

ANNUAL ADMINISTRATIVE REPORT

2007 - 2008



**FOREST, ENVIRONMENT & WILDLIFE MANAGEMENT
GOVERNMENT OF SIKKIM**

MESSAGE



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Minister

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Natural resources are vital components for sustaining life support system on Earth and human beings are dependent not only for economic activities but also meeting their day-to-day needs. The very system of human society depends on substance of forest eco-system and conservation of bio-diversity. However, with the ever increasing demand on the forest resources for goods and services, the forests are under tremendous biotic pressure.

Keeping this in view, the Planning Commission of India has set the target for achieving the national goal of 33% of forest and tree cover of the total geographical area of the country by 11th Five Year Plan Period i.e. 2012 as approved by the National Development Council to check the Environmental Hazards and have a reasonably eco-friendly environment to leave in addition to cater to needs of growing population of the country. The Forest Env. & Wildlife Management Department, I am proud to say has already achieved this target as the forest cover accounts for over 46% of the total geographical area of the State. The State has set the target to increase the forest cover to 60% by 2015 as earmarked by the Ministry of Environment & Forests, Government of India, for the hill states. For this, there is need to generate awareness among the common mass and institutional mechanism needs to be strengthened to ensure active participation of the people in the management, regeneration of the forest wealth.

The State Government has launched a unique and innovative programme called "STATE GREEN MISSION" with a view to raising avenue plantation along the roads and beautification of all vacant and wastelands to further reinforce widespread reorganization of Sikkim being a Green State. The Hon'ble Chief Minister Dr. Pawan Chamling has formally launched this Mission on 27th February 2006, in the presence of all ministers, officers and the public of Sikkim.

Although the total tree cover in the state is about 46%, density of tree cover in main areas is very low. The State would try to increase the area under tree cover further and also improve the density of the tree cover. A massive need based and time bound 'Programme of Afforestation and tree planting' needs to be taken up with greater emphasis in production of fuel, wood and fodder in degraded and denuded lands, both forest and non-forest. An Urban forestry programme is a necessity to improve the environment in the urban areas of all the districts through planting of ornamental trees and bushes. Such a programme is increase the scenic beauty of the towns as well as check soil erosion and landslides in these areas.

(S.B.SUBEDI)

FOREST MINISTER

Government of Sikkim.

FOREWORD



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The Forest Department has been publishing Annual Administration Report every year, highlighting various aspects of forest working. The report for the year 2007-08 brought out by the Planning & Statistical Cell of the Department, under the guidance of Shri Manjit Singh, APCCF (Planning & Administration) & Shri B.K Tiwari, Addl. Director(Planning & Administration), has attempted to present statistical reports of the various schemes under the Forest, Environment & Wildlife Management Department.

The publication contains updated statistics of the forest area, its management, silviculture, forest produce, physical and financial achievements of forestry development works and organizational set up of the department. The data provided herein should prove interesting and useful for all those who are connected with forestry at various levels within and outside the State. Suggestions for improving the format and contents are welcomed.

*(S.T.LACHUNGPA) IFS
Principal Chief Conservator of Forests-cum- Secretary
Forest, Environment and Wildlife Management Department.*

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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 ° 00' 58" and 88 ° 55' 25" East longitudes and 27 ° 04' and 28° 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.

CHAPTER-2

DEMOGRAPHIC PROFILE

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
	Total	540851	41030	245040	131525	123256
Rural Persons	Males	255774	22643	104150	66096	62885
	Females	225207	17616	88038	61483	58547
	Total	480981	39782	192188	127579	121423
Urban Persons	Males	32710	771	28767	2145	1027
	Females	27160	477	24085	1801	797
	Total	59870	1248	52852	3946	1824
Projected Population for the year 2007	Total Persons	612123	46435	277332	148856	139500
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

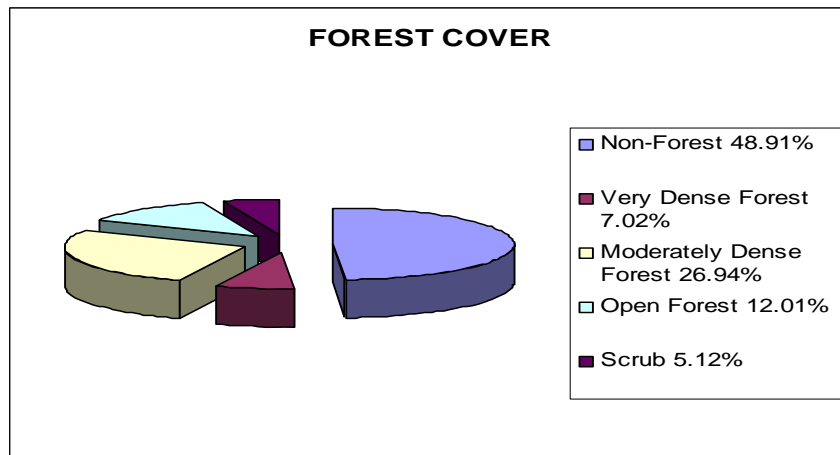
CHAPTER-3

FOREST COVER District Wise Forest Cover 3.1

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

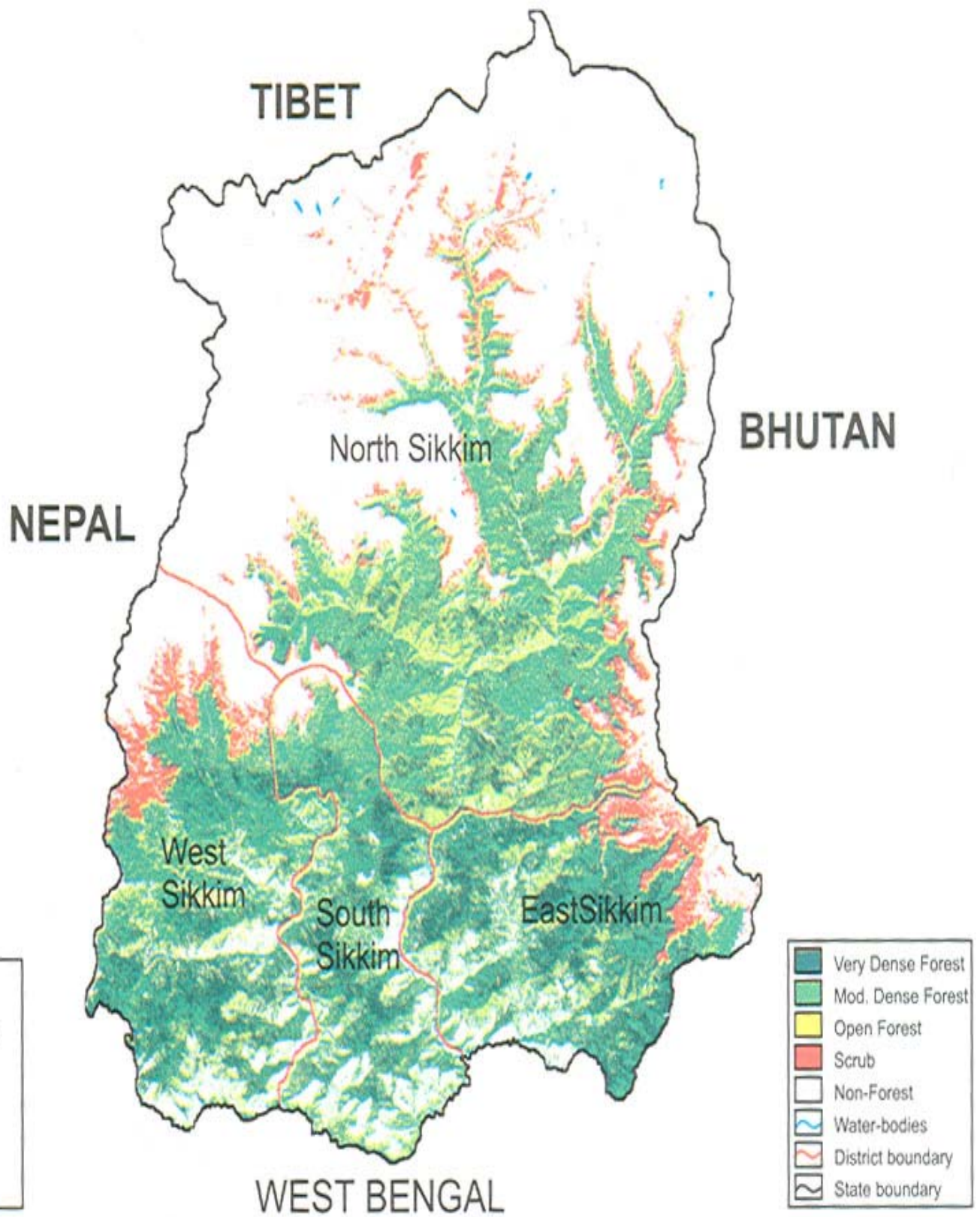
Forest & Tree Cover- 3.2

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



3.3

Source: State of Forest Report 2005



FOREST COVER MAP OF SIKKIM

3.4

3.5-RECORDED FOREST LAND

Over 81% of the total geographical area of the state is recorded as forest land comprising forest land tree cover, road reserve, streams, lakes, alpine pasture and scrub and land under perpetual snow cover. There has been an increase of 469sq.km. of forest covers till 1993 and another 8 sq.km, between 1993 and 1995. The detail of forestland and increase in forest cover is shown below:

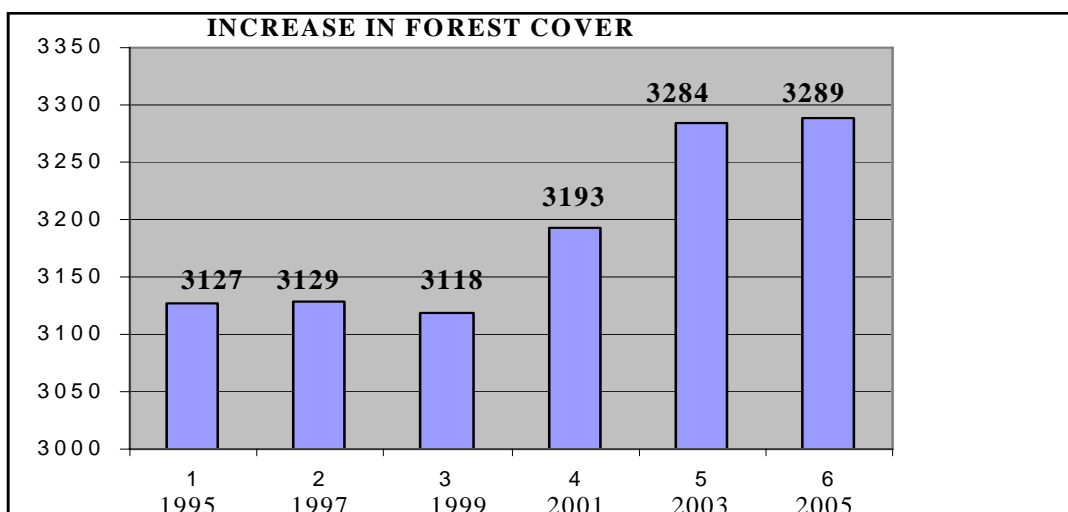
AREA STATISTICS OF FOREST COVER IN SIKKIM

Description	Area in Sq.Km.	% of Total Area.
(1) Recorded forest land with tree cover.		
(i) Reserve Forest	2261.00	
(ii) Khasmal Forests	285.00	
(iii) Goucharan Forests	104.00	
Total	2650.00	37.34
(2) Alpine Pasture and scrub	1024.00	14.44
(3) Perpetual snow Covered Area	2091.10	29.50
Total (1+2+3)	5765.10	81.28
(4) Remaining Area	1331.00	19.00

Hence, total area which is under administrative control of Forests, Environment and Wildlife Department is **5765.10** square kilometres which accounts for **81.28** % of the total geographical area of the state.

3.6 INCREASE IN FOREST COVER

Description	Area in Sq. Kms.	% of Total Geographical Area
a) Recorded forest Area under tree cover as on 1975-76	2650.00	37.34
Actual Forest Cover Assessment		
(a) 1995	3127.00	44.06
(b) 1997	3129.00	44.10
© 1999	3118.00	44.00
(d) 2001	3193.00	45.00
(e) 2003	3284.00	46.28
(f) 2005	3289.00	46.35
• Net increase in forest cover till 2005	639.00	9%
• Increase in forest cover as percentage of the recorded forest area of the state. (since 1975-76)		24.11%
• Percentage of total geographical area under forest cover.		46.35%



3.7- Forest cover in the North-Eastern State

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	0

3.8- 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.	<i>SNOW</i>	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
	Total	5452.39	1643.59	7095.98	100.00

CHAPTER-4

ADMINISTRATIVE SET-UP

Under the **Minister** in charge of Forests, Environment & Wildlife, Department is headed by the **Principal Chief Conservator or Forests cum Secretary** who is assisted by the following officer at different wings/levels.

- Advisor
- Principal Chief Conservator of Forests
- Additional Principal Chief Conservator of Forests
- Chief Conservator of Forests
- Conservator of Forests
- Additional Director of Forests
- Joint Director of Forests
- Special Secretary
- Joint Secretary
- Chief accounts Officer
- **Officers under the Additional Principal CCF (I)**

<i>CCF(Working Plan)</i>			CCF(Social Forestry/Utilization/Sericulture)									
<i>CF(Working Plan)</i>		Addl. Director (Sericulture)								Additional Director Research, NTFP, <i>SMPB</i>		
		Joint Director (Sericulture)	Joint Director (Social Forestry)							Joint Director NTFP, <i>SMPB</i>	Joint Director Research Edn. & <i>Extn.</i>	
<i>DFO (Working Plan)</i>	<i>DFO (Survey & Demarcation)</i>		<i>DFO North</i>	<i>DFO East</i>	<i>DFO SF & Zilla South</i>	<i>DFO West</i>	<i>DFO Zilla North</i>	<i>DFO Zilla East</i>	<i>DFO Zilla West</i>	<i>DFO NTFP</i>	<i>DFO Silivi.</i>	
-	<i>ACF (Survey & Demarcation)</i>	<i>Assistant Director (Sericulture)</i>										
<i>R.O</i>	<i>R.O.- 2</i>	<i>R.O Rorathang</i>	<i>RO-2</i>	<i>RO-4</i>	<i>RO-3</i>	<i>RO-3</i>	-	-	-	<i>R.O-2</i>	<i>RO-1</i>	
		<i>R.O Mamring</i>										
The Range Officers are assisted by Block Officers, Head Guards & Forest Guards												

Offices under the Additional Principal CCF (Territorial)

CCF(Territorial)								
CF(Territorial)								
DFO North		DFO East	DFO Pakyong		DFO South		DFO West	
ACF Chungthang	ACF Mangan	ACF Gangtok	ACF Pakyong	ACF Rongli+	ACF Rabongla	ACF Namchi	ACF Soreng	ACF Geyzing
Ranges	Ranges	Ranges	Ranges	Ranges	Ranges	Ranges	Ranges	Ranges
Lachen	Mangan	Gangtok	Pathing	Phadamchen	Lingmo	Namchi	Sombaria	Geyzing
Lachung	Phodong	Ranipool	Pakyong	Rongli	Rabongla	Melli	Soreng	Yuksom
Chungthang	Dzongu	Singtam				Namthang	Dentam	Tashiding
		Kyongnosla						
		Tumin						

Officers under the Additional Principle CCF (Wildlife/Chief Wildlife Warden)

CCF(Wildlife)							
CF (Wildlife)				Additional Director of Forests(N.P. & Zoo)			
				Joint Director of Forests (N.P & Zoo)			Senior Research Officer Wildlife
DFO North	DFO East	DFO South	DFO West	DFO (KNP) North	DFO (KNP) West	Deputy Director Himalayan Zoological Park	
R.O Shingba Rhodod- endron Sanctuary	R.O. Fambonglho Wildlife Sanctuary R.O.Pangolakha Wildlife Sanctuary R.O.Kyongnosla Alpine Sanctuary	R.O Mainam Wildlife Sanctuary	R.O. Barsey Rhododendron Sanctuary				
				R.O. North	R.O West	RO(HZP)	
The Range Officers are assisted by Block Officers, Head Forest Guards and Forest Guards							

Offices under the Additional Principal CCF (Environment)

CCF((Landuse & Environment)					
CF ((Landuse & Environment)					Additional Director
DFO North	DFO East	DFO South	DFO West	DFO (EPC)	DFO (RVP)
					ACF (RVP)
R.O. Chungthang	R.O.Gangtok -3	R.O. Namchi	R.O. Sombaria	R.O. -1	R>O. -6
R.O. Mangan	R.O. Singtam	R.O. Rabongla	R.O. Dentam		
R.O. Dzongu	R.O. Sang	R.O. Namthang			
	R.O. Pakyong				
	R.O. Samdong				
The Range Officers are assisted by Block Officers, Head Forest Guards and Forest Guards					

Offices under the Additional Principal CCF (Planning and Administration)

Joint Director (Planning & Adm)	Joint Director (Statistics)	Special Secretary
Deputy Director (Statistics)	-	Joint Secretary
Assistant Director	Assistant Director	Under Secretary – 3
Statistical Officer	Statistical Officer	OS
Statistical Investigators - 4	Statistical Investigator-1	Has, UDCs, LDCs

ACCOUNTS DIVISON

Chief Account Officer
Senior Account Officer
Accounts Officer – 2
Senior Accountants
Accountants, Jr. Accountants, LDCs

DIFFERENT BOARDS UNDER FORESTS, ENVIRONMENT AND WILDLIFE DEPARTMENT.

- State Wildlife Advisory Board
- State Land-use Board
- State Pollution Control Board
- State Medicinal Plants Board

CHAPTER-5

MANPOWER

Forest, Environment and Wildlife Department is one of the largest departments in terms of manpower strength. There are 110 gazetted officers and 839 regular employees of Group 'B' and 'C' category. This department has provided round the year employment to as many as 824 on muster roll and 13 on work charged employment in the rural areas in the form of nursery laborers and chowkidars in plantation areas. Beside, this department provides seasonal employment to a large number of villagers in plantation activities and soil and water conservation works including development of sericulture and fisheries. The present manpower strength of the department is as follows.

**LIST OF REGULAR OFFICERS O FOREST, ENV. & WILDLIFE MANAGEMENT
DEPARTMENT DURING 2007-2008.**

Sl.no.	Designation	Cadre	Total strength	Remarks
1	Advisor	IFS	-	
2	PCCF-cum-Secretary	IFS	1	
3	Addl.PCCF	IFS	2	
4	Chief Conservator of Forests	IFS	3	
5	Conservator of Forests	IFS	5	
6	O.S.D.	IFS	1	
7	Divisional Forest Officer	IFS	4	
8	IFS Probationary	IFS	1	
9	Director of Forests	SFS	3	
10	Addl. Director of Forests	SFS	4	
11	Joint Directors	SFS	6	
12	Divisional Forest Officers	SFS	24	
13	Assistant Conservator of Forests	SFS	62	
14	Addl. Director (Sericulture)	-	1	
15	Joint Director (Sericulture)	-	1	
16	Asstt. Director (Director)	-	1	
17	Special Secretary	SCS	-	
18	Joint Secretary	SCS	1	
19	Under Secretary	SCS	2	
20	Chief Accounts Officer	SFAS	1	
21	Sr. Accounts Officer	SFAS	1	
22	Accounts Officer	SFAS	2	
23	Joint Director	SSS	1	
24	Deputy Director	SSS	1	
25	Asstt. Director	SSS	2	
26	Chief Scientist	-	1	
27	Sr. Research Officer	-	1	
28	Asstt. Scientific Officer	-	1	
29	Deputy Director (WL & Zoo)	-	1	
30	Sr. Private Secretary	-	1	
31	Private Secretary	-	1	
32	D.E. (Electric)	-	1	
33	O.S.D.	-	2	
34	Range Officers	SFS	75	
35	Block Officers	SFS	93	
36	Head Forest Guard	SFS	45	
37	Forest Guard	SFS	273	

	Designation	Cadre	Total strength	Remarks
38	Sericulture Inspector	-	2	
39	Sericulture Sub-Inspector	-	2	
40	Veterinary Compounder	-	1	
41	Driver	-	39	
42	Statistical Officers	SSS	2	
43	Statistical Investigator	SSS	7	
44	Sr. Accountant	SFAS	8	
45	Jr. Accountants	SFAS	27	
46	Accounts Clerk	SFAS	9	
47	Office Superintendent	SCS	4	
48	Head Assistant	SCS	4	
49	U.D.C.s	SCS	19	
50	L.D.C.s	SCS	51	
51	Steno	-	7	
52	Sr. Technical Assistant	-	2	
53	Cartographer	-	2	
54	Surveyor	-	1	
55	Asstt. Surveyor	-	1	
56	Tracer	-	1	
57	Draftsmen	-	3	
58	Mali	-	22	
59	Peon	-	49	
60	Chowkidar	-	19	
61	Cook	-	1	
62	Bearer	-	1	
63	Pipe Fitter	-	1	
64	Lab Asstt.	-	1	
65	Supervisor	-	2	
66	Tally Clerk	-	1	
	TOTAL OFFICERS		287	

CHAPTER-6

FOREST FIRE

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)	Tot	Within Protect ed Area(P A)	Outside Protected Area(PA)	Total	Volume in cu.mt.	Value in lakhs	Damag e to Plantati on Areas	Damag e in PAS Area	Hum an Life	Cattle	Wildlif e
2002	4	28	32	16	154	170	2.00	1.00	15.00	1.00	Nil	Nil	Nil
2003	5	18	23	12	110	122	2.00	1.00	9.77	1.00	..	..	..
2004	5	16	21	18	100	118	2.00	1.00	12.16	1.00	..	..	..
2005	6	36	42	30	332	362	3.00	1.50	38.14	1.80	..	..	2
2006	8	50	58	100	308	408	3.00	1.50	37.46	10.00	..	..	2
2007	2	29	31	25	75	100	1.00	0.50	9.50	2.00	..	..	Nil
2008	3	48	51	8	338	346	2.00	1.00	31.00	2.00	..	..	..

CHAPTER- 7

FOREST OFFENCE

7.1-ILLICIT FELLING

Year	No. of cases of illicit felling	No. of trees illicitly felled	Loss of Timber (Volume in cu. Mt.)	Value losses (Rs. 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	30.0	5.00	8	2	Nil

7.2- FOREST LAND ENCROACHMENT

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	3448.0626	-	3446.0686

CHAPTER-8

NATIONAL AFFORESTATION PROGRAMME AND JOINT FOREST MANAGEMENT COMMITTEES (JFMCs) & FDA

The Government has adopted the participatory approach to forest protection, management and development. It has taken up formation of Joint Forest Management Committees / Eco-Development Committees at the village-level which comprises of all the villagers who wish to participate in the forest management, development and protection functions of the forests that are located in the vicinity of their villages. So far 155 JFMCs (Fewer than four territorial FDAs) have been registered all over the State and the work of JFMC constitution in the villages not yet covered is being taken up. At the district level all the JFMCs have together been formed into a confederation called the Forest Development Agency (FDA). The JFMCs have been entrusted with the task of Afforestation and protection of the natural resources of their area and they are implementing the National Afforestation Programme through the four FDAs in the Tenth Plan period. More than 9362 hectares of land have already been covered under JFMCs involving more than households.

These JFMCs are working on share and care basis, whole heartedly right from plantation to overall protection. The details of the work carried under different FDAs are as under:-

FDA UNDER TERRITORIAL CIRCLE AS ON 31.03.2008

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	2002-03 To 2006-07	551.32	2330	551.32	488.03	2330
2	East Sikkim FDA	-do-	543.04	2233	543.04	523.68	2153
3	South Sikkim FDA	-do-	542.67	2655	542.67	534.31	2614
4	West Sikkim FDA	-do-	450.35	2265	450.35	469.14	2265
	Total		2087.38	9483	2087.38	2015.16	9362

**NO. OF HOUSEHOLDS COVERED JFMCs
AS ON 31.03.2008**

SL. No	Name of FDA	No of JFMCs	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	15	1980	1995	5	640	645	20	3102	3122
2	East Sikkim FDA	49	628	5317	15666	638	5369	11050	175	1180	2018	568	712	2850
3	South Sikkim FDA	36	1755	4804	16889	355	450	1755	568	987	2840	630	788	5500
4	West Sikkim FDA	38	561	2251	9515	298	1165	4800	345	1298	5400	388	1558	3400
	TOTAL	155	2975	16736	46500	1306	8964	19600	1093	4105	10903	1606	6160	14872

CHAPTER-9

STATE BAMBOO MISSION

The Department of Agriculture & Cooperation, Government of India launched the "National Bamboo Mission" recognizing the role of bamboo in improving the socio-economic condition of the rural poor and also to contribute to the development of the bamboo sector in the country. The State of Sikkim has a good potential for Bamboo development and has about 29 species belong to 9 genera.

Objective: The main objective of the mission is to promote growth through an area based, regionally differentiated strategy so as to increase the bamboo cover in potential area with improved high yielding varieties. Traditional as well as scientific technologies will also be incorporated. The Mission will reduce pressure on forests and help in employment generation. The mission intends to capture the international market on bamboo and its allied product.

Approach and Strategy: Emphasis will be on promotion of research and increasing production. The Mission will ensure that there are substantial returns to the growers through appropriate marketing measures. Capacity building and human resource development will be given priority. Care will be taken to eliminate middle men.

State. Out of the twelve species suggested for cultivation under the Mission three species are proposed in Sikkim i.e. *Dendrocalamus hamiltoii*, *Bambusa nutans*, and *Dendroclamus asper* have been proposed for propagation. The culms of D. used from one year old culms for various weaving purposes, where as B, *nutans* can be harvested after three years i.e. from 4th year three years old bamboos can be harvested, D. three years old bamboos can be harvested, D. *asper* can be harvested after three years but shoots can be extracted from second year.

Result and Achievements in 2006-07 (executed in 2007 plantation season):

SI.No	Division	Target(Ha)	Achievement(Ha)	Result (Survival %)
1	North	150	184	80%
2	East	150	116	78%
3	West	300	255.5	78%
4	South	200	200	56%
	Total	800	755.5	

During the Year 2006-07 FDAs have achieved 94.4% of the total target with survival percentage between 56% to 82.3% (based on monitoring report during the month of October).

Plantation targets assigned for 2007-08 (will be executed in 2008 plantation season):

SI.No	FDA	Target (Ha)	Maintenance(Ha)
1	North	344.5	184
2	East	300	116
3	West	300	255.5
4	South	300	200
Total		1244.4	755.5

CHAPTER-10

Status of Integrated Wasteland Development Project (IWDP) In Sikkim

The Department of Land Resources Ministry of Rural Development Government of India has sanctioned 25 projects within a period of 1995-2007 with total outlay of project amounting to Rs. 7796.00 lakhs for duration of 5 years to each project. So far, the Government of India has realized the amount of Rs. 2662.40 lakhs. Some of the projects are running very slow due to non availability of state share in and not release of fund in time by Zilla Panchayat. But since last year, the State Government has provided sufficient state share to match the released of central share as the funding pattern is 8.33:91.67 state-centre ratio. The entire projects are in good progress except Project-XII of East District.

The Integrated Wasteland Development Project is being implemented on watershed basis under the common guidelines for watershed development. This scheme envisages employment generation, socio-economic upliftment, eradication of poverty, soil and water conservation, to fulfil the fodder requirement of local villagers. This programme aims at sustainable development and equitable sharing of benefits. It is being implemented with full participation of the Watershed Development Committee, villagers, local NGOS and line department in the planning implementation and monitoring.

The detail statement showing the sanctioned of projects and release of fund up to 31.03.2008 and implementing PIAs has been mentioned in the table given below:

STATEMENT SHOWING THE SANCTIONED OF PROJECT AND RELEASE OF FUNDS UNDER IWPD PROJECTS

AS ON 31.03.2008

Sl. No	Name of the Districts	Yr. of sanction	Total area in ha.	Total Cost	(Rupees in Lakhs)												Total Release	PIA
					Funds Released under IWDP during the period													
					96-97	97-98	98-99	99-00	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08		
1.	Sikkim West-I	1996	5500	220	20.8		34.2	44	44	54.5	21.65						219.12	Saturated
2.	Sikkim East-III/FC	1997	5669	222.8		33.4				22.1							55.53	Foreclose
3.	Sikkim North-II	1997	12000	480		72	48	96	96	72	48	48					480	Saturated
4.	Sikkim East-IV/FC	1998	11900	476			8			63.4							71.4	Foreclose
5.	Sikkim South-VI	1999	11200	448				67.2			41.99		89.51			85.65	284.35	DFO (LU&E)
6.	Sikkim West-II	1999	9060	362.4				54.4		35.8	72.48	72.48			53.2		288.33	DFO (S/F)
7.	Sikkim South-VII	2000	10500	630					63	23.6							86.63	DFO (Zilla)
8.	Sikkim East-V	2001	6000	360						49.5					42.73	48.68	140.91	J.D. (S/F)
9.	Sikkim East-VI	2001	6177	370.6						51				47.23		50.16	148.34	J.D (P&G)
10.	Sikkim East-VII	2003	6000	360								49.5					49.5	DFO (Zilla)
11.	Sikkim West-III	2003	6000	360								49.5					49.5	DFO (W/L)
12.	Sikkim North-III	2003	6000	360								49.5	99			99	247.5	DFO (IWDP)

13.	Sikkim West-IV	2004	1572	94.33										13.51			25.4	38.91	Dir. SIRD
14.	Sikkim East-VIII	2004	6000	360										49.5				49.5	DFO Sericulture
15.	Sikkim East-IX	2004	5469	328.1										45.12				45.12	DE (Zilla)
16.	Sikkim East-X	2004	3349	200.9										27.63				27.63	DO (LU&E)
17.	Sikkim East-XI	2005	4075	244.5											33.62			33.62	DFO (Zilla)
18.	Sikkim West-V	2005	2160	129.6											17.82			17.82	DFO (LU&E)
19.	Sikkim West-VI	2005	2000	120											16.5			16.5	DFO (S/F)
20.	Sikkim West-VII	2005	787	47.22											6.49			6.49	DFO (Zilla)
21.	Sikkim North-IV	2005	5320	319.2											43.89		82.78	126.67	DFO (IWDP)
22.	Sikkim East-XII	2006	5600	336												46.2		46.2	N/A
23.	Sikkim North-V	2006	4500	270												37.13		37.125	DFO (IWDP)
24.	Sikkim West-VIII	2006	6000	360												49.5		49.5	DFO (W/L)
25.	Sikkim South-VIII	2006	5600	336												46.2		46.2	DFO (S/F)
Total				7796	20.8	105	90.2	262	203	372	184.1	269	324.3	165.6	275	391.7	2262.4		

CHAPTER-11

OUT TURN OF TIMBER & FIREWOOD

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.

Details of Extraction and Sale of Forest Produce

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	<u>4863.50cft.</u>	10.28	151.82	0.76	176	0.26	11.30
2004-05	3852.62 cft.	8.23	169.15	0.85	13	0.21	9.29
2005-06	3367.52cft	8.14	111.80	0.77	13	0.19	9.1
2006-07	1876.43cft	2.81	224	1.21	-	-	4.08
2007-08	1007.53cft	1.91	90.8	0.56	-	-	2.47

CHAPTER-12

ACTIVITIES UNDER BIODIVERSITY RESEARCH, EXTENSION AND EDUCATION

I. RESEARCH:

	PARTICULARS	AMOUNT IN Rs.
1	WAGES: Continuation of monitoring activities in Tso Lhamo proposed could desert area and Computerisation of data including regular office duties (en bloc 2 M/R wages at Gangtok and Tso Lhamo) (Sanctioned vide no. 11/GOS/FEWMD?Wages at dated:27 th April 2007)	95,892

II. OFFICE, LABOURATORY AND FIELD RESEARCH

2	Purchase and Maintenance of essential equipment like projects,computer,computer accessories, toner cartridges, chemicals, print-out of reports, color printout, etc.	29,108
---	--	--------

GRAND TOTAL Wildlife (Biodiversity) Research (P)	1,25,000
--	----------

Continuation of annual research related activities: sporadic data collection

Research related Presentations/Papers/Consultation/Workshops/Seminars attended:

CBD Workshop on Pas at WII,Dehradun; Planning team from Singapore for Bird &Butterfly Park; Master Zoo Education Plan at PNHXP, Darj. CEE Ahmedbad,;Meeting on IPR/GI in Sikkim by DST;KNP Bird Study 9WII, Chicago Univ.); SARAH Programmed with AHLF &VS Dept,; On Advisory Committee for Wetland Conservation in Sikkim vide O.O. dated 3/05/2007; Analyzed Chap-X CCOTB-CISHME, Delhi on Socio-Econ. & Cultural Env. And submitted to PCCF; Vetted (write up) EIA on Biological Env / Aquatic ecology and EMP for Dikchu HEP for DFO/ Member Secy-EIA/EMP.

III. EXTENSION EDUCATION:

a) Extension: Executed NEAC project for two garbage bins at Thomchi School,Lachung, North Sikkim; Write-up on Biol & Cultural Diversity for Mr.DB Shrestha, PCCF *for The Mail*; Training on Cubing WL-Trade (WWF /TRAFFIC /IUCN, Gtk) for Forest /Army /ITBP / Excise; World Statistics Day by NSSO Field Ops. Div.; Teachers Training (Green School Programmed), Gtk by Dept & CSE,Delhi Green Mission Awareness Prog.; Stakeholders meeting, by PSS Tsomgo Gtk; 1st Glacier & Climate Change Commission Meeting, Chintan Bhawan; TAC-meeting (TDET) scheme of LU&E; **Important Bird Areas Book** published through Dept. and released by HCM on occasion of World Environment Day 2007.

b) Education: Talks, Slide-shows, Lectures, Counseling/Guiding:

WL Week-HZP, (guiding 12 schools, judge PANDA Poster & Quiz with WWF); Bird watching training (presentation, field trip to HZP);Orientation to Co-op. Dept. on BD; Cap. Bladg & Ecotourism training for Unemployed Youth thro' Tourism<SAATO (Hee-Bermiok, Gangtok, Rangpo, Namchi); Heritage Walk of BLIA-Skm Chapter at HZP; ECOSS; Lion Club of Gangtok Hills (School debate), Skm Ornit. Society; Army Awareness Programmed; Frontline Staff of FEWMD on Wildlif Census, Rangers Trainees (Kyongnosla); Singapore/CISHME Delhi Univ. student (HZP); Bahai's School (Cl.9-10, Med plants, Fermented foods, Birds)

CHAPTER-13

PLANNING AND STATISTICAL CELL

The main role of this cell is to assist the Principal CCF-cum-Secretary in all matters related to policy, planning the activities to be undertaken by the department, monitoring the progress of the schemes being implemented by different Circles and reporting the progress to the State as well as the Central Government. This Circle also deals with the works of the management of IFS and SFS cadres, training of IFS and SFS officers, inter as well as intradepartmental meetings. Reply to Parliament Questions, Cases of the Department in the Supreme Court and Coordination with the different Ministries in the government of India, Planning Commission, preparation Five Year Plan and Annual Plans, handling of RTI Applications & Green Mission advertisements.

CHAPTER-14

STATE GREEN MISSION

The "State Green Mission" was launched in 2006 in Sikkim with the twin objective of beautifying the State by raising plantations of flowering plants on roadsides and vacant lands and to motivate the masses to adopt eco-friendly measures in their day to day activities.

To achieve this goal Government has allocated the required budget for material procurement, seedling production, transportation and awareness etc, and the works are being executed on shramdhan basis to generate more responsibility in the surrounding people along with other silvicultural operation. With this call of the Government, protection committees have been organized at every Constituency level under the leadership of the H/area MLA by involving public, local JFMCs EDCs Eco-clubs, Educational institutions, NGOs, Panchyats, exiting manpower with the Government.

The task has been given to the state Forest Environment and Wildlife Management Department to implement the scheme in three different phases. Accordingly it has been decided to cover 20% of the areas in 1st phase, 50% in second and 30% in 3rd phase. In the current financial year state government has made it compulsory for all the departments in the state to utilize 2% of their plan budget for SGM activities (in case of small department it is 1% only) and details should be submitted to the FEWMD department. As per the state government expectations public at all levels have extended their support whole heartedly right from the stage of plantation to protection.

Aim and Objectives: The main objective of the programmed is to create a green belt and increase the aesthetic appeal of the surrounding areas so as to provide for the recreational needs of the people. It is a programmed to make the State more appealing to the tourist and encourage the promotion of Green Tourism. The programmed will also help to curb the destructive effects of surface run off and check soil erosion. It will serve as a store house of genetic diversity as indigenous trees, shrubs, herbs, conifers and green foliage including fruits and medicinal plants will be planted under the Mission.

Implementing mechanism: A State-level committee under chairmanship of the Hon'ble Chief Minister was formed to oversee and to provide policy and administrative support to the Mission. The Forest, Environment and Wild Life Management Department is the Nodal Department. At the constituency level a Green Task Force headed by the Area MLA has been formed to implement the programme in the field. One district level officer is appointed as Nodal Officer for each constituency. The Forest Department is providing all technical guidance, saplings and manure for the programme. All the Government departments are also providing managerial and labor force from the existing establishment. At Ward level, one village protection committee is constituted headed by the concerned ward Panchyats member.

Technical aspects: The plantation is being done according to the availability of space, Where sufficient area is available, two row of plantation are being done on both sides of road with total of 1400 plants per Km i.e. 467 tree species at a spacing of two meters.

The Phase- I and Phase- II works of the State Green Mission are complete and the results and achievements of this two year are laudable. This is a testimony to the existed between all the departments and the public during implementation of the programme.

Phase I (2006-07): Though a target of 310 km of avenue and 15 ha of block plantation were fixed, 367.9 km & 15 ha respectively were achieved with a survival of more than 60%. A total of 575617 saplings were planted all over Sikkim during this Phase. The department has maintained around 25.2 ha of nurseries to

meet up the seedling requirements for this task. In this phase an expenditure of Rs. 2.00 crores allotted from the State Plan has been incurred.

Phase II (2007-08): Against the target of 930km of avenue and 60ha of block plantation, **597.9 km and 148.9 ha respectively** were achieved with a survival of more than 80 % (As per the monitoring report done in the month of October 2007).

First Phase:-

Physical targets and achievement in the 1st phase SGM (2006-07)

Sl.No	District	Area in Km/ha	
		Target	Achievement
1.	North	30Km	23.5 Km
2.	East	120 Km	146.9 Km
3.	West	90 Km	113.0 Km
4.	South	70 Km	84.5 Km
5.	East (Block Plantation in GtK)	15 Ha	15 Ha
Total		310 Km +15 Ha	367.9 Km +15 Ha

Physical targets and achievement in the IInd phase SGM (2007-08)

Sl.No	District	Tree sps planted	Ornamental spa planted	Total saplings	Survival as on Oct. 2007
1	North	78967	146336	225303(160.9Km)	80%
2	West	96347	126346	222693(161Km)	95%
3	East	80602	66015	146617(104.7Km)	80%
4	South	119115	85225	204340 (146.0Km)	82%
Total		375032	423922	798954(572.6)	

CHAPTER-15

River Valley Project Scheme

A project proposal for implementation of RVP scheme was submitted to the Government of India for Tb3g Watershed which is the Catchments of Reshi Khola in Samdong, Sribadam and Deythang area in West Sikkim. These Catchments have been recognized as very high priority area by the All India Soil & Land Use Survey Organization (AISLUS) for scientific watershed management. The project has been approved by the Government of India for implementation at a total cost of Rs. 553.48 lakhs during five year plan period. Under the guidelines for Macro Management issued by the Government of India, the funds for the State Government are released to the State Agriculture Department which is the Nodal Department for routing the fund to the Forest Department.

The item of work physical, financial, and structural year 2007-2008 involving the total expenditure of Rs.160.00 in Tb3 watershed and Rs.102.00 for Tb4c watershed area which comes to the total of 262.00. The detail allocation of fund and target achieved during 2007-2008 are as follows.

Information on project under implementation

- | | |
|------------------------|--|
| 1. Name of the project | I. Reshi Khola Watershed Development 100% CSS
II. Bhutay Khola watershed Development 100% CSS. |
| 2. Name of 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 2007-2008 (approved in 2003) Tb3g
II. 2006-2007 to 2010-2011 (approved in 2006) Tb4c |
| 6. Commencement | Financial Year 2003-2004 Tb3g
Financial year 2006-2007 Tb4c |
| 7. Watershed Name | Sub- Watershed Code – Tb3g of Teesta Catchments (classified
As High Priority Watershed by AISLUS) |
| 8. Total Project Cost | Rs. 553.93 lakhs-Tb3g Watershed
Rs.387.47 lakhs-Tb4c Watershed |

9. Annual Outlay approved for 2007-2008	262.00 (including spill over of 2006-2007)
10. Total Expenditure during 2006-07	Rs.227.88 (Project & Non Project Activities)
11. Villages covered	I. Sribadam, Deythang, Samagaon, Samagow and Parangow West Sikkim - Tb3g watershed area. II. Berthang, Bermok, Martam, Pechrik and Rungdu in West Sikkim -Tb4cwatershed area
12. Name of seedling	Rani Champ, Phusrey Champ, Accr, Panisaj, Nevara, Lapsi Tooni, Pipli, Lampatey, Arupatey, Khamari, Kaijal, Kawla etc.
13. Project Headquarter	Office of the Divisional Forest Officer, River Valley Project Division, Forest Environment and Wildlife Management Department, P.S Road Gangtok

DETAILS OF WORK CARRIED BY RVP DIVISION DURING
2007 - 2008

Target achievement during 2007 - 2008											
	AGRILAND		Tb3g			Tb4c			Total		
Sl. No.	Biological Measures	Rate	Phy	Str	Fin	Phy	Str	Fin	Phy	Str	Fin
A.1	Contour graded bunding	5466	513	-	28.04	60	-	3.28	573	-	31.32
A.2	Horticulture dev.	2550	674	-	17.18	320	-	8.17	994	-	25.35
A.3	Agro - Forestry	1200	720	-	8.64	200	-	2.40	9.20	-	11.04
	Sub- Total	-	1187	-	53.86	380	-	13.85	1567	-	67.71
AB	Drainage Line Treatment										
B2	Middle-Reaches(Nos.)				-	-	-	-	-	-	-
11	Loose boulder with Vegetative Support	8670	-	90	7.80	-	49	4.22	-	139	12.02
B3	Lower-Reaches(Nos.)										
11	Loose boulder with gabion	17785	-	-	-	-	-	-	-	-	-
111	Water harvesting structure	188870		-	-	-	1	1.89	-	1	1.89
IV	Farm-Ponds	8500	-	4	0.34	-	20	1.71	-	24	2.04
V	Spillway/chut/retaining wall	59177	-	16	9.46	-		-	-	16	9.46
	Sub - total of B	-	-	110	17.65	-	70	7.82	-	180	25.47
	Sub - total of A and B	-	1187	-	17.51	380	-	21.67	1567	-	93.18

Target achievement during 2007 – 2008											
	FOREST LAND		Tb3g			Tb4c			Total		
Sl.No.	Biological Measures	Rate	Phy	Str	Fin	Phy	Str	Fin	Phy	Str	Fin
FA.1	Demarcation	102	100	-	0.10	200	-	0.20	300	-	0.30
FA.2	Closure by Guards	510	28	-	0.14	28	-	0.14	56	-	0.28
FA.3	Veg. Fencing	5100	50	-	2.55	102	-	5.21	152	-	7.76
FA.4	Composite Nursery	2550	100	-	2.55	100	-	2.55	200	-	5.10
FA.5	Sowing & Planting	5100	100	-	5.10	100	-	5.10	200	-	10.20
FA.6	Contour/S.C. Trenching	3466	30	-	1.03	70	-	2.42	100	-	3.45
FA.7	Silvipasture Dev.	4828	53	-	2.56	75	-	3.62	128	-	6.18
FA.8	Gap Filling	3443	200	-	6.88	-	-	-	200	-	6.88
	Sub – Total	-	183	-	20.91	245	-	19.24	428	-	40.15
FB	Drinage Line Treatment										
B1	Upper Reaches(Nos.)										
11	Loose boulder with Veg. Support	4828	-	46	2.22	-	40	1.93	-	86	4.15
B2	Middle Reaches					-					
11	Loose boulder with Veg. Support	8500	-	16	1.36	-	40	3.40	-	56	4.76
	Sub - total of DLT	-	-	62	3.58	-	80	5.33	-	142	8.91
	Sub - total of A and B	-	183	-	24.49	245	-	24.57	428	-	49.06

Target achievement during 2007 – 2008											
			Tb3g			Tb4c			Total		
Sl.No.	Biological Measures	Rate	Phy	Str	Fin	Phy	Str	Fin	Phy	Str	Fin
WA.1	Demarcation	102	-	-	-	300	-	0.30	300	-	0.30
WA.2	Closure by Guards	510	-	-	-	15	-	0.08	15	-	0.08
WA.3	Contour graded bundings	5466	-	-	-	40	-	2.19	40	-	2.19
WA.4	Veg. Fencing	5100	-	-	-	79.5	-	4.05	79.5	-	4.05
WA.5	Composite Nursery	2550	-	-	-	-	-	-	-	-	-
WA.6	Sowing & Planting	5100	-	-	-	-	-	-	-	-	-
WA.7	Gap Filling	3443	-	-	-	-	-	-	-	-	-
WA.8	Silvipasture Dev.	5100	-	-	-	55	-	2.81	55	-	2.81
WA.9	Pasture Dev.	3040	-	-	-	70	-	2.13	70	-	2.13
	Sub Total	-	-	-	-	165	-	11.56	165	-	11.56
WB	Drainage Line Treatment										
B1	Middle Reaches (Nos.)										
11	Loose boulder with Veg. Support	8500	-	-	-	-	40	3.40	-	40	3.40
	Sub-Total of DLT	-	-	-	-	-	40	3.40	-	40	3.40
	Sub-Total of A&B	-	-	-	-	165	-	14.96	165	-	14.96

CHAPTER-16

LAND USE TREATMENT OF LANDSLIDE & EROSION CONTROL

Sikkim, a hilly area with young geological formations having high rate of precipitation and weak slope formation often face the problem of landslide. Three Landslide & Erosion Control projects were approved by the Department of Land Resource, Government of India in South, West and North Sikkim. The main objectives of the project are to reduce and control landslide and soil erosion in a specific landslide prone area through mechanical vis-à-vis biological treatment. The landslide & Erosion Control work in West and South was started since 2004-05-2005-06 onwards whereas work in North started only in the year 2007-08. The details of physical & financial achievement are given below-

The Statement showing the actual expenditure for Treatment of Landslide & Erosion Control in West Sikkim during 2007-08

Sl. No	Activities	Target		Achieved		Location
		Phy.in Ha	Fin	Phy.	Fin.	
1	Afforestation works (in hac)	60hac	12.20	60 hac	7.25	Piplay,Pelling,Salley and Sagbari
2	SMC works (in hac)	30 hac	9.90	30 hac	6.87	Salley, Manedara and Piplay
3	Bamboo Plantation (in hac)	75 hac	19.30	75 hac	12.10	Piplay,Rangsang, Kanikhola and Salley
4	Belley benching works (in hac)	20 hac	5.00	20 hac	3.41	Salley & Piplay.
5	Maintenance of 1 st Year Bamboo and Afforestation (in hac)	45 hac	115.00	45 hac	1.15	Salley,Pelling,Rangsang, Chinthang & Piplay
					30.78	
6	Application Geosynthetic/polmers in sqm	5000 sqm	9.30	1500sqm	1.43	Pelling
				15000sqm	1.37	Piplay
				2000sqm	1.89	Mangthang
					0.25	Cost of hooks
					0.18	Carriage of coir
					4.16	Cost of Geo-Synthetic
					9.28	
7	Over head				2.86	
8	Adjustment and advance payment of materials to STCS				2.72	
9	Consolidated pay of field supervisor				0.48	
					6.06	
	Total				46.12	

**PHYSICAL & FINANCIAL ACHIVEMENT FOR TREATMENT OF LANDSLIDE AND EROSION CONTROL
UNDER TDET PROJECT IN SOUTH LAND USE & ENV. DURING 2007-08**

Sl. No	Activities	Total Target		Achievement		Location
		Phy	Fin Rs. in lakh	Phy	Fin Rs.in Lakh	
1	H.P. Stone Wall inside sausage in landslide area	600 RMT	26.40	600 RMT	11.89	a)Kateng Slipb) Pamphok Slip c)Turung Slip
	H.P. Stone wall inside sausage for River Terrain.	300 RMT	13.20	300 RMT	5.66	a)KatengSeti-Khola
	G.I. Sausage wall with 1:2:4 PCC lining	96 RMT	6.14	96 RMT	2.61	Pamphok
2	Soil & moisture cons.	64 Hac	21.12	64 Hac	21.12	a) Kateng b) Donak c)Phamphok
3	a) Afforestation.	100 Hac	20.70	100 Hac	12.66	a) Donak Slip b)Ahaley c)Mamring d)Maneydara e)Nagidara f)Turung Slip
	b) Maint. Of afforestation	100 Hac	3.70	100 Hac	3.40	a) Donak b)Upper Tek c)Mamring d)Kanam Tek e)Kateng
4	Bamboo Pltn. With seed sowing	84 Hac	21.59	84 Hac	19.95	a)Turung b)Kateng c)Chuba d)Donak e) Bimbong f)Maneydara g)Setikhola h)Phongla i)Norok
5	Balley Benching	24 Hac	5.96	24 Hac	5.24	a)Donak b)Turung
6	App.of Geo sym.WP/mer	5000/- Sqm	9.23	5000/- Sqm	9.25	a)Turung Slip b)Donak c)Kateng d)Pomphok
7	Regarding of Slope	7500 Cum	4.13	7500 Cum	4.13	a)Donak b)Turung c)Kateng d)Pamphok
8	Anchoring Shotecting	20 m	1,30	20 m	-	a)Turung slip
9	Supervisor	1 Per person	0.72	1 Per person	8.10	
10	Adm.overhead 15%	-	16.53	-	-	
	Grand total		150.38		104.01	
	Beneficiaries contribution		(-) 2,50,000/- 1,47,88,400			
	Spill over of 2006-07		12,29,144/- 1,60,17,544/-			

**DETAILED PHYSICAL & FINANCIAL ACHIEVEMENT UNDER PROJECT TREATMENT OF LANDSLIDE & SOIL
EROSION CONTROL UNDER TDET IN NORTH SIKKIM SCHEME DURING 2007-08**

(Rs. in lakhs)

Sl. No.	Activities	WATERSHEDS						Total	
		Rangrang		Namok		Chanday			
		Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
1.	Protective Works								
	A. 1.HP Stone Wall inside sausage in landslide area	304 Rmt	13.07	182 Rmt	7.67	123 Rmt	5.27	609 Rmt	26.01
	B. Stream Trg. Works	243 Rmt	10.69	184 Rmt	7.85	182 Rmt	7.75	609 Rmt	26.29
	1. HP Stone Wall inside Sausage for river trg.								
	2. G.I.Wire Sausage Wall 1:2:4 PCC Lining	55 Rmt	3.42	42 Rmt	2.69	41 Rmt	2.60	138 Rmt	8.71
2.	A. Soil & Moisture Cons.	10 ha	3.30	10 ha	3.00	10 ha	3.00	30 ha	9.30
	B. Afforestation including maintenance	50 ha	6.72	0	0.00	6 ha	0.91	56 ha	7.63
3.	Bamboo Plantation	30 ha	6.34	18 ha	3.94	12 ha	2.46	60 ha	12.74
4.	Balley Benching	30 ha	6.90	5 ha	1.16	5 ha	1.16	40 ha	9.21
5.	Application of geosynthetics & polymers	300 sq.ft.	0.56	300 Sq.ft.	0.56	300 Sq.ft.	0.56	900 Sq.ft.	1.67
6.	Re-grading of Slopes	2000 Cum	1.00	2000 Cum	1.00	2000 Cum	1.00	6000 Cum	3.00
7.	Administrative Overhead		3.24		2.05		1.33		6.62
	TOTAL		55.24		29.92		26.04		111.18

12TH FINANCE COMMISSION GRANTS

The 12th Finance Commission grant small portion to address the eco-restoration of hill slopes and landscape was entrusted to Land Use & Environment Circle. The main activities of the eco-restoration of hilly slopes and landscape area are Sausage wall, Catch water drain, Jhoras, CRSM wall. The restorations cum protection of eco-fragile area were selected on the basis of landslide, soil erosion and degree of degradation through collection secondary information of the landscape from the local informant. The construction/ diversion and training of surface run off through established drainage provide safe disposal of heavy runoff and reduced damage in the area. On the basis of information collected and observation made by the Division detail proposals with estimate were framed by the concerned Divisions during the year 2006. The following activities were carried out and the amount approved were spent for control and mitigation of fragile eco-system.

DETAILS OF WORK CARRIED OUT DURING 2006-07 & 2007-08 UNDER 12TH FIBANCE COMMISSION GRANTS

2006-07			
Sl.No.	Activities	Expenditure (Rs. in lakhs)	Location
A: 1.		15.97	Namphong, Tumin, Sotak, Baluakhani, au. Sichey Gumpa, rakshal-Rhenock,, L. Tekhabong, L. Aritar, Bering, Namcheybong, Bardang, Samdur, Chanbari, Rautey Rumtek, Ralak, Raksey, Aho, Pakshyap, Rakhakali khola
2.	Sausage Wall	0.73	Raksey
3.	Protective Wall	0.72	Baluakhani Jhora, Phenla Khas
4.	C.C.M. Wall	0.40	Karponang in East
	SUB TOTAL	17.82	
B: 5.	CRSM Wall	0.95	Bichu , North
C: 6.	Sausage Wall	2.42	Marmu Chu Dzongu, North
	TOTAL (A+B+C)	21.19	
2007-08			
1.	Sausage Wall	2.70	Amdo Golai, Patuk Kokolay, Tathangchen in East
2.	1:4:8CCM Wall	0.92	6 TH Mile Samdur in East
3.	Catch Water Drain	5.63	Raniban & Kyongsa in West
	TOTAL	9.25	

WET LANDS OF SIKKIM

Sikkim has only natural inland wetland belonging to the category lakes/ponds. In all 160 wetlands greater than the minimum mapping unit (2.25ha) were delineated which occupy an area of 1985 ha. 69 wetlands got frozen during the winter as manifested on the pre monsoon season imagery. Majority of the wetlands in Sikkim have low turbidity due to the fact that most of these wet lands are located in the high Himalayas and are of glacial origin.

Distribution of Wet Lands in Sikkim

Sl. No.	District	Wetland Class	No. of Wetlands	Wetland Area (ha)
1.	East Sikkim	Lakes/Ponds <2.25 ha	14 3	120.75 -
2.	West Sikkim	Lakes/Ponds	11	56.50
3.	North Sikkim	Lakes/Ponds <2.25 ha	135 64	1807.75 -
4.	South Sikkim	-	-	-
Total		227	1985.00	1985.00

WET LAND CONSERVATION PROGRAMME

Considering the dynamic change of the Himalayas and the water bodies, an expert team from MoEF was invited in the year 2006 and shown some of the important wetland of the state viz Tsomgo, Phedang, Menmoitso, Nathila cho, Hass Pokhari in East district and Khechephelri Holy Lake in the west district followed by Gurudogmar, Tambao, Gyatsona, Chhachuphu Lake and Cholhamu Lake the main source of Teesta river. Subsequently, State Level Wetland Steering Committee under the Chairmanship of Chief Secretary, Government of Sikkim was constituted to advise and provide scientific and technological inputs for management, development and improvement of the lakes on priority basis. The lakes of our State do not qualify as wetland, as such a number of small and big lakes coalesced in big water bodies having single outlet as a watershed were considered as '*Wetland Complex*' of the State. As many as 6 wetlands were prioritized for inclusion in the national Wetlands Conservation Programme in the year 2006-07-2007-08 and comprehensive action plans were submitted to the MoEF for financial support. All the six lakes or wetlands have been considered for inclusion in the National Wetland Conservation Programme by the Government of India and as result, three wetlands namely Tsomgo, Phedang and Gurudogmar wetlands received a token budget to initiate preliminary survey preparation of action plan. The details of activities carried out in the first year of the project sanction are given below:

**CONSERVATION & MANAGEMENT OF PHEDANG, TSOMGO & GURUDONGMAR
LAKES DURING THE YEAR 2007-08**

I- PHEDANG LAKE WATERSHED & COMPLEX					
Sl.No.	Item of Work	Target		Achievement	
		Phy.	Fin.(Rs. in lakhs)	Phy.	Fin.
1.	Watershed Management	5 ha	1.50	5 ha	1.49
2.	Survey & Demarcation	20 km	1.50	20 km	1.47
3.	Erosion Control	258 cum	2.50	258 cum	2.50
4.	Medicinal Plantation Protection	450 ha	1.00	450 ha	0.99
5.	Public Awareness	-	1.50	-	1.52
	TOTAL		8.00		9.97
II- TSOMGO WETLAND COMPLEX					
Sl. No.	Item of Work	Target		Achievement	
		Phy.	Fin.	Phy.	Fin.
1.	Survey & Demarcation	28 km	2.10	28 km	2.08
2.	Water harvesting structure	100 nos.	1.90	100 nos.	1.90
3.	Public Awareness	-	1.00	-	1.00
	TOTAL		5.00		4.98
III-GURUDONGMAR LAKE COMPLEX					
Sl. No.	Item of Work	Target		Achievement	
		Phy.	Fin.	Phy.	Fin.
1.	Survey & Demarcation	27 km	2.00	27 km	2.00
2.	Fuel wood alternative	26 nos.	0.70	26 nos.	0.70
3.	Public Awareness	-	0.66	-	0.66
	TOTAL		3.36		3.36

ENVIS CENTRE MANAGEMENT

ENVIS Centre (ENVironmental Information System) was established under EPC Division in June 2002. It is a decentralized system with a network of distributed subject oriented Centres ensuring integration of National efforts in environmental information collection, collation, storage, retrieval and dissemination to all concerned. The Centre has launched a website with the domain name of www.sikenviis.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.

- ENVIS Centre has been assisting the Member Secretary to State Environment Agency in monitoring and implementation of the Ministry's sponsored programme such as NEAC, NGC and VVK.
- The ENVIS Centre has also been providing technical support to the host Department.
- ENVIS Centre has emerged itself as a backbone in development of ISBEID (Indian State Based Environmental Information Database).
- ENVIS Centre also hosts the department library which in fact is a boost to the dissemination process.
- The volume of data and information collected, collated and stored in a retrieval system by the ENVIS Centre can ensure comprehensive environmental management and promote sound development.
- Publication made so far by the Centre:
 1. ENVIS Pamphlet
 2. Solid Waste Management Booklet
 3. Solid Waste Management Presentation Handouts (in booklet)
 4. State Green Mission Pamphlet
 5. Newsletters-Two Issues
 6. Compilation of State Government Gazette Notification related to Forests, Env. & Wildlife Management Department.
 7. Compilation of Report on Catchment Area Treatment Plan – Teesta Stage V
 8. Reports of Landslide Treatment & Erosion Control in South Sikkim
 9. Report on Implementation of National Green Corps Programme 2006-07 in North Sikkim.
 10. State of Environment Report 2007 (The first of its kind for the state of Sikkim)

ACTIVITIES OF THE ENVIS CENTRE DURING 2007-08

Sl.No.	Sanctioned Object Head	Amount Sanctioned (Rs. in lakhs)	Expenditure Incurred (Rs. in lakhs)	Available Balance (Rs. in lakhs)
1.	Staff	3.84	3.84	0
2.	Database Development	0.75	0.09	0.66
3.	Stationeries	1.00	0.36	0.64
4.	Traveling & Training	0.25	0.17	0.08
5.	Internet Connectivity & AMC	0.25	0.24	0.01
	TOTAL	6.09	4.70	1.39

CHAPTER-17

WILDLIFE CIRCLE

Brief Report of Activities of Wildlife Sector 2007-08

Introduction:

Wildlife in Sikkim is an important facet of the state due to its rich floral and faunal diversity and also of the facts that it lies on the confluence of three zoo-geographic zones of the world, viz., Palearctic, Oriental and IndoMalayan. The present administrative set up in the state concerning the Wildlife Sector is headed by the Additional Principal Chief Conservator of Forests-cum-Chief Wildlife Warden Head quarter in Gangtok. He is aptly supported by the Conservator of Forests, Wildlife who is also stationed at the four Wildlife Divisions of the state, North, East, West, and South, each headed by officers of the rank of Divisional Forest Officers, Wildlife, stationed at their respective district headquarters, viz., Mangan, Gangtok, Gyalshing and Namchi and FDA Scheme of Khangchendzonga National Park.

The Wildlife Circle presently looks after the conservation and protection of wildlife in its protected area spread over the state. At present there are seven Wildlife Sanctuaries and one National park in the state.

Note:

1. Protected Area Network does not include area under buffer zone of a biosphere reserve.
2. Total area admn by FEWM Deptt (RF i/c Pas) + Khas + Gaucharan = 5452 + 285 + 104 = 5841 Sq. km
3. Territorial Sector [RF + Khas + Gaucharan = 3268.90 + 284 + 104 = 3657.90 Sq. km] i.e. 51.55% of State's Geog Area.
4. Wildlife Sector [KNP + Sanctuaries = 3019.10 Sq. km] i.e. 42.54% of State's Geog Area.

Aims and Objectives:-

The aims and objectives of the protected areas of the states are based on the common agenda of Protection, Preservation and Conservation for perpetuity which are as follows:

- ✓ Protection of Wildlife and its habitat.
- ✓ Preservation and Conservation of the state's rich biodiversity.
- ✓ In situ conservation of rare and endangered species.
- ✓ Ex-situ conservation of Birds and Butterflies and some rare and threatened species.
- ✓ Rescue, Rehabilitation and Reintroduction of injured animal back to the wild.
- ✓ Population estimation of Wild animals and birds of the state.
- ✓ Develop research and monitoring techniques and implement them.
- ✓ Garner people support and participation in the conservation programme.
- ✓ Implement State and Centrally Sponsored Schemes for the development and improvement of the PA's and the wildlife therein.

Activities:

The various activities and works undertaken in the Wildlife sector are as follows:-

- Development of Wildlife infrastructure
- Strengthening and Enhancing the Protected Area Network.
- Effective Management of Protected Areas.
- Resolving Man and Animal conflicts.
- Conservation of Wildlife and Endangered Species and their Habitats.
- Restoration of Degraded habitats outside Protected Areas.
- Control of Poaching and Illegal Trade in Wild Animal and Plant Species.
- Improvement of communication network.
- Census/Estimation of Wildlife populations.
- Fire protection.
- Addressing Livelihood issues of ex-cattle herders.
- Tourism in Protected Areas.
- Determination of Critical Wildlife Habitat.
- Implementation of Wildlife Action Plan.
- Livestock immunization in and around P.A.
- Regular Wildlife Expeditions.
- Census/Estimation of Wildlife populations.
- Human Resources Development and Personnel Planning.
- Ensuring People's Support & Participation in Wildlife Conservations.
- Conservation Education and Protected Area Interpretation.
- Enhancing Financial Allocations for ensuring sustained fund flow to the Wildlife Sector.
- Monitoring and Research.

III. NOTIFICATION ISSUED DURING 2007 – 08

1. Notification No. 75 & 76 regarding – State Board for Wildlife.
2. Notification No. 85 regarding – Publication of Notification in the Official Gazette for the Reconstitution of State Board for Wildlife.
3. Notification No. 173 regarding – Publication of Notification in Official Gazette.

**STATEMENT SHOWING FUND REALISED FROM MINISTRY OF ENVIRONMENT & FOREST
GOVERNMENT OF INDIA DURING 2007-08 BEING IMPLEMENTED BY WILDLIFE CIRCLE,
DEPARTMENT OF FOREST, ENV. & WL MANAGEMENT, GOVERNMENT OF SIKKIM.**

Sl.no.	Name of project	Amount sanctioned for the year 2007-08 (Rs in lakhs)	Amount released as 1st instalment (Rs in lakhs)	Amount released as 2nd instalment (Rs in lakhs)	Total funds received (Rs in lakhs)
1	Development of Maenam wildlife Sanctuary, South Sikkim	14.40	11.52		11.52
2	Development of Kitam Bird Sanctuary, South Sikkim	12.90	9.67		9.67
3	Development of Barsey Rhododendron Sanctuary, West Sikkim	23.50	18.00		18.00
4	Development of Fambonglho Wildlife Sanctuary, East Sikkim	37.73	25.60	12.13	37.37
5	Development of Kyongnosla Alpine Sanctuary, East Sikkim	29.20	24.00	5.20	29.20
6	Development of Pangolakha Wildlife Sanctuary, East Sikkim	24.39	18.00	6.39	24.39
7	Development of Shingba Rhododendron Sanctuary, North Sikkim	28.06	17.10	4.31+6.65 (unspent balance of 2006-07)	21.41
Total		170.18	123.89		151.92

WORK CARRIED OUT UNDER FDA AS ON 31.3.2008
(WILDLIFE CIRCLE)

Sl. No	Name of FDA	Project period	Total Outlay	Total Physical Target (in Ha.)	Fund released till Date	Fund Utilized	Physical Achievement (in Ha.)
1	North-East Wildlife Sanctuary	2007-08 (1 Year)	178.30	280	151.00	150.95	280
2	South-West Wildlife Sanctuary	-do-	120.04		136.04	103.29	
3	KNP FDA	-do-	201.50	600	171.15	168.83	600
	Total		499.84		458.19	423.07	1440

NO. OF HOUSEHOLD COVERED UNDER EDCs AS ON 31.06.2008

SL. No	Name of FDA	No. of JFMC S/ EDC S	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	16	499	1092	4963	03	130	139	384	844	1228	384	856	1240
2	South-West Wildlife FDA	16	192	1516	6294	07	372	937	16	1427	1958	10	34	51
3	KNP FDA	17	50	3500	4042	12	112	208	14	1750	2100	26	1862	1888
	TOTAL	49	741	6108	15299	22	614	1284	414	4021	5286	420	2752	3179

ECO-DEVELOPMENT COMMITTEES UNDER WILDLIFE CIRCLE

Sl.No	Name of Sanctuaries	Name of EDC	
1	Barsey Rhododendron Sanctuary, West Sikkim	i)	Uttaray EDC
		ii)	Dentam EDC
		iii)	Hee Patal EDC
		iv)	Bermiok Martam EDC
		v)	SribedemEDC
		vi)	Soreng
		vii)	Sombaria EDC
		viii)	Ribdi EDC
2	Maenam Sanctuary, South Sikkim	i)	Sada Phamtam EDC
		ii)	Borong EDC
		iii)	Ralang EDC
		iv)	Rabongla EDC
		v)	Yang yang EDC
		vi)	Pathing EDC
		vi)	Lingmo EDC
		vii)	Sokpay EDC
3	Fambonglho Wildlife Sanctuary	i)	Song EDC
		ii)	Martam EDC
		iii)	Sumik EDC
		iv)	Rumtek EDC
		v)	Ranka EDC
		vi)	Ray EDC
		vii)	Samdong EDC
		viii)	Rabdong EDC
		ix)	Tumin EDC
		x)	
4	Pangolakha Wildlife Sanctuary	i)	Dhalopchen EDC
		ii)	Regu EDC
		iii)	Signay Bas EDC
		iv)	Rhodamchen EDC
5	Kyongnosla Alpine Wildlife Sanctuary	i)	Tsangu EDC
		ii)	Kyonngnosla EDC
6	Shingba Rhododendron Wildlife EDC	i)	Shengba EDC

CHAPTER-18

KHANGCHENDZONGA NATIONAL PARK AND BIOSPHERE RESERVE 2007 – 2008

1. THE AREA ETHNICITY AND DEMOGRAPHY:

The Khangchendzonga National Park covers an area of 1784 sq.kms and is the Core Zone of the Khangchendzonga Biosphere Reserve (KBR). The KBR has the total area of 2620 sq.kms 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 1829-2730 mts, Mixed Coniferous Forest within the altitude of 2730-3650 mts., and Alpine-Scrub, grass, variety of flowers and medicinal herbs from 3650 mts. and ultimately barren rocks and 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 central part of the Park are inhabited by Lepchas mainly, while the Chungthang, Lachen, Munsithang, Pegong consist of Bhutias with few Lepchas and Nepali communities. The Western & Southern part of the Park is dominated by Nepali communities. About 75% of households are considered to be at subsistence level and they depend on the Biosphere Reserve for the livelihood. The rural economy of the area is of fixed type and mostly on traditional farming, horticulture, agriculture and animal husbandry apart from tourism, small percentage of contract work and Government service. As such this National Park has least biotic interference.

2. STATEMENT OF SIGNIFICANCE:

- The third highest point of the earth's surface, the Khangchendzonga and its surrounding are of major significance not only to Sikkim but also to the Nation. Its status as a National Park further elevated the international prestige for its outstanding universal importance for aesthetic and scientific values.
- As an ecological unit in the high mountains of the world, the area is of important scientific value and offers unique research opportunities to the scientists of the nation, because of its conditions of extreme elevation, associated flora and fauna, culture and environment.
- The high altitude forests and rangeland environment of the Park are not only of aesthetic value but are vital to the local people of the area and down below as the glaciers and rivers of the area are important source of water for people downstream.
- The Park is of major religious and cultural significance in Sikkim since it abounds in sacred mountains and holy places. The Sikkimese people respect their homeland as a sacred hidden valley and refrain from hunting and slaughtering animals. These indigenous belief systems and practices provide important cultural basis for conservation.
- The Park has become an important destination for National and International visitors to Sikkim and benefits the State through revenue generation and friendship building. The scenic and wilderness values, which are major tourism resources, must be protected from further

exploitation and ill judged commercial development. This can be achieved through participatory planning and management based on sound conservation principles.

- The major portion of the National Park comprises of glaciers, mountains and lakes. There are about 18 glaciers and prominent amongst them are South Lhonak, Langbu, Changsang, Nepal Gap Glacier, Tongshiong, Talung, Onglakthang, East Rathong, Zumthul Phuk and the largest among all is Zemu Glacier. Besides, over 17 crystal clear and placid lakes, the Khangchendzonga National Park is blessed with more than 19 mountain peaks and they boast some of the most magnificent scenery of the snow clad in the world. It is place of beauty, charm, peace and remote from the main streams of events.
- Among all the peaks, most glamorous, magnificent, panoramic and predominant peak is the Mount Khangchendzonga (8586m.), world's third highest peak, which literally narrates the Guardian Deity of Sikkim, along with the other peaks namely: in the middle flank is the beautiful Mount. Narsing (5825m.), Mount. Pandim (6691m.), Mount Kuber on the Southern side, The Twin (7350m.), Nepal Peak (7150m.), Tent Peak (7365m.) etc. these lofty peaks, totally or partly have occupied the Khangchendzonga National Park and has influenced the climate of the region and rendered a conducive environment for Bio-resources including Valuable, rare and endangered species of flora, fauna and avi-fauna, etc.
- Besides various fauna and avi-fauna of the park it is also the store house of medicinal plants and other valuable floras.

3. Patterns Of Resources Allocation From Government Of India:

There are two centrally sponsored schemes:i) Management Action Plan (MAP) for Conservation and Management of Khangchendzonga Biosphere Reserve- Sikkim and ii) Assistance to States for development of Parks and sanctuaries- Khangchendzonga National Park- Sikkim. As per the Annual Plan of Operation submitted by the Forest, Environment & Wildlife Management Department, Government of Sikkim, after careful consideration by the MOEF, Government of India, releases the resources for implementation of a) Eco-development activities b) Social welfare activities, d) Habitat management, e) Forest Research, Extension and Education, f) Forest Protection, g)Infrastructure Development etc. All the administrative expenses like salaries and wages of the officers, field staffs and office staffs are born by the State Government.

I. Funding Pattern and Expenditure under; Assistance to State for development of National Parks and Sancturries- Khangchendzonga National Park- Sikkim, during 2007-08.

Sl. No.	Item Of Expenditure	Locations	Physical Target (Ha./No.)	Financial Target (Rs. In Lakhs)	Physical Target Achieved (Ha./No.)	Financial Target Achieved (Rs. In Lakhs)
Non- Recurring Activities :						
1.	KNP boundary & erecting of RCC pillar with angle iron post	Toong-Chhaten in North Sikkim	21 km.	9.24	21 km.	9.24
2.	Biodiversity check-post	Labdang & Sankalang	2 Nos.	6.00	2 Nos.	6.0
3.	Drinking water provision	Phimphu Log Hut	Ls	1.00	Ls	1.00
4.	Construction of artificial water holes for wild animals	Kishongla, Jakchen, Yambing & Phimphu.	15 Nos.	1.50	15 Nos	1.50
Recurring Activities :						
5.	Furnishing & painting of interpretation center.	Yuksom	1 No.	2.00	1 No.	2.00
Grand Total :			21Km. & 18 Nos.	19.74	21Km. & 18 Nos.	19.74

II. Funding Patterns and Expenditure under; Management Action Plan (MAP) for Conservation and Management of Khangchendzonga Biosphere Reserve: Sikkim: During 2007-08.

Sl. No.	Item / Head	Physical Target	Financial Target (Rs. in Lakhs)	Location	Physical Target Achieved Ha./Nos.	Financial Target Achieved (Rs. in Lakhs)
A.	ECO – DEVELOPMENT ACTIVITIES					
1.	Handlooms & Handicrafts	90 persons	5.50	Unemployed youths from KNP-Buffer village	90 persons	5.50
2.	Toilets	18 families	6.30	Poor families of Buffer village	18 families	6.30
3.	Cardamom rhizomes	150 families	4.80	Farmers from Buffer villages	150 families	4.80
B.	SOCIAL WELFARE ACTIVITIES					
1.	LPG Connections	100 families	3.50	Selected families of KNP-Buffer villages	100 families	3.50
2.	Health Camps		2.00	Check-up & free distribution of medicines to the Buffer villagers	300 persons	2.00
3.	Solar Light	60 families	3.60	Village where electrification is needed	60 families	3.60
C.	HABITAT MANAGEMENT					
1.	Broom Grass Plantation	45 ha.	3.96	Selected beneficiaries from forest fringe village	90 families	3.96
2.	Bamboo Plantation	30 ha.	6.42	Chunghang, Yuksom & Dzongu.	30 ha.	6.42
3.	Maintenance of 2 nd year plantation	45 ha.	1.15		45 ha.	1.15

D. ECO - TOURISM BASED INFRASTRUCTURE DEVELOPMENT						
1.	Up-gradation of Interpretation Centre	Ls	Yuksom	1 No.	1 No.	3.00
2.	Furnishing of Beh Log-Hut	1 No.	1.50	Beh in North Sikkim	1 No.	1.50
3.	Renovation of Zali & Zakthang Log Hut	2 No.	6.00	Zali & Zakthang	2 No.	6.00
4.	Construction of trekking trail	5 km.	5.00	Labdang-Kasturi, Tholung-Kishongla, Zali-Biguatey	5 km.	5.00
E. FOREST RESEARCH, EXTENTION OF EDUCATION						
1.	Signage of resources	Ls	1.50	Treking routes in the Park and posters	-	1.37
2.	Documentry flim on KBR	-	5.00	Natural Resources on KNP & KBR	-	5.00
TOTAL			59.23		178 fam. 5 km. 64 nos.	59.10 Lakhs

CHAPTER-19

HIMALAYAN ZOOLOGICAL PARK, GANGTOK.

Brief background:

Himalayan Zoological Park, Gangtok is a State Government owned Zoo established with few animals in the year 1994. It is under proposal for extension and expansion in line with new concept for a modern Zoo. It is one of the high altitude Zoos in the country recognized by the Central Zoo Authority, Government of India and is unique in its set -up in the natural forest where the captive animals have been provided large enclosures with simulated natural environment.

The Himalayan Zoological Park is the only Zoo in the State. It is in budding stage, a growing asset and one of the thrust areas in the agenda of the State Government for extension and expansion to make it a modern Zoo during the Eleventh Plan.

Location and Area:

Himalayan Zoological Park is closely situated at six kilometers of Gangtok town, the capital of the Himalayan State of Sikkim in the North-Eastern region of India. Situated at an altitude of 1890 -2130m, the Zoological Park is spread over an area of 230 hectares of mountainous land with terrain suitable for captive management of Eastern Himalayas and Sikkim Himalayas fauna.

Climate : Winter : Dry, sometimes light snow fall and precipitation.
Summer : Rainy. Monsoon starts in May and ends in September.

Temperature : Summer - Maximum : 25° C
Minimum : 11° C
Winter - Maximum : 13° C
Minimum : 0.1° C to 0.5° C

Best Season : Mid – February to May end
Mid- September to December end.

Rainfall : 2535 mm to 3894 mm

Humidity : Fluctuates between 72 % in Winter and 85% in Summer.

Snow and Frost : Light snowfall is almost every year in the higher reach. Frost is more frequent from December to February. Hail storms and lightning occasional during March – April and do some damage to the trees.

Vision:

To ensure the conservation of all endangered animals and their environment through a holistic approach towards captive management and education.

Mission:

- To promote conservation breeding of some important and endangered 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 animals 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 and preserve the natural habitat including the freely living 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 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.

Present Zoo Exhibits:

(A) Mammals

Sl. No.	Species	Male	Female	Total	IUCN/WPA Status
1	Snow Leopard <i>Uncia uncia</i>	1	1	2	Schedule I
2	Red Panda (State Animal) <i>Ailurus fulgens fulgens</i>	4	2	6	Schedule I
3	Common Leopard or Panther <i>Panthera pardus</i>	1	1	2	Schedule I
4	Tibetan Wolf <i>Cannis lupus chanco</i>	3	3	6	Schedule I
5	Leopard Cat <i>Prionailurus bengalensis</i>	2	5	7	Schedule I
6	Himalayan Black Bear <i>Ursus thibetanus</i>	1	1	2	Schedule I
7	Himalayan Palm Civet <i>Paguma larvata</i>	2	1	3	Schedule II
8	Large Indian Civet <i>Viverta zibetha</i>	1	1	2	Schedule II
9	Goral <i>Naemorhedus goral</i>	1	1	2	Schedule III
10	Indian Muntjac or Barking Deer <i>Muntiacus muntjak</i>	2	4	6	Schedule III
11	Flying Squirrel <i>Petaurista magnificus</i>	1	1	2	Schedule III
12	Yak <i>Bos grunniens</i>	1	1	2	Schedule I
Total		19	21	42	I - 7 Sp. II - 3 Sp. III - 2 Sp.

(B) Birds:

Sl No.	Species	Male	Female	Total	IUCN/WPA Status
1	Kaleej Pheasant <i>Lophura leucomelana melanota</i>	1	1	2	Schedule I
2	Silver Pheasant <i>Lophura nycthemera</i>	1	1	2	Exotic
3	Lady Amherst's Pheasant <i>Chrysolophus amherstiae</i>	1	1	2	Exotic
4.	Golden Pheasant <i>Chrysolophus pictus</i>	1	1	2	Exotic
Total		4	4	8	

Other Attractions:

Besides the captive animals and birds, the dense lush green temperate forest with smaller bamboos clumps, flora including wild flowering plants, orchids, ferns, medicinal herbs and shrubs and the resident freely living animals such as Foxes, Jackals, Barking Deer, Goral, Red Panda, Civet Cats, smaller Cats, Rodents, Birds and Butterflies are also the additional attractions for the visitors in the Himalayan Zoological Park campus. The nature trails to facilitate walk-in through the forest and observe flora and fauna are also available for nature lovers at some places.

Initiatives for Conservation Breeding Programs in the Zoological Park, Gangtok:

Zoos are conservation organizations and need to be developed to more of a scientific institution so that the desired objectives in this direction are fulfilled. It is well known to Indian Zoos that the Central Zoo Authority has, in the above direction conducted various trainings, workshops and meetings for the Zoo Directors of the Indian Zoos in the recent past. Its flagship program was to train the Zoo Directors in the master planning of their Zoos and also to initiate programs for conservation breeding of identified endangered wild animal species in their respective Zoos.

Subsequent to the above, the Himalayan Zoological Park is in the process of completion of its draft Master Plan which will have the master lay-out plan and its other important ingredients covering the proposed enclosures for new collections of Eastern Himalayan and Sikkim Himalayas fauna, conservation breeding centers of identified Himalayan species, other developmental works such as up-gradation of old enclosures, network of roads & footpaths, strengthening of Zoo Hospital, rescue centre - cum- quarantine house, Zoo Director' office, administrative buildings, staff quarters, electricity and water supplies connections, tourist facilities, wildlife interpretation centre, research centre etc. under proposal and also in the process of completion of detailed project reports (DPR) in respect of the identified endangered wild animal species for conservation breeding programs.

The Himalayan Zoological has already given a start for Red Panda conservation breeding in the off-display enclosure. The captive breeding has been successful when a pair of captive bred male from Darjeeling Zoo and the female brought from Rotterdam Zoo (Holland) gave birth to two males during the year 1999. The pair delivered cubs for four consecutive years further till the year 2002 and thereafter was a break in birth due to the death of female in 2003. The male was paired again with a female rescued from the

wild during 2006 and the female delivered a female cub during 2007 and again in the recent past June of the current year. The recent born cub has not been sexed yet.

The State Government is very keen to expand the Red Panda breeding and also to initiate similar program for Snow Leopard and other targeted species for which the available sites are large and very ideal. The Blood Pheasant *Ithaginis cruentus*, the State Bird of Sikkim, the Himalayan Tahr *Hemitragus jemlahicus* and the Blue Sheep *Pseudois nayaur* are the three identified endangered wild animal species for the Himalayan Zoological Park, Gangtok to take up for initiating conservation breeding program in the zoo as Coordinating Zoo while for endangered species such as the Red Panda, *Ailurus fulgens fulgens* (State Animal), the Snow Leopard *Uncia uncia*, the Tibetan Wolf *Canis lupus chanco*, the Himalayan Monal Pheasant *Lophophorus impejanus*, the Satyr Tragopan *Tragopan satyra*, the Himalayan Zoological Park, Gangtok is the Participating Zoo.

The Detailed Project Reports (DPRs) in respect of the identified endangered species for initiating conservation breeding programs in the Zoological Park are in the process of completion. The Zoo personnel and engineers in consultation with experts are already on the work in that direction for completion of the same soon and submission to the State Government and the Central Zoo Authority for approval.

Staff:

Himalayan Zoological Park has 36 staff from the level of Addl. Director down to Zoo Keepers including administrative staff for its management. The HZP is equipped with small veterinary facilities along with veterinary personnels to look into the matters of upkeep, hygiene and health care of captive animals.

The Addl. Director of Forests has been given independent charge of the Zoological Park under the direct control of the State Chief Wildlife Warden for its overall improvement and development. He is assisted by a Sr. Veterinarian in the capacity of Dy. Director for Veterinary Section and the DFO and his sub-ordinates are for the planning and executing developmental works.

Visitors' Amenities :

Ticket Counter is located at the main entrance. 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 interpretative signages have been placed at appropriate places for convenience of the zoo visitors. Zookeepers and field staff do also act as zoo guide, professional photographers are also available in the Zoo campus.

Fees:

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 seven days a week

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

CHAPTER-20

SERICULTURE

Sericulture Directorate in Forests Environment and Wild Life Management Development have been functioning within its perimeters since its inception from 1977-78. Within limited infrastructures and small number of manpower the Sericulture Directorate deals with the centrally sponsored schemes known as Catalytic Development Programme (CDP) launched by the Central Silk Board, Government of India. In addition to this programme, three kinds of sericulture viz. Mulberry, the Muga, and the Eri culture has been in practice which has been gaining its popularity amongst the newly adopted sericulture farmers in the State. Thus, marginal farmers involved in the sericulture are being benefited directly in terms of cash and employment in the State.

1. Sericulture Extensional Programme:

Extension of Sericulture programmes through implementation of CDP in the villages where it is found feasible is the prime activity of the Directorate. Hence, the people oriented Sericulture Scheme "Catalytic Development Programme" (CDP) sanctioned by the Central Silk Board, Government of India during the year 2007-08 which is being implemented in the year 2008-09 only due to lack of 10% State Share and 10% beneficiary matching Share. The details of the achievement is given in the table below.

Sl. No.	Name of Scheme	Target (in acre)			Achievement (in acre)			Remarks
		Mulb	Eri	Muga	Mulb	Eri	Muga	
1.	Augmentation of Silk worm food plants	25	25	25	25	25	25	100%
2.	Maintenance of silkworm Food plants	25	25	25	25	25	25	100%
3.	Seri. Farmers trained	25	25	25	30	-	-	Under Progress
4.	Provision of start up tools	25	25	25	25	25	25	
5.	Construction of Silkworm Rearing House	25	25	-	02	-	-	Under progress
6.	Provision of Drip irrigation facility	25	-	-	25	-	-	100%
7.	Provision disinfectants	50	50	15	50	50	15	100%
8.	Establishment of CRC	3	-	-	1	-	-	Under Progress
9.	Establishment of Grainage	1	-	-	1	-	-	100%
10.	Upgradation of Govt. farm	-	1	-	-	-	-	Under progress

2. SilkWorm Rearing Programme:

Besides extension and developmental programmes. To plan and conduct three types of silkworm rearing in the Government farms and also in the level of private rearers in different villages are equally important responsibility of the Directorate. The objective behind the organization and to conduct seasonal silkworm rearing in the farmers level and also in the different Government Sericulture farms are to produce desirable quantity of good quality mulberry bivoltine cocoons, Muga seeds and high quality Eri cocoons. Thus, the super quality cocoons produced in the hilly regions at different crop schedules have always attracted the purchasers from outside the State and ultimately contributed a lot in financial support to the sericulture farmers and collection of revenue in the State. The Sericulture Crop Schedule and its annual target/achievement of cocoon production for the year 2007 given in the table below.

Sl. No.	Name of the Centre	Target (in Kg.)			Achievement (in Kg.)		
		Mulb.	Eri	Muga	Mulb.	Eri	Muga
1.	Govt. Sericulture Farm, Rorathang	440	200	15000	239	8	262
2.	Sericulture Village in East District	560	1313	12000	150	182	58
3.	Govt. Sericulture Farm, Mamring	640	200	18000	275	248.5	2280
4.	Sericulture Village in South District	1300	1750	21000	36	281	631
5.	Govt. Sericulture Centre, Nagdhara	60	100	-	-	11	-
6.	Sericulture Village in West District	1840	1000	18000	118	622.3	1050
	TOTAL	4848	4563	84000	818	1353.2	4281

As per the earmarked target, there has been shortfall in production of cocoons at different sectors due to certain unavoidable reasons like short supply of quality seeds (Dfls). Failure of crops repeatedly because of an unfavourable weather and finally of natural calamity (hail storms).

3. Other Activities

In addition to Silkworm Rearing and Extensional activities incorporated within the Catalytic Development Programmes, the Directorate of Sericulture has also organized and executed several other programmes like Capacity Building and Skill Development programmes for the departmental staffs and sericulture farmers.

CHAPTER-21

NON TIMBER FOREST PRODUCE (N.T.F.P.) ANNUAL REPORT OF NTFP/SMPB DIVISION FOR YEAR 2007 – 2008:

The brief annual reports of activities carried out by NTFP/SMPB Division during the year 2007-2008 are as under:

1. **The State Medicinal Plants Board (SMPB):** SMPB was constituted under the Forest, Environment & Wildlife Management Department, Government of Sikkim, by the State Government in the year 2002 – 2003. The objectives of the Board is formulation of policy, co-ordination with concerned Departments and organizations, implementation of the project for conservation, propagation and utilization of medicinal plants resources in the state.

Activities of SMPB:

In order to develop & conservation of existing medicinal plant resources available in the state & its sustainable use, the SMPB is implementing the projects under Promotional & Contractual Farming Scheme funded by the National Medicinal Plants Board (NMPB), Government of India.

2. **Promotional Scheme:** Promotional Scheme is mainly aims to disseminate awareness about the important of Medicinal Plants, Survey & Inventorisation, Resource, In-situ Conservation & Ex-Situ Cultivation of Medicinal Plants for production of quality planting materials and development.
 - i. **Project for production of Quality Planting Materials:**

The Production of Quality Planting Materials project under Promotional Scheme was approved and sanctioned by National Medicinal Plants Board (NMPB) for the period of 3 years commencing form 2005-2006 to 2008-2009 with financial target of Rs. 25.00 lakhs.

The existing herbal garden nurseries located at Dombang, Lachung, Thangu, Zeema Herbal Garden, Lachen in North and Rateychu Herbal Garden in East are maintaining under this scheme since 2005-2006 to increase the production of planting materials of medicinal plants species. Besides that, ex-situ conservation of medicinal plants by using the seedlings produce from existing herbal nurseries were carried out during the year 2005-2006 & 2006-2007 covering about 34 ha. The physical and financial target achieved under this project areas under:

Sl. No.	Year	Financial Target (Rs. in lakhs)	Physical Target (Area in ha)		Total Area
			Nursery	Ex-situ Cultivation	
1	2005-2006	10.00	4 ha	17 ha	21 ha
2	2006-2007	9.00	4 ha	17 ha	21 ha
Total		19.00	8 ha	34 ha	42 ha

ii. **Creation of trees Species Nurseries:** The primary objectives is to make available as many seedlings of medicinal trees as possible to farmers, JFMCs for planning in forest lands, institutional lands like schools, office & vacant public land in order to meet the critical shortage of tree parts of certain medicinal trees demand. The Ayurvedic & Herbal industry has huge demand for medicinal trees & therefore, marketing would pose no problem. Another objective is to achieve the National goal of 1/3 of the geographical area under Forest tree cover by 2012 A.D.

National Medicinal Plants Board has approved the project for creation of 2 ha. of nursery for raising tree species of medicinal value in the North, East, West and South Districts with financial target of Rs. 20.00 lakhs for each projects. The first installment of Rs. 10.00 lakhs for each project has been sanctioned and released by NMPB during the year 2007-2008.

Owing to saturation of the some projects the Department had directed the SMPB to take up the old and abundant forest nursery areas located in the East, West and South District by engaging the old labors.

Accordingly, SMPB had taken up the abundant forest nursery areas located at Singtam, Rorathang in the East, and Sipsu and Raniban in the West District for raising the tree species of medicinal plants. In case of North District, the creation of nursery was taken up in private land by engaging the interested farmers. The details of physical and financial target achieved till 31st March 2008 are as under:

Sl. No.	Location	Physical & Financial target		Physical & Financial target achieved	
		Phy. in Ha.	Fin. in lakhs	Phy. in Ha.	Fin. in lakhs
1	Private holding at Tingda Block, North Sikkim	2 ha.	10.00 lakhs	2 ha.	5.62
2	Old abundant nurseries located at Singtam and Rorathang in East District	2 ha.	10.00 lakhs	2 ha.	5.09
3	Old abundant nurseries located at Sipsu and Raniban in West District	2 ha.	10.00 lakhs	2 ha.	5.58

The creation of nursery in South District was kept pending for taking up of existing forest nursery located at Tingling Ramyang in the South District from Landuse and Environment Division with effect from 1st April 2008 as approved and directed by the competent authority.

Trees species identified are: Eagle marmelos (Bale), Azadiarchta indica (Neem), Bauhinia variegata (Koirala), Cinnamomum tamala (Sinkauli), Emblica officinalis (Amla), Fraxinux floribunda (Lankuri), Hippophoe salicifolia (Achuk), Juglans regia (Okhar), Oroxylu, indicum (Totala), Rhus semialata (Bhakimol), Rhododendron aroberum (Gurans), Terminalia ballerica (Barra), Terminalia chebula (Harra), Zanthoxylum (Bokey timber), Taxus baccata (Dhengre-Salla), Evodia fraxinafolia (Khanakpa).

3. **Contractual Farming Projects:** The objectives of Contractual Farming is to strengthen the cultivation of medicinal plants by large scale 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 total cost of project is granted by the National Medicinal Plants Board, Government of India as financial assistant for cultivation of medicinal plants in the private holdings by the farmers for commercial purpose.

- i. During the 10th Five Year Plan:

84 Nos. of Contractual farmers projects were approved and sanctioned by National Medicinal Plants Board (NMPB) from 2003-04 to 2006-07. The details are as under:-

Sl.No.	Year	No. of Farmers Projects	Physical Target in acers	Financial Target in lakhs			
				1 st	2 nd	Balance	Total
1	2003-04	02	20	01.00	00.65	00.30	01.95
2	2004-05	19	188	20.75	12.91	07.13	40.79
3	2005-06	04	45	04.63	00.00	04.63	09.26
4	2006-07	59	585.83	57.82	00.00	57.98	115.81
Total		84	837.83	84.20	13.56	70.04	167.81

Abstract Of Physical And Financial Target Achieved:

- i. The total private land under cultivation of medicinal plants by farmers =837.83 acers
- ii. Total financial assistance approved by NMPB =Rs.167.81 lakhs
- iii. 1st installment of financial assistance released to contractual farmers =Rs. 84.20 lakhs
- iv. 2nd installment of financial assistance released to contractual farmers =Rs. 13.56 lakhs
- v. Total fund released to contractual farmers by NMPB =Rs. 7.76 lakhs
- vi. Balance financial assistance to be released by NMPB =Rs. 70.04 lakhs

- ii. During the 11th Five Year Plan:

45 Contractual Farming projects were approved and sanctioned by NMPB during the year 2007-2008 to 2009-2010. The first installment of the project amounting to Rs. 41.37 lakhs has been sanctioned and released by the NMPB through State Medicinal Plants Board for cultivation of medicinal plants in the private lands by the farmers. The funds released have been transferred to the respective contractual framers as per the approved work programmed. The details are as under:

Contractual Farming projects approved and sanctioned by NMPB during 2007 - 2008 = 45 Contractual Farmers.

Abstract:

Sl.No.	District	No. of Farmers	Area	1 st installment released
1	East	8	55 Acers	3.9705
2	West	2	14 Acers	0.9240
3	North	4	45 Acers	3.0375
4	South	1	6 Acers	0.7050
Total		15	120 Acers	8,6370

Sl. No.	District	No. of Farmers	Area	1 st installment released
1	East	10	56 Acers	5.38
2	West	6	32 Acers	3.28
3	North	5	33 Acers	2.19
4	South	9	57 Acers	5.11
Total		30	178 Acers	15.96

iii. Registration of Contractual Farmers:

To create awareness about important of medicinal plants and to encourage the farmers for domestication of medicinal plants resources SMPB has started the registration of interested farmers of cultivator, collectors, and traders. Till 31st March 2008, 590 farmers have been registered as a farmer, 209 as a collector and 202 as a trader. To enable them to carried out the cultivation of medicinal plants in the private holdings and its trading operation in the state of Sikkim.

4. **Jari Buti Khosh:** The Jari Buti Khosh (Herbal Medicine Fund) was established under the State Medicinal Plants Board by the State Government during the year 2004-2005. The sum of Rs. 50.00 lakhs was provided under Jari Buti Khosh for the production of quality planting materials and to create awareness among the stakeholders and public regarding the important of medicinal plants available in the state.
The SMPB has maintained herbal nurseries located at Kyongnosla and Tamzey Herbal Gardens in East District, Samduptse Herbal Garden in the South District and Guransey Nunthaley in the West District. The total areas cover is 4 ha. and financial target involved was Rs. 6.93 lakhs.
5. **BADP:** Under this programme one ha. of herbal nursery located at Kyongnosla Herbal Garden was maintained during the year 2007-2008 for the production of quality planting materials.

6. NTFP Activities:

i. **Bamboo Mission Programme:** The NTFP Division was allotted 100 ha. of bamboo plantation under National Bamboo Mission Programme during the year 2007-2008. The bamboo plantation was carried out by the NTFP Division through Joint Forest Management Committee of the concerned Blocks as per the guidelines of the National bamboo Mission. The detail location, physical and financial target achieved is as under:

a. Under Lingdum Tingda JFMC

Location		Physical Target
Namsing R.F	-	40 ha.
Languray Khas	-	23 ha.

b. Under Kabi-Rongpa JFMC

Zamlay R.F	-	18 ha.
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c. Under Kabi Bakcha JFMC

Phakhu Khas	-	<u>19 ha.</u>
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Total:		100 ha.
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Total financial target involved		16.68 Lakhs
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7. **Tribe Sub-Plan (TSP) & Scheduled Caste Sub-Plan (SCSP):** The Social Justice, Empowerment & Welfare Department, Government of Sikkim is the Nodal Department for formulation and implementation of Scheme under TSP and SCSP. The social Justice, Empowerment & Welfare Department had approved and sanction schemes submitted by Forest, Environment & Wildlife Management Department, Government of Sikkim under Scheduled Tribe and Scheduled Caste Sub-Plan During the year 2007-2008.

The objective of the scheme envisages conservation, improvement and to increase the productions of broom grass and medicinal plantation in the rural areas for providing the additional source of income to Scheduled Tribe and Scheduled Caste.

The scheme priorotised were broom grass and bamboo plantation in the private holdings to ensure direct benefit to the farmers belonging to Scheduled Tribe and Scheduled Caste. The scheme was implemented through beneficiaries for planting of broom grass and bamboo plantation in the privet holdings. The list of beneficiaries for

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:

Sl. No.	Items Of Work	Physical Target Achieved	Financial Target Achieved	Nos. of beneficiaries benefited
1	Broom Grass Plantation in private holdings under Scheduled Tribe Sub-Plan in North District	150 ha.	14.88	834 nos.
2	Bamboo Plantation in private holdings under Scheduled Tribe Sub-Plan in North District	55 ha	7.95	220 nos.
Total		205 ha.	22.83	1034 nos.
3	Broom Grass Plantation in private holdings under Scheduled Caste Sub-Plan in East and South District	30 ha.	2.91	151 nos.

The Schemes implemented by the beneficiaries were checked and monitored by the field staffs and officers of the Forest Env. & Wildlife Management Department, Government of Sikkim.

CHAPTER-22

SOCIAL FORESTRY

“Social forestry” means rural and community groups who control local trees and forest resources. People use tree or forest related activities to provide products for their own use or to generate income.

Social Forestry term was used in the year 1976 at aims to take the pressure of the forests and making use of all unused and fallow land. Government forest areas that are close to human settlements and have been degraded over the years due to human activities needed to be afforested. Trees are to be planted in and around agricultural fields. Plantation of trees along roadsides, river bank side, west & barren land etc. is to be taken up. They are also being planted in village common land, government waste land and community land.

Social Forestry also aims at raising plantations by the common man so as to meet the growing demand of timber, fuel wood, fodder, etc. thereby reducing the pressure on the traditional forest areas. This concept of the village forests meets the needs of the rural people which help to eradicate the poverty of poor farmers.

With the introduction of this scheme, the government formally recognized the local communities on its right to forest resources, encouraging rural participation in the management of natural resources. In the Social Forestry Scheme, it has involved community participation as part of a drive towards afforestation and rehabilitating of the degraded forests and common lands.

The department has to implement the programme of forestry activities and hand over to the villagers to manage for themselves and generated products as they saw fit for use in the community themselves.

Social Forestry is community involvement project, through which day to day requirement of common people such as fuel wood, fodder and other basic and minor forest project are grown. Further, it is also helps in conservation of soil and moisture and consequent impact on human population, there is great need to develop land use systems that sustain both human and forest eco-systems. Social Forestry and Agro-Forestry address this need

Social Forestry undertakes raising of gardens in the school premises, hospitals and government institution premises and also in “C” and “D” class lands in the rural areas. It also aims at raising seedlings in the nurseries through schools and decentralized nurseries. The plantation will be done in the village land and periphery of villages to the khas and gowcharan lands and after establishment, it will be open to use for the nearby villagers to meet up their daily requirements like fodder to the tamed cattle for stall feeding and firewood as well as other minor forest produces for their domestic use. Implements, small timber are also being given to the farmers in free of cost/royalty free as usufruct sharing basis.

Social Forestry directly involves the values need and priorities of local people in the management of trees and forests. Agro-Forestry is sustainable and systematic land use management system that integrates trees, agricultural and horticultural crops etc. to meet the needs the local farmers. Its goal is to optimize land use by conserving the natural resources for sustainable production of firewood, fodder and minor forest produces.

In the context of Social Forestry in Sikkim, this department in implementing different schemes under different head which has been given in table below:

Sl. No.	DIVISION	NAME OF SCHEMES	ITEM OF WORK	PHYSICAL TARGET ACHIVEMENT	FINANCIAL TARGET ACHIEVEMENT
1.	EAST DIVISION	TSV(CAT) PLAN Funded by NHPC	1. Gap filling work.	177.8 hac.	14.03 lakhs
			2. Stone wall Fencing.	8km.800mts.	35.67 lakhs
			3. Maint. of old plantation.	1600 hac.	43.65 lakhs
			4. Maint. of Nurseries.	9.5 hac.	1.89 lakhs
			5. Watch & Ward.	9.5 hac.	16.18 lakhs
		GREEN BELT Funded by NHPC	1. Maint. of Nurseries	1 hac.	0.22 lakhs
		2. Maint. of nursery (Regular)	1 hac.	1.86 lakhs	
2.	NORTH DIVISION	-DO-	1. Afforestation.	140 hac.	16.09 lakhs
			2. Dry Stone Wall.	3 km.	13.36 lakhs
			3. Fule Wood & Fodder.	50 hac.	5.74 lakhs
			4. SPD.	30 hac.	3.08 lakhs
			5. Broom Grass.	3 hac.	0.43 lakhs
			6. Gap Filling work.	40 hac.	2.55 lakhs
			7. Seed Defiling work(winter plantation)	14 hac.	14.77 lakhs
			8. Maint. of nurseries.	3 hac.	1.86 lakhs
			9. Maint. of old plantation work.	1280 hac.	35.0 lakhs
			10. Maint. of nursery(Regular)	3 hac.	6.26 lakhs
3.	EAST DIVISION	12 th Finance Commission	Dry Stone Wall Fencing Work	5 km.	22.29 lakhs
4.	SOUTH DIVISION	NOVOD 100% CSS	1. Zetropha Khanji & Neem plantation work.	110 hac.	10.06 lakhs
			2. Maint. of plantation work.	110 hac.	0.94 lakhs
			3. maint. of Nurseries.	1.5 hac.	2.09 lakhs
			4. Advance work of Zetropha plantation.	30 hac.	1.04 lakhs
			5. Training Programme.	-	0.10 lakhs

5.	WEST DIVISION	NOVOD 100% CSS	1. Jetropha Khanji & Neem plantation work. 2. Farmers Training Programme. 3. Advance work of Zetropha plant.	90 hac. - 30 hac.	8.47 lakhs 0.65 lakhs 2.77 lakhs
6.	EAST DIVISION	Aesthetic Forestry STATE PLAN	Maint. of garden	8 Nos.	4.12 lakhs
7.	NORTH DIVISION	Aesthetic Forestry STATE PLAN	Maint. of nurseries etc.	3 hac.	4.19 lakhs
8.	WEST DIVISION	Aesthetic Forestry STATE PLAN	Maint. of garden	5 hac.	3.05 lakhs
9.	SOUTH DIVISION	Aesthetic Forestry	Maint. of garden	3 nos.	0.96 lakhs

CHAPTER-24

DIVERSION OF FOREST LAND UNDER FOREST (CONSERVATION) ACT 1980

Forest (Conservation) Act 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 prohibitory.

Since 1980, Rules and Guidelines have been formed for division 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, drinking water facilities, mining etc. on forest land and checked the indiscriminate diversion of pristine forest areas. Between 1950 and 1980, forest lands have been diverted at the rate of 1.5 lakh hectare per annum by the various state government/UT Administration. This diversion has however, come down as low as 0.38 lakh hectares 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 and progress of Compensatory Afforestation till 31.March 2008 is given below.

DIVERSION OF FOREST LAND TILL 31ST MARCH 2008

Sl. no.	Item	District wise (in ha.)				Total
		North	East	South	West	
1.	No. of Cases approved for Diversion	46	68	66	26	206
2.	Total Forest Land Diverted	467.36	294.26	283.95	72.76	1118.34
3.	Compensatory Afforestation Stipulated					
	a. In Forest Land	1328.53	598.985	461.33	329.76	2718.61
	b. In non-Forest Land	7.276	0.00	2.70	15.78	25.75
	Total (a+b)	1335.806	598.985	464.03	345.54	2744.36
4.	Compensatory Afforestation completed					
	a. in forest land	800.405	583.07	470.76	280.75	2134.99
	b. In non-forest land	2.262	0.00	2.50	13.014	17.77
	TOTAL (a+b)	802.667	583.07	473.26	293.764	2152.76

CHAPTER-25

STATE POLLUTION CONTROL BOARD

The Sikkim State Pollution Board was initially set up to implement the provisions of the Water (Prevention & Control of Pollution) Act, 1974 and since its inception the Board has tried to ensure proper implementation of the status, judicial and legislative pronouncements and to meet the public demands.

At present the responsibility of implementing a series of environmental Acts & Rules has been bestowed upon the State Pollution Control Board-Sikkim.

- The Water (Prevention and Control of Pollution) Act, 1974, as amended and Rules made thereunder;
- The Water (Prevention and Control of Pollution) Cess Act, 1977, as amended and Rules made thereunder;
- The Air (prevention and Control of Pollution) Act,1981, as amended and Rules made thereunder;
- The Public Liability Insurance Act, 1991, as amended and Rules made thereunder;
- The Environment (Protection) Act,1986 and Rules made thereunder;

FINANCES:

YEARWISE

A .Grants received from State Government by State Land Use & Env.Board.

<u>YEAR</u>	<u>AMOUNT</u>
1997-1998	Rs. 1.60 Lac
1998-1999	Rs. 1.0 Lac.
1999-2000	Rs. 1.0 Lac.
2000-2001	Rs. 1.0 Lac.
2001-2002	Rs. 2.27 Lac.
2002-2003	Rs. 2.60 Lac.
2003-2004	Rs. 5.0 Lac
2004-2005	Rs. 13.5 Lac.
2005-2006	Rs. 16.0 Lac.
2006-2007	Rs. 16.50 Lac.
2007-2008	Rs. 22.50 Lac.

B. Receipts of SPCB out of consent fees, authorization fee.

<u>Year</u>	<u>Amount</u>	<u>Expenditure</u>
1999-2000	Rs. 65, 500.00	
2000-2001	Rs. 67, 500.00	
2001-2002	Rs. 69,250.00	
2002-2003	Rs. 1, 97, 000.00	
2003-2004	Rs. 1, 97,000.00	
2004-2005	Rs. 2, 67,000.00	
2005-2006	Rs. 6, 89,000.00	
2006-2007	Rs. 8, 89,000.00	Rs. 4, 58,897.00
2007-2008	Rs. 8, 55,000.00	

The Grant-in-Aid received by the SPCB amounting to Rs.22.0 Lac was utilized for the payment of salaries of the engaged in the SPCB and the office of the Chairperson, SLUB.

ACTIVITIES OF THE STATE POLLUTION CONTROL BOARD DURING THE YEAR 2007-2008.

1. Project Implemented by SPCB funded by CPCB.
 - i) National Air Quality Monitoring Programme (NAMP)
(Continuous monitoring)
 - ii) Monitoring of Indian National aquatic Resources (MINARS) **(Continuous monitoring)**

The above schemes were funded by CPCB & MOEF and implemented as per the guidelines given by CPCB & MOEF.

CONSENT ISSUED BY SPCB-SIKKIM DURING 2007-2008.

Beside the above mentioned activities, consent to establish and consent to operate was issued to the following Units:

- i. Carnosite Projects Pvt.Ltd.-
- ii. Liddle Manufacturing Pvt.Ltd.-Near Topakhani,Singtham
- iii. Promising Exports Ltd.-Manpur, South Sikkim.
- iv. Saraswathi Herbals Product Factory-Chisopani, Jorethang.
- v. Lama Enterprise-Khani Khola,Melli.
- vi. K-Lee Food Processing Factory
- vii. Ansh Manufacturing Pvt.Ltd.-Rangpo, East Sikkim
- viii. ADS Industries-Manpur, South Sikkim
- ix. Sign Sikkim Pvt.Ltd,-Mining Complex,Rangpo
- x. Kapil Food Products-Nandu goan, Jorethang, S/Sikkim
- xi. Bisco Food Products-Soreng, West Sikkim
- xii. Bee Wires & Cables Co.-Manpur, S/Sikkim
- xiii. Shri R.D>Mills-DIC, Jorethang.
- xiv. Organic Manures-Manpur, S/Sikkim
- xv. Unichem Lab.Ltd.-Mazitar, East Sikkim
- xvi. Flex Art Foil Pvt.Ltd.-Mazitar, East Sikkim
- xvii. Janki Mirra & Co.- Manpur, S/Sikkim
- xviii. Multivision infrastructure Pvt.Ltd.
- xix. Epitome Petro-chemical Pvt.Ltd.
- xx. Teesta Enterprise
- xxi. Intas Pharma-Mazitar-Mazitar, S/Sikkim
- xxii. R.P.C.Polymers Pvt.Ltd.-Manpur, S/Sikkim
- xxiii. Nexteen Printers Pvt.Ltd.-Mazitar, S/Sikkim
- xxiv. Golden Cross Pharma Pvt.Ltd.-Rorathang, S/Sikkim
- xxv. Kailash Rolls Floor Mill-Tandong, East Sikkim
- xxvi. YBL Bottle Manufacturing Division-Melli, S/Sikkim
- xxvii. Ipca Laboratories Ltd.-Bhari Khola, S/Sikkim
- xxviii. Shrinivas (Gujurat) Laboratories Pvt.Ltd.
- xxix. Deepak Cable (India) Ltd.
- xxx. Rainbow Pvt.Ltd.-DIC, Jorethang, S/Sikkim
- xxxi. Ramro Food Products-Arithang, East Sikkim
- xxxii. Ramky Enviro Engineers Ltd.

WATER QUALITY OF RIVERS

Under the National Quality Monitoring Programme, Water Quality of Teesta River is monitored in nine sampling stations identified and sanctioned by the CPCB.

Out of 104 rivers water quality monitoring of River Teesta, Rangit & Rani are monitored in a continuous manner as these rivers are to be monitored under the National Water Quality Monitoring Programme.

NAME OF IMPORTANT LAKES IN SIKKIM

SL.NO	NAME OF LAKES	DISTRICT
1.	Khe-cheod-Palri (Khecheoperi)	West
2.	Gurudungmar	North
3.	Lam Pokhari	West
4.	Changu Pokhari	East
5.	Laxmi Pokhari	West
6.	Cholamu	North
7.	Bidang Cho	East
8.	Menmecho	East
9.	Majur Pokhari	West
10.	Sima Choka	North
11.	Dud Pokhari	West
12.	Samiti Lake	West
13.	Ram-Laxman (Twin Lake)	West

Out of the above lakes water quality of Khechopalri, Gurudongmar, Menmencho, Changu lakes have been monitored by the State Pollution Control Board Sikkim as per the Central Sponsored Scheme.

HOTSPRINGS (TSHACHHU)

- i. Phurtshachu at Khadosangphug, South/West Sikkim.
- ii. Ranglop tashachhu at Borong, South Sikkim
- iii. Gangyab chhutshen, West Sikkim
- iv. Takrumtshachhu, North Sikkim
- v. Yumasamdongtshachhu, North Sikkim
- vi. Yumthangtshachhu, North Sikkim
- vii. Zee tshachhu, North Sikkim
- viii. Shagyong phedok tshachhu, North Sikkim.
- ix. Tholung kangtshachhu, North Sikkim.

Out of the above hot springs water quality of Phurtshachhu at Khadosangphug, South/West Sikkim, Ranglop tshachhu at Borong, South Sikkim. And Yumasamdongtshachhu, North Sikkim have been monitored by the State Pollution Control Board Sikkim as per the Central Sponsored Scheme.

CHAPTER-26

SURVEY & DEMARCATION

REPORT ON SURVEY & DEMARCATION ACTIVITIES FROM 2005-2008

Introduction:

The State with more than 80% of the geographical area under the Forest and Protected Area cover has been identified as one of the biodiversity hotspots of the World. To manage this rich biodiversity survey and demarcation is essential. The undulating mountainous terrain makes this task highly challenging. The first recorded cadastral land survey had been undertaken in 1950-52. During the survey, boundaries of the forest land which had been classified into Reserve Forest, Khasmal and Gaucharan were surveyed and demarcated. Along the boundaries of the RFs, stone boundary pillars had been erected. These pillars were damaged and/or shifted by the encroachers during the transition period in mid 1970s. The matter was further complicated by the cadastral survey undertaken in 1979-80 during which large tracts of Forest land had been registered as private holdings and vice-versa. In such a situation surveying and demarcating the forest boundaries using only the traditional method of chain and compass survey posed a gigantic task fraught with possibility of igniting unwanted unrest and providing fuel to the vested interest. It was to overcome this difficulty that the Department of Forest, Environment & Wildlife Management, and Government of Sikkim adopted the GPS technology to complement the traditional survey techniques. The

Details of the physical and financial achievements under Survey & Demarcation Division from 2005-2008

SN	Type of infrastructure	Target		Achmnts 05-06		Target		Achmnts 06-07		Target		Achmnts 07-08	
		PHY	FIN	PHY	FIN	PHY	FIN	PHY	FIN	PHY	FIN	PHY	FIN
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Clearance of survey line(No)	287	22.62	287	22.62	0	0.00	0	0.00	120	10.87	120	10.87
2	Erection of Boundary Pillars(No)	3713	53.14	3713	53.14	0	0.00	0	0.00	720	23.23	720	23.23
	Sub Total				75.76				0.00				34.10

DETAILS OF BOUNDARY PILLARS ERECTED UNDER IFPS DURING 2005-06 TO 2007-08

SN	Location	Range	District	Year	Nos of BP
1	Melli RF, Payong RF, Suntaley RF, Kateng RF	Melli	South	2005-06	251
2	Tsulamthang Rf, Sammardong RF, Kateng RF	Namthang	Do	Do	180
3	Manghring RF, Donak RF, Narak RF, and Chedeme RF	Do	Do	Do	172
4	Suminkhor Rf, Dara-dhunge RF, Pamphok RF, Dhunge-Pani RF and N & W of Tukray RF	Do	Do	Do	174
5	Northern boundaries of Melli RF	Melli	Do	Do	107
6	S & W boundary of Lagyap RF	Kyongnosla	East	Do	92
7	S & W boundary (Chandmari) of Lagyap RF	Gangtok	East	Do	20
8	Eastern boundary of Rumtek RF	Ranipool	East	Do	99
9	Eastern boundary of Rongyek		Do	Do	21
10	E of Pangthang & Lindok RF	Gangtok	Do	Do	125
11	S-W boundary (Penlong-Burtuk) of Bulbuley RF	Do	Do	Do	31
12	Denga RF, Tsungthang RF, Tungley RF Shipygar (Theng) RF	Tsungthang	North	Do	251
13	Labrang RF	Phodong	Do	Do	55
14	Kabi (Ghaikhana Top) RF	Do	Do	Do	32
15	Mongranggang RF	Do	Do	Do	72
16	E of Labrang RF, S-SE of Chawang & Famang RF	Do	Do	Do	85
17	West of Tingda RF	Do	Do	Do	32
18	West of Gethang & Phodong Rf	Do	Do	Do	45
19	East of Latong RF & West of Rabom Rf	Lachen	Do	Do	71
20	East of Chatten & Zema RF	Do	Do	Do	105
21	W of Rangrang, Kalay, Pamthang & N of Manul Rf	Mangan	Do	Do	126
22	SW of Zoom RF	Soreng	West	Do	125
23	Toyang & Shrihang RF	Gyalshing	Do	Do	130
24	S of Pelling-Sangchu-Chhange-Bangtin RF	Do	Do	Do	185
25	Bardang & Salingey RF	Singtham	East	Do	125
26	N-W-S of Khani RF	Do	Do	do	65
27	W of Lachung, E of Yumthang & Bichhu Rf	Lachung	North	Do	117
28	W of Namok, Tingchim & Phodong RF	Mangan	Do	Do	140
29	Nambu RF, Singpheng RF, Darap RF & Peka RF	Gyalshing	west	Do	185
30	W of tendong RF	Namchi	South	Do	116
31	N of Ramaram RF & E of Tendong RF	Do	Do	Do	185
32	E of Sitley RF, Tumlabong RF & South of Khani RF	Singtham	East	Do	230
33	Dikiling RF	Do	Do	2007-08	120
34	Bhasmey RF	Do	Do	Do	65
35	Pachay Khani RF	Paykohg	Do	Do	50
36	Dhanukay RF	Do	Do	Do	55
37	Tendong RF (Jowfari boundary)	Namchi	South	Do	120
38	Chakamthang RF	Namthang	Do	Do	25
39	Tendong RF (Namchi boundary)	Namchi	Do	Do	75
40	Tendong RF/Papung RF	do	Do	Do	140
41	RF boundaries under Tsungthang sub-division left during 2005-06	Tsungthang	north	Do	70
Total					4433

CHAPTER-27

WORKING PLAN

DETAILS OF THE WORK CARRIED OUT DURING LAST THREE YEARS BY WORKING PLAN CIRCLE.

SL. NO.	FINANCIAL YEAR	NAME OF WORK	LOCATION
1.	2005-06	1. Range & Block Mapping	East, West North & South Sikkim
		2. EIS/EMP Pakyong Airport	Pakyong, E. Sikkim
		3. Natural Resources Atlas of Sikkim by NAMTO, Kolkatta.	-
		4. Forest Inventory Works by SFD	East District
2.	2006-07	1. Ground Truthing of Wet Land Mapping	East District
		2. EIA/EMP of Teesta State VI by Lanco 500 MW	Sirwani, East District
3.	2007-08	1. EIA/EMP Report prepared for 96 MW HEPP at Dikchu	Dikchu, East Sikkim
		2. Preliminary Working Plan under progress	East, West & North District

CHAPTER-28

ENVIRONMENT & POLLUTION CONTROL DIVISION (EPC)

Brief write-up on Wetland Conservation at Tsomgo & J.N Botanical Garden, Rumtek.

1. Wetland Conservation at Tsomgo:

This scheme aims at conserving the Wetland areas specially those that form the water supply sources for the villages, as well as those that support peculiar ecosystems consisting of rich flora assemblages and associated fauna. It is proposed to protect the lakes by constructing slit detention structures. This ensures for the protection of existing fir forest regeneration and natural growth by conducting suitable silvicultural operations.

2. J.N Botanical Garden, Rumtek

This project consist of propagating ex-situ,several varieties of orchids, Rhododendrons and associated plants with a view to educated the people about the Richness of the flora wealth of Eastern Himalayas. This garden also became a Tourists spot.

Sl.no	Name of Activities	Budget(Rs.in thousand)	Location	Target		Remarks
				Physical	Financial	
1	CONSERVATIONPROGRAMME					
1A	Wetland Conservation	294				
1AI	M/rolls of Nursery Labors	-	Kyongnosola	0.06Ha/ Nursery	93696	
1AII	Silt Detention/Dry Wall	-	Changu	216.60 cum	162407.00	
1AIII	Purchase of tools and implements etc.	-	Kyongnosola	-	21664	
2	Ecological Development Urban Areas.	62				
2A	M/roll of Nursery Labor	-	Pinetum	0.04Ha/ Nursery	62220.00	
2AI	Purchase of tools and implements etc.	-	Pinetum	-	12200	
3	Research &Ecological Regeneration	311		-		
3A	M/roll of Nursery Labor of J.N Botanical garden,Rumtek	-	Rumtek	0.27Ha	311000.00	
3AI	M/roll of Supervisors of J.N Botanical garden,Rumtek	-	Rumtek	-	31476.00	
4	Supplies & Materials	230		-		
4A	Purchase of tools and implements etc.for J.N Botanical Garden.		Rumtek	-	80000.00	
4AI	Construction of RSM wall of foot stairs with square bar railing.		Rumtek	-	121488.00	

CHAPTER-29

AFFORESTATION UNDER 20 POINT PROGRAMME

Afforestation, Natural Regeneration, Pasture Development (Fodder Plantation), Plantation of Bamboo other Minor Forest Produce as well as Medicinal Plants is being carried out by Forests, Environment and Wildlife Department regularly. Area under both forest as well as private lands covered under plantation during the last 30 years is given below.

Sl. No.	Period of Afforestation	Area in Hectares		Total Area
		Government land	Private land	
1.	1971-80	7463.00	1317.00	8780.00
2.	1980-85	3332.65	676.35	4009.00
3.	1985-86	1666.25	558.75	2225.00
4.	1986-87	1470.00	490.00	1960.00
5.	1987-88	1511.25	503.75	2015.00
6.	1988-89	1616.25	538.75	2155.00
7.	1989-90	1852.50	617.50	2470.00
8.	1990-91	3416.25	1138.75	4555.00
9.	1991-92	4622.47	1580.82	6203.29
10.	1992-93	5484.00	1828.00	7312.00
11.	1993-94	5786.70	1928.90	7715.60
12.	1994-95	6900.00	2300.00	9200.00
13.	1995-96	7189.50	2398.50	9588.00
14.	1996-97	7500.00	2500.00	10000.00
15.	1997-98	6356.56	2610.30	8966.86
16.	1998-99	7537.00	500.00	8037.00
17.	1999-00	6923.00	4183.00	11106.00
18.	2000-01	8048.00	3031.00	11079.00
19.	2001-02	6217.00	2483.24	8600.24
20.	2002-03	3696.00	2946.00	6618.00
21.	2003-04	6125.19	1732.00	7857.19
22.	2004-05	6191.00	2064.00	8255.00
23.	2005-06	8012.87	306.00	8319.00
24.	2006-07	3550.26	487.35	4037.61
25.	2000-08*	3456.73*	-	3456.73

Total :

- Area worked out on the basis of 14, 73,000 seedlings distributed to public
- * 2007-08 onwards only Forest land has been accounted for and private land has been excluded.

CHAPTER-30

30.1- Statement of revenues realised during last eleven years.

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%

30.2- STATEMENT OF EXPENDITURE

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

CHAPTER-31

Various Training Attended By IFS Officers During 2007

1	Shri, SBS Bhaduria	Promotion linked in- service Training	IGNFA,Dehradu.	16- 27.4.'07	241/GEN/DOP
2	Shri, A.K.Ganeriwala	Do	Do	2-13.7.'07	Do
3	Shri, S.T.Lachungpa	Three Day's Senior Forester's workshop	Do	23- 25.7.'07	Do
4	Shri, N.T.Bhutia	Do	Do	Do	Do
5	Shri,Karma Zimpa Bhutia	Advance Forest Management course for Senior Forest Officers.	IGNFA, Dehradun	28.5.'07- 15.6.'07	267/GEN/DOP Dt.7.5.'07
6	Shri, S.T.Lachungpa	Role of State Forest Deptt.in Conservation,Cultivation Harvesting,Marketing & Benefisharing by the communities.	Amity School of Natural Resources University Campus, Noida.	1-2.2.'07	223/GEN/DOP dt.12.1.'07
7	Shri, M.L.Srivastva	Do	Do	Do	Do
8	Shri, SBS Bhadauria	Do	Do	Do	Do
9	Shri, M.Singh	Eco-Tourism Assessment & Dev.	Jungle Lodges & Resorts Ltd., Bangalore.	18- 22.6.'07	282/GEN/DOP dt.28.5.'07

10	Shri Thomas Chandy	Promotion-linked In-Service Training of IFS Officers	IGNFA, Dehradun.	215/GEN/D OP dt.5.1.'07	5-16.2.'07
11	Shri, SBS Bhadauria	Promotion linked In-Service Training of IFS Officer	Do	214/GEN/D OP dt.22.3.'7	16-27.4.'07
12	Shri, A.K.Ganeriwala	Do	Do	Do	2-13.7.'07
13	Shri, Sandeep Tambe	Preparing Projects & Schemes & Monitoring & Evaluation.	SIRD, Kerfector Sikkim	42/DESME	9-14.7.'07
14	Mrs. Monalisa Dass	7 days Training on Office rules & Procedure	AATI, New Secretariat Annexure 1 Gangtok	51/P&S/F dt. 25.6.'07	2-6.7.'07
15	Shri, H,P.Pradhan	One Week Compulsory Training Course on Env. Impact Indicators and valuation Technique.	Adm. Staff College of India (ASCI) Hyderabad	309/GEN/D OP dt.02.07.'07	30.07.'07- 03.08.'07
16	Shri, H.P.pradhan	Enhancing the effectiveness for Implementation of the Govt. Policies & Programme	IIM, Bangalore	353/GEN/D OP 14.8.'07	3-7.9.'07
17	Shri, Pradeep Kr.	International Forest Standards	Forest Research Institute, Dehradun	Order not received.	28-30.9'07
18	Shri, Manjit Singh, APCCF (PMA)	Eco-Tourism Assessment & Development	Jungle Lodges & Resorts, Banglore	June 18-22,2007	
19	Shri K.Z. Bhutia, DFO,WP	Science Writing/Journalism	Forest Conference Hall	Sept.24-27.2007	62/PS/GOS/F 12.9.2007

CHAPTER -32

NURSERIES UNDER FOREST ENVIRONMENT & WILDLIFE MANAGEMENT DEPARTMENT

SL No	Name of Division/Circle/scheme	District	Location		Area (in Ha.)	No. of Labors
1	Non Timber Forest Product 1. Promotional Scheme Funded By NFPB	East	1	Rateychu Herbal Garden	1	2
		North	3	Dombang Herbal Garden, Lachung Zema Herbal Garden, Lachen Thangu Herbal Garden, Lachen	3	6
		Sub Total		4		4	8
	2. Jari Buti Khosh	East	1 1	Kyongnosla Herbal Garden Tamzey Herbal Garden	1 1	2 2
		West	1	Guransey Nunthaley H.G.	1	2
		South	1	Samduptse H.G.	1	2
	Sub Total		4		4	8
3.BADP	East	1	Kyongnosla H.G.	1	2	
Total		9		9	18	
2	Silviculture	South	1	Barhi Khola Nursery	1.5	5
		Under Assisted Natural Regeneration of Sal, South	1	Barhi Khola Nursery	75	4060 mandays
Total		2		76.5		
3	Social Forestry	East	1	B-II Nursery	2	NA
			1	Lagyap Nursery	2.5	NA
			1	Raksey Nursery	1	NA
			1	Amlatar Nursery	1	NA
			1	Gaidhara Nursery	2	NA
			1	Salingey Bagey Nursery	1	NA
		North	1	Nampriekdang	1	NA
			1	Dikchu Laborboty	1	NA
			1	Goansamdong	1	NA
		South	1	Barhi Khola Nursery	1.5	NA
Total		10		14	NA	
4	KNP		1	Mensithang	1	4
Total		1		1	4	
5	Green Mission	North	1	Kabi Namsing	1	5
			1	Rafom	5	2
			1	Munshithang	2.5	13
			1	Singring	0.5	3
			1	Lachen	0.5	2

		East	1	Bagey Khola	1.6	7
			1	Balwakhany	0.5	2
			1	Gurdan	1	3
			1	Burtuk	1	4
		South	1	Namchi Borongpani	1.8	9
			1	Melli	2	10
			1	Bhguwa	2	9
			1	Rayong	1	5
			1	Ralang	1.4	7
			1	Due	0.4	2
		West	1	Tikjuk	1	5
			1	Gyalzing	1	3
			1	Begha	1.5	5
			1	Yuksom	1	6
			1	Tikpur	1.5	7
			1	Okhery	1.5	7
			1	Ridge Park	2	10
			1	Buriakhop	1.2	6
	Total		24		25.2	132
6	Bamboo Mission	East	2	Sangkhola	1.2	6
				Lower Martam	0.5	3
		North	1	Tanek	1	5
		West	3	Sirithang	1	5
				Kaluk	1	5
			Daramdin	1	5	
		South	1	Mamring	1	5
	1	Rabongla	1	5		
	Total		8		7.7	39
7	Forest Development Agency	North	4	Lingdong	2	10
				Pakshep	2	10
				Chewang	0.6	3
				Kabi	1	5
		East	4	Assam - linzey	1	6
				Upper Martam	0.5	2
				Lingdum	1	3
				Pangthang	3.6	18
		South	3	Kamdaley	2.4	12
				Chirbirey Tar	1	5
				Bhanjyang	1	3
West	2	Hee-Kyongbari	1	5		
		Phagyambotey	1	5		
	Total		13		18.1	87
8	F.C.A.		1	Bulbuley	2	10
			1	Hunuman Tok	0.50	3
	Total		2		2.50	13
9	Sericulture	East	1	Rorathang	6.4	13
		South	1	Manring	4	11
		West	1	Nagdhara	1.2	7
	Total		3		11.6	31
10	Wildlife Circle	South West FDA	1	Noonthalay	1	4
			1	Terchay	1.2	5
		North East FDA	1	Nomnasa	0.5	3
	Grand Total				167.65	344