhs has been tendered and work has commenced.
  
- iii.** Creation of Eco-friendly Park at Amlaten (Damthang) South Sikkim – The scheme was sanctioned in the year 2008-09.
  
- iv.** **Construction of meditation of hut & land development at Tamla Chour (South) –A** Park has been developed with a meditation hut at Tamla Chour (Sadam) South Sikkim for development of Eco-Tourism.
  
- v.** **Construction of Smriti Van at Hanuman Tok** – It was proposed to create a memorial forest at Hanuman Tok, Gangtok. However, since the area was under Defence control, the creation was abandoned after some progress and the area was handed over to the Army.
  
- vi.** **Extension of Bio-diversity Park at Damthang** – The extension work in the existing Park at Damthang has been carried out to improve the infrastructure facilities for the visiting tourist on way to Namchi.

## Chapter - 24

### EXTRACTION AND SALE OF FOREST PRODUCE

The Utilization Circle is the commercial wing of the department. Extraction of Wind-fallen trees, trees from project sites where forest land is diverted to the user agencies, extraction of poles from thinning of old plantations and conversion into timber, firewood and charcoal and sale of these forest produce is done by this Circle.

The Utilization Circle consists of one Conservator of Forest, one Divisional Forest Officer, One Assistant Conservator of Forest and a Block Officer and has to cover the whole of Sikkim.

The Division has one saw mill situated at Chuba in Government land, where the Division converts timber, firewood out of those trees/poles from above mentioned areas.

The division is also doing the Import of timber, charcoal, quartz stones from out side the State through Sale Agents, who are operating timber business after obtaining license and paying import fee as per schedule of Government rate. By doing so the Forest Environment & Wildlife Management Department is saving the forest of the State and earning revenue in a legalized manner.

The financial achievements of this division are given below for the year of 2008-09.

#### **Detail of extraction and sale of forest produce and import fee as on 30/3/2009.**

**Table - 24.1**

<b>Year</b>	<b>Forest Produce</b>	<b>Quantity extracted &amp; sold (in cft. / piles /No)</b>	<b>Revenue realized (Rs.in lakhs)</b>
<b>2008-2009</b>	Timber	2659.95 cft.	4.26
	Firewood	144.65 pile.	0.81
	Disposed of tree	354 Nos.	2.69
	Disposed of ballies	1493 Nos.	2.98
	Sawing Charge	4718 cft.	0.94
	Saw dust	140 bags	0.14
	<b>TOTAL</b>		<b>11.82</b>
	<b><u>IMPORT FEE</u></b>		
	Timber	1, 11,372.32 cft.	21.06
	Quartz Stone	10,500 MT.	5.25
	Charcoal	55,358 bags.	11.07
	Bamboo	1,025 Nos.	0.07
	<b>TOTAL</b>		<b>37.45</b>
	<b>GRAND TOTAL</b>		<b>49.27</b>



Details of Extraction and Sale of Forest Produce for the last twelve years.

Table - 24.2

Year	Timber		Firewood		Charcoal		Total
	Quantity extracted and sold (Cubic feet)	Revenue realized (Rupees)	Quantity extracted and sold (Piles)	Revenue realized (Rupees)	Quantity extracted and sold (Bags)	Revenue realized (Rupees)	Revenue realized (Rupees)
1997-1998	2153.50	2.75	36	0.50	986	0.57	3.82
1998-1999	1004.75	1.41	58	0.22	180	0.18	1.81
1999-2000	1535.52 1872 Nos (Ballies)	2.23	157	0.84	620	0.45	3.52
2000-2001	1741.75 1393 Nos (Ballies)	2.93	168	0.83	245	0.18	3.94
2001-2002	11869.54 1225 Nos (Ballies)	22.31	95	0.18	77	0.37	22.86
2002-2003	13421.31 cft.	20.13	379.72	1.90	213	0.28	22.31
2003-2004	4863.50cft.	10.28	151.82	0.76	176	0.26	11.30
2004-2005	3852.62 cft.	8.23	169.15	0.85	13	0.21	9.29
2005-2006	3367.52cft	8.14	111.80	0.77	13	0.19	9.1
2006-2007	1876.43cft	2.81	224	1.21	-	-	4.08
2007-2008	1007.53 cft	1.91	90.80	0.56	-	-	2.47
2008-2009	2659.95 cft 354 no of trees 1493 no of ballies	11.01	149.65	0.81	-	-	11.82

## CHAPTER – 25

### STATE MEDICINAL PLANT BOARD / NTFP.

1. **The State Medicinal Plants Board (SMPB):-** SMPB was constituted in the year 2002-2003 by the State Government under Non-Timber Forest Produce (NTFP) Division of Forest, Environment & Wildlife Management Department, Government of Sikkim, The objectives for the constitution of SMPB are formulation of policy, co-ordination with concerned Departments and Organizations for conservation and propagation of medicinal plants resources in the State for its sustainable..

2. **Activities of SMPB:**

For conservation and propagation of medicinal plant resources SMPB had carried out the following activities under different schemes funded by Central & State Government during the year 2008-09.

A. **Promotional Scheme:** The objective of this scheme is to disseminate awareness among the people about importance of medicinal plants, Survey & Inventorisation, Research, In-situ & Ex-situ Conservation of medicinal plants areas for the production of quality planting materials. The various activities implemented under this scheme are:-

a) **Maintenance of Existing Herbal Garden Nursery:** - Maintained existing herbal garden nurseries located in North & East Districts for production of quality planting materials of important medicinal plants species having medicinal value and high market price: -

1. Zema Herbal Nursery, Lachen, North	– 1 Ha.
2. Thangu Herbal Nursery, Lachen, North	– 1 Ha.
3. Dombang Herbal Nursery, Lachung, North	– 1 Ha.
4. Rateychu Herbal Nursery, East	<u>– 1 Ha.</u>
<b>Total:</b>	<b>4 Ha.</b>

Total financial target incurred for the maintenance of above mentioned nurseries during the year 2008-09 was Rs. 6.49 lakhs.

b) **Ex-situ Conservation:** - Ex-situ conservation of medicinal plants covering 2.5 Ha. was carried out at Zema RF North for propagation of rare and important medicinal plants species. The financial target incurred was Rs. 0.80 lakhs.

c) **Maintenance of Tree Species Nurseries:** The tree species nurseries of medicinal plants having high medicinal value was created during the year 2007–08 in the four districts covering the area of 2 Ha each. These nurseries were maintained for the production of tree species seedlings during the year 2008-09. The financial assistance for the creation and maintenance of these nurseries for the period of three years is being provided by the National Medicinal Plants Board, Department of AYUSH, Ministry of Health and Family Welfare, Government of India.

The physical and financial target achieved during the year 2008-09 is as under: -

**Table-25.1**

Sl. No.	Location	Physical and financial target achieved 2008 - 09	
		Phy. in Ha.	Fin. in lakhs
1	Medicinal Plants Tree Specie community Nursery at private holding, Tingda Block, North Sikkim	2 ha.	<b>6.31</b>
2	Medicinal Plants Tree Specie Nursery at Singtam and Rorathang in East District	2 ha	<b>4.89</b>
3	Medicinal Plants Tree Specie Nursery at Sipshu and Raniban in West District	2 ha	<b>5.91</b>
4	Medicinal Plants Tree Specie Nursery at Tingli Rameng in South Sikkim	2 ha	<b>9.85</b>

3. **Contractual Farming Projects:** The objectives of Contractual Farming Scheme is to strengthen the cultivation of medicinal plants by involving the farmers, value addition for development of proper harvesting technique like processing, storage, extraction, packaging and facilitating for development of market infrastructure for medicinal plants.

Under this scheme 30% subsidy of the total cost of project is granted by the National Medicinal Plants Board, Deptt. of AYUSH, Ministry of Health and Family Welfare, Government of India as a financial assistant for the cultivation of medicinal plants in the private holdings by the farmers for commercial purpose. The grant-in-aid for contractual Farming Projects sanctioned by NMPB, Department of AYUSH, Ministry of Health & Family welfare, Government of India to the tune of Rs.20.29 lakhs was released in the year 2008-09 & 37 farmers for cultivated of medicinal plants in this private holdings.

4. **Registration of Contractual Farmers:** About 699 farmers have been registered under the State Medicinal Plants Board (SMPB) as a Cultivator, Collector and Trader till date. This registration will enable the farmers to trade their medicinal plants cultivated in their farms for commercial purpose and in return improve their economic condition.
5. **Jari Buti Khosh:** The Jari Buti Khosh (Herbal Medicine Fund) was established under the State Medicinal Plants Board by State Government during the year 2004-05. The sum of rupees 50.00 lakhs was provided under this scheme for the production of quality planting materials and in order to create awareness among the stakeholders and public regarding the importance of medicinal plants available in the state.

The activities carried out by SMPB during 2008-2009 are as follows:-

a) **Maintenance of existing Herbal Nurseries:** -The SMPB in the year 2008-09 had maintained herbal nurseries located at Kyongnosla and Tamzey in East District, Samduptse Herbal Garden in the South District and Guransey Nunthaley in the West District. The total area covered was 4 Ha. and the financial target involved for maintaining these nurseries was Rs. 12.09 lakhs.

b) **Small Grant Scheme to Traditional Herbal Healers:** - The State Medicinal Plants Board had identified about 20 Traditional Folk Healers from different villages with the help of Block Panchayats and Village elders. The small grant of Rs.3.00 lakhs provided under Jari Buti Khosh Scheme was distributed to them at the rate of Rs.15,000/- to each for the development of their kitchen herbal gardens and infrastructure development.

Further, the State Medicinal Plants Board has also compiled and documented their traditional knowledge of herbal medicines being practiced by them. The publication of their documentation and importance medicinal plants used by them has been completed for release.

6. **BADP Scheme:** Under this scheme 1 Ha. Herbal nursery located at Kyongnosla herbal garden was maintained during the 2008-2009 for the production of quality planting materials of rare and endangered species of medicinal herbs having high medicinal value. The total financial target achieved was Rs.6.49 lakhs.

7. **NTFP Activities :**

**Bamboo Mission Programme:** The NTFP Division was allotted 200 Ha. of bamboo plantation under National Bamboo Mission Programmes during the year 2008-2009. The total areas achieved for bamboo plantation was 192 Ha. and the plantation was taken up in the degraded forest areas in North, East, West and South District under different Joint Forest Management Committee. The details of the location, physical and financial target achieved under different JFMCs are as under:

**Table-25.2**

Sl. No	District	Location	Achievement		Carried out by
			Phy.	Fin.	
1	North	Upper Namsing R.F.,Pondung, Khas Dozong Khas, Forest Dara	100 Ha.	16.95 lakhs	Lingchum Tingda JFMC
2	East	Nim Khas & Paireni Khas	25 Ha.	4.23 lakhs	Namchebong JFMC
3	South	1.Namphing Malabasey	24 Ha.	4.07 lakhs	Namphing Malabasey JFMC
		2. Phong & Tanak	23 Ha.	3.90 lakhs	- do -
4	West	9 <sup>th</sup> .Mlie Dhupi Dara,Gyalshing	5 Ha.	0.85 lakhs	Kyongsha JFMC.
		Total -	177 Ha.	30.00 lakhs	

**Chapter- 26**

**SOCIAL FORESTRY, EAST DIVISION:**

Work done under different Schemes:

Sl.No	Name of the Schemes	Item of works	Physical Achievement (in Ha/Km)	Financial Achievement (Rs.in lakh)	Remarks
(1)	(2)	(3)	(4)	(5)	(6)
1	Catchment Area Treatment Plan Teesta Stage - V	Fuel wood and fodder plantation	297.5	8.93	Maintenance of old plantation. The entire plantation falls under Gangtok Range.
2	- do -	Afforestation in degraded forest land	42.5	12.75	
3	- do -	Silvipasture Development	187	5.61	
4	- do -	Bamboo Pltn.	38.3	1.15	
5	- do -	Horticulture Development	170	5.10	
6	- do -	Broom Grass Pltn	357	10.71	
7	- do -	Gap filling	227.8	14.04	New creation
8	12 <sup>th</sup> Finance Commission	Dry Stone Wall fencing	2.2 Km.	8.92	Taken up at Singtam and Rongli Range.
9	Restoration of spoil tips scheme, under T.S. - V	Maintenance of Nursery	1	2.46	
10	Bamboo Plantation	Bamboo Mission	50	9.10	Taken up at all three Ranges Singtam, Gangtok and Rongli Range.
11	Avenue and Patch plantation	State Green Mission	29.5 KM 4 Ha.	1.75207	Maintenance of previous year plantation.

**Chapter – 27**

**Intensification of Forest Management (90:10) CSS sanctioned during 2008-09.**

**State: SIKKIM**

**Progress Report upto the period ending March 2009.**

**Component: Forest Fire Control and Management.**

**Table-27.1**

Sl No.	Item	Description of Items	As per Cabinet Memo, GoS No.469/FEWMD Dated: 15/10/2008			Achievements				Pending Bills		Remarks	
			Unit cost	No.of Units	Amo unt	Phy.	Central share	State share	Total fin.	Phy	Fin.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
1	Fire line	a	Fireline` maintenance (Km)	0.017	100	1.70	75	1.16	0.129	1.29	25	0.41	Balance completed
		b	Engagement of Firewatchers @Rs.100/dy for 3 months	0.090	60	5.40	42	3.21	0.357	3.57	18	1.66	Completed.
2	Fire fighting equipments	a	Procurement of fire fighting equipment per set (No)	0.035	40	1.40	0	0.00	0	0.00	40	1.40	Procured but bills are pending
		b	Procurement of manual sprayers	0.020	20	0.40	0	0.00	0	0.00	20	0.40	
		c	Back Pack pumps	0.065	20	1.30	0	0.00	0	0.00	20	1.30	
		d	Procurement of power chain saws	0.400	2	0.80	0	0.00	0	0.00	2	0.80	
		e	Procurement of power saw branch cutter	0.600	1	0.60	0	0.00	0	0.00	1	0.60	
3	Training Publicity & awareness	a	Training & capacity building of field staff (No)	0.005	100	0.50	0	0.00	0	0.00	100	0.50	- do -
		b	Publicity in electronic media @Rs.800/-insertation	0.008	15	0.12	0	0.00	0	0.00			
		c	Printing & distribution of pamphlet @ Rs.600/100 nos	0.006	10	0.06	0	0.00	0	0.00			
		d	Weekly awareness programme on local TV Channel	0.150	16	2.40	16	2.16	0.24	2.40			
		e	Awareness Camp @ Rs. 10,000/camp	0.100	10	1.00	0	0.77	0.086	0.86			
4	Procurement of Wireless sets (No)		0.200	40	8.00	0	0.00	0	0.00	40	8.00	Procurement under progress	
5	Procurement of wireless communication accessories,batteries,antenna,etc		0.150	13	1.95	0	0.00	0	0.00	13	1.95	- do -	
6	Fire mapping / Fire management plan (No)		0.020	9	0.18	0	0.00	0	0.00			Not done	
7	Vehicle	a	Procurement of vehicle-Bolero(No)	7.000	3	21.00	3	18.90	2.1	21.00			
		b	Procurement of motor bike (No)	0.500	1	0.50	0	0.00	0	0.00	1	0.50	Procurement completed.
<b>Component Total -</b>					<b>47.31</b>		<b>26.21</b>	<b>2.912</b>	<b>29.12</b>		<b>17.52</b>		

**Component: Preparation of Working Plan / Survey & Demarcation.**

**Table-27.2**

1	Survey / Demarcation of Reserve Forest boundary	a	Clearance & survey of forest boundary line (low altitude)Km	0.104	50	5.20	50	4.68	0.52	5.20			
		b	Clearance & Survey of forest boundary line(High altitude) Km	0.156	5	0.78	5	0.70	0.078	0.78			
		c	Clearance of survey of forest compartment boundary(LA)Km	0.060	620	37.20	620	33.48	3.72	37.20			
		d	Clearance of survey of forest compartment boundary(HA)Km	0.090	68.44	6.16	68.44	5.54	0.616	6.16			
		e	Erection of forest boundary pillars (Low Altitude) No.	0/036	500	18.00	500	16.20	1.8	18.00			
		f	Erection of forest boundary pillars(High Altitude) No.	0.051	50	2.55	50	2.30	0.255	2.55			
		g	Erection of forest compartment boundary pillars(LA) No.	0.036	800	28.80	800	25.92	2.88	28.80			
		h	Erection of forest compartment boundary pillars(HA) No.	0.051	200	10.20	200	9.18	1.02	10.20			
		i	Mapping of Khasmal & goucharan maps with records (No)	0.040	50	2.00	0	0.00	0	0.00	50	2.00	
		j	Up-gradation & strengthening of cartographic laboratory(No)	2.000	1	2.00	0	0.00	0	0.00	1	2.00	Work completed.
2	Working Plan Preparation	a	Field inventory on sampling basis (Low Altitude)	0.055	400	22.00	369	19.80	2.2	22.00			
		b	Field inventory on sampling basis (High Altitude)	0.076	100	7.60	100	6.84	0.76	7.60			
		c	Field inventory on sampling basis (Very H.A)	0.119	100	11.90	100	10.71	1.19	11.90			
		d	Complete enumeration of trees for thinning(LA)ha	0.022	1000	22.00	430.5	19.80	2.2	22.00			
		e	Complete enumeration of trees for thinning(HA)ha	0.031	100	3.10	100	2.79	0.31	3.10			
		f	Consultation/training with FSI on GPS & GIS	1.000	2	2.00	2	1.80	0.2	2.00			
		g	Up-gradation/purchase of software in RS GIS lab	1.000	2	2.00		1.80	0.2	2.00			
		h	Vehicles for field visit for working plan exercise	7.000	1	7.00	1	6.30	0.7	7.00			
		i	Purchase of bike 200 CC Bajaj Pulsar	0.500	1	0.50	0	0.00	0	0.00	1	0.50	Procurement under progress
3	Capacity building of Department staff on field surveys & modern equipments/ techniques at Institutes of repute.			0.500	4	2.00	0	0.70	0.078	0.78	3	1.22	Under progress
<b>Component total -</b>						<b>195.99</b>		<b>170.96</b>	<b>18.996</b>	<b>189.96</b>		<b>5.72</b>	

## Component: Strengthening of Infrastructure for Forest Protection

Table-27.3

1	Building for forest protection, staff quarter, Office etc.	a	Range Office-cum-Quarters(Plinth Area=1104 sqft)	13.810	1	13.81		4.68	0.52	5.20	1.00	8.61	Work is completed
		b	Forest Guard Quarters (Plinth Area=396 sqft)	4.960	3	14.88		8.45	0.939	9.39	1.00	5.49	- do -
2	Road & Path	a	Construction of foot/Inspection path (Km)	4.002	2	8.00		3.96	0.44	4.40	1.00	4.00	Work is completed.
		b	Construction of approach roads (Km)	15.950	1.255	20.02	1	18.02	2.002	20.02			
3	Procurement of GPS for frontline staff (No)			0.250	25	6.25	25	5.61	0.623	6.23			
4	Procurement of search light			0.120	2	0.24	0	0.00	0	0.00	2.00	0.24	Procured but bills are pending.
<b>Component Total -</b>						<b>63.20</b>		<b>40.72</b>	<b>4.524</b>	<b>45.24</b>		<b>18.34</b>	
<b>Grand Total -</b>						<b>306.50</b>		<b>237.89</b>	<b>26.432</b>	<b>264.32</b>		<b>41.58</b>	

(Rupees- Two hundred sixty four lakhs thirty two thousand) only.



## Chapter –28

### Tribal Sub-Plan (TSP) and Scheduled Caste Sub-Plan (SCSP):

#### **Implementation of Scheme under Tribe Sub-Plan (TSP) and Scheduled Caste Sub-Plan (SCSP) during 2008-2009.**

On 22<sup>nd</sup> April, 2008, a state level meeting was conducted by the Principal Secretary, Social Justice Empowerment and Welfare Department, Government of Sikkim under the chairmanship of Hon'ble Chief Minister of Sikkim, with a view to discuss the issues relating to implementation of the programmes under Tribal Sub-Plan and Scheduled Caste Sub-Plan for the year 2008-2009. The basic aim of this meeting was to channelize the plan outlays and benefits from the general sector of the State Plan for the development of Scheduled Tribe & Scheduled Caste in proportion to their population both in physical and financial terms with an ultimate goal of bridging the gap in social economic development of Scheduled Caste and Scheduled Tribe. As discussed and decided in the meeting, the scheme was directed to prepare people oriented programme, scientific, productive with an area specific and training oriented programme to make the beneficiaries knowledgeable and to reach the benefits at the grass root level. The population of Scheduled Tribe and Scheduled Caste was based as per the economic survey conducted by the Director of Economic, Statistics, Monitoring & Evaluation, Government of Sikkim.

To follow up the above meeting, the Forest, Env. & Wildlife Management Department, Government of Sikkim, discussed implementation of programme under Scheduled Tribe and Scheduled Caste Sub-Plan in the chamber of PCCF-cum-Secretary Forest, on the 24<sup>th</sup> April 2008 and decided to implements on following activities through beneficiaries in the private holdings especially in ST and SC Constituencies during 2008-2009.

- i. Broom grass plantation in low altitude.
- ii. Medicinal plantation
- iii. Maintenance of nursery for raising broom grass, fodder, fuel wood & wild fruits trees.
- iv. Maintenance of old plantation.
- v. Publicity.
- vi. Engagement of unemployment youth as work supervisors for supervisions and checking of beneficiaries works.
- vii. Monitoring.

The scheme was implemented through beneficiaries for planting of Broom Grass and bamboo Plantation in the private holdings. The list of beneficiaries for the implementation of the scheme in the Block levels were selected and prepared by Block Panchayats and it was further recommended and approved by the concerned Hon'ble Area MLA.

The details of physical and financial target achieved for implementation of project are as under:

**a. TSP Scheme**

**Table-28.1**

<b>Sl. No</b>	<b>Item of Work</b>	<b>Physical target achieved</b>	<b>financial target achieved</b>	<b>Nos. of beneficiaries benefited</b>
1	Broom Grass, Medicinal Plantation in private holdings and maintenance of broom and bamboo under Scheduled Tribe Sub-Plan in North District	157 ha.	34.33	1168 nos.
2	Broom Grass Plantation in private holdings under Scheduled Tribe Sub-Plan in East District	80 ha	9.01	640 nos.
3	Broom Grass Plantation in private holdings under Scheduled Tribe Sub-Plan in South District	60 ha	6.60	480 nos.
4	Broom Grass Plantation in private holdings under Scheduled Tribe Sub-Plan in West District	60 ha	6.60	480 nos.
	<b>Total:</b>	<b>357 ha</b>	<b>56.54</b>	<b>2768 nos.</b>

**b. SCSP Scheme**

**Table-28.2**

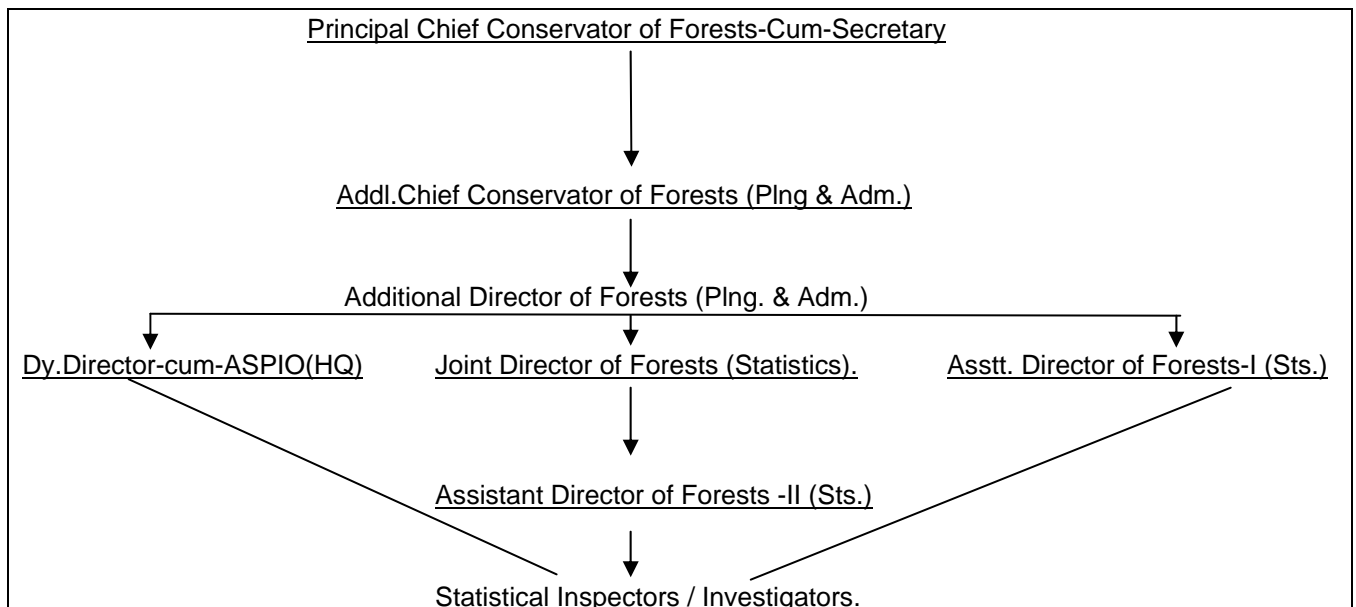
<b>Sl. No</b>	<b>Item of Work</b>	<b>Physical target achieved</b>	<b>financial target achieved</b>	<b>Nos. of beneficiaries benefited</b>
1	Broom Grass, fodder Plantation in private holdings and maintenance of broom grass under Scheduled Caste Sub-Plan in East District	130 ha	14.44	1040 nos.
2	Broom Grass, fodder Plantation in private holdings and maintenance of broom grass under Scheduled Caste Sub-Plan in South District	110 ha	12.24	880 nos.
3	Broom Grass, fodder Plantation in private holdings and maintenance of broom grass under Scheduled Caste Sub-Plan in West District	110 ha	12.24	880 nos.
	<b>Total:</b>	<b>350 Ha</b>	<b>38.92</b>	<b>2800 nos.</b>

The above mentioned Schemes was implemented by the beneficiaries and was checked and monitored by the field staff and officers of Forest, Env. & Wildlife Management Department, Government of Sikkim.

## Chapter – 29

### PLANNING AND STATISTICAL CELL:

The main role of this cell is to assist the Principal Chief Conservator of Forest-cum-Secretary in all matters related to policy matters, planning the activities to be undertaken by the department. This cell is the store-house of all the forestry related data. The Monthly Progress Report of various schemes being implemented by different circle of the department is being collected, compiled here and disseminated to the State and Central Government. This cell also deals with the work of management of IFS and SFS cadres, Training of IFS and SFS officers, inter as well as interdepartmental meetings. Reply to Parliament Questions, State Assembly Questions, cases of the department in the Supreme Court and co-ordination with different Ministries in the Government of India, Planning Commission and preparation of Five Year Plans etc. is being taken care of by this cell. Other important work of Right to Information Act and Administrative Reforms Commission & Knowledge Commission is also attending by this cell.



## CHAPTER-30

### B. WILDLIFE:

#### Protected Areas:

##### Introduction:

Wildlife Circle is headed by Chief Conservator of Forest-cum-Chief Wildlife Warden stationed at Head Office, Gangtok which controls the overall activities of the four Wildlife Divisions, Khangchendzonga National Park and Biosphere Reserve and the Himalayan Zoological Park.

The Wildlife Circle of the Department controls over the Conservation and protection of the Wild life (Flora & Fauna) of the State's rich biodiversity. At present there are seven sanctuaries, one national park and one Biosphere Reserve which are as follows:

Table 30.1

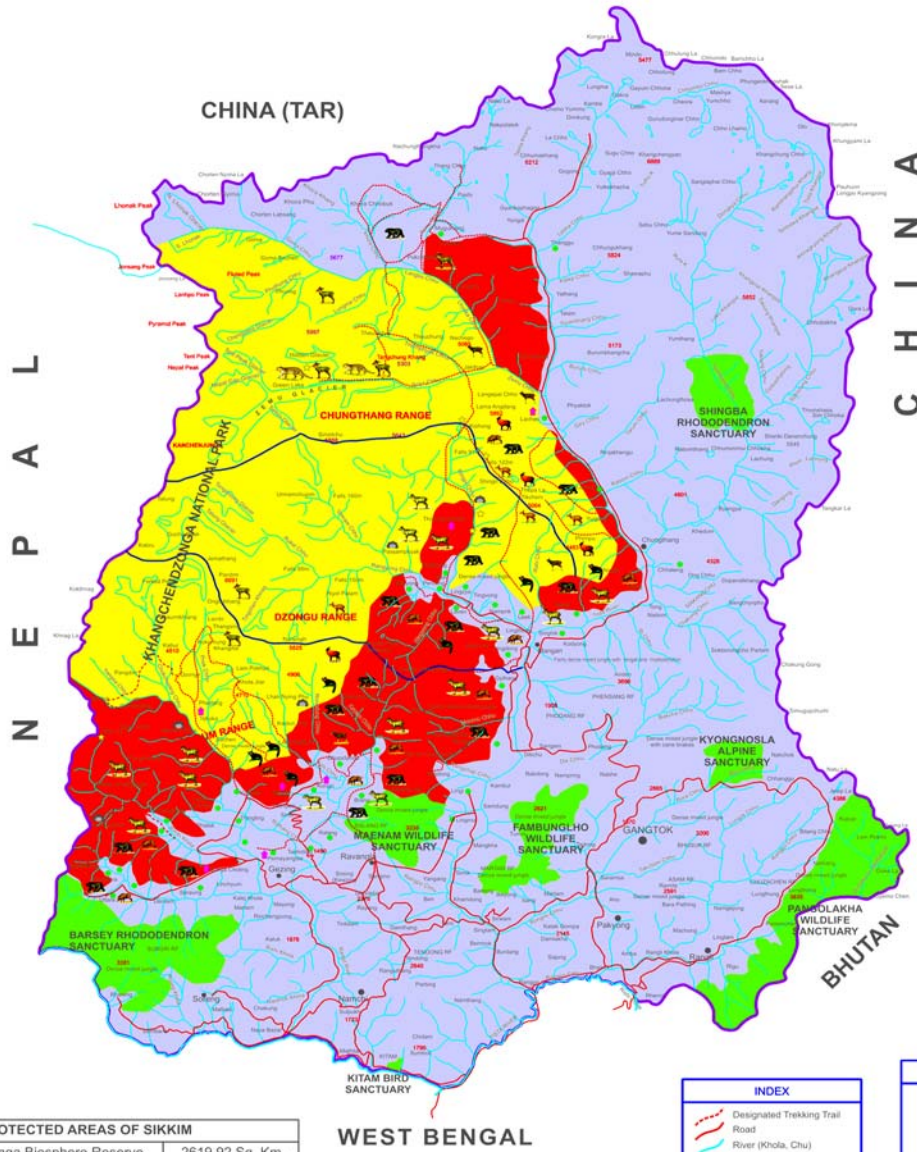
Sl.No.	Name of Protected Areas	Location/ District	Month & Year of Notification	Area in Sq.Km.
1	Khangchendzonga National Park	North West	August 1977	1784.00
2	Khanchendzonga Biosphere Reserve	North West	May 1997	2620.00
3	Kyongnosla Alpine Sanctuary	East	August 1984	31.00
4	Fambonglho Wildlife Sanctuary	East	April 1984	51.76
5	Pangolakha Wildlife Sanctuary	East	November 2000	128.00
6	Mainam Wildlife Sanctuary	South	March 1987	34.35
7	Barsey Rhododendron Sanctuary	West	July 1996	104.00
8	Shingba Rhododendron Sanctuary.	North	August 1984	43.00
9	Kitam Bird Sanctuary	South	February 2005	6.00
	<b>TOTAL</b>			<b>4802.11</b>

The Wildlife Sanctuaries has special protection scheme by way of implementing the various Centrally Sponsored Schemes and state Sponsored Projects. The visitors require the permission of the concerned WL Officer for entering into the sanctuaries. The Wildlife wing aims at the Conservation and Protection of the Wildlife (Flora & Fauna) all over the State as per the Wildlife Protection Act of 1972.

#### **Aims and objectives:**

- (a) Protection & Conservation of Wildlife.
- (b) Implementation of CSS Projects and State Projects.
- (c) Preservation & Conservation of State's rich Biodiversity.
- (d) Protection through the people's participation.
- (e) Rescue of injured wild animals.  
Implementation of CSS Projects and State Projects.

# PROTECTED AREAS IN SIKKIM



PROTECTED AREAS OF SIKKIM	
1. Khangchendzonga Biosphere Reserve	2619.92 Sq. Km.
2. Barsey Rhododendron Sanctuary	104.00 Sq. Km.
3. Kitam Bird Sanctuary	6.00 Sq. Km.
4. Maenam Wildlife Sanctuary	35.34 Sq. Km.
5. Fambunglho Wildlife Sanctuary	51.76 Sq. Km.
6. Pangolakha Wildlife Sanctuary	128.00 Sq. Km.
7. Kyongnosla Alpine Sanctuary	31.00 Sq/ Km.
8. Shingba Rhododendron Sanctuary	43.00 Sq. Km.

Note: 1784 Sq. Km of Khangchendzonga National Park includes in the KBR.

**INDEX**

- Designated Trekking Trail
- Road
- River (Kholo, Chu)
- Lake (Pokhari, Cho)
- Sacred Cave
- Holy Spot
- Monastery
- Fringe Village of KBR
- KBR - Core Zone
- KBR - Buffer Zone
- Sanctuaries

**WILD ANIMALS OF KBR**

Forests, Environment & Wildlife Management Department, Government of Sikkim

## ACTIVITIES UNDERTAKEN IN THE WILDLIFE SANCTUARIES DURING 2008-09

I. Assistance to State Management Plan for the sanctuaries have been prepared and at present the development activities are taken up as per the Annual Plan of operation (APO), submitted by the Department to Govt. of India for funding the proposed items of activities for each sanctuary. The details of the activities under taken in the three Sanctuaries are as follows:-

### 1. Pangolakha Wildlife Sanctuary, East Sikkim Table-30.3

SN	Item of Work	Sanctioned			Actual		
		Amount	Quantity	Location	Amount	Quantity	Location
1	Erection of boundary pillars (No)	3.85	100	Along North-Western boundary	3.85	LS	Along North-Western boundary
2	Creation of water holes for providing water to wild animals (No)	1.55	5	Inside PWLS	1.55	3	Inside PWLS
3	Construction of bridle path (km)	5.86	2	do	5.30	1.6	do
4	Soil moisture conservation (Ha)	2.30	10	do	2.30	15	do
5	Procurement of utility vehicle (No)	5.00	1	East Wildlife Division	5.56	1	East Wildlife Division
6	Clearance of Wildlife trails (km)	2.76	4	Inside PWLS	2.75	4	Inside PWLS
7	Antipoaching & trap demolition	2.07	3	do	2.07		do
8	Desilting & maintenance of lakes (No)	2.00	1	do	2.00		do
9	Awareness campaign	0.50	LS	Gnathang & Rhenock	0.50		Gnathang & Rhenock
10	Major repair & furnishing of Forest Rest house (No)	2.00	1	Phadamchen	2.00		Phadamchen
11	Relief to crop damages by wild animals	3.00		Villagers in and around Pangolakha WLS	3.00		
	<b>Total</b>	<b>30.89</b>			<b>30.88</b>		

### 2. Kyongnosla Wildlife Sanctuary, East Sikkim Table-30.4

SN	Item of Work	Sanctioned			Actual		
		Quantity	Amount	Location	Quantity	Amount	Location
1	Procurement of desktop computer & multifunctional printer	LS	0.75	Division Office	LS	0.75	Division Office
2	Development of water holes for providing water to wild animals (No)	3	1.89	Inside kyongnosla Alpine WLS	3	1.89	Inside kyongnosla Alpine WLS
3	Construction of bridle path (km)	2	6.92	Do	2	6.92	do
4	Soil Moisture Conservation (Ha)	5	1.75	Do	5	1.70	do

5	Construction of Incenerators	1	0.50	Do	0	0.50	do
6	Procurement of scientific equipments for high altitude activities	2	1.00	Do	2	1.00	do
7	Awareness programme	LS	0.25	Do	LS	0.25	do
8	Clearance of Survey line	10	1.30	Do	0	1.30	do
9	Clearance of Wildlife trails (km)	5	5.20	Do	0	5.20	do
10	Renovation of kitchen of the Kyongnosla Log Hut	LS	1.00	Do	0	1.00	do
11	Anti-poaching/trap demolition and combing operations	4	2.00	Do	4	2.00	do
12	Habitat improvement in Critical Wildlife habitats	10	2.00	Do	10	1.99	do
13	Up-gradation of FG qtr & construction of wireless Infrastructure	LS	1.00	Do	0	1.00	do
<b>Total</b>			<b>25.56</b>			<b>25.49</b>	

### 3. Fambonglho Wildlife Sanctuary, East Sikkim Table-30.5

SN	Item of Work	Sanctioned			Actual		
		Amount	Quantity	Location	Amount	Quantity	Location
1	Development of water source and laying of water line at Golitar (KM)	2.50	1	Fambonglho WLS	2.50	1	Fambonglho WLS
2	Construction of bridle path (km)	5.86	2	do	5.86	2	do
3	Procurement of gun (No)	1.20	2	do	1.20	2	do
4	Development of camping ground with toilet and kitchen (additional fund for completion of approved item)	3.00	LS	do	2.99	LS	do
5	Maintenance of sample plots of 0.1 Ha size for undertaking floral inventory (i/c 0.1 Ha for trees, 3m x 3m for shrubs and 1m x 1m for herbs)	0.40	40	do	0.40	40	do
6	Strengthening of watchers	1.00	LS	do	1.00	LS	do
7	Awareness programme	1.00	LS	do	1.00	LS	do
8	Maintenance of water holes for providing water to wild animals (No)	1.20	6	do	1.20	6	do
9	Clearance of Wildlife trails (km)	1.38	2	do	1.38	2	do
10	Strengthening of protection measures and combing operations (No)	1.00	2	do	1.00	2	do
<b>Total</b>		<b>21.54</b>			<b>21.53</b>		

**4- ACTIVITIES UNDERTAKEN IN BARSEY RHODENDRON SANCTURIES DURING 2008-09**

**Table- 30.6**

SN	Item of Work	Sanctioned			Actual		
		Amount	Quantity	Location	Amount	Quantity	Location
1	Boundary demarcation for rationalization of sanctuary boundary	2.82	5 km	Bhareng & Ribdi	2.82	5 km	Bhareng & Ribdi
2	Creation of water hole	2.00	2 nos	Dhajey & jhandi	2.00	2 nos	Dhajey & jhandi
3	Procurement of field kit for staffs working in the high altitudes	0.60	LS	Barsey Rhododendron Sanctuary	0.60	LS	Barsey Rhododendron Sanctuary
4	Restoring catchment areas (degraded & open forests by plantation)	0.80	10 ha	Naya Patal	0.80	10 ha	Naya Patal
5	Construction of resting sheds at Hilley Barsey trail	2.00	1 no.	Hilley Barsey	2.00	1 no.	Hilley Barsey
6	Construction of toilet	1.50	1 no.	Jorbotey	1.50	1 no.	Jorbotey
7	Annual cleaning of natural trails for patrolling after monsoon season	2.50	25 km	Inside Barsey Rhododendron Sanctuary	2.50	25 km	Inside Barsey Rhododendron Sanctuary
8	Capacity building of the field staff	0.40	LS	Inside Barsey Rhododendron Sanctuary	0.40	LS	Inside Barsey Rhododendron Sanctuary
9	Fire management to save high altitude vegetation from forest fires	2.00	LS	Inside Barsey Rhododendron Sanctuary	2.00	LS	Inside Barsey Rhododendron Sanctuary
10	Signages	0.50	LS	Inside Barsey Rhododendron Sanctuary	0.50	LS	Inside Barsey Rhododendron Sanctuary
11	Habitat improvement (gap plantation, removing weeds, water holes etc.)	2.00	20 ha	Musleri	2.00	20 ha	Musleri
12	Rejuvenation & desilting of lakes and water holes	2.25	3 nos.	Kachopatey, Chadra chok & Kalijhar	2.25	3 nos.	Kachopatey, Chadra chok & Kalijhar
13	Anti-poaching activities	1.50	LS	Inside Barsey Rhododendron Sanctuary	1.50	LS	Inside Barsey Rhododendron Sanctuary
14	Biological & socio-economic study	0.50	LS	Fringe villages of the sanctuary	0.50	LS	Fringe villages of the sanctuary
	<b>Total</b>	21.37			21.37		



**5-ACTIVITIES UNDERTAKEN IN THE MAENAM WILDLIFE SANCTURIES DURING 2008-09**

**Table-30.7**

SN	Item of Work	Sanctioned			Actual		
		Amount	Quantity	Location	Amount	Quantity	Location
1	Boundary demarcation @ Rs.1.77 lakh/km - 5 km	8.85	5 km	Selelay to Sada-Phamtam, Maenam Wildlife Sanctuary	8.85	5 km	Selelay to Sada-Phamtam, Maenam Wildlife Sanctuary
2	Purchase of scientific equipments - GPS - 3 nos. @ Rs.0.40 lakh each & compass - 4 nos. @ Rs.0.20 lakh	2.00	7	Maenam Wildlife Sanctuary	2.00	7	Maenam Wildlife Sanctuary
3	Water harvesting structure - 4 nos. @ Rs.0.50 lakh each	2.00	4	Mahadeothan (Yangang) Nunthalay (Maenam) Dareli (Ralong)	2.00	4	Mahadeothan (Yangang) Nunthalay (Maenam) Dareli (Ralong)
4	Construction of salt lick - 5 nos. @ Rs.0.12 lakh each	0.60	5	Neopany Chok (Lingmoo) Tin Bangalay (Sada-Phamtam)	0.60	5	Neopany Chok (Lingmoo) Tin Bangalay (Sada-Phamtam)
5	Soil moisture conservation - 10 Ha @ Rs.0.24 lakh / Ha	2.40	10 Ha	Siganthang (Pathing) Khop (Rabongla) Sangkhabhir (Rabongla)	2.40	10 Ha	Siganthang (Pathing) Khop (Rabongla) Sangkhabhir (Rabongla)
6	Signages & interpretation facilities - 5 nos. @ Rs.0.10 lakh each LS	0.50	LS	Maenam Wildlife Sanctuary	0.50	LS	Maenam Wildlife Sanctuary
7	Awareness & training - 20 persons	0.50	20	Rabongla, Lingmoo & Sada-Phamtam	0.50	20	Rabongla, Lingmoo & Sada-Phamtam
8	Antipoaching & trap demolition - LS	1.00	LS	Sada-Phamtam, Khop, Pathing	1.00	LS	Sada-Phamtam, Khop, Pathing
9	Fire control - 4 sqkm @ Rs.0.50 lakh / sqkm	2.00	4 sqkm	Dareli (Ralong), Pathing RF	2.00	4 sqkm	Dareli (Ralong), Pathing RF
10	Habitat improvement	3.00	30 Ha	Maenam Wildlife Sanctuary	3.00	30 Ha	Maenam Wildlife Sanctuary
11	Purchase of wireless set	2.00	8 sets	Maenam Wildlife Sanctuary	2.00	8 sets	Maenam Wildlife Sanctuary
	<b>Total</b>	<b>24.85</b>			<b>24.85</b>		

**6- ACTIVITIES UNDERTAKEN IN KITAM BIRD SANCTUARY DURING 2008-09**

**Table-30.8**

SN	Item of Work	Sanctioned			Actual		
		Quantity	Amount	Location	Quantity	Amount	Location
1	Construction of Range-Office-cum-Residence	1	5.00	Bagwa, Kitam Bird Sanctuary	1	5.00	Bagwa, Kitam Bird Sanctuary
2	Habitat improvement by fruit plantation in and around the sanctuary	10 Ha	1.41	Kitam Bird Sanctuary	10 Ha	1.41	Kitam Bird Sanctuary
3	Creation of water holes for wildlife	5	2.00	do	5	1.95	do
4	Fire protection in the sanctuary	4 sqkm	2.00	do	4 sqkm	2.00	do
5	Elimination of weed (Phinix)	10 Ha	2.00	do	10 Ha	2.00	do
6	Crop, livestock & property compensation damaged by wild animals	LS	3.00	do	LS	3.00	do
7	Soil & Moisture Conservation work within the Southern zone of the sanctuary.	4 Ha	1.80	Within the Southern zone of the sanctuary	4 Ha	1.80	Within the Southern zone of the sanctuary
8	Awareness, training & Monitoring activities	20 Persons	1.00	Fringe villages of Kitam Bird Sanctuary	20 Persons	1.00	Fringe villages of KBS
9	Sinages & printing materials	5 nos.	1.00	Within Kitam Bird Sanctuary	5 nos.	1.00	Within KBS
<b>Total</b>			<b>19.21</b>			<b>19.21</b>	

## II. National Afforestation Programme under Wildlife Sector:

The National Afforestation Programme (NAP) is a Centrally Sponsored Scheme wherein direct assistance is provided to the Wildlife Forest Development Agency.

### 1. Activities carried Wildlife FDA as on 31.3.2009

**Table-30.9**

SN	Name of FDA	Project Period	Total Outlay (Rs.in lakhs)	Total PHY. Target (in Ha)	Fund released till date	Fund Utilized	PHY. achievement (in Ha)
1.	North-East Wildlife FDA	2008-09	167.26	680	125.00	124.93	680
2.	South- West Wildlife FDA	2008-09	144.87	650	110.00	110.00	400
3.	KNP	2008-09	145.61	950	145.61	145.61	950
	<b>TOTAL</b>		<b>457.74</b>	<b>2280</b>	<b>380.61</b>	<b>380.54</b>	<b>2030</b>

### 2. No. of household covered under EDCs of Wild Life FDAs as on 31.03.2009

**Table-30.10**

SN	Name of FDA	Name of EDCs	No of Household in Project Village			No of Household Directly Benefited								
						From EPA Activities			From Silvicultural Works			From Wages		
			SC	ST	Total	SC	ST	Total	SC	ST	Total	SC	ST	Total
1.	North-East Wildlife FDA	19	405	2371	6382	80	180	320	280	1300	1580	250	850	1400
2.	South-West Wildlife FDA	18	337	1771	6524	25	410	980	25	1520	2050	15	44	65
3.	KNP	20	53	3598	4058	19	139	221	21	1785	1785	27	1897	2567
	<b>Total-</b>	<b>57</b>	<b>975</b>	<b>7740</b>	<b>16964</b>	<b>124</b>	<b>729</b>	<b>1521</b>	<b>326</b>	<b>4605</b>	<b>5415</b>	<b>292</b>	<b>2791</b>	<b>4032</b>

## **Chapter – 31**

### **KHANGCHENDZONGA NATIONAL PARK:**

The Khangchendzonga National Park covers an area of 1784 sq.km. and is the Core Zone of the Khangchendzonga Biosphere Reserve (KBR). The KBR has the total area of 2620 sq.km. inclusive of four Buffer Zones. Buffer Zone I, II, III and IV identified and demarcated in the North, East and South of the National Park. The vast area of the Park covers with dense forest like, Broad leaved Forest within the altitude of 1829 to 2730 mts. Mixed Coniferous Forest within the altitude of 2730 to 3650 mts. and Alpine-Scrub, grass, variety of flowers and medicinal herbs from 3650 mts, and ultimately barren rocks and snow beyond 6000 mts. The Buffer Zone of the Park is surrounded by number of small villages. The population consists of Lepcha, Bhutias and Nepalese in the periphery of Buffer Zones of the Park. The villages such as Beh, Sakyong, Pentong, Satdharey, Leek, Shipgyar, Safoo, Lingya, situated in the buffer zone of central part of the Park are inhabited by Lepchas mainly, while the Chungtha, Laqchen, Munsithang, Pegong consist of Bhutias with few Nepalese communities. The western part of the Park such as Yuksom, Tsong, Neshu, Chongrang, Kongri, Labdang, Dhupi, Norkhola, Upper Karjee, is dominated by Nepali communities. About 75% of households are considered to be at subsistence level and they depend on the Biosphere Reserve for their livelihood. The rural economy of the area is of fixed type and mostly depends on traditional farming, horticulture, agriculture and animal husbandry apart from tourism. As such this National Park has least biotic interference. The Khangchendzonga National Park receives grants under different head as under:

1. Management Action Plan (MAP) for Conservation and Management of Khangchendzonga Biosphere Reserve Sikkim (100% CSS).
2. Assistance to States for Developments of National Parks and Sanctuaries Khangchendzongpa National Park Sikkim (100% CSS).
3. KNP- Forest Development Agency (100% CSS).

There are altogether 20 EDCs constituted all along the buffer zone of the National Park boundaries.

The detail physical and financial achievements under each component of the above mentioned head are shown as enclosed:

I. Management Action Plan (MAP) for Conservation and Management of Khangchendzonga Biosphere Reserve, Sikkim – 2008-09.

**Table-31.1**

SL.NO.	WORK COMPONENTS	PHYSICAL TARGET	FINANCIAL TARGET (Rs.in lakhs)
(1)	(2)	(3)	(4)
A	INFRASTRUCTURE DEVELOPMENT		
1	Renovation of Log Huts	1 No.	4.00
2	Approach Road	0.5 Kms.	8.00
3	Development of Camping Sites	02 Nos.	4.00
4	Drinking Water Supply	01 No.	5.00
B	ECO DEVELOPMENT ACTIVITIES		
1	Construction of toilets	15 Families	5.25
C	SOCIAL WELFARE ACTIVITIES		
1	Cattle immunization	180 nos.Livestock	3.00
2	Nature Trip	01	1.00
D	HABITAT MANAGEMENT		
1	Bamboo Plantation	30 Ha.	7.54
2	Maintenance of old plantation	30 Ha.	2.40
3	Improvement & maintenance of high altitude water bodies	06 Nos.	6.00
E	FOREST RESEARCH, EXTENSION OF EDUCATION		
1	Awareness on protection of Natural Resources of KBR	L.S	2.00
2	Signage's & Natural Resources Poster	L.S.	1.00
F	OVER HEAD EXPENSES	L.S.	1.00
		<b>Total -</b>	<b>50.19 lakhs</b>

II. Assistance to States for Development of National Parks and Sanctuaries – KNP, Sikkim.

**Table-31.2**

SL.NO.	WORKS DONE IN THE YEAR 2008-09	PHYSICAL TARGET	FINANCIAL TARGET (Rs.in lakhs)
(1)	(2)	(3)	(4)
1	Construction of Trekking Trail	4 Kms.	4.00
2	Construction of Waterholes	20 Nos.	2.00
3	Soil & Moisture Conservation	10 Ha.	3.50
4	Gap filling through plantation of trees	15 Ha.	3.00
5	Construction of Hides /talus	01 No.	1.50
6	Up gradation of Trekking Trails	04 Kms.	3.40
7	Livestock immunization	200 Nos.	1.00
8	Control of forest fires	30 Ha.	3.00
9	Habitat Improvement	20 Ha.	3.00
10	Improvement of sinking & landslide areas through vegetative method	10 Ha.	1.80
11	Awareness & Extension Education	L.S.	0.50
12	Patrolling & surveillance	01 No.	1.00
13	Renovation of F.G.Quarters	01 No.	1.00
14	Renovation of Log Hut	01 No.	1.00
15	Posters,brouhures, pamphlets,signages	L.S.	0.50
		<b>Total :-</b>	<b>30.20 lakhs</b>

## Chapter- 32

### Himalayan Zoological Park, Bulbulay, Gangtok.

Himalayan Zoological Park situated just 6 K.M. away from Gangtok town is one of the high altitude Zoos in the country recognized by the Central Zoo Authority, Government of India.

#### Missions:

- To promote conservation breeding of some important and endangered Sikkim Himalayan and Eastern Himalayan animals under captivity.
- To deliver the best possible care to animals exhibited in the zoo by providing excellence dietary requirements, exhibits construction and husbandry skills.
- To promote and provide excellent exhibition of both endangered and common species of Himalayan regions in the display enclosures for visitors.
- To promote Zoo education, wildlife research and create awareness among people especially children about wildlife and make more of a scientific institutions of Himalayan bio-diversity.
- To protect, preserve and improve the natural forest including the freely living wild fauna of the area.
- To offer the visitors the best of Zoological experience by providing them an opportunity to see the animals in simulated natural environment.
- To provide a sanctuary for the displaced and endangered species due to the neglect and degradation of natural habitat.
- To establish and maintain genetically viable and controlled regional and global breeding programs.
- To generate employment for the local communities.

#### Present Zoo Exhibits:

The Himalayan Zoological Park, Gangtok was opened to the visitors during May, 1997. The present collections of wild animals under captivity as per the animal collection plan are as under:

#### A. Mammals:

Table- 32.1

Category of Animals	Species	No. of Animals & Male-Female Ratio	Status on IUCN/WL (P) Act, 72.
1. Panda	Red Panda	8 (3:3:2)	Endangered/I
2. Big Cat	Snow Leopard	1 (1:0)	Endangered/I
	Common Leopard	2 (1:1)	Lower Risk/I
3. Lesser Cat	Leopard Cat	3 (2:1)	Lower Risk/I
4. Canid	Tibetan Wolf	3(2:1)	Endangered/ I
5. Bear	Himalayan Black Bear	2 (1:1)	Vulnerable /I
6. Wild Cattle	Yak (Domestic)	2(1:1)	Lower Risk/ I
7. Civet	Large Indian Civet	2 (1:1)	Vulnerable/II
	Himalayan Palm Civet	3 (2:1)	Lower Risk /II
8. Flying Squirrel	Hodgson's Flying Squirrel	2(1:1)	Vulnerable/ II
9.Goat-Antelope	Goral	3(2:1)	Lower Risk / III
10. Deer	Indian Muntjak or Barking Deer	9(4:5)	Lower Risk/III

**B. BIRDS:****Table-32.2**

Total Mammals	Schedule	Species	Specimen
	I	7	21
	II	3	7
	III	2	12
		<b>12</b>	<b>40</b>

**Total Animal Collections in the Zoo:****Table- 32.3**

Category of Birds.	Species	No. of Animals & Male-Female Ratio	Status on IUCN/WL (P) Act, 72.
1. Pheasant	Kalij Pheasant	2 (1:1)	Lower Risk / I
	Satyr Tragopan	2 (1:1)	Endangered/ I
	Lady Amherst's Pheasant	2 (1:1)	Exotic (South West China)
	Golden Pheasant	2 (1:1)	Exotic Central China
	Silver Pheasant	2 (1:1)	Exotic ( Southern China)
Total Birds		10	I - 2 Species Exotic – 3 species

Total Animals	Schedule	Species	Specimen
	I	9	24
	II	3	7
	III	2	10
	Exotic	3	6
		<b>17</b>	<b>47</b>

Total Birds	Schedule	Species	Specimen
	I	2	4
	Exotic	3	6
		<b>5</b>	<b>10</b>

**Visitors' Amenities:**

Ticket Counter is located at the main Entrance Gate. One public toilet is attached with the Interpretation Hall near the Entrance Gate and another near Panda Park. There are rain shelters and resting benches provided near display enclosures and at important points. The directional as well as interpretive signages have been placed at appropriate places for guidance of the zoo visitors. Zoo Keepers and field staff do also perform as zoo guides.

**Admission and Fees:**

Entry Passes for adults are in the form of picture cards.

**Table-32.4**

Category	Rate per entry
Adult Person	Rs.. 10.00
Children	Rs. 2.00
Jeep/Gypsy Vehicle	Rs. 40.00
Car/Van Vehicle	Rs. 25.00
Two Wheeler	Rs. 10.00
Movie/Video Camera	Rs. 500.00
Filming	Rs. 1200.00
Dry Picnic (Group upto 20 nos.)	Rs. 200.00

**Opening time:**

Winter: 9.30 A.M. to 4.00 P.M.

Summer: 9.00 A.M. to 4.00 P.M.

HZP is open six days a week. Zoo is closed every Thursday.

It is recommended for a minimum of 2 hours for visit to the Zoo.

**Records of visitors in the Zoo:****Table-32.5**

Years	Indians	Foreigners	Total	
2004	10,884	515	11,399	
2005	18,530	715	19,245	
2006	20,025	856	20,881	
2007	20,441	859	21,300	
2008	17,373	604	17,977	

**Revenue Collections from admission:****Table-32.6**

Year	Amount
2004- 05	Rs. 1,80,067.00
2005- 06	Rs. 2,62,122.00
2006- 07	Rs. 2,78,327.00
2007- 08	Rs. 2,93,357.00
2008 – 09	Rs. 2,69,223.00



Statement of Works Activities and Achievements during the last three years under State Plan and five years under the sharing basis between Central Zoo Authority and State.

**Table- 32.7**

Rupees in Lakhs

Year	Activities	Achievements		Remarks
		Physical	Financial	
2006-07	1. Purchase of animals' Feeds & other essential items.	Upkeep of 52 captive animals and birds, their health care and hygiene.	Rs.40.00	Liabilities of previous year have also been settled during the year.
	2. Making of Zoo sign boards, creation of Rare and Threatened Plants Conservation Park.	15 Zoo sign boards made. 1 Ha. Area created for Plant Conservation Park	Rs.01.00	
2007-08	1. Purchase of animals' Feeds & other essential items.	Upkeep of 52 captive animals and birds, their health care and hygiene.	Rs.14.98	
	2. Topographical Survey of Zoo Area.	Survey of 230 Ha. Of Zoo area. Contour map in the scale of 1:5000 in 5 mtr contour.	Rs.6.06	
2008-09	1. Purchase of animals' Feeds & other essential items.	Upkeep of 52 captive animals and birds, their health care and hygiene.	Rs.20.84	
	2. Improvement of Pheasants' enclosure.	Three enclosures of Pheasants' have been modified and improved.	Rs. 1.98	
2004-05 to 2008-09.	1. Construction of Zoo boundary fencing with M.S.Angle Iron posts (50:50 %).	1172 Mtr	Rs. 28.00	The works were continuing since the period of sanction (2004-05) to the period of completion (2008-09).
	2. Procurement of Computer (100% CZA).	1 Set	Rs. 0.534	
	3. Vehicle for Zoo Hospital (50:50 %).	One Utility vehicle.	Rs. 5.47	
	Vet. equipments for Zoo Hospital (100% CZA).	Hemascreen, Regents, Lab. Glass wares, Microscope, Infra Red lamp etc. (47 items)	Rs.10.62	
	Water supply including construction of receiver tanks, treatment plant etc. (50:50 %)	W/S line 8305 mtr, Reservoir, Tanks (3nos), Treatment Plant (1 No.)	Rs. 95.87	
	Sinages at animals' enclosures.	Display boards & signposts 12nos in Flex papers with frames.	Rs. 3.19	
		<b>Total</b>	<b>Rs. 228.54</b>	

## CHAPTER-33

### RESEARCH: -

#### **Sikkim State Biodiversity Board (Between 2007-2009)**

#### **Summary Report of Activities facilitated under Member-Secretary.**

**Background:** The Sikkim State Biodiversity Board was established in 2007 under the Chairmanship of Hon'ble Chief Minister of Sikkim Dr.Pawan Chamling. The strength of the Sikkim State Biological Diversity Rules included the recognition that perhaps these were the only Biodiversity Rules in the Country where it was not just consultation with the community like in other states rules, but consent of the community which was required for access to any natural resource. Initially there was a period of stagnation when the Member-Secretary of the SBB was transferred to other department. Also NBA stipulated that Chairperson had to be by name instead of designation and the anomaly in notification of the Sikkim Board needed to be amended. As a result it was not possible for the SBB to hold full fledged meeting. However to keep the ball rolling and ensuring Biodiversity Conservation initiatives through various avenues, the Member-Secretary in his additional capacity as Chief Wildlife Warden and Additional Chief Conservator of Forests in conjunction with the Biodiversity Research Cell of the department also facilitated many collaborative activities with GOs and NGOs which had direct significance for the SBB. In-house meetings were held to facilitate this. Now that the three year term of the SBB is over, a proposal is being drafted for fresh nominations for the next term.

**Activities / Achievements in field of Biodiversity Conservation through Member-Secretary, Sikkim State Biodiversity Board, Gangtok**

**1. Facilitation of Research Projects since last three (3) years 2007-09**

Sl. No.	Organization	Researchers	Name of Project	Date on which permission issued
1	Delhi University	Shiva Kr. Sharma	Study of Panax species in Sikkim	June 2007
	Wildlife Institute of India	Pranav Chanchani	Wildlife of Cold Desert	Aug 2007
	Botanical Survey of India	Deepa Tamang	Survey and Ethnobotany of	Aug 2007
	Wildlife Institute of India	Dr. Satya Kumar	Survey & blood Sampling of RJF	17.2.07 to 11.3.07
	Voluntary Health Associations	Dr. B. B. Rai	Study in villages around Barsey	Nov. 2007
	Wildlife Institute of India	Dr. V. B Mathur	KBR Project	Nov. 2007
	Deccan College, Post Graduate and Research Institute, Pune - 411006	Dr. Mukund Kajale	Paleoenvironmental study in North Sikkim	Nov. 07
	Indian Institute of Sciences	Dr. Praveen Karanth	DNA Barcoding of Satyrid Butterflies	Jan 2008
	Botanical Survey of India	Dr. V B Mathur	Collection of Salix spp.	April 2008
	Delhi University	Yasmeen Telwala	Research work on high altitude	May 2008
	Chicago University; WII - Dr. V B Mathur		Birds Spp. Nos. and Densities of KNP/KBR	Dec. 2008
	BSIP		Zema collection	
	TMI/NCF	Dr. Yash Veer, Nima Tashi	Sow Leopard Survey	
	SACON/ CISMHE	Dr. Bhoj Kr. Acharya	Birds & Butterflies of Tista Valley	
	SACON/ CISMHE	Dr. Basundhara Chettri	Reptiles of Tista valley	Dec. 2008
	KFRI	Dr. Sankaran	Collection of <i>Hedychium</i> spp and their pests	
	Punjabi University	Dr. M. S. Saini	Survey & collection of Trichoptera	
	Punjabi University	Dr. Hemender Bharti	Survey & collection of Ants	
	WWF-India	Dr. Partho Ghose	Red Panda Survey	
	Wildlife Institute of India	Dr. Trevor Price	Birds Spp. Nos. and Densities of KNP/KBR	May 2009
	Botanical Survey of India	Dr. B. S. Kholia	Ferns of Sikkim	Oct 2008
	Sikkim Government College	Dr. Basundhara Chettri	Amphibian study	Dec. 2008
	Botanical Survey of India	Dr. Kanad Das	Mushroom of Sikkim	April 2009
	Ghent University & Botanical Survey of India	Dr. Verbekan & Dr. Kanad Das	Study of Lactarius	April 2009

## 2. Presentations / Talks /Paper / etc.:

Date	Lecture/Talk/Paper/Presentation	Name of Programme	Organized by	Venue
7 Jun'07	Forest and Wildlife	Skill Development Programme	Tourism Department	Ravangla Community Hall
16 Jul'07	'Birds of Sikkim'	Guide Training Course for Unemployed Youth	Sikkim Association of Adventure Tour Operators (SAATO)	Sichey Housing Complex, Gangtok (63 participants) under East Zilla Panchayat
8 Aug'07 22 Aug'07 15 Sep'07 26 Sep'07	Flora and Fauna and Ecology of Sikkim	CBD training	Tourism Department	Limbo Bhawan Gangtok Community Hall, Namchi
5 Jan'08 18 Jan'08	Natural Resources of Sikkim, importance of forest rules and Regulations and Conservation of Biodiversity in Sikkim	White Water River Guide Training	Tashila Tours & Travel under Tourism Department	Tashila Beach, Below Lingkim Busty, South Sikkim.
5 May'08	WL PAs in Sikkim on Avifauna & Butterfly	Capacity Building –cum-interactive session to the frontline staff of Forest, WL Division	East & North WL Division, FEWMD	Advanced Technical Training Centre (ATTC), Bardang, East Sikkim.
22 May'08	"Biodiversity and Agriculture"	International Day for Biological Diversity (IBD)	G. B. Pant Institute of Himalayan Env. & Dev. Campus at Pangthang,	GBPIHED.
10 Jul'08	Environment and Conservation of Tsomgo Lake Conservation for 2008-09	awareness cum planning workshop	Tsomgo Pokhari Sanrakshan Samiti (PSS)	Tsomgo Lake
6 Sep'08	Biodiversity of Sikkim & Conservation Issues	Training Prog	Education Development Trust of Sikkim	Tadong.
4 Oct'08	The forgotten Dokpas of North Sikkim	International Conference on Golden Jubilee Celebration of Namgyal Institute of Tibetology (NIT)	NIT	Deorali.
17 Oct'08	Importance of Wildlife and Biodiversity	Training of front-line staff	DFO (WL) East.	Golitar, Fambong Lho WL Sanctuary
20 Nov'08	Indian Biological Diversity Act	training cum	Society for Better	Lingee,

28 Feb'09	2002 and the Biological Diversity Rules 2004	awareness programme on Access and Benefit Sharing from Genetic Resources and Associated Traditional Knowledge	Environment, Sikkim, Tadong Daragon	Khamdong
18 Dec'08	PP Presentation Biodiversity (flora, fauna, habitats)	to SSB personnel	24 <sup>th</sup> Battalion, SSB	Marchak
19-20 Dec'08	Sub Regionalism and Natural Resource Conservation in Sikkim'	International Conference on Sub-regional Approach to Regional Integration in South Asia: Prospects and Opportunities	Sikkim University & Friedrich Ebert Stiftung, New Delhi.	Gangtok
20 Mar'09	Wildlife Diversity in Sikkim	training Workshop for students and teachers on Conservation of Biodiversity	GB Pant Institute of Himalaya Environment & Development (GBPIHED)	Pangthang
23 Mar'09	Sensitization on Wildlife Diversity in Sikkim and Wildlife Administration in forestry	to newly appointed Under Secretaries of the different department		Forest Conference Hall
25 Mar'09 27 Mar'09	Sensitization on Wildlife Diversity in Sikkim and Wildlife Administration in forestry	to newly appointed Under Secretaries of the different department		chamber of Sr. Research Officer (WL)

### 3. Workshops / Training/ Meeting/Seminar

Date	Workshops / training	Name of Programme	Organized by	Venue
9 April'08	Recent Advances in Mathematics & its Application	1 <sup>st</sup> National Conference & Workshop		Sikkim Government College, Tadong
4 Sept'08	one day User workshop on Indian State Basic Environmental Information Database (ISBEID) for Envis		ENVIS Centre	Forest Conference hall.
17 Jan'08	Inaugural Function	1 <sup>st</sup> Glacier & Climate Change Commission Meeting	Govt. of Sikkim.	Chintan Bhawan
19 July'08	1 <sup>st</sup> Meeting / brainstorming session of Support Core Group working under Commission	Glaciers and Climate Change Studies and its impact on Water System in Sikkim	S & T.	S & T Office
1 <sup>st</sup> Aug 2008	Brainstorming session	establishment of a research unit of IBSD in Sikkim	Institute of Bio-resources and Sustainable Development (IBSD)	Chintan Bhawan
18-20 Sept.'08	TRAC meeting	Annual Research Seminar	Wildlife Institute of India	WII, Dehradun
12 Nov'08	inaugural function	bioinformatics centres of North Eastern States	Sci. & Technology	Chintan Bhawan
11 Dec'08	discussion	Ecotourism – Sikkim's emerging Scenario	ECOSS in collaboration with WWF – India	Hotel Chumbi Residency
20 Jan'09	Project Leopard	Meeting of Steering Committee	MoEF.	Room No. 403, at MoEF, , New Delhi
21 Feb'09	Brochures, Booklet on Birds, Centenary	Centenary Celebration	FEWMD	Rabdentse
19 Mar'09	Renewable projects in Sikkim	Renewable Energy Resources	SREDA	Hotel Sikkim Retreat, Gangtok

#### 4. Radio Talks/Write up, Information dissemination

Date	Radio Talks/Write up	Name of Programme		
1-5 Oct '08	Paper presented THE FORGOTTEN DOKPAS OF NORTH SIKKIM,	Golden Jubilee Celebrations of Namgyal Institute of Tibetology		
June -July'08	Facilitated WL Circle	Peacock Ringing, Blood Sampling & Translocation, Drafted MoU between Dept. and Nature Conservation Foundation Mysore, Scientific Backup in Caterpillar Fungus Case, Tinkitam Orchid Conservation Reserve proposal, Wildlife Crop predation issue		
30 & 31 <sup>st</sup> Aug'08 4 <sup>th</sup> Dec'08	Judge/Evaluator	RANK & BOLT Award for Teachers and Students from all districts of Sikkim State Level National Children Science Congress	AIR India  Science & Technology	Mangla Mansion, Gangtok  Marchak
June '08	Information and archival search	history of Forest Department		
11 Sept'08	details information to five CI- XI students of Holy-Cross School	Climate Change Project, Red Panda		
Oct. 2008	information to Joint Secretary Cultural & Heritage Department, GoS	flora & fauna for Independence Parade float at Delhi		

1. Prepared report on chapter X on Carrying Capacity of Teesta Basin by CISHME, Delhi University on Socio-economic & socio-cultural environment and submitted to PCCF.
2. July 2008: Contracted to Drug Controllers of Sikkim, Health Dept. and Sikkim Chemist Associations for Vulture Conservation.
3. Revival of STATE FOREST HERBARIUM
4. Oct 2008: Enabled AHLF & VS Vet Officer Dr. C. P. Rai to nominate for short course Training Programme conducted by Wild Life Institute of India (WII), Dehradun w.e.f 03.11.2008 to 07.11.2008 at Dehradun, through personal letter to Secretary AH, LF & VS.
5. Darjeeling Zoo Educators' Prog by CEE-AHMEDABAD
6. 28/4/2009: Orientation Programmes for resource persons for the Project Long Term Survival of Red Panda in Kanchandzonga Landscape organized by WWF-India Sikkim Branch at Hotel Chumbi Residency for JFMCs and EDCs Members and government officials
7. Monitoring activities of World Pheasant Association
8. State Biodiversity Board : Establishment of State Biodiversity Board; June 2008: Open a account for State Biodiversity Board; Peoples' Biodiversity Register (EDCs to be notified as BMC), Butterfly Poster and Calendars
9. Correspondence with AH/Army for Control of Wildlife Disease (FMD, Birdflu, Ban on Diclofenac, Biodiversity Crime Control (Nathula Trade Route)
10. Project Snow Leopard initiated
11. Booklet on Biodiversity of Raj Bhawan; Rabdentse Brochure; Centenary Brochure Documentation of Historical info for Centenary
12. Panda Newsletter of Forest Dept.
13. Collaboration of SARAH programme of AH Dept.

## Chapter - 34

### **III. SOIL AND WATER CONSERVATION:**

#### **BRIEF REPORT ON ORGANIZATION OF LAND USE & ENVIRONMENT CIRCLE**

Land Use & Environment (LU&E) Circle is headed by Conservator of Forests holding the additional charge of Chief Conservator of Forests - LU&E/Nodal Officer (FCA) vide O.O.No.1852/Gen/DoP dated 02/02/09. The Circle has four Divisions namely; North, East, South and West under LU&E; and one FCA division under FCA Circle which is under direct control of CCF(Env.) for land use policy, activities and execution; and to the CCF(P&A)/FCA for matter pertaining to implementation of FCA 1980 activities.

The Chief Conservator of Forests (LU&E/FCA) holds the following additional responsibilities.

- 1) Programme Coordinator (ENVIS Centre), Forests, Env. & Wildlife Management Department, Government of Sikkim.
- 2) Member Secretary (SEIAA/EAC)
- 3) Secretary (SEAC/EAC)
- 4) Regional Resource Agency for NEAC
- 5) Coordinator (NGC)
- 6) Nodal Officer (CAT/HEP)
- 7) Member Core Group, Glacier Commission Sikkim
- 8) Member, Centre Level Monitoring Committee for Teesta Low Dam-III (W.B)

The main activities of the Land Use & Environment Circle are as under:

- 1) Control and Management of Environment, Soil Conservation and River valley projects, National River Conservation Program, Implementation and Monitoring of State Forest, Land Use & Environment Policy, Wetlands Conservation, Landslide Protection & Conservation Programme, Catchment Area Treatment Plan, Water Resources Conservation, Restoration of eco-fragile landscape, protection and improvement of degraded land. Creation, updation and access of environmental information system. Environmental Education, Extension & Awareness, Environmental matters, Policy and its protection & Monitoring and all other matters pertaining to Land Use & Environment Sector.



2. The main activity of the FCA Circle is to implement the provision of the FCA 1980 and also to oversee the implementation of condition and stipulation of FCA Clearance by User Agency.

The Budget provision for Land Use & Environment Circle for the year 2008-09 is as under (Plan /Non Plan):

(Plan)

Original	=	85.00 lakhs
1 <sup>st</sup> Supplementary	=	Nil
2 <sup>nd</sup> Supplementary	=	12.00 lakhs
<b>Total</b>	=	<b>97.00 lakhs</b>

(Non-Plan)

Original	=	165.62 lakhs
1 <sup>st</sup> Supplementary	=	322.43 lakhs
2 <sup>nd</sup> Supplementary	=	9.29 lakhs
	=	<b>497.34 lakhs</b>

Therefore, the Plan allocation is 0.11% of the total budget and 0.59% for Non-Plan for 2008-09 with this provinces, it is difficult to achieve any physical target for over all environmental programme. The budget provided under Plan head is not adequate to create any new assets for Soil Conservation, Environmental improvement and various other areas. The budget is merely met the salaries and administrative expense of the office of the Addl. PCCF and the CCF and division offices in the districts. The division offices are also facing financial constraint due to limited financial resources allotted on the Plan and Non-Plan Heads.

The following schemes have been sponsored by Government of India under 100% CSS.

- 1) Landslide & Erosion Control in West District/ South District which were sanctioned in the year 2004-05 were completed by the end of 31<sup>st</sup> March 2009. Impact of Treatment of Land slide and Erosion Control activities in this watershed were carried out jointly by ICAR Tadong, G.B.Pant Institute, Mines, Mineral and Geology Department and Forests, Environment & Wildlife Management Department, Government of Sikkim and produced comprehensive report on Treatment of watershed projects.  
The second phase of treatment of landslide and erosion control at Rangrang Watershed is under progress. The mid-term evaluation of the project approved during 2009-10.
- 2) The Conservation of Wetland is another project sponsored by Ministry of Environment & Forests, Government of India. Around 6 sensitive wetland complexes of the State have been included in the National Wetland Conservation Programme of the Government of India and funded for Conservation and Management of Wetland in four high priority categories viz: Gurudongmar in North Sikkim, Tsomgo in East Sikkim, Phedang in East Sikkim and Khecheopalri in West Sikkim District.

- 3) Under the 12<sup>th</sup> Finance Commission, the Land Use & Environment sector was allotted funds for restoration ecologically fragile landscape and improvement of ecology of the area in the forest area. Accordingly, the scheme were drawn and prepared to address the problem of land degradation, soil erosion and limitation of water sources.
- 4) The Sikkim Ecology Fund & Environment Cess Act 2008 extended in the state since 2005 and its rule were framed in 2007 and notification for implementation of the Act through Prescribed Authority notified along with operational rules in the year 2008-09 and implemented the activities approved in the rule.

The following Schemes have been implemented during the prescribed period.

a) Creation of indigenous temperate nursery in East District - 0.5 Hac.	Rs.6.98 lakhs
b) Creation of indigenous low belt nursery 0.5 Hac.	Rs.5.59 lakhs
c) Re-strengthening & improvement of ENVIS Centre	Rs.2.88 lakhs
d) Survey & authentication of various sacred groves in all district.	Rs.2.50 lakhs
e) A publication of Environmental New letter 'PANDA' 800 copies	Rs.1.50 lakhs
f) Payment of honorarium to Chairman/ Member of SEIAA/SEAC/EAC category 'B' for 8 months.	Rs.3.62 lakhs
h) Preparation and supply of eco-friendly garbage disposal bags -3000 Nos.	<u>Rs.2.00 lakhs</u>
<b>Total</b>	<b>Rs 25.07 lakhs</b>

These works have been executed by the Circle during 2008-09.

- ✓ Regional Museum of Natural History (RMNH) site at Marchak near Science City was finally selected and approved by the State Government for establishment of Regional Museum of Natural History (RMNH) and an expert from Government of India inspected the site and has agreed in-principle to provide fund for the same.
- ✓ Environmental Education Programme through Ministry of Environment & Forests were also organized and provided guidelines and capacity building through a media of NGC and NEAC during 2008-09.
- ✓ The Circle also made appropriate and adequate arrangements for creating awareness, sensitization and dissemination of environmental agenda enshrined in the eco calendars through mass community participation, NGO and general public.
- ✓ The Circle also brought notification for implementation of condition and stipulation accorded in the Environment Clearance for safety and improvement of environment through Multi-disciplinary Central Level Committee.
- ✓ The Circle also took part in organizing environmental related programme with G.B.Pant Institute, ICAR, WWF and Green Circle and made visible impact.
- ✓ The DFOs/ACFs have been appointed as Nodal Agency for effective coordination of implementation of State Green Mission Programme in the district and has organized with zeal and enthusiasm.
- ✓ The Divisions also implemented schemes for environmental amelioration and improvement programme under Sikkim Ecology Fund and Environment Cess.
- ✓ The year 2008-09 witnessed heavy forest fire outbreak and the division attempted to assist the Territorial Division to contend forest fire.
- ✓ Reports on Treatment of Landslide and Erosion, Management Plan, Quarterly Report, Annual Report and collection and collation of various data information on environment vis-à-vis administration were prepared and maintained under ENVIS Centre. Large information on various aspects of ecology, environment, administration and other related data can be accessed through the centre.

**Activities carried out under 12<sup>th</sup>. Finance Commission during 2008-2009.**

**Table-34.1**

Sl.No	District	Location	Item of work	Achievement	
				Physical	Financial
(1)	(2)	(3)	(4)	(5)	(6)
01	North	-	1.Dry stone wall fencing	3 Km.	4.01
			2. CRSM Wall	71.25 cum	1.43
			3. Catch Water Drain	350 RMT	2.59
			4. Sausage Wall	310 Sq.km	0.83
			5. DRSM	13 cum	3.21
			Sub-total-	-	12.07
02	East	1.Pakyong,Ganchung 2.Raley,Samdong	1.Sausage Wall 1:4:8	85.85 cum	1.02
		1.Chandmari Shiv Mandir 2.Nazota, 3.Upper Chandmari Forest Colony 4.Nimatheeng Jhora,Sichey	CRSM 1:4:8	111.75 + 52.29 cum  164.04 cum	1.95 + 1.48=3.43
		1. Bakthang R.F. 2.7 <sup>th</sup> Mile R.F.	Stone wall fencing	2.2 Km	8.92
		1.Bakthang R.F.	Regeneration of other degraded forest area	12.20 ha	2.26
		1. Upper Chandmari	Catch Water Drain	200 MT	2.93
		1.Baluakhani Forest Colony	Plum Concrete Wall	15.90 cum	0.55
			Sub-total -		19.11
03	South	Cherehery (Salghari R.F.)	Catch Water Drain	13 MT	0.98
			Sub-total -		0.98
04	West	1. Senglik Slip 2. - do -	CRSM wall	44.72 RMT	0.84
			Catch Water Drain	14 RMT	0.84
			Sub-total -		1.68
05	East	1. Singtam & Rongli	Dry stone wall fencing	2.2 Km.	8.92
			<b>Grand Total -</b>		<b>42.76</b>

**Wetland Management Scheme (LU&E) During 2008-09**

**Table-34.2**

Sl.No.	District	Location	Item of work	Achievement	
				Physical	Financial
(1)	(2)	(3)	(4)	(5)	(6)
01	North	Gurudongmer	1. Survey & Demarcation	15 Ha	2.34
			2. Construction of DRM Wall	3 Km	3.96
			3. Seabuckthron Plantation	20 Ha	2.15
			4. Creation of Seabuckthron Pltn.	5 Ha	1.74
			5. Public Awareness Programme	-	1.23
			<b>Sub-total -</b>	<b>-</b>	<b>11.42</b>
02	East	Tsomgo	1. Creation of Hippophea Nry.	1.00	2.56
			2. Silt retention structures	549.65 cum	8.78
			3. Livelihood programme	-	1.00
			<b>Sub-total -</b>		12.34
		Phedang	1. Silt retention structures	549.65 cum	8.78
			3. Livelihood programme	-	0.50
			<b>Sub-total -</b>		<b>21.62</b>
03	West	Khecheopalri	1. Microplanning & preparation of Management Action Plan & Annual Plan operation	1	0.30
			2. Survey & Demarcation	2 Km	1.00
			3. Fencing (Stone Wall)	0.5 Km	3.00
			4. Construction of wall inside G.I.Sausage	40 Mts.	2.20
			5. Maintenance of Nursery	0.60 Ha	1.10
			6. Awareness Programme	3	0.90
			7. Avenue Plantation	0.5 Km	0.20
			<b>Sub-total -</b>		<b>8.70</b>

## TSOMGO LAKE AND EFFORTS MADE ON ITS CONSERVATION:

Tsomgo Lake is located at an altitude of 12400 feet from MSL and 38 Km away from Gangtok in East District of Sikkim. This serene and beautiful high altitude lake is considered as a sacred lake by the local inhabitants. For years together, this lake had remained undisturbed due to its remoteness and poor accessibility. However, from early sixty's road construction for defence purposes and other forms of human activities in the area has gradually started affecting the lake. From late eighty, the inflow of visitors both local and from outside the State increased in number.

Few local people from 1988-89 started small business like selling of tea and other eatable items to the visitors in the vicinity of Tsomgo Lake area by erecting umbrella sheds. Slowly and gradually the number of visitors and tourists in the areas increased and tea stall under umbrella shed converted into small shops which risen upto 52 number till the date of shifting from the areas to shopping complex below Tsomgo Lake.

Ever since the area was opened up for tourism, the tourist traffic has been growing at an alarming rate. Nearly 400 vehicles ply daily during the peak session carrying 10 passengers per vehicle on an average. While this is a good indication for State's economy but the future consequences due to deterioration and degradation of the environment and the scenic beauty may not only cause environmental problems but could also adversely affect the tourism industry.

The hordes of tourists and other local visiting the area each day has changed the landscape of the lake due to temporary shops and structures on the lake side made out of bamboo matting, tar drums, scrap GCI sheets etc. such structures had distorted the aesthetic look of the lake environment. The sacred lake started receiving garbage and dirty slurry of human wastes, oil spills from vehicles, littering of the areas from shops, tea stalls and waste water from kitchens and by visitors. There were 30 shops before 1998 in the lake areas.

There is a constant threat to lake environment due to unregulated human activities and animals, pollution of lake water, gradual siltation due to construction activities, pollution from plying vehicles mainly noise, smoke and oil spills, deforestation in the nearby areas as the people used to keep themselves warm during night by burning firewood in the hearth (Bhukaris), grazing by cattle and pack animals. Littering of surrounding by yak dung as Yak Riding is common in the lake areas as it is a tourist hub.

There are hosts of other NGOs who worked on the conservation of Tsomgo Lake like Green Circle of Gangtok who have put their best efforts in creating awareness among the tourists and other visitors. The said NGO has put up many sign boards with information details about the lake. Similarly, the tourism Department has also tried to create awareness among the tourists and people visiting the area,. Under the Wetland Conservation Programme, the Land Use & Environment Circle of the Forest Department, JFMCs and EDCs have also taken up conservation and protection activities of the lake. However, continuous inflow of tourist and biotic activities, the protection of lake, its flora and fauna is under constant threat. The siltation of the lake is a major problem. No doubt that this lake has provided livelihood of thousands of people living along the JN Road from tourism activities. However, development should go hand in hand with conservation of nature and environment.

Keeping all these points in mind during 1997, the State Forest Department in consultation with the Tourism Department, Government of Sikkim moved a proposal for eco tourism and conservation programme of lake with following objectives to preserve, protect and conserve the lake environment on a sustainable basis for conservation of Tsomgo Lake.

- Shifting the existing huts/shops from the lake site an area below the lake.
- To relocate the car parking facilities below the lake near the proposed shop areas.
- Creating and providing yak and pony on the downward slope of the lake.
- Providing pay and use toilet facilities near the shops and parking areas.
- Providing garbage disposal bins and signboards with environmental message around the lake area.
- Development of parks and gardens etc.

The proposal for diversion of 1.465 ha of Reserve Forest land below the lake was sent to the Ministry of Environment and Forests, Government of India, Eastern Regional Office, Bhubaneswar under section 2 of the Forest (Conservation) Act, 1980 on 30.3.1998 for the above mentioned purpose. The Ministry conveyed its formal approval for use of 1.465 ha of forest land vide No.12-89/FCE/5239 dated 20.11.1998. However, it took almost 10 years to complete the project for parking and shopping areas below the Lake. The Forest Department constantly requested the Tourism Department to complete the construction and shift the shops from the Lake site.

Further, during 1999, the government had constituted a Tsomgo Lake Management Committee with Additional Secretary, Tourism as Chairman, Divisional Forest Officer (T), Forest Department as Chief Executive Officer and Joint Secretary / Dy. Secretary, Urban Development and Housing Department and other local people as members of the committee to manage all the facilities as well as the maintenance and upkeep of Tsomgo Lake vide Notification No.150 (8)98/TD/6942 dated 5<sup>th</sup> April, 1999. This committee also played a vital role in conservation and protection of Lake Environment.

While the construction Shopping Complex was completed by 2007 but shifting again took almost a year. Meanwhile on 31/7/2006, Major role was played by the Forest Department, Government of Sikkim and was also assisted by NGOs like WWF-I and TMI. A policy was drafted and a Notification was brought out for conservation of Lake in partnership with Gram Panchayats and Pokhri Sanrakshan Samiti. The Tsomgo Lake Sanrakshan Samiti was formed on 24.5.2007 at a Gram Shabha held at Tsomgo under the guidance of Forest Department and WWF-I. Committee was constituted, consisting of following members.

- |    |                              |                  |
|----|------------------------------|------------------|
| 1. | Shri Chewang Norbu Bhutia    | President        |
| 2. | Shri Bikash Rai              | Vice President   |
| 3. | Shri Gnawang Gyaltzen Bhutia | Gen. Secretary   |
| 4. | Shri Tamding Dophapa         | Joint Secretary  |
| 5. | Smt.Phurba Doma Bhutia       | Deputy Secretary |
| 6. | Shri B.B.Moktan              | Treasurer        |
| 7. | Shri Dawa Norby Bhutia       | Vice- Treasurer  |

The Samiti was then registered in the office of the Divisional Forest Officer (T) East at P.S.Road, Gangtok on 31/12/2007. A temporary office of the TPSS was inaugurated on 1<sup>st</sup> April, 2008 at Chipso village near Tsomgu with launching of entry ticket of Rs.10/- (Rupees- ten) only to be collected from every tourist and visitors entering the area.

The Tsomgo Lake Sanrakshan Samiti also played a vital role in removing the shops from Lake Site. The TPSS & Forest Department faced a lot of criticism in the initial stage even from the Government Department also. Till 31<sup>st</sup> March, 2009 the Tsomgo Pokri Sangrakshan Samiti collected a sum of Rs.25, 76,564.00 as entry fee from the tourists and visitors. 50% of the collection is being utilized by the TPSS for conservation & protection of the Lake as per the approved conservation plan. During 2008-09 a sum of Rs.5,19,600.00 was sanctioned for Tsomgo lake conservation works namely desiltation programme, Sign boards, Lake cleaning drive, construction of garbage collection pits, dustbins for shops etc. Besides this the TPSS has been actively working and helping the tourists during accidents, road mishaps and provides shelter to stranded tourists during road blockade.

The new shopping complex below the Lakes has been allotted to shopkeepers who vacated their shops from Lake Site. The shifting was done after issuing repeated reminders to the shopkeeper for shifting of shops by Forest Department followed by tourism Department. Finally by the end of June 2008, the shopkeepers shifted the shops do9wn to shopping complex leaving a huge quantity of garbage in and around the Lake.

TPSS along with the State Forest Department along with the State Forest Department organized a cleaning drive in collaboration with WWF India and SKES by removing garbage from the area using volunteers and taking all garbage by truck to garbage dumping yard at Martam below National Highway which is about 65 km from Tsomgo Lake. Since then TPSS has been playing a vital role in the Lake conservation.



## North Division

In the year 2008-09, the Land Use & Environment Cell, North Division executed the following routine and project works for the safeguard of the environment in general.

### Projects & Schemes

1. A project title “Treatment of Landslide & Soil Erosion in Rangrang Watershed Catchment of Teesta River in North Sikkim” under the Scheme “Technology Development, Extension & Training (TDET) is granted by the Ministry of Rural Development (MoRD). The total cost of the project is Rs. 473.13 Lakh. The work executed during the fiscal year 2008-09 is as under:

**Table-34.3**

Sl. No.	Item of Work	Achievement		Remarks
		Phy	Fin (Rs.in lakhs)	
1	HP Stone Wall inside Sausage in Landslide Areas	1500 Rmt	61.82	
2	HP Stone Wall inside Sausage for River Training	800 Rmt	34.58	
3	G.I. Wire Sausage Wall with 1:2:4 P.C.C. Lining	330 Rmt	20.36	
4	Soil & Moisture Conservation	50 Ha.	15.50	
5	Afforestation (i.e. Maintenance)	160 Ha.	28.29	
6	Bamboo Plantation including maintenance	90 Ha.	12.95	
7	Bally Benching	72 Ha.	13.73	
8	Geo-Synthetics & Polymers	1400 Sq.Ft.	2.59	
9	Re-grading of Slopes	900 Cum	4.55	
10	Anchoring / Shoteeting	80 Mtr	Nil	
11	Supervisor	03 no.	0.46	
12	Administrative Overhead		17.78	
	Total		212.60	
	Beneficiaries Contribution Share (-)			
	<b>Grand Total</b>		<b>212.60</b>	

## 2. Catchment Area Treatment (CAT) Plan of Teesta Stage V, Hydro Electric Project.

The last left maintenance works were executed during the year 2008-09. The following are the figures.

**Table-34.4 (Rs.in lakhs)**

Sl. No.	Item of Work	Achievement		Remarks
		Phy.	Fin. (Rs.in lakhs)	
1	Maintenance of Nursery & Supervisor	05 Ha.	811	
2	Maintenance of Afforestation (2005-06)	916 ha.	12.60	
3	Maintenance of Bamboo Plantation	108 ha.	2.00	
	<b>Total</b>		<b>22.71</b>	

## East Division

### I. Physical Target and Actual Achievement

**Table-34.5**

Sr. No.	Name of Scheme	Name of Item	Target		Achievement		Location
			Physical	Financial (in lakhs)	Physical (Rs.in lakhs)	Financial	
1	Sikkim Ecology Fund & Env. Cess Act.	i) Hi- tech Nursery creation at high & low altitudes.	0.5ha. each	12.57	Hi-tech Nursery creation at low & high altitude- 0.5 ha. each	12.54	i) 6 <sup>th</sup> mile Lagyap RF ii) Jitlang RF, Rangpo
		ii) Identification & development of sacred groves		1.00	Identified flora & fauna of sacred groves.	1.00	Rumtek, Enchey and Gnor monasteries
<b>TOTAL</b>				<b>13.57</b>		<b>13.54</b>	

## South Division

### I. PHYSICAL & FINANCIAL ACHIEVEMENT FOR TREATMENT OF LANDSLIDE AND EROSION CONTROL UNDER TDET PROJECT WITHIN SOUTH LAND USE & ENVIRONMENT DIVISION DURING THE YEAR 2008-09

**Table-34.6**

Sl. No.	Activities	Target		Achieved		Location
		Physical (in Hac)	Financial (Rs. in lacs)	Physical (in Hac)	Financial (Rs. in lacs)	
1.	G.I. Sausage wall with 1:2:4 PCC Lining	48 mtr	3.07	48 mtr	3.09	Mamring, South Sikkim.
2.	Soil & Moisture Conservation	32 ha	10.56	32 ha	10.56	Lower Donok Slip – 04 ha Turung Suminkhor. – 03 ha Nalam (water source area) – 03 ha Yabandanra (Upper Pomphok) – 03 ha Bokrong- Katang – 04 ha Nagi (around lake) – 03 ha Ruchung slip – 02 ha Lower Kolbong – 04 ha Turung Slip – 06 ha
3.	Afforestation	50 ha	10.17	50 ha	10.17	Mamring Kopchey – 03 ha Bimbong slip – 07 ha Donok slip – 03 ha Suminkhor – 06 ha Turung (below Sec. School) – 05 ha Tek – 03 ha Palitam – 04 ha Nagi Pokhari compound – 04 ha Upper Norok slip – 02.50 ha Thokrey slip – 06 ha Kateng slip – 06.50 ha

4.	Maintenance of Afforestation	100 ha	3.70	100 ha	3.70	Donak – 30 ha Turung – 50 ha Aley – 05 ha Nagi – 06 ha Mamring – 03 ha Maneydara – 06 ha
5.	Bamboo plantation	42 ha	10.79	42 ha	10.79	Lingkhim Bimbong slip – 05 ha Suminkhor – 03 ha Kanam Slip – 02 ha Namthang Kolbong – 05 ha Phong – 04 ha Pomphok (Basainy slip) – 06 ha Kateng slip – 08 ha Gairygoan slip – 07 ha Turung slip – 02 ha
6.	Bally Benching	12 ha	2.98	12 ha	2.97	Mamring – 03 ha Bimbong – 02 ha Kateng – 04 ha Pomphok – 02 ha Turung – 01 ha
7.	Application of Geo Synthetic and polymers	5000 sqm	9.25	5000 sqm	9.24	Kateng – 3000 sqm Pomphok – 1000 sqm Turung Donak – 1000 sqm
8.	Regrading of Slope	7500 cum	4.13	7500 cum	4.13	Turung – 1500 cum Donak – 1000 cum Pomphok – 1000 cum Katang – 3500 cum
9.	Anchoring / Shoteeting	80 mtr	5.20	80 mtr	5.20	Turung slip – 80 mtr
10.	Supervisors	2 Nos.	0.72	2 Nos.	0.72	Kateng- Pomphok – 1 No. Turung- Donak – 1 No.
11.	Administrative Overheads i/c Spill over of 2007-08	-	6.39	-	6.39	
	<b>Total Beneficiaries contribution</b>		<b>66.96</b> <b>(-) <u>2.50</u></b> <b>64.46</b>		<b>66.95</b> <b>(-) <u>2.50</u></b> <b>64.45</b>	

## West Division

### Details of works carried out during 2008-09 under landslide and erosion control under TDET scheme in West Sikkim

Table- 34.7

(Financial Rs.in lakhs)

Sl.No.	Activities	Target		Achieved		Location
		Phy	Fin	Phy	Fin	
a.	Afforestation	75 Ha	15.25	75 Ha	15.25	Pipaley, Salley, Rangsang
b.	Bamboo Plantation	45 Ha	11.56	45 Ha	11.56	-do-

### Physical and financial Achievement for Treatment of Landslide and Erosion Control under TDET Project during 2008-09

Table-34.8

(Financial Rs.in lakhs)

Sl.No.	Name of Schemes	Target		Achievement		Location
		Phy	Fin	Phy	Fin	
a.	SMC	54 (Ha)	17.97	54 Ha	17.97	Pipaley, Salley
b.	Balley Benching	10 Ha	2.48	10 Ha	2.48	Mangtang, Salley
c	G.I. Sausage with PCC lining	160 RMT	10.23	160 Rmt.	10.23	Salley, Mangtang, Rangsang
d	Regarding slope	7500 m <sup>2</sup>	4.12	7500 m <sup>2</sup>	4.12	Salley, Rangsang
e	Application of Geosynthetic	5000 m <sup>2</sup>	9.24	5000 m <sup>2</sup>	9.24	Salley, Pipalley, Rangsang.
f	Anchoring/Shock reting	42 mtr.	2.80	42 mtr.	2.80	Salley
g	Sowing dibbling Broadcasting	29.5 Ha	3.56	29.5 Ha	3.56	Pipley, Salley, Mangtang, Rangsang

## Chapter -35

### IV. ECOLOGY AND ENVIRONMENT:

#### State Pollution Control Board:

##### 1. Inventorisation of Hazardous Waste.

The Hazardous Waste generated by Industries of our State has been carried out.

Sl.No.	District	Landfillable	Recyclable	Incinerable	Total
01	North	-	-	-	-
02	East	8550 Kg.	6550 lts.	-	15100
03	West	-	-	-	-
04	South	2860 Kg.	88 Lts.	-	2948

##### 2. Inventorisation of Bio Medical Waste.

The Hazardous Waste generated by Hospitals of our State has been carried out.

Total no. of Heal Care : 32

Total no. of incinerator installed : 07

Total no. of authorization  
Granted since 2008 : 11

Total no. of BMW : 264.46 Kg / day.

##### 3. Monitoring of River Teesta Rangit.

Monitoring of River Teesta 9 stations and Rangit 5 stations under National Water Quality Monitoring Programme is being carried out regularly and report submitted to CPCB on a regular basis.

##### 4. Monitoring of Air Quality Status of Sikkim.

Air Quality Monitoring is being carried out by the SPCB under NAMP. Presently in 2 stations some problems have been observed for which help of Envirotech has been sought for.

##### 5. Public Hearing of Rangit –II Hydro Electric Project.

Public Hearing has been carried out and report submitted.

##### 6. Environment Status study of Maghey Mela.

Environmental status study was carried out by the SPCB during the Maghey Mela held at Jorethang from 13-15 th. January. Report has been prepared.

##### 7. Environmental Quality Monitoring of Hydro Electric Project.

Air Monitoring, Water Analysis, and Noise Monitoring are being conducted by the team of SPCB in all the H.E.Project in Sikkim on regular basis.

8. Conducting Mass Awareness Camp.  
Mass Awareness were conducted by realizing various types of posters, stickers and T-Shirts with environment messages. T.V. and other media are also involved for generating awareness. One visual advertisement is under preparation.
9. Public Hearing of Ting-Ting.  
Public Hearing carried out on 18/6/2009 has been deferred for the time being.
10. Public Hearing of Tashiding.  
Public Hearing carried out on 19/6/2009 has been deferred for the time being.
11. Municipal Solid Waste Management & handling.  
Demo project for Solid Waste in South West district of Sikkim under UD&HD. Only first installment of Rs.60 lakhs received rest not yet released which is hampering the progress of the work. The state share of Rs.25.00 lakhs have been received on toto. A SWM plant is functional for capital town and other towns of East district. Waste bell ringing and collected from household and bazaars are taken to Martam compost plant after segregation at sources.
12. Sewage Treat Plant under NRCP (PHE).  
Sewage treatment plant under PHE is under progress for Ranipool, Singtam and Gangtok. The fund is parked in SPCB Account, and is released as per progress of work on being carried by PHE Department, capacity 8 MGD.
13. Minars: Under Minars Water Quality of River Teesta & Rangit as per the directives of CPCB, is carried out regularly at 14 stations.
14. Regular Water Quality Analysis of Portable river and jhora water.  
Regular Water Quality Analysis of Portable water and jhora water is being done by SPCB.
15. Computersation.  
Computers have been procured and the networking yet, to be done.
16. Induction of Manpower.  
Out of 8 post, 6 have been filled up viz. Scientist'B', AEE, JSA, DEO, Jr.L.A. F.A. salary not yet released by MoEF.
17. Strengthening of Laboratory, Proposal submitted yet to be approved.  
A proposal amounting to Rs.93 lakhs have been submitted to MoEF for procurement of Laboratory equipments, reply awaited.
18. Provision of SPCB building.  
Proposal submitted to both CPCB & MoEF for financial assistance for construction of a building, land has been provided by the Forest Department, Govt.of Sikkim, free of cost.
19. Chemical Analysis of Manpur Khola South Sikkim (Project submitted).  
Proposal amounting to Rs.6.94 lakhs have been submitted to CPCB – Delhi, sanction awaited.

## **Chapter - 36**

### **Environment and Pollution Control Division:**

#### **1. Ecological Development of Urban Areas:**

For the Ecological Development of Urban Areas the Department has established one Pinetum Nursery at Raj Bhawan Complex with an area of 0.40 Ha. The seedlings are supplied to the Parks & Garden Division especially for their plantation in and around Gangtok area and also distributed to the locals for private holdings. The total man days works is 730 and the financial expenditure incurred is Rs.1,09,060.00 (Rupees- one lakh nine thousand sixty) only.

#### **2. Wet Land Conservation:**

The High Altitude Nursery has been established by the Department having an area of 0.40 Ha. With one regular labour in the Kyongnosla Nursery during the year 2008-09. The Army personnel took 5000 nos. of seedlings of different species as per their requirement for the plantation. The EPC Division has also constructed 340 cum Silt Detention/Dry wall at Changu Lake the expenditure incurred for the maintenance of Kyongnosla Nursery is Rs. 1,19,060.00 (Rupees- one lakh nineteen thousand sixty) only and that of the construction of Silt detention dry wall is Rs.1,88,554.00 (Rupees- one lakh eighty eight thousand five hundred fifty four) only.

### **Research & Ecological Regeneration (J.N. Botanical Garden, Rumtek).**

There are 8 nos. of labourers engaged for the maintenance of J.N.Botanical Garden at Rumtek. The works include for purchase/procurement of implements, seasonal flowers, manures and pesticides, with a repair of Green House the expenditure incurred in Rs.5,64,736.00 (Rupees- five lakh sixty four thousand seven hundred thirty six) only. The J.N.Botanical Garden is very important place for visit of Tourist as well as general public and students for their studies of plants. The provision of expenditure is very less and Department may provide Rs.10 lakhs yearly for the beautification and maintenance for attraction of tourist visit.



Work carried out under E.P.C. during 2008-2009:

**Table-36.1**

Sl. No	Name of Activities	Allotment of Budgets (in thousand)	Location	Target		Remarks
				Physical	Financial	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
01	<b>Conservation Programme</b> a. Wetland Conservation	308				
	b. Maintenance of Nursery		Kyongnosla	730 days	1,09,060.00	
	c. Purchase of cowdung, collection of jungle manure, purchase of poly bags and implements		Kyongnosla	L.S.	10,000.00	
	d. Construction of silt detention/dry wall		Changu	340 cum	1,88,554.00	
02	<b>Ecological Development Urban Areas</b>	63				
	a. Maintenance of Nursery		Pinetum	730 days	72,670.00	
03	<b>Research &amp; Ecological Regeneration (Wages)</b>	343				
	a. Maintenance of Garden		Rumtek	3650 days	3,64,736.00	
	b. Supplies & Materials	200				
	c. Purchase / procurement of implements, seasonal flowers, manures & pesticides		J.N.B.	L.S.	75,000.00	
	d. Repairing of Green House		J.N.B.	As per the estimate	1,25,00.00	

## Chapter-37

### V. SERICULTURE :

Under the administrative umbrella of Forest, Environment & Wildlife Management Department, the Directorate of Sericulture exists with its own functionaries trained up with specific working skills to deal with various Sericultural activities defined under the its jurisdiction. The specific function of the Directorate is to deal with the various Sericulture developmental activities in the State and some of the schemes are being sponsored by the Central Silk Board, Government of India termed “Catalytic Development Programme” (CDP). In fact, the over all activities being carried out by the Directorate at present could be categorized under three broad heads; such as (i) Extension Programme (ii) Silkworm Rearing Programme and (iii) Training, Motivation and Capacity Building Programme

1. Sericulture Extensional Programmes: In the Sericulture extension programme includes mainly the implementation of various schemes covering three sectors incorporated in the Catalytic Development Programme (CDP) as been funded by the Central Silk Board. The sector wise and scheme wise targets earmarked under the CDP for the financial year 2008 are as cited below in Table -1.

Sl. No.	Name of Scheme	Earmarked Targets: (in acre)			Achievement of Targets: (in acre)			Remarks
		Mul.	Eri	Muga	Mul.	Eri	Muga	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Augmentation of Silkworm food plants.	20	51	10	20	51	20	100%
2	Maintenance of Silkworm food plants	20	51	10	20	51	20	100%
3	Sericulture farmers trained	20	51	10	20	51	20	100%
4	Provision of start up tools	20	51	10	20	51	20	100%
5	Construction of Silkworm rearing house	20	06	-	-	-	-	On progress
6	Provision of Drip irrigation facility	03	-	-	-	-	-	100%
	Total -	103	210	40	80	104	40	

2. Silkworm Rearing Programme: To conduct successfully three types of silkworm rearing three minimum crops annually in two different sectors i.e. in all Government Sericulture farms located at different places in three districts and also in farmer's level at different villages in East, South and West Sikkim has been prime responsibility of the Directorate. Hence, the outcome of three types of silkworm rearing conducted in the farmer's level and in Government farms during the year 2008 is cited below in Table 2.

Sl. No	Name of Scheme	Targets Earmarked:			Targets Achievement:		
		Mul. (in Kg)	Eri (in Kg)	Muga (in No.)	Mul. (in Kg)	Eri (in Kg)	Muga (in No.)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Govt. Sericulture Farm, Rorarthang	360	299	15000	140	-	-
2	Seri village in East District	560	1313	12000	268	140	-
3	Govt.Seri.Farm, Mamring	480	200	18000	118	84	1012
4	Seri. village in South District	1300	1750	21000	20	77	7458
5	Govt. Seri. Centre Nagdhara	60	100	-	06	07	1979
6	Seri. Village in West District	1840	1000	18000	03	08	3664
	Total -	4848	4563	84000	546	316	14113

3. Training, Motivation and Capacity building: Sericulture farmers Training and orientation programmes for the minimum duration of 15 days separately for mulberry, Muga and Eri has been regular in feature. This year first time in the Sericulture history of Sikkim the directorate has organized a specialized training on Eri Silk Reeling and yarn weaving programme for the rural woman at Kokrajhar, under the capacity building programme. Under the same programme one month special training at Government Muga Farm, Cooch Bihar (West Bengal) was organized by the department for new Muga farmers, one month special training for mulberry farmers at RSRS Kalimpong was also organized. And this year only exposure field trip for the progress sericulture farmers of three districts to south India was conducted. And most of the Sericulture officers and field functionaries have attended the skill updation programme organized by the Central Silk Board, Government of India at Central Sericulture Research and Training Institute at Berhampore (West Bengal) and Regional Development office at Guwahati.

## **ENVIRONMENTAL SUSTAINABILITY INDEX:**

Sikkim stands 1<sup>st</sup> Rank in Conservation of Natural Resources:

Centre for Development Finance (CDF) at the Institute for Financial Management and Research (IFMR) ranks Sikkim 1<sup>st</sup> among the Indian States in Conservation of Natural Resources and Performance in Land Use for the year 2008. Sikkim has been adjudged high at 2<sup>nd</sup> rank in the overall ESI ranking.

States (1)	ESI Score (2)	ESI Rank (3)
Manipur	100.00	1
Sikkim	90.99	2
Tripura	85.81	3
Nagaland	82.08	4
Mizoram	81.58	5
Arunachal Pradesh	75.45	6
Chhattisgarh	74.09	7
Orissa	71.88	8
Uttaranchal	71.18	9
Assam	70.15	10
Meghalaya	66.79	11
Jharkhand	64.33	12
Himachal Pradesh	61.26	13
Karnataka	55.79	14
Kerala	53.71	15
Bihar	51.98	16
Jammu & Kashmir	48.73	17
Goa	45.16	18
Madhya Pradesh	43.01	19
Maharashtra	37.28	20
West Bengal	35.72	21
Tamilnadu	33.75	22
Andra Pradesh	32.55	23
Rajasthan	26.52	24
Haryana	25.59	25
Utter Pradesh	21.40	26
Gujarat	1.46	27
Punjab	0.00	28