



**2018-2019**

**ANNUAL ADMINISTRATIVE  
REPORT**



**FOREST &  
ENVIRONMENT  
DEPARTMENT**  
GOVERNMENT OF SIKKIM



Minister,  
Forest and Environment  
Mines & Geology and  
Science & Technology Department  
Government of Sikkim  
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## FOREWORD

Sikkim, one of the smallest States, occupying only 0.2% of the total geographical area of India, with an area of 7096 sq.km accounts for over 25% of the biodiversity of the country. Forest and its rich natural resources are important sources of the livelihood for the State's primarily rural population. However, with ever increasing demand on the forest resources for goods & services, the forest are under tremendous biotic pressure.

We, in Sikkim have always believed in a path of eco-friendly and sustainable development. We want to maintain ecological balance between the nature and use of its resources as per need of the people. In such a scenario our Government is committed to protect, preserve and expand our natural resources and maintain a balance between protected of environment with development. That is why we have an impressive record in environmental conservation & climate change mitigation action.

We have initiated a new green initiative of dedicating "A Day for Mother Earth" on 7<sup>th</sup> July of every year during which all vehicular movements are stopped for seven minute to reduce carbon foot print as well as to ascertain State's affirmative action towards ameliorating the detrimental effects of global warming & climate change.

Sikkim is a model State in governance related to cleanliness. Use of all types of plastics, burning of agricultural waste is banned in Sikkim. But perhaps the greatest achievement is the awareness among the people about the need to protect & conserve our rich natural resources.

I am pleased that Forest & Environment Department, Government of Sikkim is bringing out Annual Administrative Report 2018-19 for record & for circulation of information related to forestry activities & I hope it will be helpful to all concerned.

**(Karma Loday Bhutia)**

Minister,  
Forest & Environment Department,  
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## ***PREFACE***

Forestry is the major land use of the State and conservation of these natural resources is of paramount importance to provide a host of ecosystem services such as soil fertility, water supply, pollution, carbon sequestration & climate moderation. Forest & Environment Department is the Nodal Department for managing the forest areas of the State which is 82.31% of the geographical areas of the State.

The State has 30.77% of the geographical area as protected area which includes one National Park & six sanctuaries. The first ever wildlife population estimation was done in these protected areas. During the 2<sup>nd</sup> phase of wildlife population estimation, a Royal Bengal Tiger has been sighted in the camera trap in Kyongnosla Alpine Sanctuary and Pangolakha Wildlife Sanctuary, which itself speaks volume about the conservation of wildlife in the State. In the year 2016, KNP was inscribed as a UNESCO World Heritage Site on mixed criteria of Cultural & Natural. This was followed by inclusion of the Kanchendzonga Biosphere Reserve in United Nations Educational Scientific & Cultural Organization (UNESCO) World Network of Biosphere Reserve (WNBR) under the Man and Biosphere Programme on 16<sup>th</sup> July 2018.

Forest & Environment Department is implementing various green programmes such as Paryavaran Mahotsav, A Day for Mother Earth, wherein saplings are distributed free of cost and various awareness programmes are conducted across the State. Other Centrally sponsored schemes like Secure Himalaya, Green Skill Development programme and Green India Mission are also being implemented by the Department. Due to the above mentioned efforts as well as due to strict implementation of relevant Forest Acts, protection & conservation measures taken up, the area of water bodies in the State has increased by 2km<sup>2</sup> during 2015 and tree cover by 1km<sup>2</sup> during 2019.

Annual Administrative Report 2018-19 brought out by Planning & Statistical Cell has tried to highlight the activities & measures taken up by the Forest & Environment Department & expansion of quality forest.

I hope readers will find this edition of AAR 2018-2019 interesting & informative.

**(M.L.Srivastava) IFS,**  
P.C.C.F-cum-Principal Secretary

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## Chapter- 1

### INTRODUCTION:

Sikkim, located in the Eastern Himalayas is the 2<sup>nd</sup> smallest State of India with a geographical area of 7096 sq.km. The State is bestowed with abundant natural resources. Covering just 0.2% of geographical area of the country, it has tremendous biodiversity and has been identified as one of the Hot Spots for biodiversity and the taxonomist often refers to the State as a “Botanist’s Paradise”. The indicators of forest cover – very dense forest, moderate dense forest, open forest & environmental protection index has shown consistent improvement over the decade. The forest cover as per FSI report, 2019, stands at 47.60% which is 4% increase since 1994 which itself speaks volumes of the conservation success of the State despite diversion of forest land for developmental works like construction of roads & infrastructures.

To oversee, manage, protect and conserve this rich biodiversity and environment, Forest Department was first set up by the then Chogyal, Sidkeong Tulku, in 1909 and Reserve and Goucharan forests surveyed and demarcated. Since then, Forest Department has come a long way. During this journey of more than 100 years, Forest Department has gone through major changes. Appropriately, the Department now has been renamed as Forest and Environment Department which has 82.31% of geographical areas of State under its administrative control. The main function of the Department is to conserve, protect and expand forest & environment activities in the State and contribute to the nation and the world. The Department is headed by the PCCF-cum- Principal Secretary, Forest and Environment Department, Government of Sikkim.

Within an area of 7096 sqm, the state has 30.77% of forest as protected area comprising of seven wildlife sanctuaries and one national park which is highest in the country. Khangchendzonga National Park, the only National Park in the state is also the UNESCO World Heritage Site declared in July 2016. The forest cover of the State has increased by 4% approximately over the last 20 years. Rural water sources have got rejuvenated, wildlife populations have gone up, forest gaps have been filled and soil erosion has been checked to larger extent. Water bodies have increased by 2 km<sup>2</sup> due to protection of forest with strict enforcement of relevant Forest Laws and Rules in the State. Many afforestation activities under different programmes and schemes to rejuvenate the degraded forest lands, implementation of Non-Forest and Private Land Tree Felling Rules have been taken up.

The people of Sikkim are environmentally aware for conservation of its natural resources and sustainable use of forest resources that is why the tree cover outside forest (TOF) has also increased as per the State of Forest Report 2019 published by Forest Survey of India, Ministry of Environment, Forest and Climate Change, Government of India. However, the forest cover of the State has gone down slightly as per 2019 ISFR, the main reason behind decline in forest cover is due to diversion of forest land for non-forestry purposes like establishment of hydropower projects, construction of border roads for defence purpose, rural connectivity roads for economic up-liftment of rural masses. These activities are in the interest of nation and sovereignty of the country and cannot be ignored. In all such diversion of forest land for non-forestry purposes, compensatory afforestation is mandatory and the fund for afforestation is levied and realized from the user agency (ies) for afforestation on double the forest land diverted for non-forestry purpose to restore the blank and degraded forests and to compensate the loss of forest land used for developmental activities (non-forestry purposes).

Forest and Environment Department has been implementing various schemes and programmes both Centrally Sponsored Schemes/Central Sector Schemes and State Funded Schemes for protection and conservation of forests, restoration of biodiversity and environment amelioration. Department has also initiated climate change mitigation measures which is a big challenge of this hour. Details of schemes / programmes implemented by the Department during 2018-19 with physical and financial achievements have been compiled in this report.



## Chapter- 2

**Area Statistics:****(a) Increase in Forest Cover:**

SN	FSI Report year	Forest Cover (sq km)	%	Tree Cover (sq km)	Forest + Tree Cover (sq km)	Total %
1	1987	2756	38.84	NA	NA	NA
2	1989	3041	42.86	NA	NA	NA
3	1991	3041	42.86	NA	NA	NA
4	1993	3119	43.95	NA	NA	NA
5	1995	3127	44.07	NA	NA	NA
6	1997	3129	44.10	NA	NA	NA
7	1999	3118	43.94	NA	NA	NA
8	2001	3193	45.00	14	3207	45.19
9	2003	3262	45.97	22	3284	46.28
10	2005	3262	45.97	27	3289	46.35
11	2009	3357	47.31	20	3377	47.59
12	2011	3359	47.34	25	3384	47.69
13	2013	3358	47.32	31	3389	47.76
14	2015	3357	47.31	35	3392	47.80
15	2017	3344	47.13	35	3379	47.62
16	2019	3342	47.11	36	3378	47.60

**(b) Forest Cover**

Sl.No.		Within Green wash (sq.km)	Outside Green wash (sq.km)	Total (sq.km)
1	Very Dense Forest	966	136	1102
2	Moderate Dense Forest	1046	506	1552
3	Open Forest	334	354	688
	Total	2358	986	3342
4	Tree Cover			36
5	Total Forest and Tree Cover			3378
6	Per capita forest and tree cover			0.556
7	Of State's Geographical Area			47.60%
8	Of India's Forests and Tree Cover			47.60%

Source: Forest Survey of India, 2019.

**(c) District wise Classification of Forest Area****Area in sq.km.**

<b>District</b>	<b>Khasmal / Goucharan</b>	<b>Reserved Forest (RF)</b>	<b>Total Forest Area</b>	<b>Geographical Area</b>
East	105.01	505.50	610.51	954.00
North	60.20	3880.00	3940.20	4226.00
South	104.06	304.75	408.81	750.00
West	119.73	761.75	881.48	1166.00
<b>Total</b>	<b>389.00</b>	<b>5452.00</b>	<b>5841.00</b>	<b>7096.00</b>

Source: FCA Division.

**(d) District wise Forest Cover.****Area in sq.km.**

<b>District</b>	<b>Geographical area</b>	<b>2019 Assessment</b>				<b>% of G.A.</b>	<b>Change</b>	<b>Scrub</b>
		<b>Very dense forest</b>	<b>Moderate dense forest</b>	<b>Open forest</b>	<b>Total</b>			
East	954	271.15	313.61	127.96	712.72	74.71	-0.28	54.73
North	4226	410.61	586.18	287.26	1284.05	30.38	-0.95	206.21
South	750	173.35	289.49	108.98	571.82	76.24	-0.18	3.71
West	1166	246.85	363.03	164.02	773.90	66.37	-0.10	42.00
<b>Grand Total</b>	<b>7096</b>	<b>1101.96</b>	<b>1552.31</b>	<b>688.22</b>	<b>3342.49</b>	<b>47.11</b>	<b>-1.51</b>	<b>306.65</b>

Source: India State of Forest Report- 2019.

### **Chapter- 3**

#### **MAN POWER:**

The Administrative Section of the Department is headed by Principal Secretary-cum-PCCF followed by Joint Secretary, Deputy Secretary & Under Secretary. The above officers are supported by Office Superintendents, Head Assistants and numerous other clerical assistants. The main task of Administration Section is to deal with the personal files related to leave, increment, retirement of the members of Sikkim State Subordinate Forest Service, Sikkim State Subordinate Ministerial & Executive Service, Sikkim State Subordinate Accounts Service and other such unorganized services associated with the Forest Department. Besides those activities, the Administration Section also deals with the matter of promotion, recruitment and training of employees as well as allotment of vehicles, part files of all the officers posted under Forest, & Environment Department.

#### **Brief description of the achievements during the year reported upon is as follows;**

- Clearance of files pertaining to conduct rules.
- Clearance of pending files of employees regarding Assured Career Progression Scheme (ACPS)
- Successfully disposing of RTI related cases.
- Regularization of 554 employees those who have completed 5, 10 & 15 years and above as M/Roll/Adhoc/ Work charge in various categories of post in the Department.

<b>MAN POWER : AS ON 31.03.2019</b>		
<b>FOREST &amp; ENVIRONMENT DEPARTMENT</b>		
<b>IFS CADRE</b>		
<b>SL NO</b>	<b>DESIGNATION</b>	<b>IN POSITION</b>
<b>1</b>	PCCF-cum-Pr. Secretary	1
	Chief Conservator of Forest	3
	Conservator of Forest	4
	Deputy Conservator of Forest	1
	Additional Project Director I & II	2
	Director	1
	On Central Deputation	7
	On State Deputation	7
<b>A. TOTAL IFS (GAZETTED)</b>		<b>26</b>
<b>SFS CADRE</b>		
<b>SL NO</b>	<b>DESIGNATION</b>	<b>IN POSITION</b>
<b>2</b>	Director	2
	Additional Director	2
	Joint Director	6
	Deputy Conservator	46
	Assistant Conservator	51
<b>A. TOTAL SFS (GAZETTED)</b>		<b>107</b>
<b>FRONTLINE STAFF</b>		
<b>SL NO</b>	<b>DESIGNATION</b>	<b>IN POSITION</b>
<b>3</b>	Range Officer	70
	Block Officer	164
	Head Forest Guard	172
	Forest Guard	163
<b>B. TOTAL NON-GAZETTED</b>		<b>569</b>
<b>TOTAL (A+B)</b>		<b>676</b>
<b>SERICULTURE/ SILVICULTURE</b>		
<b>SL NO</b>	<b>DESIGNATION</b>	<b>IN POSITION</b>
<b>4</b>	Additional Director Silviculture	1
<b>A. TOTAL GAZETTED</b>		<b>1</b>

<b>SL NO</b>	<b>DESIGNATION</b>	<b>IN POSITION</b>
<b>5</b>	Sericulture Range Officer	1
	Sericulture Block Officer	Nil
<b>B. TOTAL NON-GAZETTED</b>		<b>1</b>
<b>TOTAL (A+B)</b>		<b>2</b>
<b>STATISTICAL SERVICE</b>		
<b>SL NO</b>	<b>DESIGNATION</b>	<b>IN POSITION</b>
<b>6</b>	Joint Director	1
	Assistant Director	6
<b>A. TOTAL GAZETTED</b>		<b>7</b>
<b>SL NO</b>	<b>DESIGNATION</b>	<b>IN POSITION</b>
<b>7</b>	Statistical Officer	1
	Inspector	1
<b>B. TOTAL NON-GAZETTED</b>		<b>2</b>
<b>TOTAL (A+B)</b>		<b>9</b>
<b>FINANCE AND ACCOUNTS SERVICE</b>		
<b>SL NO</b>	<b>DESIGNATION</b>	<b>IN POSITION</b>
<b>8</b>	Director	1
	Additional Director	1
	Chief Account Officer	1
	Accounts Officer	2
<b>A. TOTAL GAZETTED</b>		<b>5</b>
<b>SL NO</b>	<b>DESIGNATION</b>	<b>IN POSITION</b>
<b>9</b>	Senior Accountant	7
	Accountant	11
	Junior Accountant	4
	Accounts Clerk	18
<b>B. TOTAL NON-GAZETTED</b>		<b>40</b>
<b>TOTAL (A+B)</b>		<b>45</b>
<b>STATE CIVIL SERVICE</b>		
<b>SL NO</b>	<b>DESIGNATION</b>	<b>IN POSITION</b>
<b>10</b>	Special Secretary	1
	Joint Secretary	1
	Deputy Secretary	1
	Under Secretary	3
<b>A. TOTAL GAZETTED</b>		<b>6</b>

<b>SL NO</b>	<b>Designation</b>	<b>IN POSITION</b>
<b>11</b>	OS	6
	Head Assistant	35
	UDC	29
	LDC	31
	Office Assistant	65
	Jr. Supervisor	42
	Assistant Sawyer	1
	Office Attendant	93
	Chowkidar	17
	Cook	1
	Jr. Cook	2
	Driver	50
	Jr. Driver	32
	Field Assistant	2
	Mali	14
	Jr. Mali	200
	Jr. cess collector	1
	Jr. Chowkidar	82
	Jr. Computer Operator	15
	Jr. Electrician	1
	Jr. Forest Guard	1
	Jr. Lab.Asstt	1
	Jr. Receptionist	1
	Jr. Safaikarmachari	3
	Jr. Safaikarmachari	2
	Jr. Sawyer	1
	Jr. Watcher	2
	Jr. Wireless Attendant	1
Jr. Zoo Keeper	19	
Surveyor	2	
<b>B. TOTAL NON-GAZETTED</b>		<b>752</b>
<b>TOTAL (A+B)</b>		<b>758</b>

<b>OTHERS</b>		
<b>SL NO</b>	<b>DESIGNATION</b>	<b>IN POSITION</b>
<b>12</b>	Principal Scientist, SPCB	1
	Principal Scientist, HARC	1
	Sr. Vigilance Officer	1
	Divisional Engineer (Civil)	3
	Sr. Scientific Officer	1
	Dy. Chief Draughting Officer	1
	Deputy Director ( Technical)	3
	Executive Environment Engineer	1
	Assistant Engineer	4
	Assistant Scientific Officer	1
Draughting Officer	1	
<b>A. TOTAL GAZETTED</b>		<b>18</b>
<b>SL NO</b>	<b>DESIGNATION</b>	<b>IN POSITION</b>
<b>13</b>	Inspector (Wireless)	1
	Junior Engineer (Civil)	5
	Sr. Draughtman	1
	Draughtman	1
	Cartographer	1
	Vety Compounder	1
	Jr.Scientist Asstt.	1
<b>B. TOTAL NON-GAZETTED</b>		<b>11</b>
<b>TOTAL (A+B)</b>		<b>29</b>
<b>STENOGRAPHER SERVICE</b>		
<b>SL NO</b>	<b>DESIGNATION</b>	<b>IN POSITION</b>
<b>14</b>	Sr. Private Secretary	4
	Private Secretary	3
<b>A. TOTAL GAZETTED</b>		<b>7</b>
<b>SL NO</b>	<b>DESIGNATION</b>	<b>IN POSITION</b>
<b>15</b>	Steno-G-III	1
<b>B. TOTAL NON-GAZETTED</b>		<b>1</b>
<b>TOTAL (A+B)</b>		<b>8</b>
<b>(A) ABSTRACT (REGULAR):</b>		
<b>SL NO</b>	<b>PARTICULAR</b>	<b>IN POSITION</b>
<b>16</b>	<b>GAZETTED</b>	<b>177</b>
	<b>NON- GAZETTED</b>	<b>1376</b>
	<b>TOTAL REGULAR</b>	<b>1553</b>

<b>DETAILS OF TEMPORARY EMPLOYEE AS ON 31-03-2019</b>			
<b>SL NO</b>	<b>NATURE OF APPOINTMENT</b>	<b>POST</b>	<b>NO OF EMPLOYEE</b>
<b>1</b>	<b>OFFICER ON ADHOC</b>	Project Officer	1
		Doctor	1
		Advocate	4
		Consultant	2
		Advisor	1
<b>TOTAL</b>			<b>9</b>
<b>SL NO</b>	<b>NATURE OF APPOINTMENT</b>	<b>POST</b>	<b>NO OF EMPLOYEE</b>
<b>2</b>	<b>MUSTER ROLL</b>	LDC/Office Assistant	14
		Computer Operator	7
		Supervisor	13
		Driver	11
		Mali	62
		Office Attendant	8
		Chowkidar	16
		Zoo Keeper	1
		Nursery Worker	380
		Watcher	5
		Road Khalasi	3
		Security Guard	4
		Safaikarmachari	14
		Tracer	1
<b>TOTAL</b>			<b>539</b>
<b>SL NO</b>	<b>NATURE OF APPOINTMENT</b>	<b>POST</b>	<b>NO OF EMPLOYEE</b>
<b>3</b>	<b>CONSOLIDATED</b>	LDC/Office Assistant	4
		Computer Operator	2
		Office Attendant	4
		Typist	1
		Driver	1
<b>TOTAL</b>			<b>12</b>

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SL NO	NATURE OF APPOINTMENT	POST	NO OF EMPLOYEE
4	89 DAYS MUSTER ROLL	Supervisor	1
		Driver	8
		Nursery Worker	1
		Mali	1
		Chowkidar	1
		Cook	1
<b>TOTAL</b>			<b>13</b>
SL NO	NATURE OF APPOINTMENT	POST	NO OF EMPLOYEE
5	WORK-CHARGE	Sr. Programme Officer, ENVIS	1
		Information Officer, ENVIS	1
		Office Assistant	1
		Safaikarmachari	1
<b>TOTAL</b>			<b>4</b>
SL NO	NATURE OF APPOINTMENT	POST	NO OF EMPLOYEE
6	ADHOC	A.I (CESS)	5
		Computer Assistant	1
		Block Officer	3
<b>TOTAL</b>			<b>9</b>
SL NO	NATURE OF APPOINTMENT	POST	NO OF EMPLOYEE
7	ADHOC/MR (CAMPA)	Accounts Clerk	1
		Computer Operator	2
		J.E	1
		LDC	33
		Supervisor	58

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<b>8</b>	<b>ADHOC/MR (CAMPA)</b>	Record Keeper	<b>1</b>
		Dispatcher	<b>1</b>
		Typist	<b>1</b>
		Driver	<b>3</b>
		Chowkidar	<b>49</b>
		Office Attendant	<b>2</b>
		Mali	<b>2</b>
		Safaikarmachari	<b>1</b>
		Nursery Worker	<b>1</b>
		Others	<b>4</b>
		<b>TOTAL</b>	<b>160</b>
<b>SL NO</b>	<b>NATURE OF APPOINTMENT</b>	<b>POST</b>	<b>NO OF EMPLOYEE</b>
<b>9</b>	<b>CONTRACTUAL (JICA)</b>	Accountant	3
		Community Organizer	29
		Computer Assistant	6
		Driver	11
		Events and Festival Assistant Manager	1
		Events and Festival Manager	1
		Finance Officer	1
		GIS Engineer	2
		Jr. Accountant	2
		Office Assistant	8
		Peon	10
		Product, Sales and Advertisement Assistant Manager	1
		Product, Sales and Advertisement Manager	1
		Safai Karmachari	2
		Survey Assistant	4
		Survey Expert	3
		<b>TOTAL</b>	<b>85</b>

<b>SL NO</b>	<b>NATURE OF APPOINTMENT</b>	<b>POST</b>	<b>NO OF EMPLOYEE</b>
10	<b>CONTRACTUAL (SLNA)</b>	Account Officer	1
		Accountant	2
		Data Entry Operator	4
		GIS Expert	1
		Jr. Supervisor	1
		LDC	1
		Peon	1
		Prog. Co-ordinator	1
		Programmer, SLNA	1
		Tech. Expert (IT)	1
		Tech. Expert (Livelihood)	1
<b>TOTAL</b>			<b>15</b>
<b>SL NO</b>	<b>NATURE OF APPOINTMENT</b>	<b>POST</b>	<b>NO OF EMPLOYEE</b>
11	<b>CONTRACTUAL (SBB)</b>	Tech./Scientific Associate	1
		Finance Assistant	1
		Computer Assistant	1
		Sr.Research Fellow	1
		Office Attendant	1
<b>TOTAL</b>			<b>5</b>
<b>SL NO</b>	<b>NATURE OF APPOINTMENT</b>	<b>POST</b>	<b>NO OF EMPLOYEE</b>
12	<b>CONTRACTUAL (SPCB)</b>	Field Assistant	10
		Junior Scientific Assistant	1
		Junior Scientific Assistant	3
		Laboratory Assistant	4
		Project Assistant	5
<b>TOTAL</b>			<b>23</b>

<b>SL NO</b>	<b>NATURE OF APPOINTMENT</b>	<b>POST</b>	<b>NO OF EMPLOYEE</b>
<b>13</b>	<b>ONE FAMILY ONE JOB</b>	Attendant cum-Chowkidar	1
		Chain Saw Operator	1
		Chowkidar	11
		Data Entry Operator	2
		Driver	6
		Environmental Assistant	907
		Forest Guard	1
		Labour/ Gardener	1
		LDC	9
		Mali	7
		Marketing Assistant	3
		Multi Task Office Staff	11
		Nursery Labour	2
		Office Assistant	23
		Office Assistant cum Chowkidar	1
		Office Attendant	28
		Office Helper	1
		Others (Put in Remarks)	2
		Safaikarmachari	8
		Stenographer	1
		Village Police Guard	1
		Wildlife Protection Guard	3
<b>TOTAL</b>			<b>1028</b>

<b>ABSTRACT TEMPORARY EMPLOYEE</b>		
<b>SL NO</b>	<b>TYPE OF EMPLOYEE</b>	<b>TOTAL</b>
1	OFFICER ON ADHOC	9
2	MUSTER ROLL	539
3	CONSOLIDATED	12
4	89 DAYS TEMPORARY MR	13
5	WORK CHARGED	4
6	ADHOC	9
7	CAMPA	160
8	JICA	85
9	SLNA	15
10	SBB	5
11	SPCB	23
12	ONE FAMILY ONE JOB	1028
<b>TOTAL</b>		<b>1902</b>

<b>Sl.No</b>	<b>Total employees under Forest &amp; Environment Department as on 31/3/2019</b>	<b>Total No.of employees</b>
1	Gazetted Officer	177
2	Non-Gazetted employees	1376
	<b>Total Regular Employees-</b>	<b>1553</b>
	Total Temporarily employees	1902
	<b>Grand Total -</b>	<b>3455</b>

## Chapter- 4

## Statement of Revenue realized w.e.f 2007-08 to 2018-19

(Rs. In lakhs)

Sl.No	Year	Estimate	Receipt	Remark
1	2007-08	700.50	1094.76	Excess:56.28%
2	2008-09	800.00	1125.62	Excess:40.70%
3	2009-10	1000.00	879.39	Shortfall:12.06%
4	2010-11	1100.00	1224.93	Excess: 11.35%
5	2011-12	1100.00	1253.05	Excess: 13.91%
6	2012-13	1348.00	1228.01	Shortfall:8.90%
7	2013-14	1450.00	1426.93	Shortfall: 1.59%
8	2014-15	1115.35	1144.87	Excess:2.64%
9	2015-16	1206.00	1278.54	Excess:6%
10	2016-17	1250.00	1601.96	Excess:28%
11	2017-18	1350.00	1420.82	Excess 5%
12	2018-19	1350.45	1502.13	Excess 11%

Source: Estimate of Receipts (Actual), Budget Division FRED.

**Statement of Expenditure under Plan & Non-Plan  
w.e.f. 2007-08 to 2018-19**

(Rs. in thousand)

<b>Sl.NO.</b>	<b>Year</b>	<b>Plan</b>	<b>Non-Plan</b>	<b>Total</b>
1	2007-08	236758	157251	394009
2	2008-09	259621	211327	470948
3	2009-10	275381	336379	611760
4	2010-11	370089	356803	726892
5	2011-12	457155	345717	802872
6	2012-13	344081	521817	865898
7	2013-14	504173	758057	1262230
8	2014-15	636373	1343829	1980202
9	2015-16	522534	682216	1204750
10	2016-17	1320478	919643	2240121
11	2017-18	2311258		2311258
12	2018-19	2580587		2580587

*Source:* Estimate of Expenditure (Actual) Budget Division FRED.

## Chapter- 5

**Forest Fire:****(A) Forest Fire Cases since 2002-2019**

Calendar Year (Jan to Dec)	Number of fire incidents in forest area	Forest area affected by fire (in ha.)	Estimated Loss		Casualties		
			Loss of Timber				
	Total	Total	Volume in cu.mt.	Value in lakhs	Human Life	Cattle	Wildlife
2002	32	170	2.00	1.00	Nil	Nil	Nil
2003	23	122	2.00	1.00	„	„	„
2004	21	118	2.00	1.00	„	„	„
2005	42	362	3.00	1.50	„	„	2
2006	58	408	3.00	1.50	„	„	2
2007	31	100	1.00	0.50	„	„	Nil
2008	42	328	2.00	1.00	„	„	„
2009	300	1303	20.00	3.50		4	4
2010	34	133	25 no of Chewri bushes	1600 Rhizomos	-	-	-
2011	64	523.60					
2012	21	21	96.5 ha.	4	-	-	Habitat Damaged
2013	74	272.30	Approx. 5000 saplings, Tree-350, Rhododendron-300 approx. & Ground bushes.		-	-	Habitat Damaged
2014	80	881	-	-	-	-	-
2015	103	502	-	-	-	-	-
2016	54	307.3	-	-	-	-	-
2017	62	328.71	-	-	-	-	-
2018	53	305.5					
2019	45	412					

**(B) District wise Forest Fire Cases (Jan to Dec, 2018 & Jan to Dec, 2019)**

District	2018		2019	
	No. of Incidents	Area damaged (Ha.)	No. of Incidents	Area damaged (Ha.)
South	41	219	11	230
West	5	23.5	14	81
East	6	61	20	101
North	1	2	NIL	NIL
<b>TOTAL</b>	<b>53</b>	<b>305.5</b>	<b>45</b>	<b>412</b>

**(C) Details of approved sites for collection of loose boulders, stone and sand through open tender for the year 2018-2019.**

Sl.No.	Year	District	No. of sites	Total area (in sq.ft)
1	2018-2019	North	1	2
2		South	41	219
3		East	6	61
4		West	5	23.5
<b>TOTAL</b>			<b>53</b>	<b>305.5</b>

## Chapter- 6

## State Domestic Product (SDP) during 2018-2019.

(Rs. In lakhs)

Sl.No.	Items	North		East		South	
		Quantity (in cft.)	Value	Quantity (in cft.)	Value	Quantity (in cft.)	Value
01	Sand	9797537	102.87	8732665	91.69	10944447	114.916
02	Stone	486886.30	4.38	4760621	42.84	8963241	80.669
03	Stone Chips	578107.30	10.405	62329269	1121.926	6902317	124.24

(Rs.in lakhs)

Sl.No.	Items	West		Total	
		Quantity	Value	Quantity	Value
01	Sand	2100827	22.058	<b>31575476</b>	<b>331.53</b>
02	Stone	2903462	26.13	<b>17114210.30</b>	<b>154.02</b>
03	Stone Chips	933315	16.799	<b>70743008.30</b>	<b>1273.37</b>

(Rs.in lakhs)

Sl.no.	Silk Cocoon	Quantity	Value
01	Mulbery (in kgs)	714.6	0.93
02	Eri (in kgs)	-	-
03	Muga (in kgs)	-	-

(Rs.in lakhs)

Sl.no.	Item	Quantity	Value
01	Industrial Wood (in cft)	8069	38.75
02	Fire Wood (in piles)	117	0.91
03	Charcoal	-	-

# FORESTRY AND WILDLIFE



**Chapter -7****TWENTY POINT PROGRAMME:****(A) TARGET AND ACHIEVEMENT UNDER 20 POINT PROGRAMME**

<b>52 a – Area covered under plantation</b>					<b>52 b- Seedling planted</b>		
Sl.No	Year	Target	Achievement	% Ach.	Target	Achievement	% Ach.
			(ha)				
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
1	1971-80		7463			6.59	
2	1980-95		37658.32			60.79	
3	1995-96		7189.5			11.99	
4	1996-97		7500			12.5	
5	1997-98		6356.56			13.05	
6	1998-90		7537			2.5	
7	1999-2000		6923			20.91	
8	2000-01		8048			15.15	
9	2001-02	12000	6217	51.81	22	12.42	56.45
10	2002-03	7500	3696	49.28	22	14.73	66.95
11	2003-04	7500	6125.19	81.67	22	8.66	39.36
12	2004-05	8000	6191	77.39	22	10.32	46.91
13	2005-06	12000	8012.87	66.77	15	6.13	40.86
14	2006-07	15000	3550.26	23.66	15	9.75	65
15	2007-08*	12000	3456.73	28.8	*78	30.84	39.54
16	2008-09	12000	3862.37	32.2	78	23.04	29.55
17	2009-10	25000	8006.85	32.02	162.5	48.61	29.54
18	2010-11	5000	2734.07	54.68	32.5	55.68	105.6
19	2011-12	6000	7454.76	124	39	50.33	129.06%
20	2012-13	7450	9019.23	121.06	48	60.27	125.57
21	2013-14	6160	4805.00	78.00	40.04	31.92	79.72
22	2014-15	6160	4095.30	66.48	40.04	23.07	57.62
23	2015-16	4810	1324.76	27.54	31.27	16.30	52.14
24	2016-17	4095	3376.47	82	26.62	22.98	86
25	2017-18	3410	364.70	11	22.17	2.36	10.64
26	2018-19	3225	40.92	1.20	20.96	16600	0.79

**(B) GREEN INITIATIVE:  
Paryavaran Mahatsov:**

In order to keep up with the vision of developing Sikkim, June 15-30<sup>th</sup> has been declared as “Paryavaran Mahatsov fortnight” in the State. Paryavaran Mahatsov or the Environment Festival is a people’s programme celebrated throughout the State which has added vigor and dynamism to the Green Sikkim Campaign.

During the fortnight, various activities were carried out throughout State which is as follows:-

1. Massive plantation drives under the State’s flagship programmes viz.Mith Trees, Heritage Trees, Smritivans, State Green Mission (13<sup>th</sup> phase) and Ten Minutes to Earth (10<sup>th</sup> phase) on June 25.
2. Cleanliness drives at major towns to contemplate Swachh Bharat Abhiyan.
3. Green Walk, Rally, Banner Campaign, Street plays
4. Signature Campaign
5. Essay-competitions at schools
6. Release of Publications
7. Presentation of Chief Minister’s Green School Rolling Trophy and State Green Schools Awards 2018.
8. Felicitation of Schools with “Certificate of Appreciation” for active participation in the riverfront cleanup programme.
9. Presentation of trophies, certificate and cash awards to winner of Mini Marathon



## 10. Awareness campaigns

11. Environment lectures on Low Carbon Lifestyles, Wildlife and Biodiversity conservation etc at various schools and colleges in the State.

Forest & Environment Department provided saplings free of cost from 15<sup>th</sup> June through seedling distribution centres being set up at various locations throughout the State. The plantation was carried out along the roadside and any vacant or degraded areas through the coordination of other government departments, NGOs, urban and local bodies, panchayats, students and local public at large.



**Chapter-8****FOREST CONSERVATION ACT (CELL):**

Forest (Conservation) Act, 1980 is a unique piece of legislative and a regulatory mechanism that reflects the collective link of the nation to protect its rich bio-diversity and National heritage and that permits only unavailable use of the forest land for various developmental purposes.

It aims to balance the conservation of forest with the sustainable developmental need of the country. It is a regulatory of Act, it deemed to have come into force on the 25<sup>th</sup> day of Oct. 1980.

Forest (Conservation) Act Cell headed by Nodal Officer under the Forest Environment & Wildlife Management Department deals with the Forest Land diversion cases as per the Act, Rules and guidelines framed by the Govt. of India from time to time.

**Details of approved forest clearance proposals, total forest land diverted and compensatory Afforestation stipulated & achieved**

SI No.	Description	Achievement
1	Total number of approved cases as on 31-3-2019	457 Nos.
2	Total forest land diverted for non-forestry purposes	2649.29 Ha
3	Total Compensatory afforestation stipulated under the Act	5154.69 Ha.
4	Total CA achieved and updated since 1980 to 31-3-2019	3608.93 Ha

**Diversion of forest land under Forest (Conservation) Act, 1980**

SI No	Category of approved cases	North		East		South		West		Total	
		No.	Area	No.	Area	No.	Area	No.	Area	No.	Area
1	Defence	11	206.2	11	500.9	0	0	0	0	22	707.06
2	Drinking Water	0	0	16	3.73	14	20.2	4	4.075	34	28.005
3	Hydroelectric Projects	13	122.8	15	241.7	5	138.3	5	46.24	38	549.03
4	Irrigation	0	0	1	3.21	3	0.88	1	0.35	5	4.44
5	Mining	1	0.05	1	0.618	0	0	0	0	2	0.6676
6	Others	28	19.17	56	70.06	32	123.6	15	12.81	131	225.62
7	Road	41	472.1	45	214.5	56	108.4	30	41.61	172	836.66
8	Railway	0	0	1	11.89	0	0	0	0	1	11.89
9	School	0	0	2	1.862	1	0.06	0	0	3	1.922
10	Transmission	4	26.8	13	64.8	16	151.6	4	40.77	37	284
	<b>Total</b>	<b>98</b>	<b>847.1</b>	<b>161</b>	<b>1113</b>	<b>127</b>	<b>543.1</b>	<b>59</b>	<b>145.9</b>	<b>445</b>	<b>2649.29</b>

**Catchment Area Treatment (CAT) Plan**

Sl.no.	Name of scheme	Year	Phy	Original amount (In lakhs)	Cost escalation (In lakhs)	Total (In lakhs)
1	Catchment Area Treatment (CAT) Plan	2018-19	As per work programme	767.07	166.83	933.90
	Total			767.07	166.83	933.90

The reconciliation process of fund deposited in Ad-hoc CAMPA has been done and is as follows:

Sl. no.	Particulars	Amount Rs. in lakh
1	Name of State	Sikkim
2	Principal deposit in State CAMPA account (bank ledger statement)	34529.19
3	Details provided by State	34498.64
4	Refund to State and User Agency	30.84
5	Net deposit (2-4) (P)	34498.36
6	Interest (I)	17901.17
7	Total Deposits in State CAMPA Account (P+I)	52399.53
8	Centre share (10% of total deposit)	5239.95
9	Total State Share (90% of total deposit)	47159.58
10	Funds released to State CAMPA from Interest	7923.49
11	Funds to be transferred (9-10)	39236.09
	01. CA	8549.34
	02. CAT	8555.36
	03. IWMP	1861.40
	04. NPV	14245.31
	05. Interest	4737.46
	06. Others	1287.22

**Notifications:-**

Further as required under the CAF (Act) 2016 & CAF (Rules) 2018, following notifications has also been published by the State Govt.

1. Notification No. - 1335/FCA/FEWMD/2019 date 20/03/2019. (Establishment of “State Compensatory Afforestation Fund”).
2. Notification No. - Bud/FCA/13 dated 26/03/2019 (establishment of different head of accounts for different components of work).
3. Notification No. - 03/Home/2019 dated 16/01/2019 (Constitution of Governing Body of State Authority” “Steering Committee of State Authority” and “Executive committee of the State Authority).

## **CAMPA FUND**

Previously the compensatory afforestation levies collected from the user agencies were deposited in Ad-hoc CAMPA at MoEF, New Delhi as per the direction of Hon'ble Supreme Court:

The Ad-hoc CAMPA released approximately 10% of the total fund deposited with Ad-hoc CAMPA for carrying out works as per the Annual Plan of Operation (APO) submitted by State Govt.

At present based on the orders of Hon'ble Supreme Court, the MoEF has issued notifications of "Compensatory Afforestation Fund Act, 2016" (CAF, Act), "Compensatory Afforestation Fund, Rules, 2018 (CAF, Rules) and "Accounting Procedure Rule 2018" for the effective utilization of the CAMPA fund and implementation of CAMPA works/activities. All the funds deposited in Ad-hoc CAMPA at New Delhi are also being transferred to State fund.

After the establishment of State Compensatory Fund, Sikkim as per above notifications all the levies against forest clearance proposals are being deposited in State fund through State Bank of Sikkim.

The APO for the year i.e. 2019-2020 amounting to Rs. 5233.26 lakhs only has been recently approved by the National Executive Committee MoEF, New Delhi for carrying out following activities.

<b>(Rs.in lakhs)</b>		
<b>Sl. no.</b>	<b>Activities</b>	<b>Amount</b>
1	Compensatory Afforestation (CA) schemes (maintenance)	567.87
	Compensatory Afforestation (CA) schemes (Creation)	373.44
	Compensatory Afforestation (CA) schemes (Penal CA)	7.81
2	Catchment Area Treatment (CAT) Plan	653.99
3	Integrated Wildlife Management Plan	400.35
4	Net Present Value (A)	1,213.90
	Net Present Value (B)	319.36
5	CAF Interest (A)	854.17
	CAF Interest (B)	424.50
6	Others (Biodiversity Conservation Plan)	417.87
<b>Total</b>		<b>5233.26</b>

**(Rupees fifty two crores, thirty three lakhs and twenty six thousand) only**

**RECEIPT AND UTILIZATION OF FUND UNDER STATE-CAMPA AS ON  
31.03.2019**

(Rs.in lakhs)

During the year	Opening balance	Receipt from Ad Hoc CAMPA	Interest accrued	Total Receipt	Fund utilised	Closing balance
2009 - 10		800.92	14.89	815.81	443.11	372.70
2010 - 11	372.70	1023.34	23.43	1419.47	1334.81	84.66
2011 - 12	84.66	904.00	19.88	1008.54	1007.56	0.98
2012 - 13	0.98	875.23	20.54	896.75	545.30	351.45
2013 - 14	351.45	950.00	31.95	1333.40	939.97	393.43
2014 - 15	393.43	1370.00	0.00	1763.43	999.80	763.63
2015 - 16	763.63	1149.55	0.00	1913.18	546.61	1366.57
2016 - 17	1366.57	900.00	0.00	2266.57	586.41	1680.16
2017 - 18	1680.16	0.00	0.00	1680.16	448.14	1232.02
2018 - 19	1232.02	0.00	0.00	0.00	542.85	689.17
<b>GRAND TOTAL</b>		<b>7973.04</b>			<b>7394.56</b>	<b>578.48</b>

The National Executive Committee has, however, suggested some corrections, to be made in the APO especially in “INTEREST and NPV” components.

**Chapter-9****Outturn of Timber and Fire Wood:**

Utilization Circle is the commercial wing of the Department, Extraction of trees posing danger, trees from diverted forest lands, poles from thinning of plantations and conversion into timber, firewood and sale of these forest produce is done through the Circle. The Circle operates two sawmills, at Chuba, East Sikkim and Bhadikhola, Jorethang, South Sikkim. The Circle is also engaged in conversion and distribution of Sal timber to REDRH beneficiaries as per the policy decision taken by the Government. In this year, a total of 2840 cft of Sal timber has been distributed free of cost to REDRH beneficiaries. Vision: The Circle is taking into consideration modernization of the Government sawmills for increase in efficiency of the mill leading to increase output and hence increased revenue to the State Government. Other avenues are also being looked into, like producing of miscellaneous wooden handicrafts which would increase revenue as well as utilize the waste products in the mill. Conclusion: Being the commercial wing of the Department this Circle is persistently working for increase in the Government revenue and has regularly been generating revenue more than the targeted revenue. With new and modern technological introductions in the sawmill operations and exploring other avenues to revenue increase, the Circle is aiming at collecting additional revenue to the State.

**Detail of extraction and sale of forest produce and import fee during 2018-2019 under Utilization Circle.**

(Rs.in lakhs)

Sl.No.	Forest Produce	Unit	Production	Value
I	Industrial Wood			
	a)Hard Wood			
	b)Soft Wood			
	c) Sawn Timber	cft.	8069	38.75
2	Auction of logs (513 nos)	cft.	2392	16.66
3	Firewood	Piles	117	0.91
4	Sawing charge	cft.	30	0.02
5	Off Cut timber	cft.	100	0.16
6	Compensation Amount			0.20
7	GST 18%on Rs.3875015 & Rs.1666405			9.97
II	Import Fees			
	a) Forest Product (Timber)	cft.	91288	28.58
	B)License fee (Revenue collected)			0.44
	Total -			95.69

**Projects/Schemes/Work components**

(Rs.in lakhs)

Sl. No.	Name of Work	Location	No. of trees/poles	Fund	Expenditure	Balance
1	Cutting/felling of trees/poles	Singtam-Tarku-Ravangla widening of road	1313 nos. of trees & 2342 nos of poles	71.66	20.35	51.31
2	Cutting/felling of trees/poles	Khanikhola, Rangpo from const. of railway line	417 nos. of trees	33.19	29.45	3.73
3	Cutting/felling of trees/poles	Rorathang-Pakyong/Rongli	3706 trees & poles 1645 nos.	70.29	39.03	31.26
4	Cutting/felling of trees/poles	Dipudara,Singtam-Dikchu widening of road	Trees 519 nos. poles 749 nos.	21.83	-	-

**Source of Funding:** The Operational expenses, office expenses, travel expenses and salary are borne from State Government fund. However, the works are mostly from the diversion of lands for road widening works. The funding for such felling and extraction works is through FCA cell.

**Key Achievements:** The Utilisation Circle has notified schedule of rates for sale of timber and firewood. The revenue generated from various sale of forest produce in the previous years were under 55 lakhs but in the year 2018-19, the Circle has generated maximum revenue of 95 lakhs.

**Revenue Realized from 2005-2019**

Details of Extraction and Sale of Forest Produce							
YEAR	Timber		Firewood		Charcoal		Total
	Quantity extracted and sold (cubic feet)	Revenue realized (Rupees in Lakhs)	Quantity extracted and sold (Piles)	Revenue realized (Rupees in Lakhs)	Quantity extracted and sold (Bags)	Revenue realized (Rupees in Lakhs)	Revenue realized (Rupees in Lakhs)
2005-2006	3685.49 cft	13.18	143.45	0.77	13	0.79	13.97
2006-2007	1876.46 cft	7.87	224	1.20	-	-	9.07
2007-2008	1082.53 cft. Trees 689 nos. ballies 3918 nos. S/Charge 4552 cft.	18.85	90.8	0.56	-	-	19.42
2008-2009	Timber 2659 cft. Logs 354 nos. trees 1493 nos. S/charge 4718 cft.	10.88	149	0.81	-	-	11.69
2009-2010	2504 cft., Logs 183 nozs. S/Charge 6579	10.1	150	0.81	-	-	10.91
2010-2011	Timber 4291.9 cft. Logs 370 nos. S/Charge 3532 cft.	28.71	248.5	154	-	-	30.25
2011-2012	Timber 5697 cft. Trees 54 nos., S/charge 5269 cft.	24.24	271	1.64	-	-	25.88
2012-2013	Timber 6678 cft. Trees 2 nos., S/Charge 3460 cft.	23.88	222	1.35	-	-	25.23
2013-2014	Timber 9598 cft., Sawing charge 1682 cft.	29.29	294	1.84	-	-	31.13
2014-2015	Timber 15125 cft., Sawing charge 197 cft., T.P. Charge	24.96	197	1.21	-	-	26.18
2015-2016	Timber 6539 cft. Logs 477 nos. , S/charge 2364 cft.	26.95	212	1.27	-	-	28.22
2016-2017	Timber 12183 cft. Logs 88 nos. S/charge 3100 cft., T.P. Charge	28.16	174	1.28	-	-	29.45
2017-2018	Timber from Saw Mill 7047.15	26.83	153.53	1.21	-	-	28.04
2018-2019	Timber from Saw Mill 8069 cft. and Auction of logs 513 Nos.	55.41	117	0.91	-	-	56.32

## Chapter- 10

### **Non Timber Forest Produce (NTFP)/ State Medicinal Plants Board (SMPB)**

The Himalaya offers an array of forest types with diversity in forest produce such as medicine, vegetables, nuts, wild edible fruits and decorative as well as non-timber forest products (NTFPs) from time immemorial. The folk medicinal practices are quite common among the ethno-cultural groups. The knowledge of flora and fauna and their value as NTFP is rich among the ethnic groups. In Sikkim alone, about 190 wild edible plants are available and some of them have high potential for their use as medicine. Therefore, the NTFP Circle aims at exploring and listing of plants and animals with their ethno biological value which is important for knowing and evaluating human-plant relationship, potential for their use in day-to-day life and for proper management.

The rural populations of Sikkim are closely linked to their natural resources. Their economy is largely dependent on NTFPs. Interest in NTFPs is increasing rapidly. Agro forestry innovations in the form of large cardamom and broom grass cultivation have supplemented the incomes of rural people. Cultivation of medicinal plants and their use as cash crops are quite common. Villagers are well aware of collecting seasons and use of specific products of many NTFP species. NTFP Circle also aims at tapping such indigenous knowledge and documenting it. The Circle also aims at imparting intensive training on cultivation, conservation, and processing techniques for NTFP. Strengthening and training of local institutions who in turn can provide training to the local community. Managing forests by focusing on NTFP which help increase the long-term value of forest resources which contribute to biodiversity conservation and sustainable forest management of this important biodiversity-rich area is another area the Circle is working on.

### **State Medicinal Plants Board (SMPB)**

The State Medicinal Plants Board (SMPB) has been constituted under the administrative jurisdiction of Forest and Environment Department, Government of Sikkim by State Government as a State Level Body (Nodal Agency) vide Notification No. 100/FEWMD, dated the 10<sup>th</sup> June 2002. In pursuance of the guidelines of the National Medicinal Plant Board, Department of AYUSH, Ministry of Health and Family Welfare, Government of India. SMPB is **required** to look after formulation of policies, co-ordination with other departments and organisations, ensuring sustained availability of medicinal plants and to co-ordinate all matters relating to their development and sustainable use.

The Board consists of official and non official representatives from various Departments and Institutions. The State Medicinal Plants board monitors the management of NTFP collection and cultivation which help maintain ecosystem complexity and also play an important role in restoring biodiversity. The Board also works in setting up national, regional, and global marketing channels for the products will open up avenues for improved access and bring increased benefits to local people.

The SMPB promotes the medicinal plants sector in the state through implementation of promotional projects/Schemes sanctioned and financed by the National Medicinal Plant Board, Department of AYUSH, Ministry of Health and Family Welfare, Government of India.

Till date 26 (Twenty six) nos. of projects are undertaken by SMPB with a total estimated cost of Rs. 3113.07 lakhs allocated by National Medicinal Plant Board as Grant-in-aid for the promotion of medicinal plants sector in the state. The Government of Sikkim has banned the commercial exploitation of naturally growing medicinal plants from forest areas except from those areas under plantation through NTFP vide Notification No.376/FEWMD dated 7<sup>th</sup> August, 2006.

All schemes/projects are implemented by the NTFP Circle of the Department in areas under jurisdiction of the State Forest Department. Important activities of SMPB/NTFP include:

- Promotion of medicinal plants cultivation
- Production of quality planting material.
- Ex-situ & In-situ conservation of medicinal plants.
- Support to community on processing, value addition & marketing of medicinal plants
- Conservation and Resource augmentation of Rare, Endangered and Threatened (RET) medicinal plants species in high demand, especially in high altitude areas.
- Training, awareness and capacity building of stake holders.
- Survey, inventorisation and quantification of medicinal plants.
- Promotional activities viz. home herbal gardens.

**DETAILS OF ON-GOING PROJECTS BEING IMPLEMENTED THROUGH NTFP SECTOR FUNDED BY NATIONAL MEDICINAL PLANTS BOARD, CENTRAL SECTOR SCHEME (100% CSS)**

Sl. No	Name of Project & Project No:	Year of Implementation	Physical Target	Financial Target	Physical Achievement	Financial Achievement	Status through	Rs. in lakhs
								Funding Source
1	Conservation, Development and Sustainable Management of High Altitude selected Rare, Endangered & Threatened (RET) species of Medicinal Plants through <i>Ex-situ</i> conservation in forest area (CONS-SK/01-2013-14)	2014-2019	1000 Ha	941.87	1000Ha	877.10	1 <sup>st</sup> instalment: Rs. 376.75 lakhs 2 <sup>nd</sup> instalment : Rs. 282.56 lakhs 3 <sup>rd</sup> instalment: Rs. 282.56 lakhs (All instalment received)	National Medicinal Plants Board(NMPB) Department of AYUSH, Ministry of Health & Family Welfare, Government of India
2	Resource augmentation of selected species of medicinal plants (Tree, shrub and herbs) in Alpine North Sikkim (CONS/SK-01/2015)	2015-2020	500 Ha	535.16	500Ha	479.32	1 <sup>st</sup> instalment : Rs. 267.58 lakhs 2 <sup>nd</sup> instalment : Rs. 133.79 lakhs 3 <sup>rd</sup> instalment: Rs. 133.79 lakhs (All instalment received)	
3	Creation of Home Herbal Garden (CHH/SK-01/2014)	2014-2017	100 households	2.00	75 households	1.50	1 <sup>st</sup> instalment: Rs. 1.00 lakhs 2 <sup>nd</sup> instalment: Rs. 0.50 lakhs 3 <sup>rd</sup> instalment: Rs. 0.50 lakhs (3 <sup>rd</sup> instalment to be release)	
4	Financial assistance to Joint Forest Management committee (JFMC) for value addition, warehousing and marketing”(JFMC/SK-01/2015)	2015-2019	30 Units	283.96		212.79	1 <sup>st</sup> instalment: Rs.141.98 lakhs 2 <sup>nd</sup> instalment: Rs. 70.99 lakhs 3 <sup>rd</sup> instalment: Rs. 70.99 lakhs (3 <sup>rd</sup> instalment to be release)	
5	Resource augmentation of selected Rare, Endangered & Threatened (RET) species of High Altitude Medicinal Plants (Shrubs and Herbs) in Alpine and Temperate Forests of Sikkim. (CONS/SK-01/2018)	2018-19 To 2020-23	500 Ha	291.14	250 Ha	166.14	1 <sup>st</sup> instalment: Rs. 291.14 lakhs	

**Note:** Third Party Monitoring of the plantation work is done by Agriculture and Finance Corporation, New Delhi. They have been nominated by National Medicinal Plants Boards, Ministry of AYUSH, Govt. of India.

## Chapter-11

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

The State Pollution Control Board- Sikkim (SPCB-Sikkim) has been created under the provision of Sub-Section (1) of Section 4 of the Water (Prevention & Control of Pollution) Act, 1974. The main function of SPCB-Sikkim is to act as:

- 1) Regulatory Body
- 2) Advisory Body

Under the advisory function, SPCB-Sikkim advises the state government in terms of measures to be taken for prevention, control and abatement of pollution

Under the regulatory function, the SPCB- Sikkim is bestowed with the power of implementation of different Acts and Rules pertaining to Environment Pollution Control. The State Pollution Control Board-Sikkim implements the following Acts and Rules in the State of Sikkim.

- i. Water (Prevention & Control of Pollution) Act,1974
- ii. Water (Prevention & Control of Pollution) Cess Act,1977
- iii. Air (Prevention & Control of Pollution) Act,1981
- iv. Environment (Protection) Act, 1986
- v. The Public Liability Insurance Act, 1991.
- vi. Hazardous & Other Wastes(Management & Transboundary Movement) Rules, 2016;
- vii. Bio-Medical Waste Management Rules, 2016;
- viii. Solid Waste Management Rules, 2016;
- ix. Plastic Waste Management Rules, 2016;
- x. E-Waste( Management) Rules, 2016;
- xi. Construction & Demolition Waste Management Rules, 2016;
- xii. The Noise Pollution (Regulation & Control) Rules, 2000.
- xiii. Batteries (Management & Handling) Amendment Rules, 2000;
- xiv. Environmental Impact Assessment Notification, 2006;

With the increase in population pressure, industrialization urbanization and massive developmental activities, the duties of SPCB have increased manifold and in order to implement the different provisions of the Acts and Rules, SPCB-Sikkim has inducted different scientific and technical manpower to strengthen the functions of SPCB viz., Scientist B, Environmental Engineer, Junior Scientific Assistant, Laboratory Assistant, Field Attendant etc.

## 1. NATIONAL AIR MONITORING PROGRAMME (NAMP):

With the increase in the establishment of industrial units in the state mostly the pharmaceuticals and ancillary units, the SPCB-Sikkim under the National Air Monitoring Programme (NAMP) established nine (09) nos. of Air Quality Monitoring (AQM) stations in order to monitor the air quality in the state. The state of Sikkim has been declared as the Air Pollution Control Area under Gazette notification no. 506 dated 08/09/2011. The details of the monitoring stations are as under:

Sl. no	Name of monitoring station :	Latitude °N	Longitude °E
1.	RANGPO	27.1736	88.5305
2.	SINGTAM	27.5144	88.4969
3.	DEORALI	27.3183	88.6063
4.	RAVANGLA	27.3075	88.363
5.	NAMCHI	27.17	88.35
6.	PELLING	27.3028	88.2344
7.	CHUNGTHANG	27.6033	88.6469
8.	MANGAN	27.5025	88.5358

\*The 9<sup>th</sup> station located at Tashi View point, Gangtok was damaged due to landslide and currently not in operation.

In order to run these AQM stations the SPCB- Sikkim has inducted 07 Project Assistant and 14 Field Assistants (contractual basis) and the Board has also established 07 laboratories for carrying out analytical work of air quality parameters. The AQM is conducted twice a week. As per the study/finding it is seen that Air Quality Index of the State is good and well within the standards prescribed both for PM 10 and other parameters. The data so generated is being forwarded to CPCB for further analysis.

## 2. NATIONAL WATER MONITORING PROGRAMME (NWMP):

SPCB-Sikkim has established 09 Water Quality Monitoring Station in River Teesta basin and 05 Water Quality Monitoring Station in River Rangit basin under NWMP.

The major objectives of water quality monitoring are:

- To warrant appropriate pollution control on the discharge reaching the water bodies.
- To identify any deficiency in water quality and to implement water pollution control strategies.
- To determine affect of water quality the intensity and exposure of various pollution on human health.
- To determine long term trends in water quality.

The details of the monitoring stations are as under:

Sl. No.	Station Code	Name of Station	Latitude	Longitude
1.	1801	River Teesta after confluence of Rivers Lachenchu and Lachungchu CHUNGTHANG, North Sikkim.	27.602	88.649
2.	1802	River Dikchu before confluence with River Teesta near NHPC hydro-electric power project, DIKCHU, East Sikkim.	27.40	88.52
3.	1803	River MANEY KHOLA AT BURTUK near Army Base Camp 4 km U/s of Gangtok, East Sikkim	27.35	88.61
4.	1804	River Maney Khola after confluence with Ray Khola at ADAMPOOL AFTER MEETING TREATED WASTE WATER of STP, Gangtok, East Sikkim	27.30	88.58
5.	1805	After confluence of Rani Chu and Rorachu at RANIPOOL, East Sikkim	27.29	88.59
6.	1806	Ranichu before confluence with River Teesta at SINGTAM, East Sikkim	27.22	88.49
7.	1807	River Teesta after confluence with River Ranichu at SINGTAM, East Sikkim	27.11	88.45
8.	1808	River Teesta after confluence with Rongpochu after meeting the industrial effluents from the town RANGPO, East Sikkim.	27.17	88.52
9.	1809	River Teesta at Melli Downstream, MELLI, South Sikkim	27.08	88.45
10.	2034	RANGIT RIVER AT DAM SITE (NHPC), South Sikkim	27.29	88.29
11.	2035	RANGIT RIVER AT LEGSHIP, West Sikkim	27.27	88.27
12.	2036	RANGIT RIVER AT RESHI, West Sikkim	27.22	88.30
13.	2037	RANGIT RIVER AT JORETHANG, South Sikkim	27.13	88.27
14.	2038	RANGIT RIVER AT TREVENI, Melli, South Sikkim	27.08	88.41

The quality of water is regularly monitored by SPCB officials and the data so generated is being forwarded to CPCB, Delhi for further analysis. This is a 100 % central sponsored scheme. As per the analysis of data, the quality of water so far has been found to be good.

In order to maintain the quality, SPCB-Sikkim has been continuously monitoring the industrial activities and has been ensuring the running of Effluent Treatment Plant (ETP) 24 hours a day. Further, SPCB-Sikkim has made Zero Liquid Discharge (ZLD) mandatory so that the treated water meeting the prescribed standard is recycled and reused for gardening, flushing, cleaning and cooling purposes.

### 3. WATER AND AIR LABORATORY:

The Pollution Control Laboratory, Forest Secretariat Annex, the Forest Department has been specified as the State Water and Air Laboratory vide Gazette no.127 dated 09/09/1996 to carry out the functions entrusted to the State Water Laboratory and the State Air Laboratory under sub-section (1) of section 52 of the Water (Prevention and Control of Pollution) Act 1974 and sub-section (1) of section 28 of the Air (Prevention and Control of Pollution) Act 1981 respectively. It deals with day to day analytical work related to both water and air pollution. Samples of air and water are collected for further course of action.

In conformity with the Hon'ble High Court of Sikkim's order in the matter of Discharge of industrial effluent at Singtam by the Pharma Unit dated 06/08/2018 and 29/11/ 2018, the upgradation of the Board Laboratory is under progress and scheduled to be completed soon.

### 4. NOISE MONITORING:

Due to increase in developmental activities there has been a rise in noise pollution in the whole country. In order to measure the noise level in the state, SPCB has been carrying out regular noise quality monitoring.

One of the key works is the measuring of noise pollution during the festival of Deepavali. As per the study conducted by SPCB-Sikkim it has been observed that recently, the noise level has gone down extremely due to ban imposed by the State Govt. on use of firecrackers and other illuminating items in the state.

Noise monitoring is conducted on a regular basis by the Board and the status is being forwarded to CPCB, New Delhi. SPCB-Sikkim took the initiative of imposing prohibition on manufacture, sale and use of all types of Firecrackers including sound emitting and illuminating type through Sikkim Gazette Extraordinary Notification no. 544 dated 19/12/2014. While executing the ban imposed by the State Government awareness among the public has been generated through print and electronic media, Street plays, Rallies through School students and appeal from the Hon'ble Chief Minister and other Celebrities. Further, the Board conducts noise pollution monitoring during the festival of Deepavali. Till date, the noise level readings generated are well within the stipulated standards.

## 5. ESTABLISHMENT OF INDUSTRIAL UNITS:

Under the provision of Section 25 of Water (Prevention & Control of Pollution) Act, 1974 and Section 21 of Air (Prevention & Control of Pollution) Act, 1981 no units can be established without the prior consent of the SPCB. Till date 112 no. of industrial units which are of large and medium scale have been granted with Consent to Operate (CTO) under manufacturing sector. Under the service sector consents are being issued to Hotels, Resorts, Health Care Facilities, Garage, Hot mix plant, Wet mix plant, Stone crushers, Sewage Treatment Plant (STP), etc. Detailed list indicating its status enclosed.

SPCB-Sikkim has categorized various industries operating within the state into 04 categories viz., Red, Orange, Green and White as per their pollution potential CTE and CTO are issued accordingly. This categorization was notified vide no. 112 dated 01/04/2017. The consent fee for each industry is calculated as per the categorization of industries.

## 6. PUBLIC HEARING:

Under the provision of Environment Impact Assessment notification, certain development projects are required to obtain Environment Clearance (EC) from the Central Government for category A Projects and from State Environment Impact Assessment Authority for category B projects. Before grant of EC, the projects are subjected to Public Hearings and SPCB-Sikkim has so far conducted the following public hearings for different types of developmental projects:

A. HYDRO-ELECTRIC PROJECTS					
Sl. No.	Name of HEP	Name of Developer	Public Hearing Conducted	Environmental Clearance Granted By MoEF	Remarks
1.	510 MW Teesta Stage-V Hydro-Electric Project, East	M/s NHPC Ltd.	02/12/1997	No. J-12011/1/98-IA.I dated:19/05/1999	Under Operation
2.	36 MW Rolep Hydro-Electric project, East	M/s Amalgamated Trans Power India Ltd. (ATPIL)	22/07/2003	No. J-12011/31/2003-IA.I dated: 25/02/2004	-
3.	99 MW Chujachen Hydro-Electric project, East	M/s Gati Infrastructure Ltd.	30/09/2004	No. J-12011/18/2005-IA.I Dated: 09/09/2005	Under Operation
4.	71 MW Sada-Mangder Hydro-Electric project, South	M/s Gati Infrastructure Ltd.	16/10/2004	No. J-12011/26/2007-IA.I dated: 25/02/2005	-
5.	96 MW Jorethang Loop Hydro-Electric project, South	M/s DANS Energy Pvt. Ltd.	09/04/2006	No. J-12011/19/2006-IA.I Dated: 26/07/2006	Under Operation
6.	1200 MW Teesta Stage-III Hydro-Electric project, North	M/s Teesta Urja Pvt. Ltd.	08/06/2006	No. J-12011/26/2006-IA.I dated: 04/08/2006	Under Operation

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7.	500 MW Teesta Stage-VI Hydro-Electric project, East	M/s Lanco Energy Pvt. Ltd.	21/06/2006	No. J-12011/55/2006 - IA.I dated: 21/09/2006	Under Establishment
8.	300 MW Pannan Hydro-Electric project, North	M/s Himagiri Hydro Energy Pvt. Ltd.	18/09/2006	No. J-12011/56/2006-IA.I dated: 02/01/2007	-
9.	96 MW Rongni chu Hydro-Electric project, East	M/s Madhya Bharat Power Corporation Ltd.	28/10/2006	No. J-12011/56/2006-IA.I dated: 04/04/2007	Under Establishment
10.	120 MW Rangit Stage-IV Hydro-Electric project, West	M/s Jal Power Corporation Ltd.	15/12/2006	No. J-12011/11/2007-IA.I Dated: 16/05/2007	Under Establishment
11.	51 MW Bhasmey Hydro-Electric project, East	M/s Gati Infrastructure Ltd.	15/03/2007	No. J-12011/04/2006-IA.I dated: 15/05/2007	Under Establishment
12.	120 MW Rammam Stage-III Hydro-Electric project, West	M/s NTPC Ltd.	04/05/2007	No. J-12011/42/2007-IA.I dated: 17/08/2007	Under Establishment
13.	96 MW Dikchu Hydro-Electric project, North-East	M/s Sneha Kinetic Power Projects Ltd.	16/11/2007 & 19/11/2007	No. J-12011/91/2007-IA.I dated: 01/04/2008	Under Operation
14.	66 MW Rangit Stage-II Hydro-Electric project, West	M/s Sikkim Hydro Power Venture Ltd.	21/09/2008	No. J-12011/6/2009-IA.I dated: 10/06/2009	Under Establishment
15.	97 MW Tashiding Hydro-Electric project, West	M/s Shiga Energy Pvt. Ltd.	18/06/2009	No. J-12011/66/2006-IA.I dated: 29/07/2010	Under Operation
16.	99 MW Ting Ting Hydro-Electric project, West	M/s T.T. Energy Pvt. Ltd.	15/09/2010	No. J-12011/65/2006-IA dated: 04/07/2011	-
17.	60 MW Lethang Hydro-Electric project, West	M/s KHC Lethang Hydro Projects Pvt. Ltd.	16/09/2010	Environmental Clearance Awaited	-

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18.	520 MW Teesta Stage-IV Hydro-Electric project, North	M/s NHPC Ltd.	29/03/2012	No. J-12011/67/2008-IA.I dated: 09/01/2014	Under Establishment
19.	25 MW Rahi Kyoung Hydro-Electric project, North	M/s Sikkim Engineering Pvt. Ltd.	20/04/2017	Environmental Clearance Awaited	-
<b>B.</b>	<b>OTHER DEVELOPMENTAL PROJECTS</b>				
1.	Martam Compost Plant, 32 <sup>nd</sup> No. East	UD&HD, Govt. of Sikkim	29/07/2003	-	Under Operation
2.	Esveegee Breweries Pvt. Ltd., Manpur, South Sikkim	M/s Esveegee	24/08/2013	No. J-11011/32/2012-1A.11(I) dated: 04/02/2015	Under Operation
3	Dhapper to Bhaleydhunga Ropeway, Yangyang, South	Tourism Deptt. Govt. of Sikkim	28/05/2015	No. 10-51/2013-1A.III dated: 16/03/2016	Under Construction
4.	Tshongmo Passenger Ropeway, Changu, East Sikkim	Tourism Deptt. Govt. of Sikkim	24/03/2016	No. 10-12/2014-1A.III dated: 17/12/2014	Under Operation

During 2018-19 no such proposals for public hearing were received by SPCB Sikkim.

#### 7. AWARENESS PROGRAMMES/SENSITISATION/WORKSHOP:

Generation of awareness is one of the key factors for prevention of environment pollution. SPCB-Sikkim has been deeply engaged in creating awareness through different types of programs to educate general public on conservation and preservation of Environment.

Various programs viz., lectures, essay and painting competition, slogan completion are held among the student community. The celebration of World Environment Day, Paryavaran Mahotsav and Ten Minutes to Earth are the regular features of SPCB-Sikkim. SPCB-Sikkim has produced environment film, environment songs, documentaries and also different Environment related advertisement, films and material to educate the general masses.

The Urban Local Bodies (ULB) and Upadhakshyas are also taken on board to create awareness on the subject. The SPCB-Sikkim also organized Sensitization seminars and workshops to the head of Departments and all the industrial units including hydroelectric project on the different Acts and Rules related to environment protection. SPCB has been assisting different social groups, NGOs and other registered organizations by providing financial support and related tools and kits for keeping their locality neat and clean.

SPCB has taken steps to provide dustbins to ULBs, religious institutions, tourism destination, schools and colleges etc. for keeping the locality clean.

SPCB has also taken initiative to organize exposure visits for the students to different types of industrial units to encourage them to opt for carrier in the concerned field. The Board is also bringing out appeals to generate awareness through advertisement in print and electronic media. Special visit to the nearby industrial units are being arranged to the School students and local public through the management of the industry and insisting the industries to maintain transference in operating their Corporal Social Responsibility (CSR) to gain the goodwill of the public and maintain the environment.

During 2018-19 sensitization program with respect to Solid Waste Management Rules 2016 and other Rules was carried out involving the Additional District Collector (Development), Sub-Divisional Magistrates and Block Development Officers. Similar sensitization program on Bio-medical Waste Management Rules 2016 was organized involving Health Care Facilities. The Industries, Public Sector Undertakings as well as Banks were given sensitization on E-Waste (Management) Rules 2016 by SPCB Sikkim in co-ordination with NIELIT.

For strict compliance of standards prescribed in the CTO, the board is engaged in regular monitoring of industrial activities. The Third Party Monitoring by an accredited consultant has been made mandatory to all the industrial units.

#### 8. LEGAL CELL:

SPCB-Sikkim has appointed two legal counsels on contractual basis to deal with the court matters including the NGT matters in addition to the Legal Counsel appointed by the State Government. In the event of any grievances the aggrieved person can approach the Appellate Authority which has been notified vide gazette notification no. 138 dated: 21/11/1992.

In order to have a proper check on the pollution level of the State, the state government has brought out different notifications to ensure clean and pollution free environment. The Gazette notification related to the Environment pollution prevention control and abatement brought out so far are as under:

Sl. No.	Subject	Notification no.
1	Ban on sale and use of Plastic bags	GOS/UD&HD/97-98/06 (85) dated 04/06/1998
2	Ban on bursting of fire crackers	544 dated 19/12/2014
3	Prohibition on burning of agricultural waste, leaves, forest litter, paper waste and garbage	13 dated 27/01/2015.
4	Ban on use of mineral water bottles in Government programmes	25/Home/2016 dated 19/05/2016
5	Ban on use of Styrofoam items	26/Home/20-16 dated 19/05/2016

Further, as per the order of the Hon'ble NGT, Principal Bench, New Delhi in the Original Application No. 673/2018 dated 20/09/2018, River Rejuvenation Committee(RRC) has been notified vide Notification No. GOS/FEWMD/PR. SECY-PCCF 161 dated 23/01/2019 to prepare an Action Plan for bringing all the polluted river stretches in the State of Sikkim to be fit at least for bathing purposes.

Similarly, as per the order of the Hon'ble NGT, Principal Bench, New Delhi in the Original Application No. 606/2018 dated 16/01/2019 in the matter of compliance of Solid Waste Management Rules 2016, the State Level Committee (SLC) headed by Justice Shri A.P. Subba, Former Judge, High Court of Sikkim as Chairperson has been notified vide Notification No. 12/Home/2019 dated 08/02/2019.

FINANCIAL STATEMENT OF THE STATE POLLUTION CONTROL BOARD-SIKKIM  
SINCE 2007-2019.

SL.NO	YEAR	AMOUNT RECEIVED	EXPENDITURE
1.	2007-08	Rs.92698670	Rs.77317217
2.	2008-09	Rs.62817127	Rs.74567469
3.	2009-10	Rs.39266156	Rs.41550661
4.	2010-11	Rs.30364850	Rs.24267855
5.	2011-12	Rs.28645018	Rs.19364942
6.	2012-13	Rs.25418308	Rs.11281835
7.	2013-14	Rs.22255067	Rs.11747672
8.	2014-15	Rs.23433457	Rs.13517162
9.	2015-16	Rs.30451265	Rs.12067888
10.	2016-17	Rs.22235667	Rs.14148707
11.	2017-18	Rs. 34277196	Rs. 28338879
12.	2018-19	Rs. 33072006	Rs. 21887622

List of Hydro Power Projects- 2018-19

1. Sneha Kinetic Power Project Pvt. Ltd., Dickchu, North Sikkim. Operational.
2. Teesta H E P (NHPC) Stage V, Balutar Singtam, East Sikkim. Operational.
3. Dans Energy HEP, Jorethang Loop, Jorethang, South Sikkim. Operational.
4. Sikkim Hydro Power Venture, Pelling, West Sikkim. Under Construction.
5. Gati Infrastructure Pvt. Ltd., Chujachen, East Sikkim. Operational.
6. Shiga Energy Pvt.Ltd. Tashiding HEP, West Sikkim. Operational.
7. Lanco Teesta HEP Ltd., Mamring South Sikkim. Under Construction.
8. NHPC Ltd, Teeta Stage IV, Nampridang, Mangan, North Sikkim. Not establish.
9. Teesta Urja Ltd.,Stage III, Chungthang, North Sikkim. Operational.
10. Madhya Bharat HEP, Singtam, East Sikkim. Under Construction.
11. Himagiri HEP (Panan), Zongu, North Sikkim. Under Construction.
12. Gati Infrastructure Pvt. Ltd., Bhasmey, East Sikkim. Under Construction.
13. M/s NTPC Ltd., 120 MW Rammam HEP (Stage-III) Jorethang, South Sikkim. Under Construction.
14. Rangit HEP, NHPC Ltd., Legship, South Sikkim. Operational.
15. Jal Power Corporation Ltd, Reshi, West Sikkim. Under Construction

**List of Manufacturing and Formulation Pharmaceutical Industries- 2018-19**

1. M/s Micro labs. Village Mamring, Namthang Road, South Sikkim.
2. M/s Swiss Garnier Genexiaa Science, Unit I, Namthang Ilaka, Mamring, South Sikkim.
3. M/s Swiss Garnier Unit II, Rongli Rorathang Road, Tarpin Block Mahakuma, Mulukey, East Sikkim.
4. M/s STP Pharmaceuticals Pvt. Ltd., Below NH10, Sangkhola, East Sikkim.
5. M/s Indchemie Health Specialities Pvt. Ltd., Unit – IV, Rangpo Rorathang Road, Kumrek, East Sikkim.
6. M/s Indchemie Health Specialities Pvt. Ltd., Unit – V, Rangpo Rorathang Road, Kumrek, East Sikkim.
7. M/s Aristo Pharmaceutical Pvt. Ltd., Baghey Khola, Majhitar, Rangpo, East Sikkim,
8. M/s East West Pharma, Majhitar. East Sikkim. (Closed)
9. M/s Alembic Pharmaceuticals Ltd., Samardung Busty, Karek Block, South Sikkim.
10. M/s Intas Pharmaceuticals Ltd., Unit II. Karek Block, Samardung Busty, South Sikkim.
11. M/s Macleods Pharmaceuticals Ltd., Ranipool Pakyong Road, Aho- Yangtam. East Sikkim
12. M/s Mankind Pharma Pvt. Ltd., Daring Block, Barmiok, South Sikkim.
13. M/s Lupin Ltd., 4<sup>th</sup> Mile Bhasmey, Duga Ilaka, Kumrek, East Sikkim.
14. M/s Cachet Pharmaceuticals Pvt. Ltd., Jholungay, Namthang, South Sikkim.
15. M/s Torrent Pharmaceuticals, Ltd., Unit I 32<sup>nd</sup> Mile Middle Camp, East Sikkim
16. M/s Torrent Pharmaceuticals, Ltd. Unit II, 32<sup>nd</sup> Mile Middle Camp, NH 10, East Sikkim.
17. M/s Torrent Pharmaceuticals, Ltd. Unit III, Village Baghey khola, Majhitar Rangpo, East Sikkim.
18. M/s Zydus Healthcare, Baghey Khola, Majhitar Rangpo East Sikkim.
19. M/s Zydus Healthcare Ltd., Unit II, Rangpo Rorathang Road, Kumrek, East Sikkim.
20. M/s Golden Cross Pharma Pvt. Ltd., Tarpin Block, Rorathang, East Sikkim.
21. M/s Aurochem Lab. India (P) Ltd., Melli Jorethang Road, Manpur. Sumbuk, South Sikkim.
22. M/s Alkem Health Science, Unit III, Karek Block, Samardung Busty, South Sikkim.
23. M/s Alkem Health Science Unit II Karek Block, Samardung Busty, South Sikkim.
24. M/s Alkem Health Science, Unit I, Karek Block, Samardung Busty, South Sikkim.
25. M/s Alkem Laboratories, Rangpo Rorathang Road, Kumrek, East Sikkim.
26. M/s Sangrilla Industries, Pvt. Ltd., Pharmaceutical Unit, Mining, Rangpo, East Sikkim.
27. M/s Sun Pharma Laboratories Ltd., Nandok Block, Unit I, Setipool, East Sikkim.
28. M/s Sun Pharma Laboratories Ltd., Namli Block, Unit II, Setipool, East Sikkim.
29. M/s Glenmark Pharmaceuticals Ltd, Samlik Marchak, Near Ranipool, East Sikkim.
30. M/s Heba Pharmaceuticals Ltd., Rumtek Block, Marchak, Near Ranipool, East Sikkim.
31. M/s PTS Packers & Providers Pvt. Ltd., Sangkhola. NH 10, Singtam, East Sikkim.
32. M/s Cipla Ltd., Unit I, Rangpo Rorathang Road, Kumrek, East Sikkim.
33. M/s Cipla Ltd., Unit – II, Taza Block, Amba Tareything Ilaka, Rorathang East Sikkim.
34. M/s Zuventus, Pharmaceuticals, Ltd, Kamarey Ilaka, 4<sup>th</sup> Mile Bhasmey East Sikkim.
35. M/s Regal Healthcare, 4<sup>th</sup> Mile Bhasmey East Pandam, P.O Rangpo, P.S. Pakyong, East Sikkim
36. M/s Pristine Life Sciences, Singtam, East Sikkim. (CLOSED)
37. M/s SBL, Majhitar Rangpo, East Sikkim.
38. M/s Intas Pharmaceutical Unit I, Baghey Khola, Majhitar Rangpo, East Sikkim.
39. M/s Aisharwya Pharmaceutical, Kabrey Block, Namthang, P.O. Mamring, South Sikkim.
40. M/s IPCA, Unit I, Melli Jorethang Road, Gom Block, Near Bharikhola, South Sikkim.
41. M/s IPCA, Unit II Melli Jorethang Road, Gom Block, Near Bhari Khola, South Sikkim.
42. M/s Salas Pharmaceuticals Ltd., Kharpani, Mamring, South Sikkim,
43. M/s Pinnacle life Science Pvt, Ltd, Jholungey, Namthang. (Closed)

44. M/s Savi Health Science, Majhitar, Rangpo, East Sikkim
45. M/s CKIM Pharma, Melli Jorethang Road, Manpur, Sumbuk, South Sikkim,
46. M/s LANUS Pharmaceuticals Ltd., Ranipool. (Closed)
47. M/s Unimark Health Care Ltd, Ranipool, East Sikkim(Closed)
48. M/s Curetech Pharmaceuticals Ltd., Bermiok, South Sikkim
49. M/s VKA Projects & Infrastructure, Pacheykhani, (Closed)
50. M/s Ideal Cures Pvt Ltd., Pakyong Rorathang Road, Pakyong Ilaka, Pachey Khani, East Sikkim.
51. M/s Mark Life Science, Samardung, South Sikkim.
52. M/s Savi Pharma, Majhitar, East Sikkim. (Closed)
53. M/s Tropic Wellness Pvt. Ltd., Jorethang Melli Road, Manpur, Sumbuk, South Sikkim.
54. M/s Zydus Wellness Sikkim, Unit I Mamring Block, Namthang Elaka, South Sikkim.
55. M/s M/s Zydus Wellness Sikkim, Unit II Mamring Block, Namthang Elaka, South Sikkim.
56. M/s Alembic Pharmaceuticals Ltd., Unit II, Samardung Busty, South Sikkim.

Total: In operation 48  
 Under Establishment 01  
 Closed 07

List of Breweries & Distilleries:

1. M/s Mayell & Fraser (O) Ltd. Baghey Khola, Majhitar, East Sikkim(Operational)
2. M/s Lahag Spirit, Manpur, South Sikkim (Bottling plant in operational)
3. M/s Sikkim Breweries Lts. Baghey Khola, East Sikkim
4. M/s Mount Distilleries Ltd. Majhitar, Rangpo, East Sikkim
5. Denzong Breweries Ltd.(Denzong Albrew) Mulukey, East Sikkim
6. Sikkim Distilleries Ltd. Sai Baba Nagar, Rangpo, East Sikkim
7. Himalayan Distilleries Ltd. Majhitar , Rangpo, East Sikkim
8. Yuksom Breweries Ltd., Melli, South Sikkim
9. Kanchanzong Distilleries Ltd. Manpur, South Sikkim

List of Manufacturing packaging Industries:

1. M/s Sicpa Ltd., Samardung, South Sikkim.
2. M/s G.K. Burman Pet & Fragrances, Jholungey, Maneydara, Namchi, South Sikkim.
3. M/s BFPL Inc. Kumrek, East Sikkim.
4. M/s C.G. Foods India Pvt. Ltd., Mining Rangpo, East Sikkim.
5. M/s LPG Bottling Plant, IOCL Baghey Khola, Rangpo East Sikkim.
6. M/s Sikkim Agro Chem, Majhitar, East Sikkim.
7. M/s Indian Oil Corporation Ltd., (Oil Depot) Majhitar Rangpo. East Sikkim.
8. M/s Godrej Consumer Product Ltd., Mamring, South Sikkim.
9. M/s Nextgen Printers Pvt. Ltd., Mazitar. East Sikkim.
10. Sikkim Co- operative Milk Producer Union Ltd., Tadong. East Sikkim.
11. M/s Sikkim Diary Product, Dentam, West Sikkim.
12. Temi Tea Estate, P. O. Temi, South Sikkim.
13. M/s Malu Electrodes Pvt. Ltd., 4<sup>th</sup> Mile Bhasmey East Sikkim.(Electrodes) East Sikkim.  
Under Establishment
14. M/s Malu Electrodes Pvt. Ltd., 4<sup>th</sup> Mile Bhasmey East Sikkim. (Tea & Coffee) East Sikkim.
15. M/s Sun Packmet Pvt. Ltd., Mazitar,

16. M/s Uttam Printers, Rangpo,
17. M/s Flex Art Foil, Bardang,
18. M/s Teesta Enterprises, Mamring, South Sikkim.
19. M/s Sikkim Organic, Manpur.
20. M/s Bhawana Papers, Mamring, South Sikkim
21. M/s Epitome Petrochemicals, Tumlabong, East Sikkim.
22. M/s Nenamma Industries Makha, East Sikkim.
23. M/s Lama Enterprise, Melli, South Sikkim.
24. M/s Sikkim Snacks Foods Ltd., Rollu, Melli, (Recently closed down)
25. M/s Kailash Roller Flour Mills, Tadong.
26. M/s Shree R.D. Mills, Jorethang, South Sikkim.
27. M/s Sikkim Fruits Preservation Factory, Singtam.
28. M/s Sagar Foods Products, Nayabazar.
29. Epitome Plasto Pack, Manpur South Sikkim.
30. M/s Scorpion Containers Pvt. Ltd, Kumrek Rangpo, East Sikkim Unit I
31. M/s Scorpion Containers Pvt. Ltd, Kumrek Rangpo, East Sikkim Unit II
32. M/s V- Guard Industries Ltd, UNIT I, Majhitar, East Sikkim.
33. M/s V- Guard Industries Ltd, UNIT II, Majhitar, East Sikkim.
34. M/s V- Guard Industries Ltd, UNIT III, Mamring, South Sikkim.
35. M/s Zephyr Food, Aritar, Khamdong, East Sikkim,
36. M/s Anjali Packers, Manpur South Sikkim
37. M/s Transasia Bio Medical Ltd., Namthang Road, Namchi
38. M/s Suncare, Majhitar, East Sikkim,
39. M/s Ravi Raj Foils Ltd. Majhitar
40. M/s Sikkim Packaging Industries, Baiguney, South Sikkim
41. M/s Ajay Bio- Tech India Ltd., Duga (Recently Closed).
42. M/s Seigneur Medipack, Bhasmey,
43. M/s Sikkim Agro Chem Pvt. Ltd, Majhitar
44. M/s Teximco Foils Pvt. Ltd., Changey Senti, Ranipool, East Sikkim,
45. M/s PRF Udyog, Bermiok, South Sikkim
46. M/s Prolink Industries, Lower Tarpin, East Sikkim
47. M/s Futuristic Packaging Pvt. Ltd., Ranipool, East Sikkim,
48. M/s Yadu Nath Enterprises, Namthang, South Sikkim,
49. M/s Titan Company, Jewellery Division, Majhitar, East Sikkim
50. M/s Titan Company, Watch Division, Baghey Khola, East Sikkim
51. M/s Anjali Flex and Containers, Manpur, South Sikkim,
52. M/s Amber Enterprises, Marchak, East Sikkim
53. M/s Hidesign India Pvt. Ltd., Rumtek, East Sikkim.
54. M/s North East Pharma Pack, Pachey Khani, East Sikkim.
55. M/s MAN AASH LLP, Duga Ilaka, Rorathang, East Sikkim.
56. M/s Phoenix Udyog, Pvt. Ltd., Majhitar, East Sikkim.
57. M/s ASSR Print Pack, Upper Namli, East Sikkim.
58. M/s Moti Plast, Sirwani Singtam.
59. M/s Web Tech Labels, Majhitar, East Sikkim.
60. M/s Suraj & Company Pvt, Ltd., (Food Packaging Unit) Samlik Marchak, East Sikkim.

## Listed Stone Crusher units under SPCB –Sikkim.

Sl. No.	Name of Stone Crusher	Address	Capacity	Current Status
1	Debendra Subba	Mulukey, Rhenock, East Sikkim	40 TPH	Operational
2	M/s Arif Engineer (P) Ltd.,	Theng Tunnel, Chungthang,	10 -20 TPH	Not in operation
3	M/s Coastal Project Ltd.,	Rangit II, Rimbi, West Sikkim	40 TPH	Operational
4	Officer Commanding,	86 RCC	6 -10 TPH 04 nos.	
		GRAF, lachen, North Sikkim	20 TPH 01 No.	Operational
5	Telu Ram Agarwal	M/s Jindal factory, Mazitar		
		South Sikkim	20 TPH	Operational
6	Santosh Pradhan	Chujachen, East Sikkim	10 TPH	Operational
7	M/s Abir Infrastructure Pvt. Ltd.,	C/o Teesta Urja Limited,	40 TPH	Operational
8	SSKC - SSKI (JV)	Mangan, North Sikkim	100 TPH x 2nos	Operational
9	Khimat Sing Rai	Baiguney Busty, Gelling, Samsing		
		West Sikkim	30 TPH	Operational
10	Officer Commanding,	86 RCC GRAF		
		Changu, Tamze, East Sikkim	6-10 TPH 05 nos.	Operational

11	Tshering wangdi Lepcha,	Lungchok, North Sikkim	6 TPH	Operational
12	Samdup Lepcha	Chungthang, North Sikkim	40 TPH	Operational
13	Yasoda Basnett,	Chujachen, East Sikkim	6 TPH	Operational
14	Officer Commanding,	86 RCC GRAF,	6 -10 TPH 3 Nos.	Operational
		Lachung, North Sikkim	20 TPH 2 nos.	
15	M.G Contractors, Pvt. Ltd.,	Lachung, North Sikkim	100 TPH	Operational
16	Navin Chettri	Karthok, Pakyong, East Sikkim	20 TPH	Operational
17	Ravi Roshan Darjee	Tareything Bering, East Sikkim	15 TPH	Operational
18	Sunil Kumar Agarwal	Jorethang, South Sikkim	50 TPH at Baiguney	Operational
19	Sunil Kumar Agarwal	Jorethang, South Sikkim	50 TPH at Churibotey	Operational
20	Sunil Kumar Agarwal	Jorethang, South Sikkim	40 TPH at Suldung	Operational
21	Bijay Sunar	Sipchu Khola, South Sikkim	20 TPH	Operational
22	Mahabir Prasad Agarwal	GAWAR Construction, Namchi	60 TPH at 9th Mile,	
			Marchak, E/ Sikkim	Not in Operation
23	Pem Dechen Denzongpa,	Kazi Road, Gangtok	20 TPH at Gyalshing	Operational
24	Dhruba Tewari,	Tarku, South Sikkim	200 TPH	Operational
25	Pushpa Raj Adhikari	Lower samdong, East Sikkim	10 TPH	Operational
26	Dhan Maya Basnett	Neya Brum, South Sikkim	30 TPH	Operational
27	Mosh Varaya Infrastructure Ltd.,	Kumrek rangpo, East Sikkim	60 TPH X 2 nos.	Operational

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28	RSK Construction (JV)	Singtam, East Sikkim	100 TPH, at Rollu, Melli	Operational
29	Khusendra Sharma	Dentam, West Sikkim	60 TPH	Operational
30	K.K. Group of Company (P) Ltd.,	Singtam, East Sikkim	50 TPH at Pabong,	
			South Sikkim	Operational
31	Shangrilla, Industries Pvt. Ltd.,	Mining Rangpo, East Sikkim	40 TPH	Operational
32	Navayuga Engineering Co. Ltd.,	Chungthang, North Sikkim	150 TPH	Not in operation
33	Lok Nath Sharma	Reshi Rhenock, East Sikkim	40 TPH at Reshi Rhenock	Operational
			40 TPH at North Regu	Operational
34	Binod Agarwal	Pakyong, Bazaar, East Sikkim	60 -70 TPH at patuk	Operational
35	Sunil Kumar Agarwal	Jorethang, South Sikkim	50 TPH at Baiguney	Operational

36	Pradeep Kumar Agarwal	Sombaria, West Sikkim	60 TPH	Operational
37	Mohan Bajaj,	P.S. Road, Gangtok	10 TPH at sangkhola	Operational
38	U. Narayan Sharma	Rangpo Bazar, East Sikkim	50 TPH at Baghey Khola	Operational
39	Ugen T. Ladhakhi	Baghey Khola, East Sikkim	30 TPH	Operational
40	Biren Chandra Rai	Jorethang, South Sikkim	6 TPH	Operational
41	Sunil Kumar Agarwal	Singtam, East Sikkim	75 -80 TPH at Pabong Tarku	Operational
42	Sunil Kumar Agarwal	Singtam, East Sikkim	75 -80 TPH at Damthang	Operational
43	Rajesh Kumar Chettr	Buriakhop, West Sikkim	25 TPH	Operational
44	M.K. Pradhan	20th Mile Bardang	2 TPH	Operational
45	Mahabir Prasad Agarwal	Namchi, South Sikkim	50 TPH at Boomtar, Namchi	Operational
46	Ratna Kumar Rapal,	Samardung, South Sikkim	50 TPH at Burul	Operational
47	Neeknore Pradhan	Tadong, Gangtok	50 -60 TPH at Lower Samdong	Operational
48	Sunil Kumar Agarwal	Singtam, East Sikkim	40 TPH at Rumtek	Operational
49	Dinesh Chandra R. Agarwal	IBM, Rangpo, East Sikkim	200 TPH at Bhasmey	Operational
50	Anup Kumar Agarwal	Reshi Rhenock, East Sikkim	40 TPH	Operational
51	Khageshwar Kumar Gupta	Geyzing, West Sikkim	25 TPH at Dentam	Operational
52	Manoj Karki	Rangpo Bazar, East Sikkim	10 TPH at Kopchey Mamring	Operational

Total	67 nos
Operational	64 nos.
Not in Operation	3 nos

## Listed HMP/WMP/Batching Plant/Brick Plant under SPCB-Sikkim

Sl.no.	Name of Unit	Address	Capacity	Status
1	Arief Engineers (P) Ltd.,	Theng Tunnel, Chungthang	1 no. Batching Plant	Not in Operation
2	Officer Commanding	86 RCC GREF, Lachen	01 no. Hot Mix Plant	Operational
3	M/s Abir Infrastructure Pvt. Ltd.,	C/o Teesta Urja Limited,	02 nos. Batching Plant	Not in Operation
4	Dinesh Chandra R. Agarwal	IBM, Rangpo, East Sikkim	1 no. Batching Plant	Operational
5	Zamyang Kunga Bhutia	Geyzing, West Sikkim	60 TPH HMP	Operational
6	SSKC - SSKI (JV)	Mangan, North Sikkim	70 TPH HMP	Operational
7	Officer Commanding,	86 RCC GREF		
		Lachen Kalep, North Sikkim	02 nos, HMP	Operational
8	Officer Commanding,	86 RCC GREF		
		Gaigoan, North Sikkim	01 nos, HMP	Operational
9	M.G Contractors Pvt. Ltd.,	Mangan, North Sikkim	100 TPH HMP	Operational
10	Officer Commanding,	129 RCC GREF		
		JNM Road, East Sikkim	20 - 30 TPH HMP & 60 TPH WMP	Operational
11	Mahabir Prasad Agarwal	Namchi, South Sikkim	60 - 90 TPH HMP at Soreng, w. sikkim	Operational
			01.no. HMP at Phalidara	Operational
			01. no. HMP at Rinchenpong	Operational
12	Sunil Kumar Agarwal	Jorethang, South Sikkim	80 - 100 TPH HMP &	Operational
			100 TPH WMP at Baiguney	Operational
			75-80 TPH HMP at Pabung, S. Sikkim	Operational
13	Norden Dorjee Sangdarpa	Sangmo - Ravangla	60 -90- TPH HMP	Operational
14	Norden Bhutia	Mangalbaria, West Sikkim	60 - 90 TPH HMP	Operational
15	Simplex Apex Encon	Ramman Barrage, West Sikkim	30 cum/hour(1 no.BP)	Operational
16	Mosh Varaya Infrastructure Ltd.,	Kumrek Rangpo, East Sikkim	4 nos. Batching Plant	Operational
			01. No. Brick Plant	Operational
17	Mahabir Prasad	Gawar Construction, Namchi		
		Bazar, South Sikkim	60 - 90 TPH HMP	Operational
18	Mohan Bajaj	P.S.Road, Gangtok	2 nos. HMP, at Sangkhola	Not in Operation
			& Sherathang	Operational
19	Sunil Kumar Agarwal	Jorethang, South Sikkim		

20	ITD Cementation	Secretariat Road, Gangtok	01. no. Mobile Batching Plant	Operational
21	Renuka Mangar	Kokoley, Samdong, E. Sikkim	10 TPH HMP at Singbel	
22	Dinesh Chandra R. Agarwal	IBM, Rangpo, East Sikkim	200 TPH wet mix plant	Operational
23	Anup Kumar Agarwal	Reshi Rhenock, E. Sikkim	01 no. Hot Mix Plant	Operational
24	Officer Commanding	107 RCC (GREF) Chungthang	20 TPH HMP at Chungthang Road	Operational
25	Lok Nath Sharma	Reshi Rhenock, E. Sikkim	01 no. Hot Mix Plant	Operational
Total		Batching Plant 09 nos.		
	Operational 18 (HMP)	Hot Mix Plants 20 nos.		
	Not in operation 02 (HMP)	Wet Mix Plant 02 nos.		
		Brick Plant 01. no.		

## Chapter- 12

## STATE BIODIVERSITY BOARD (SBB):

## Administrative setup/Organization strength of Sikkim Biodiversity Board

1	<b>Mandate/Functions</b>	<ol style="list-style-type: none"> <li>1. To facilitate Biodiversity Management Committees (BMC) formation at the local level throughout the state.</li> <li>2. Facilitate the documentation of People's Biodiversity Register (PBR) for all the BMCs in the state.</li> <li>3. To create awareness among all stakeholders regarding conservation of bio-resources, its sustainable use &amp; ensuring equitable sharing benefits resulting from access to the biological resources.</li> <li>4. To facilitate nomination/creation of Biodiversity Heritage sites in the state.</li> <li>5. To conduct studies related to the bio-resources of the state.</li> </ol>
2	<b>Men in position</b>	<ol style="list-style-type: none"> <li>1) Dr D.Manjunatha (IFS), Member Secretary</li> <li>2) Smt. Bhumika Rai, DFO, SBB</li> <li>3) Dr. Bharat Kumar Pradhan, Scientific-Technical Associate (contract basis)</li> <li>4) Smt. Yanki Bhutia, Finance Assistant (contract basis)</li> <li>5) Ms. Rajina Chettri, Computer Assistant (contract basis)</li> <li>6) Ms. Ringzing Ongmu Lepcha, Office Attendant (contract basis)</li> <li>7) Ms. Bindhya Subba, Senior Research Fellow (contract basis)</li> </ol>
3	<b>Project/Schemes/Work Components</b>	<ol style="list-style-type: none"> <li>1) National Mission on Himalayan Studies Project</li> <li>2) Grant-in-Aid(State Fund)</li> <li>3) SECURE Himalaya</li> <li>4) Formation Of BMC (National Biodiversity Authority)</li> </ol>
4	<b>Source of Funding/State Govt./Central Govt.</b>	<ol style="list-style-type: none"> <li>1. State grant-in-aid</li> <li>2. COP XI (National Biodiversity Authority)</li> </ol>
5	<b>Common Activities(e.g. JFMC, EDC)</b>	BMC Formation, awareness program/workshops/seminar, trainings

6	<b>Key achievements</b>	<ol style="list-style-type: none"> <li>1. Formation of 43 BMCs</li> <li>2. Documentation of 14 PBRs</li> <li>3. Books/reports published :       <ol style="list-style-type: none"> <li>i. Ferns &amp; Fern-allies of Sikkim ( author B S Kholia, Botanical Survey of Sikkim) - I</li> <li>ii. Ferns &amp; Fern-allies of Sikkim ( author B S Kholia, Botanical Survey of Sikkim)- II</li> <li>iii. Mushrooms of Sikkim ( author Kanad Das, Botanical Survey of Sikkim)</li> <li>iv. Report on Tradable Bio-resources of Sikkim ( author Dr Ghanashyam Sharma, The Mountain Institute, India)</li> <li>v. Report On Economic Valuation of Large Cardamom</li> <li>vi. Economic Valuation of <i>Citrus reticulata</i>, <i>Zingiberofficinale</i>, <i>Swertiachirayita</i>, <i>Paris polyphylla</i>, <i>Acoruscalamus</i> and <i>Picrorhizakurrooa</i> in Sikkim (2018 – 2019)</li> <li>vii. CASE STUDY ON BONE FRACTURE, BODYACHE &amp; GASTRITIS IN SIKKIM</li> <li>viii. <b>Translation/printing of booklets into Nepali</b> : The Biological Diversity Act 2002, Biodiversity Management Committees Operational Tool Kit, ABS Mechanism Under the Biological Diversity Act 2002, India)</li> <li>ix. <b>Brochures</b> : Access and Benefit sharing from Utilization of Biological Resources and Associated Traditional Knowledge, ABS Potential in Sikkim, General Information brochure on ABS, Operational Guidelines on ABS, Mith tree brochure (Nepali &amp; English)</li> <li>x. <b>Flier</b>: Salient features of BD Act 2002, Biodiversity in Religion, Nagoya Protocol and ABS, <b>Posters</b>: Medicinal plants of Sikkim, Wild edible fruits of Sikkim, Rhododendrons of Sikkim.</li> <li>xii. <b>Only Printing</b>: Biological Diversity Act 2002, ABS Terminology, Biodiversity Heritage Site Guidelines, BMC Toolkit, People’s Biodiversity Register Format, Biodiversity Management Committees Operational Tool Kit, ABS Mechanism under the Biological Diversity Act 2002</li> <li>xiii. Sikkim State Biological Diversity Rules 2006 framed and amendment in 2018.</li> </ol> </li> </ol>
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		<ul style="list-style-type: none"> <li>xiv. <i>Ophiocordyceps sinensis</i> Harvesting &amp; Auctioning Guidelines 2016</li> <li>xv. Exposure visit of 08 BMC members and officials to Telangana on 2018.</li> <li>xvi. Radio and local television panel discussion program regarding activities of SBB.</li> <li>xvii. Seed bank in West Pandem and Lingmo paying.</li> </ul>
7	<b>Sector related notifications</b>	<ul style="list-style-type: none"> <li>1) Sikkim State Biological Diversity Rules 2006 framed and amendment in 2018.</li> <li>2) <i>Ophiocordyceps sinensis</i> Harvesting &amp; Auctioning Guidelines 2016.</li> <li>3) Constitution of Standing Committee of Sikkim Biodiversity Board</li> </ul>
8	<b>Any unique features/activities/functions of the Sector</b>	-

**Chapter-13****PARKS AND GARDEN DIVISION:**

Year of Creation of Parks & Garden Division		1975
Total Nos. of Garden		17 Nos.
Name of Gardens		
1.	Raj Bhawan Garden	
2.	Mintokgang Garden	
3.	Samman Bhawan Garden	
4.	VIP Garden/Bungalow	
5.	Ridge Park/Chogyal P.T. Namgyal Memorial Park	
6.	Bhanu Park Gangtok	
7.	SLA Complex	
8.	Forest Colony	
9.	Millennium Garden	
10.	Rustumji Park	
11.	Chintan Bhawan	
12.	Mannan Bhawan/Hydrangea Park	
13.	Forest Secretariat	
14.	Saramsa Garden	
15.	Butterfly Garden 32no	
16.	Rongnichu Water garden	
17.	Singtam Bhanu Park	
Total Nos. of Officers and staff in position.		
1.	Additional Director (P&G)	1 No.
2.	Divisional Forest Officer	1 No.
3.	Assistant Conservator of Forest	1 No.
4.	Range Officer	1 No.
5.	Block Officer	2 Nos.
6.	Forest Guard	2 Nos.
7.	LDC	1 No.
8.	Computer Operator	1 No.
Total Nos of Regular Malis		111 Nos.
Total Nos of M/R Malis		38 Nos.
Environmental Assistant (One Family One Job)		24 Nos.

**Functions:-**

1. Floral Decoration during National, State & other Function.
2. Landscaping & Beautification of Gardens in Gangtok area and other parts of State
3. Creation of flower nursery & raising of seedlings and other nursery activities
4. Construction of Gates & Beautification activities during the visit of VVIP & Others.
5. Maintenance of 17 Nos. of Gardens.

**DETAILS OF REVENUE COLLECTED DURING THE FINANCIAL YEAR APRIL 2016 TO MARCH 2019**

(Rs.in lakhs)

Months	SARAMSA GARDEN				WATER GARDEN	
	Convention Hall		Entry fee/ Picnic fee		Entry fee/ Picnic fee/Swimming fee	
	2017 to 2018	2018 to 2019	2017 to 2018	2018 to 2019	2017 to 2018	2018 to 2019
April	2.00	3.00	0.57	1.03	0.02	0.15
May	3.00		0.30	0.91	0.15	0.28
June		1.00	0.30	0.62	0.15	0.28
July			0.45	0.15	0.15	0.57
August	1.00		0.15	0.24	0.15	0.34
September			0.66	0.36	0.24	0.26
October	2.00		0.36	0.87	0.16	0.13
November	2.00		0.56	1.00	0.16	0.08
December	1.00		1.87	1.11	0.07	0.10
January			0.92	0.52	0.10	0.08
February	3.00	0.60	1.77	0.86	0.11	0.11
March			1.28	0.63	0.68	0.01
<b>Total ₹</b>	<b>14.00</b>	<b>4.60</b>	<b>9.21</b>	<b>8.30</b>	<b>1.53</b>	<b>2.40</b>

**April 2017 to March 2018 (Convention Hall, Entry Fee & Water Garden) Rs.24.75.00**

**April 2018 to March 2019 (Convention Hall, Entry Fee & Water Garden) Rs.14.76.00**



# WILDLIFE CIRCLE



## Chapter-14

### Wildlife & Other Biodiversity

#### Wildlife Protected Area Network in Sikkim (Area in sq km)

In Sikkim we have, presently, 8 Protected Areas which comprises of 1 National Park and 7 Wildlife Sanctuaries that covers almost 31 per cent of the total geographical area of the state.

SN	Name	District	Declaration		Amendment/Revised	
			Notification No. & Date	Area	Notification No. & Date	Change in Area
1.	Shingba Rhododendron Sanctuary	North	No. 45/WL/83/625 dt. 29/08/1984	32.50 Sq.Km	• No. 46/WL/F/92/1585/F&WL dt: 05.12.92	43.00 Sq.km
					• No.46IWLC/FEWMDI147 dt:05-11-2011	43.00 Sq.km
2.	Fambonglho Wildlife Sanctuary	East	No. 34/WL/82 dt: 02.04.1984	51.76 Sq.km	• No.GOS/FEWM/PCCF/04/Adm/F dt. 17-06-2010	51.76 Sq.km
3.	Kyongnosla Alpine Sanctuary	East	No. 45/WL/83/625 dt. 29/08/1984	401.05 ha.	• No. 45/WL/F/92/1585/F & WL dt: 05.12.1992	31.00 Sq. Km.
					• No. 45/WLC/FEWMD dated 03-02-2012	31.00 Sq. Km.
4.	Pangolakha Wildlife Sanctuary	East	No. 26/WL/F/89 dt: 07.11.00	128 Sq. Km	-	128.00 Sq. Km
5.	Kitam Bird Sanctuary		No.39/FEWM/2005 dt: 03.02.05	6 Sq. km.	-	6.00 Sq. Km.
6.	Maenam Wildlife Sanctuary	South	No. 63/WL//F/86 dt: 09.03.1987	35.34 Sq. Km.	• No. 63/WLC/FEWMD/02 dt.03-02-2012	35.34 Sq. Km.
7.	Barsey Rhododendron Sanctuary	West	No. 50/WL/F/95/269 & WL dt: 08.07.96	104 Sq. Km.	-	104 .00Sq. Km.
8.	Khangchendzonga National Park	North/ West	No. 95 dt. 26/08/1977	850 Sq.km	1/KNP(WL)/F/27 dt: 19.05.1997	1784 Sq.km.
9.	Khangchendzonga Biosphere Reserve	North/ West	229/F/ENV.& WL	835.92 Sq.km	204/KNP-KBR/Forests/2009 dt: 24.05.2010	835.92 Sq.km

**ORGANIZATIONAL STRUCTURE.**

Sl. No.	Name of Circle	Name of Division	Name of Range	Name of Beat Office
1.	Wildlife Circle	North Wildlife Division (Shingba Rhododendron Sanctuary)	Shingba Range	Shingba Beat
2.		East Wildlife Division (Kyongnosla Alpine Sanctuary)	Kyongnosla Range	1. Tsangu Beat 2. Kupup Beat 3. Kyongnosla Beat
		East Wildlife Division (Fambonglho Wildlife Sanctuary)	1. Fambonglho (West Range) 2. Fambonglho (East Range)	1. Sumick Beat 2. Golitar Beat 3. Sang Beat 4. Ranka Beat 5. Pangthang Beat 6. Sumin Beat
		East Wildlife Division (Pangolakha Wildlife Sanctuary)	1. Pangolakha (South Range) 2. Pangolakha (North Range)	1. Phadamchen Beat 2. Gnathang Beat 3. Dalapchen Beat
3.		South Wildlife Division (Maenam Wildlife Sanctuary)	Ravangla Range	1. Yangang Beat 2. Rabong Beat
		South Wildlife Division (Kitam Bird Sanctuary)	Kitam Range	Kitam Beat
4.		West Wildlife Division (Barsey Rhododendron Sanctuary)	1. Dentam Range 2. Soreng Range	1. Dentam Beat 2. Ribdi Beat 3. Hee-Patal Beat 4. Bhereng Beat 5. Sribadam beat 6. Hilley beat 7. Uttarey beat 8. Soreng Beat

**MEN IN POSITION**

<b>Designation</b>	<b>EAST</b>	<b>WEST</b>	<b>NORTH</b>	<b>SOUTH</b>	<b>TOTAL</b>
DFO	1	1	1	1	4
ACF	3	1	1	2	7
R.O	5	2	1	2	10
B.O	9	7	3	4	23
HFG	10	5	1	6	22
FG	17	10	2	6	35

The Department of Forest, Environment & Wildlife Management in the state has been adopting and implementing following strategies for smooth and effective management of Protected Areas i.e. Sanctuaries and National Parks which are oriented towards protection, conservation and preservation of pristine flora and unique Himalayan fauna in the state:

- (i) Strengthening and Enhancing the Protected Areas Network
- (ii) Effective Management of Protected Areas
- (iii) Conservation of Wildlife and Endangered Species and their Habitats
- (iv) Restoration of Degraded habitats outside Protected Areas
- (v) Control of Poaching and Illegal Trade in Wild Animal and Plant Species
- (vi) Monitoring and Research
- (vii) Human Resource Development and Personnel Planning
- (viii) Ensuring Peoples' Support & Participation in Wildlife Conservations
- (ix) Conservation Education and Protected Area Interpretation
- (x) Tourism in Protected Areas
- (xi) Domestic Legislation and International Conventions
- (xii) Enhancing Financial Allocations for Ensuring Sustained Fund Flow to the Wildlife Sector
- (xiii) Integration of National Wildlife Action Plan with Other Sectoral Programmes
- (xiv) Management plan of PAs
- (xv) Human and animal conflicts

During the 10<sup>th</sup> Financial Year Plan, the Ministry of Environment & Forests, Government of India has introduced "Development of National Parks and Sanctuaries-Centrally Sponsored Scheme" to all over the States/UT, bases on the approved Management Plan, declared notification with map of the Protected Area submitted by the respective State Government.

Under this scheme (90:10) assistance was provided for non-recurring item of expenditures for both National Parks and Sanctuaries. National Parks and Sanctuaries in high mountain region, coastal zones and deserts and supporting large number of endangered species are eligible as (90% Central and 10% State Share) assistance for both recurring and non-recurring item of expenditure. Recurring expenditure includes all the maintenance and repair works like de-silting of water bodies, running charges of vehicles, cleaning of fire lines, engaging sanctuary /fire watchers during peak season based on the prioritized number on the approved management plan.

## **Wildlife decentralization with addition of Eco-Development Committees (EDCs).**

National Afforestation Programme (NAP) is a major forestry scheme of the Government of India in which afforestation and related activities are intended to be implemented under two-tier institutional structure with public participation having Joint Forest Management and Eco-Development Committees. This scheme is under the National Afforestation and Eco-development Board (NAEB) of the Ministry of Environment & Forests, Government of India at the centre. This is a 100% Centrally Sponsored Scheme (CSS) started during the 10<sup>th</sup> Five Year Plan with a two-tier institutional structure i.e. Forest Development Agency (FDA) and Joint Forest Management Committee (JFMC) or Eco-Development Committee (EDC). The village is reckoned as a unit of planning and implementation and all activities under the programme are conceptualized at the village level. The decentralized two-tier institutional structure has been further decentralized by the Government of India with the introduction of State Forest Development Agency (SFDA) to act as an umbrella agency in the State since 2010. SFDA is the federation of all FDAs of the State. There are a total of 9 FDAs - 4 Territorial FDAs with 159 JFMCs and 5 Wildlife FDAs with 60 EDCs. The objective of the project is primarily to have a participatory forest management by the local people for sustainable development and management of forest resources.

### **Eco-Development Committees (EDC):**

Joint Forest Management System was started in 1998 with the issue of notification by the State Government, the main objective of JFMC was to involve local people for protection and management of forest in forest fringe villages with formation of JFMC with usufruct sharing of products. Like JFMC under the Territorial FDA, an EDC under the Wildlife FDA is the implementing agency at the village level. It is formed for a village or a cluster of villages situated adjacent to National Park or Wildlife Sanctuaries and is registered with the respective Wildlife Divisional Forest Office in the district.

### **Rationalization and re-constitution of Eco-Development Committees:**

Like Joint Forest Management Committee which is formed for a village or a cluster of villages situated adjacent to Reserved Forests (RF) and registered with the concerned Territorial Divisional Forest Office, an Eco-Development Committee (EDC) is also formed for a village or a cluster of villages situated adjacent to National Park or Wildlife Sanctuaries and is registered with the respective Wildlife Divisional Forest Office. An EDC is composed of General Body and Executive Body, all members are elected for 3 years by consensus/majority vote through Gram Sabha. General body comprises of President, Vice-President, all villagers as members and concerned BO/RO is the ex-officio member. The Executive Body comprises of President & Vice-President of EDC, six of the General Body members, a Treasurer, at least one member from the forest-based artisan community or a representative of the socially marginalized community, two local Panchayat members. Concerned BO/RO is the Member-Secretary of the Executive Body. The functions of EDCs are to execute the annual programmes as per the micro plans. They are to assist in the preparation of micro-plans of the villages, choice of species to be planted, suggesting physical & financial targets, proposing entry point activities, awareness programmes and usufruct sharing mechanism and fund raising activities.

During the year 2016, the Department had undertaken the 3R's exercise i.e. Rationalization, Re-organization and Re-constitution of Joint Forest Management Committees (JFMC) and Eco-development Committees (EDC) for rationalization of boundaries, re-organization of working areas and reconstitution of the executive body members, for the purpose of participatory forest and wildlife management vide notification no. 79/GOS/PCCF-PS/FEWMD dated 04-06-2016.

Name of FDA	EDC Constituted during 2002		Reconstituted during 2016	
	No. of EDC	PA	No. of EDC	PA
North Wildlife FDA	01	Shingba Rhododendron Sanctuary	01	Shingba Rhododendron Sanctuary
East Wildlife FDA	18	Fambonglho WLS (10 EDCs) Kyongnosla Alpine WLS (02 EDCs) Pangolakha WLS (06 EDCs)	20	Fambonglho WLS (11 EDCs) Kyongnosla Alpine WLS (02 EDCs) Pangolakha WLS (07 EDCs)
South Wildlife FDA	12	Kitam Bird WLS (04 EDCs) Maenam WLS (08 EDCs)	10	Kitam Bird WLS (01 EDCs) Maenam WLS (09 EDCs)
West Wildlife FDA	09	Barsey Rhododendron Sanctuary	11 2	Barsey Rhododendron Sanctuary* *Two new EDCs added and amended to notification vide no.104 (i)/GoS/FEWMD/PCCF-SECY dated 28/09/2018
KNP FDA	20	Khangchendzonga National Park	22	Khangchendzonga National Park
Total EDCs	60		66	

#### Projects/Schemes/Work Components:

**Integrated Development of Wildlife Habitats (90:10):** It is a flagship program of the Ministry of Environment, Forests & Climate Change. The scheme is being implemented by the Wildlife Sector and aims to develop and conserve wildlife habitats in the Protected Areas of the State.

#### Physical & Financial Targets and Achievements of Centrally Sponsored Scheme Integrated Development of Wildlife Habitats at Shingba Rhododendron Sanctuary, North Sikkim, (90:10) for the year 2018-19.

(Rs.in lakhs)

Sl. No	Item of Work	Sanctioned			Actual (Expenditure)		
		Qty.	Fin	Location	Qty	Fin	Location
<b>A</b>	<b>Non- Recurring Activities</b>						
1.	Soil & moisture conservation to control soil erosion	6 ha.	4.80	Pom N 27° 45'35.56" E 88°41' 35.56"	6 ha.	4.80	Pom N 27° 45' 35.56" E 88° 41' 35.56"
2.	Purchase of tranquilizing gun	1 set	4.00	North WL Div	1 set	4.00	North WL Div
3.	Installation of live hedge fencing to buffer villages adjoining PA	3 no.	1.38	SRS, Lachung Block	4 nos.	1.38	SRS, Lachung Block

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4.	Purchase of body protection gears for field staff	LS	2.00	North WL Div	LS	2.00	North WL Div
5.	Purchase/fabrication of cages squeeze cages bear for transportation of black bear during human-animal conflict	1 no.	0.80	North WL Div	1 no.	0.80	North WL Div
6.	Cage for monkeys for transportation of monkeys for capture and release programme	2 nos.	0.60	North WL Div	2 nos.	0.60	North WL Div
7.	Installation of solar fencing to protect fields from raiding by wild animals	3 kms.	9.00	Along SRS, Lachung Block	3 kms.	9.00	Along SRS, Lachung Block

<b>Total-A</b>			<b>22.58</b>			<b>22.58</b>	
<b>B Recurrent Activities</b>							
8.	Publication and printings	LS	2.00	North WL Div	LS	2.00	North WL Div
9.	Exposure trip to EDC members	1 no.	1.00	-	1 no.	1.00	-
10.	Management of feral dogs	5 camps	2.50	North WL Div	5 camps	2.50	North WL Div
11.	Opening of souvenir shops at Shingba for publicity and generate incomes for EDC	LS	2.00	N27°42'51.32" E 88° 41' 35.56"	LS	2.00	N27°42'51.32" E 88° 41' 35.56"
12.	Printing of T-Shirts, mugs, key chains, jackets with the approved Shingba logo on it to be sold in souvenir shop	LS	2.50		LS	2.50	
13.	Installation of signages along the roadside	10 nos.	2.00		10 nos.	2.00	
14.	Awareness raising and capacity building around the forest fringe villages	4 nos.	2.00	Fringe villages of Shingba	4 nos.	2.00	Fringe villages of Shingba
15.	Purchase of medicines for tranquilizing guns	LS	1.00	North WL Div	LS	1.00	North WL Div
16.	Ex-gratia payments for crop damages, cattle lifting and human injury	LS	5.00	North WL Div	LS	5.00	North WL Div
17.	Anti- poaching and conduct of animal trap demolition operation	2 camps	1.00	North WL Div	2 camps	1.00	North WL Div
18.	Mobilization of rescue efforts while rescuing Himalayan Black Bear menace	4 camps	2.00	North WL Div	4 camps	2.00	North WL Div
<b>Total-B</b>			<b>23.00</b>			<b>23.00</b>	
<b>Grand Total A+B</b>			<b>45.58</b>			<b>45.58</b>	

**Physical & Financial Targets and Achievements of Centrally Sponsored Scheme Integrated Development of Wildlife Habitats at Fambonglho Wildlife Sanctuary, East Sikkim, (90:10) for the year 2018-19.**

(Rs.in lakhs)

Sl No	Prioritised work/Activities	Unit cost	Location	Proposed Target		Latitude and Longitude	Achievement	
				Phy	Fin		Phy	Fin
<b>A Non- Recurring Activities</b>								
1	Construction of solar fencing lines from Kali Khola to Rapen Gumpa.	4.0	Kali Khola to Rapen Gumpa	5 km	20.00	N-27°18'67.75" E-88°28'30.18" N-27°18,22.72" E-88° 29'20.43"	5 km	20.00
2	Construction of Water	0.75	New- 1.Martam Tin	4	3.00	N-27°17'50.8"	4	3.00

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	Holes (new-4)		Jurey. 2. Rumtek Alubari. 3. Near Doke Dara 4. Near Gumti Pokhari			E-88°31'42.8" N-27°18,38.0" E-88° 31'52.4"		
3	Habitat Improvement of Protected area with creation of seed dibbling of fruit bearing trees.	0.70	1. Lower Sokay 2. Sang Chuja	4.5 Ha	4.20	N- 27°16'55.67" E- 88°28'49.83" N-27°17'14.4" E-88°31'52.4"	4.5 Ha	4.20
4	Construction of nature trails	4.00	1. Boktay Dara to Tham Dara (East)	3 km	12.00	N-27°17'03.78" E-88°32'27.65"	3 km	12.00
6	Wireless connectivity		FWLS(EAST)	LA	2.00		LA	2.00
7	Repairing work of FG Barack at Golitar	2.00	2 Golitar 2. Martam Dhan Kuttay	2	4.00	N-27°17'34.0" E-88°32'20.2"	2	4.00
			<b>Sub Total (A)</b>		<b>45.20</b>			<b>45.20</b>
<b>B</b>	<b>Recurring Activities</b>							
1	Uniform of Watchers and field kit for Frontline Staffs	4.00	East& West Range of FWLS	L.S.	4.00	-	L.S.	4.00
2	Mobilization of Rescue team for Himalayan Black bear and other activities	L.S	FWLS	L.S	2.00	-	2.00	2.00
3	Engagement of Sanctuary fire watchers in fire prone area(10 nos labour for 3 months=90 days * 300)	0.2	FWLS		2.70	-		2.70
4	Compensation and relief measures for Man and Animal conflict and crop damages	3.00	FWLS	L.S	3.00	-	L.S	3.00
6	Anti- poaching and monitoring activities	2.00	1. Tham Dara 2. Palling	2	4.00	N-27°17'34.0" E-88°32'20.2"	2	4.00
7	Awareness and sensitizing programme	1	1. Tumin 2. Rumtek	2	2.00	N-27°19'37.07" E-88°31'22.84"	2	2.00
8	Maintenance of existing nature trail	1.5	1. Golitar to Gurasey (5 km) 2. Golitar to Noon Thalay (3 km)	8 km	12.00	N-27°21'61.3" E-88°33'91.3"	8 km	12.00
9	Problem mitigation for wild animals in urban/Rural areas	LS	East District	LS	3.00		LS	3.00
			<b>Sub Total (B)</b>		<b>32.70</b>			<b>32.70</b>
			<b>Total (A)+(B)</b>		<b>77.90</b>			<b>77.90</b>

**Physical & Financial Targets and Achievements of Centrally Sponsored Scheme Integrated Development of Wildlife Habitats at Kyongnosla Alpine Sanctuary, East Sikkim, (90:10) for the year 2018-19.**

(Rs.in lakhs)

SI No	Prioritised work/Activities	Unit cost	Location	Proposed Target		Latitude and Longitude	Achievement	
				Phy	Fin		Phy	Fin
A	<b>Non- Recurring Activities</b>							
1	Printing of Sanctuary Brochures.	1.50	-	L.S.	1.50		L.S.	1.50
2	Purchase of equipments/kits for high altitude field conditions for field staff.	2.50	KAS	L.S.	2.50		L.S.	2.50
3	Construction of trekkers hut	8.00	Above Goral Rock	1 nos	8.00	N27°22'52.2" E88°43'29.5"	1 nos	8.00
4	Construction of 2 nos of water holes	0.63	KAS	2 nos	1.26	N27°23'42.15" E88°45'26.54" N27°23'12.68" E88°43'10.05"	2 nos	1.26

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5	Creation of bird and wildlife watching area. ( Viewing Deck )	10.00	KAS	1nos	10.00	N27°23'3.4" E88°43'29.5"	1nos	10.00
6	Construction/Provision of salt licks	2.00	KAS	1 nos	2.00	N27°23'42.15" E88°45'26.54" N27°23'12.68" E88°43'10.05"	1 nos	2.00
<b>Sub Total (A)</b>					<b>25.26</b>			<b>25.26</b>

<b>B Recurring Activities</b>								
1	Maintenance of existing Nature trail	2.00	Carpost area to Sanctuary Gate via Rongchu Bridge	5km	10.00	N27°22'28.6" E88°43'38"	5km	10.00
2	Mobilisation of rescue team during himalayan black bear and other wild animals.	LS	KAS	LS	2.00	-	LS	2.00
3	Engagement of Fire Watchers	1.18	KAS ( in and around)	3 watchers x 4 months	1.18	-	3 watchers x 4 months	1.18
4	Man-animal conflict and waste management awareness camp including purchase and distribution of dustbins.	0.85	KAS	3 camps	2.55		3 camps	2.55
5	Expeditions within Protected Areas	2.50	KAS	L.S.	2.50		L.S.	2.50
6	Antipoaching and trap demolition activities	1.00	KAS	2 camps	2.00	-	2 camps	2.00
<b>Sub Total (B)</b>					<b>20.23</b>			<b>20.23</b>
<b>Total (A)+(B)</b>					<b>45.49</b>			<b>45.49</b>

**Physical & Financial Targets and Achievements of Centrally Sponsored Scheme Integrated Development of Wildlife Habitats at Pangolakha Wildlife Sanctuary, East Sikkim, (90:10) for the year 2018-1**

(Rs.in lakhs)

Sl. no	Item of Work	Unit cost	Proposed Target		Location	Latitude and Longitude	Achievement	
			Phy	Fin			Phy	Fin
<b>A</b>								
1	Maintenance of F. G. Quarter at Chandaney	8.00	1 no	8.00	PWLS	N27°10'49.8" E88°40'06.9"	1 no	8.00
2	Providing Protective wall at Phadamchen Check post cum Quarter	6.00	1 no	6.00	Phadamchen	N27°14'30.3" E88°46'33.3"	1 no	6.00
3	Strengthening of frontline staff by providing equipments such as sleeping bags, tents etc.	LS	LS	3.00	PWLS	-	LS	3.00
4	Development & improvement of Salt lick at high & low altitude	0.40	6 nos	2.40	PWLS	-	6 nos	2.40
5	Development of water hole at high & Low altitude	0.60	4 nos	2.40	Goru Juray and Bhotay Phatak	N27°13'22.22" E88°48'12.11"and N27°12'28.26" E88°47'54.30"	4 nos	2.40

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6	Preparation of brochure, pamphlets etc.	LS	LS	2.00	PWLS	-	LS	2.00
7	Removal of Kalamey Fern at Chandaney	LS	LS	3.00	PWLS	-	LS	3.00
<b>Sub Total (A)</b>				<b>26.80</b>				<b>26.80</b>
<b>B</b>								
1	Compensation and relief measures for crop damages by wild animals and ex-gratia payment for domestic animal kills by Wild animals.	LS	L.S	3.00	PWLS and surrounding area	-	L.S	3.00
2	Mobilization of Rescue team for Himalayan Black bear and antipoaching activities	LS	L.S	3.00	PWLS	-	L.S	3.00
3	Sanctuary watchers for 4 month during peak season.	0.36	6 nos	2.16	PWLS and surrounding area	-	6 nos	2.16
4	Creation of fire lines at fire prone area at Chandaney to Phusrey Barrek	1	2km	2.00	PWLS	-	2km	2.00
5	Anti poaching and Trap demolation activities	1	KAS	2	2	-	KAS	2
6	Awareness Programme	LS	LS	1.50	Schools and areas around PWLS	-	LS	1.50
7	Provision of signages	LS	LS	1.00	PWLS and surrounding area	-	LS	1.00
<b>Sub Total (A)</b>				<b>14.66</b>				<b>14.66</b>
<b>Total (A+B)</b>				<b>41.46</b>				<b>41.46</b>

**Physical & Financial Targets and Achievements of Centrally Sponsored Scheme Integrated Development of Wildlife Habitats at Kitam Bird Sanctuary, South Sikkim, (90:10) for the year 2018-19.**

SN	Items of Works	Sanctioned			Achievement	
		Qty.	Amount	Location	Qty.	Amount
<b>Recurrent</b>						
1	Forest Fire Protection	1 job	4.00	Kitam Bird Sanctuary		4.00
2	Maintenance of Solar fence	1 job	0.50	Harra botey to Alley khet N27°09'56.3" E88°21'34.1"		0.50
3	Maintenance of Natural trail	3 km	3.00	1. Tarpin golai to 10th mile (1km) N27°06'25.2" E88°21'07.7"		3.00
				2. Debrey turning to Sansari dara (2km) N27°06'30.1" E88°21'21.9"		
4	Ex gratia payment for crop damages and injury by wildlife	1 job	5.00	Fringe villages		5.00

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5	Repairing of underground pipeline and water hole	05 water holes	0.50	1. Alley Khet N27°06'12.7" E88°21'21.7" 2. Jor Kuwa N27°06'45.8" E88°21'06.7" 3. Debrey Turning N27°06'41.1" E88°21'28.7" 4. Ratomatey Turning N27°06'25.8" E88°21'16.3" 5. Dipudara N27°06'30.2" E88°21'22.7"		0.50
6	Mobilisation of Rescue team for monkeys, deer, etc and others activities including control of feral dogs	LS	2.00			2.00
7	SMC work for control of soil erosion	5 ha	2.50	Purnabotey tar N27°06'44.2" E88°21'01.0"		2.50
<b>Non Recurrent</b>						
1	Publicity and Promotion of KBS	1 job	3.00		1 job	3.00
2	Purchase of field equipments for strengthening the frontline staffs	LS	2.00		LS	2.00
3	Dry stone protective wall	LS	0.60	Near watch tower N27°06'26.4" E88°21'21.9"	LS	0.60
4	Construction of Watch tower	1 job	12.00	Dipu Dara N27°06'30.5" E88°21'15.9"	1 job	12.00
<b>Total</b>			<b>35.10</b>	<b>Total</b>		<b>35.10</b>

## Physical &amp; Financial Targets and Achievements of Centrally Sponsored Scheme Integrated Development of Wildlife Habitats at Maenam Wildlife Sanctuary, South Sikkim, (90:10) for the year 2018-19.

SN	Items of Works	Sanctioned			Actual Expenditure	
		Qty.	Amount (in lakh)	Location	Qty.	Amount (in lakh)
<b>Recurring Activity</b>						
1	Mobilisation of Rescue team to mitigate human animal conflict and other activities.		3.00	In fringe villages and town areas		3.00
2	Engagement of Watchers during peak season to prevent forest fire and illegal activities (3 months)	4 Nos	1.08	within MWLS	4 Nos	1.08
3	Ex gratia for crop damage killing of animal and animal attack by wild animals		3.00	Fringe villages of MWLS		3.00
4	Maintenance of salt licks	5 Nos	1.50	1. Dhajey: N27°20'02.79" E88°21'56.28" 2. Nunthaley: N27°19'35.14" E88°22'37.50" 3. Dongdongay: N27°19'02.27" E88°21'59.50" 4. Saleley: N27°19'25.14" E88°22'05.45" 5. Chauhan Dara: N27°19'50.8' E88°21'25.0"	5 Nos	1.50
5	Maintenance of Nature trail	5.0Km	5.00	5kms of Dhapper-Bhalleydhunga trail Start point: N27°19'30.4" E88°24'20.9"	5.0Km	5.00
6	Awareness programme	2 location	1.00		2 location	1.00

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7	Monitoring and trap demolition activities		2.00	within MWLS		2.00
<b>Non Recurring Activity</b>						
8	Publicity and Promotion of MWLS	1 job	3.00		1 job	3.00
9	Laying of underground pipes to bring water from the available source area to the dry and fire prone area and construction of water tank/placing of tank		6.00	Jor Kharka: N27°19'24.7" E88°23'56.28"		6.00
10	Creation of water harvesting structure	5 Nos	4.00	1. Yangang: N27°18'38.7" E88°23'56.1" 2. Lingmoo: N27°20'26.8" E88°26'08.4" 3. Sokpay : N27°21'15.3" E88°26'16.5" 4. Dhajey : N 27°20'02.79" E88°21'56.28" 5. Nunthaley : N27°19'35.14" E88°22'37.50"	5 Nos	4.00
11	Purchase of field equipments like GPS, Thermal Imaging Camera, Binoculars, Camera Traps etc		3.00			3.00
12	Skill Development Training for the EDC members for bird watching guides etc	2 location	2.00		2 location	2.00
13	Plantation of Small bamboo	05 Ha	2.50	Dhajey : N27°20'02.79" E88°21'56.28"	05 Ha	2.50
14	Purchase of cage for birds, small mammals	LS	2.00		LS	2.00
15	Construction of Watch tower cum patrolling hut	1 Nos	15.00	Dhajey: N27°20'02.79" E88°21'56.28" ^ 3012m	1 Nos	15.00
		<b>Total</b>	<b>54.08</b>		<b>Total</b>	<b>54.08</b>

Physical & Financial Targets and Achievements of Centrally Sponsored Scheme Integrated Development of Wildlife Habitats at Barsey Rhododendron Sanctuary, West Sikkim, (90:10) for the year 2018-19.

Sl. No	Item of Work	Sanctioned			Achievement	
		Qty.	Fin	Location	Qty.	Fin
<b>A</b>	<b>Non- Recurring Activities</b>					
1.	Wetland Development along with saltlick provision within the Sanctuary	5 nos.	1.00	Juray tham & within BRS	5 nos.	1.00
2.	Chain Link Fence along the Sanctuary of PA to prevent crop damage by wild animals (Ribdi Village)	2 km	20.00	Along the sanctuary (Ribdi village area)	2 km	19.93
3.	Purchase of squeeze cages for bears and monkeys	4 nos.	4.00	West WL Division	4 nos.	4.00
4.	Creation of live hedge fencing	5 kms.	5.00	Begha, Upper Buriakhop	5 kms.	5.00
5.	Construction of check post-cum-FG Quarter at	1 no.	7.00	Uttarey & Buriakhop N 27° 16' 01.0" E 88° 03' 53.3	1 no.	7.00
6.	Habitat Management of Red Panda and Himalayan Black Bear	5 ha.	3.50	Banjagha , Achaley, Jorbotry	5 ha.	3.50
	<b>Total-A</b>		<b>40.50</b>			<b>40.43</b>

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<b>B</b>	<b>Recurrent Activities</b>					
7.	Repair and furnishing of DFO and field staff quarter at	1 no.	2.00	Geyzing N27° 17' 23.4" E 88° 15' 40.7"	1 no.	2.00
8.	Anti – poaching & trap demolition activities within Sanctuary	LS	2.50	within BRS	LS	2.50
9.	Protection of forest fires by engaging 10 (ten) nos. of fire watchers for 4 (four) months in fire prone areas during the peak season of fires	1220 days	2.68	within BRS	1220 days	2.68
10.	Mobilization of rescue team during wild animal menace	LS	2.00	In & around BRS	LS	2.00
11.	Maintenance and clearing of existing nature trails for patrolling squads and wildlife tourism	20 kms	6.00	Deonigaley dhap to Barsey	20 kms	6.00
12.	Garbage Management	2 nos.	2.00	Hilley & Uttarey	2 nos.	2.00
13.	Procurement of field equipments such as leech guard, rucksacks, water bottles, torch lights, cuttings weapons, sleeping bags, tents, mattresses, jackets, walking, sticks, resin coat, body protection, rescue stretcher, gears to prevent human injury while dealing with human-animals conflicts	LS	2.00	West WL Division	LS	2.00
14.	Creation of awareness generation programme on Protection of Natural Resources of the Sanctuary	2 times	1.00	West WL Division	2 times	1.00
15.	Ex-gratia payment for loss of crops, cattle and human injury	LS	5.00	Fringe villages of BRS	LS	5.00
16.	installation of signages	LS	4.00	Within BRS	LS	4.00
17.	Minor Repair of Old Check Post cum FG Quarter	1 no.	1.00	Hilley N- 27° 11' 5.00" E- 88° 7' 17.5"	1 no.	1.00
18.	Contour Burning	7 kms.	0.49	Achaley to Daruwa & Lidum & Upper Sangkhu & Tarey bhir to Chakmakey, Chim kharka to Ratomatey	7 kms.	0.49
19.	Minor Repair of FG Barrack	1 no.	3.00	Barsey N- 27° 12'33.9", E- 88° 7' 59.4"	1 no.	3.00
20.	Maintenance of Patrolling Path	5 kms.	2.50	Gumpa dara to Barsey N 27°10'34.7", E 88° 11' 08.7"	5 kms.	2.50
21.	Rain Water Harvesting tank in dry areas	5 nos.	2.50	Chim kharka- N- 27° 13' 59.1" E- 88° 07' 51.3" Deorali, Barsey N-27° 12'34.2" E- 88° 08' 45.1" Daruwa-N- 27° 14' 18.4" E- 88° 03' 58.5" Kharka Chwok-N 27°14'57.21" E 88°2'07.01" Kalijhar-N 27°15'27.53" E 88° 02'31.70"	5 nos.	2.50
	<b>Total-B</b>		<b>38.67</b>			<b>38.67</b>
	<b>Grand Total A+B</b>		<b>79.17</b>			<b>79.10</b>

## Physical &amp; Financial Targets and Achievements of Centrally Sponsored Scheme Integrated Development of Wildlife Habitats at Khangchendzonga National Park, (90:10) for the year 2018-19.

(Rs.in lakhs)

Sl. No	Item of Work	Target			Achievement	
		Qty	Rate per Unit	Amt	Qty	Amt
<b>A</b>	<b>Non- Recurring Activities</b>					
1.	Purchase of gamow bags for treating altitude sickness 1. Chungthang 88°38'1.5", 27°36'56.5" 2. Dzongu 88°27'28.52" 27° 33'. 20' 3. Yuksom 88°13'30.8" 27°22'33.8"	2Nos.	2.5	5.00	2Nos.	5.00
2.	Habitat improvement of Red panda, Himalayan black bear 1. Thinchu 88°26'31.40" 27°41' 32.07" 2. Phyanguteng 88°26'26.43", 27°42'5.74" 3. Gunsu 88°10' 28.40", 27°26'39.02" 4. Neytham 88°06'49.66" 27°19'58.83"	15 ha	0.49/Ha	7.35	15 ha	7.35
			<b>Sub-Total</b>	<b>12.35</b>		<b>12.35</b>
<b>B</b>	<b>Recurrent Activities</b>					
3.	Renovation & Maintenance of Interpretation Centre-cum-Range Officer Quarter at Yuksom 88°13'30.8" 27°22' 33.8"	LS	6.00	6.00	LS	6.00
4.	Restoration of patrolling path from Yuigang to German Orar 1. Yuigang 88°36'41.708" 27°38'18.396" 2. German Orar 88°34'35.4" 27°39'29.6"	6kms	2.00/km	12.00	6kms	12.00
5.	Creation of fire lines and mobilization of staffs during forest fire season 1. Chungthang 88°38'1.5" 27°36'56. 5" 2. Dzongu 88°27'28.52" 27° 33'. 20' 3. Yuksom 88°13'30.8" 27°22'33.8"	3ranges	LS	3.00	3ranges	3.00
6.	Anti-poaching activities-patrolling to check encroachment ,poaching and demolition of traps 1. Chungthang 88°38'1.5" 27°36'56. 5" 2. Dzongu 88°27'28.52" 27° 33'. 20' 3. Yuksom 88°13'30.8" 27°22'33.8"	3ranges	2.00	6.00	3ranges	6.00
7.	Livestock Immunization 1. Chungthang 88°38'1.5", 27°36' 56.5" 2. Dzongu 88° 27'28.52" 27° 33'20" 3. Yuksom 88°13' 30.8" 27°22'33.8"	300 nos.	LS	2.00	300 nos.	2.00
8.	Laying of salt licks 1. Turgongtum 88°26'30.62" 27°41'30.59" 2. Thepala 88°32'58.68" 27°42'26.10" 3. Lamuney 88°11'9.58" 27°32'44.23" 4. Majurpokhari 88°04'13.70" 27°28'16.85" 5. Gawthalidara 88°07' 51.37" 27°32'18.39"	1500 Kgs	0.001/kg	1.50	1500 Kgs	1.50
9.	Ex-gratia payment and Compensation for crop damage by Wild animals	LS	5.00	5.00	LS	5.00
10.	Mobilization of rescue team during Himalayan black bear menace	LS	4.50	4.50	LS	4.50
11.	Garbage Management 1. Chungthang 88°38'1.5" 27°36'56. 5" 2. Dzongu 88°27'28.52" 27° 33'. 20' 3. Yuksom 88°13'30.8" 27°22'33.8"	3ranges	LS	3.00	3ranges	3.00
12.	Control and management of Feral dogs 1. Chungthang 88°38'1.5" 27°36' 56.5" 2. Chongri 88°38'1.5" 27°36'56.5" 3. Nayapatal 88°05'44.38" 27°22'15.33" 4. Sopakha 88°02'45.68" 27°17'34.46"	LS	3.00	3.00	LS	3.00
			<b>Sub-Total</b>	<b>46.00</b>		<b>46.00</b>
			<b>Grand Total</b>	<b>58.35</b>		<b>58.35</b>

**National Afforestation Programme under Wildlife Forest Development Agency:** Forest Development Agency North, east, South & West (Territorial & Wildlife) and KNP, NAP is a flagship program of the Ministry of Environment, Forests & Climate Change which aims at augmenting the forest and tree covers of the country in pursuance of the goals enshrined in the Nation Forest Policy 1988. It is being implemented in the participatory mode of involving the grass roots level communities, the Joint Forest Management Committees and the Eco Development Committees. The plantation are planned and executed by these JFMCs and EDCs in their respective areas.

**Physical and Financial Achievements under Wildlife FDA during the year 2018-19:**

**Low Altitude**

S. No	Items of work	Adm Cost.	Physical and financial achievements											
			KNP		East WL		West WL		North WL		South WL		Total	
			Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
<b>1</b>	<b>Aided Natural Reg.</b>													
	Creation (200Plts/ha)	11751	44	5.17	22	2.59	22	2.59	0	0.00	18	2.12	106	12.46
	Maintenance 3rd Year	3203	30	0.96	30	0.96	15	0.48	0	0.00	25	0.80	100	3.20
	<b>Sub-total</b>	<b>14954</b>	<b>44</b>	<b>6.13</b>	<b>22</b>	<b>3.55</b>	<b>22</b>	<b>3.07</b>	<b>0</b>	<b>0.00</b>	<b>18</b>	<b>2.92</b>	<b>106</b>	<b>15.66</b>
<b>2</b>	<b>Artificial Regen.</b>													
	Creation (1100 Plts./ ha)	22366	53	11.85	20	4.47	23	5.14	0	0.00	12	2.68	108	24.16
	Maintenance 3rd Year	5380	50	2.69	30	1.61	20	1.08	0	0.00	6	0.32	106	5.70
	<b>Sub-total</b>	<b>27746</b>	<b>53</b>	<b>14.54</b>	<b>20</b>	<b>6.09</b>	<b>23</b>	<b>6.22</b>	<b>0</b>	<b>0.00</b>	<b>12</b>	<b>3.01</b>	<b>108</b>	<b>29.86</b>
<b>3</b>	<b>Pasture Development</b>													
	Creation (400 Plts/ ha)	13856	0	0.00	18	2.49	21	2.91	0	0.00	4	0.55	43	5.96
	Maintenance 3rd Year	3611	20	0.72	20	0.72	15	0.54	0	0.00	5	0.18	60	2.17
	<b>Sub-total</b>	<b>17467</b>	<b>0</b>	<b>0.72</b>	<b>18</b>	<b>3.22</b>	<b>21</b>	<b>3.45</b>	<b>0</b>	<b>0.00</b>	<b>4</b>	<b>0.73</b>	<b>43</b>	<b>8.12</b>
<b>4</b>	<b>Bamboo Plantation</b>													
	Creation (625 pltn./ ha)	12664	46	5.83	16	2.03	21	2.66	0	0.00	12	1.52	95	12.03
	Maintenance 3rd Year	2645	15	0.40	15	0.40	10	0.26	0	0.00	15	0.40	55	1.45
	<b>Sub-total</b>	<b>15309</b>	<b>46</b>	<b>6.22</b>	<b>16</b>	<b>2.42</b>	<b>21</b>	<b>2.92</b>	<b>0</b>	<b>0.00</b>	<b>12</b>	<b>1.92</b>	<b>95</b>	<b>13.49</b>
<b>5</b>	<b>Planting of Canes</b>													
	Creation (1100/plants/ha)	13217	6	0.79	3	0.40	0	0.00	0	0.00	6	0.79	15	1.98
	Maintenance 3rd Year	4086	25	1.02	0	0.00	5	0.20	0	0.00	7	0.29	37	1.51
	<b>Sub-total</b>	<b>17303</b>	<b>6</b>	<b>1.81</b>	<b>3</b>	<b>0.40</b>	<b>0</b>	<b>0.20</b>	<b>0</b>	<b>0.00</b>	<b>6</b>	<b>1.08</b>	<b>15</b>	<b>3.49</b>
<b>5</b>	<b>Mixed Plantation</b>													
	Creation (1100/plants/ha)	22275	35	7.80	20	4.46	18	4.01	0	0.00	14	3.12	87	19.38
	Maintenance 3rd Year	5148	25	1.29	25	1.29	15	0.77	0	0.00	25	1.29	90	4.63
	<b>Sub-total</b>	<b>27423</b>	<b>35</b>	<b>9.08</b>	<b>20</b>	<b>5.74</b>	<b>18</b>	<b>4.78</b>	<b>0</b>	<b>0.00</b>	<b>14</b>	<b>4.41</b>	<b>87</b>	<b>24.01</b>
<b>6</b>	<b>Perennial herbs and shrubs</b>													
	Creation (2000 plants/ha)	4212	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	Maintenance 3rd Year	4212	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	<b>Sub-total</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>
<b>7</b>	<b>Seabuckthorn Plantation</b>													
	Creation (2000 pts/ha)	44743	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	Maintenance 3rd Year	9431	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	<b>Sub-total</b>	<b>3705</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>
	<b>Total of Works</b>	<b>CR</b>	<b>184</b>	<b>38.52</b>	<b>99</b>	<b>21.41</b>	<b>105</b>	<b>20.65</b>	<b>0</b>	<b>0.00</b>	<b>66</b>	<b>14.06</b>	<b>454</b>	<b>94.63</b>
<b>8</b>	<b>Overhead</b>													
				<b>3.85</b>		<b>2.14</b>		<b>2.06</b>		<b>0.00</b>		<b>1.41</b>		<b>9.46</b>
	<b>Total</b>		<b>326</b>	<b>42.37</b>	<b>159</b>	<b>23.55</b>	<b>215</b>	<b>22.71</b>	<b>44</b>	<b>0.00</b>	<b>66</b>	<b>15.46</b>		<b>94.63</b>
	Total Creation Works		184	31.44	99	16.43	105	17.31	0	0.00	66	10.78	454	75.96
	Total Maint -3rd		165	7.08	120	4.98	80	3.34	0	0.00	83	3.27	448	18.67

## High Altitude

S. No	Items of work	Adm Cost.	Physical and financial target/ outlay breakup (in Ha & Rs. Lakh) 2016-17											
			KNP		East WL		West WL		North WL		South WL		Total	
			Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin	Phy	Fin
<b>1</b>	<b>Aided Natural Reg.</b>													
	Creation (200Plts/ha)	17075	32	5.46	10	1.71	22	3.76	8	1.37	0	0.00	72	12.29
	Maintenance 3rd Year	5161	30	1.55	20	1.03	20	1.03	15	0.77	0	0.00	85	4.39
	<b>Sub-total</b>	<b>22236</b>	<b>32</b>	<b>7.01</b>	<b>10</b>	<b>2.74</b>	<b>22</b>	<b>4.79</b>	<b>8</b>	<b>2.14</b>	<b>0</b>	<b>0.00</b>	<b>72</b>	<b>16.68</b>
<b>2</b>	<b>Artificial Regen.</b>													
	Creation (1100 Plts./ ha)	33078	29	9.59	10	3.31	22	7.28	8	2.65	0	0.00	69	22.82
	Maintenance 3rd Year	8084	20	1.62	25	2.02	25	2.02	15	1.21	0	0.00	85	6.87
	<b>Sub-total</b>	<b>41162</b>	<b>29</b>	<b>11.21</b>	<b>10</b>	<b>5.33</b>	<b>22</b>	<b>9.30</b>	<b>8</b>	<b>3.86</b>	<b>0</b>	<b>0.00</b>	<b>69</b>	<b>29.70</b>
<b>3</b>	<b>Pasture Development</b>													
	Creation (400 Plts/ ha)	21102	0	0.00	10	2.11	18	3.80	8	1.69	0	0.00	36	7.60
	Maintenance 3rd Year	5535	0	0.00	15	0.83	10	0.55	15	0.83	0	0.00	40	2.21
	<b>Sub-total</b>	<b>26637</b>	<b>0</b>	<b>0.00</b>	<b>10</b>	<b>2.94</b>	<b>18</b>	<b>4.35</b>	<b>8</b>	<b>2.52</b>	<b>0</b>	<b>0.00</b>	<b>36</b>	<b>9.81</b>
<b>4</b>	<b>Bamboo Plantation</b>													
	Creation (625 pltn./ ha)	18185	29	5.27	10	1.82	20	3.64	0	0.00	0	0.00	59	10.73
	Maintenance 3rd Year	4171	15	0.63	20	0.83	15	0.63	0	0.00	0	0.00	50	2.09
	<b>Sub-total</b>	<b>22356</b>	<b>29</b>	<b>5.90</b>	<b>10</b>	<b>2.65</b>	<b>20</b>	<b>4.26</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>59</b>	<b>12.81</b>
<b>5</b>	<b>Mixed Plantation</b>													
	Creation (1100/plants/ha)	33354	28	9.34	10	3.34	20	6.67	4	1.33	0	0.00	62	20.68
	Maintenance 3rd Year	7673	10	0.77	5	0.38	5	0.38	5	0.38	0	0.00	25	1.92
	<b>Sub-total</b>	<b>41027</b>	<b>28</b>	<b>10.11</b>	<b>10</b>	<b>3.72</b>	<b>20</b>	<b>7.05</b>	<b>4</b>	<b>1.72</b>	<b>0</b>	<b>0.00</b>	<b>62</b>	<b>22.60</b>
<b>6</b>	<b>Perennial herbs and shrubs</b>													
	Creation (2000 plants/ ha)	38930	24	9.34	10	3.89	8	3.11	8	3.11	0	0.00	50	19.47
	Maintenance 3rd Year	9585	10	0.96	10	0.96	5	0.48	5	0.48	0	0.00	30	2.88
	<b>Sub-total</b>		<b>24</b>	<b>10.30</b>	<b>10</b>	<b>4.85</b>	<b>8</b>	<b>3.59</b>	<b>8</b>	<b>3.59</b>	<b>0</b>	<b>0.00</b>	<b>50</b>	<b>22.34</b>
<b>7</b>	<b>Seabuckthorn Plantation</b>	0												
	Creation (2000 pts/ha)	29834	0	0.00	0	0.00	0	0.00	8	2.39	0	0.00	8	2.39
	Maintenance 3rd Year	9341	0	0.00	0	0.00	0	0.00	10	0.93	0	0.00	10	0.93
	<b>Sub-total</b>	<b>44460</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>8</b>	<b>3.32</b>	<b>0</b>	<b>0.00</b>	<b>8</b>	<b>3.32</b>
	<b>Total of Works</b>	<b>CR</b>	<b>142</b>	<b>44.53</b>	<b>60</b>	<b>22.23</b>	<b>110</b>	<b>33.35</b>	<b>44</b>	<b>17.15</b>	<b>0</b>	<b>0.00</b>	<b>356</b>	<b>117.26</b>
<b>8</b>	<b>Overhead</b>			<b>4.45</b>		<b>2.22</b>		<b>3.33</b>		<b>1.71</b>		<b>0.00</b>		<b>11.73</b>
	<b>Total</b>		<b>326</b>	<b>48.98</b>	<b>159</b>	<b>24.46</b>	<b>215</b>	<b>36.68</b>	<b>44</b>	<b>18.86</b>	<b>66</b>	<b>0.00</b>		<b>117.26</b>
	Total Creation Works		142	39.01	60	16.17	110	28.25	44	12.54	0	0.00	356	95.97
	Total Maint -3rd		85	5.52	95	6.06	80	5.10	65	4.61	0	0.00	325	21.29

## Notifications

a. Notification on ban the use of recorded call/song playback in and around Sikkim's Wildlife Protected Areas and in Wildlife working circle of Territorial divisions, except for scientific research for specified areas and times under requisite permit issued by the office of the Chief Wildlife Warden vide no. No. 15/GoS/FEWMD/Pr.SECY-PCCF, dated: 16/04/2019

b. Notification regarding "forest officers may engage dog squads to seize forest produce in respect of which there is reason to believe that a forest offence has been committed as provided for under sub-section (1) of section 55 of the Sikkim Forests, Water Courses and Road Reserve (Preservation and Protection) Act, 1988 (6 of 1988) vide No. GOS/FEWMD/PR.SECY-PCCF/228, dated:09/03/2018 and another notification regarding authorization of the forest officers to engage dog squads to stop and check any vehicle suspected of being involved in a forest offence vide No. GOS/FEWMD/PR.SECY-PCCF/07, dated: 07/07/2018.

c. Two phases of Wildlife Population Census have been conducted in all Protected Areas of the State. The report has the outcome of the study conducted by the Department of Forests, Environment and Wildlife Management, Government of Sikkim with technical support from the Wildlife Institute of India. Considering potential habitats in all protected areas a total of 262 camera traps were installed out of which 37 species were captured from 189 locations, with some significant findings. The main objective was to estimate the density of large and medium sized carnivores, their prey base and the habitat distribution. This exercise has given a realistic status of Wildlife species richness and Population status in the State which has definitely set the pitch for the State's faunal diversity

d. While conducting 2<sup>nd</sup> Phase of Wildlife Population Census during the month December, 2018 to January, 2019 A Royal Bengal Tiger has been sighted in the Camera Trap at 11715 ft. in Kyongnosla Alpine Sanctuary and Pangolakha Wildlife Sanctuary, East Wildlife Division at an elevation of 9583 ft.

**Revenues collected:**

Year	Name of Sanctuaries (Amount in )						
	Shingba Rhod. S	Fambonglho WLS	Kyongnosla Alpine S	Pangolakha WLS	Maenam WLS	Kitam B S	Barsey Rhod. S
2018-19	-	156537/-		2641090/-	56145/-	1470/-	237740/-

## Chapter-15

### **KHANGCHENDZONGA NATIONAL PARK (KNP)**

#### **Natural values of KNP:**

KNP has an area of 178,400 hectares and covers approximately 25% of the entire State. KNP was declared in 1977 and its area was more than doubled in 1997 by the State Government to protect an area of spectacular peaks, glaciers and rugged alpine terrain in the Indian part of the Eastern Himalayas. The 1997 extension broadened the range of ecosystems covered and increased the impressive altitudinal gradient. India's highest peak, Khangchendzonga, at 8,586 m above sea level (asl), literally stands out within the protected area which boasts of 20 peaks above 6,000 m, the visually prominent Khangchendzonga Massif is actually comprised of five major peaks, which culturally stand for the five treasures salt, gold, turquoise, arms and (combined) medicine and seeds. The massif literally named the "Abode of the Gods", has exceptional symbolical, cultural, religious and spiritual significance for many ethnic peoples and religious beliefs across and beyond the Himalayas.

Numerous lakes and glaciers, including the 26 km long Zemu Glacier flow the barren high altitudes. The glaciers feed important rivers, creeks and wetlands within the seven major watershed of the KNP. The part boasts of an unusually diverse flora and fauna with many rare and endangered species, some of them endemic. The different altitudinal zones provide habitat for markedly distinct faunal and floral assemblages. Eleven broad vegetation types have been identified, each confined to specific elevation ranges and topographic niches and each with corresponding faunal assemblages. Recent camera trapping confirms that the mammal species encompass numerous rare and endangered species and probably the full array of naturally occurring predators. Asiatic Black Bear and at least four canines, including the elusive Asiatic Wild Dog and the Tibetan Wolf have recently been confirmed. The Snow Leopard is the flagship species of KNP, one of the three leopard species and six confirmed (possibly eight) car species found within KNP. The charismatic Red Panda is the State Animal of Sikkim and is likewise found in the lower altitude forests of KNP, in buffer zone and nearby protected areas. Among the insects, butterflies are extremely abundant in Sikkim State which is home to an estimated 46% of India's butterfly species. Sikkim boasts of up to 650 species.

### **Steps taken by the Government to preserve the biodiversity and ecosystems of KNP.**

Mobile pastoralism has been a central element of the traditional local livelihood systems in Sikkim, including what is today KNP, both in the form of transhumance and nomadism. The Government of Sikkim banned open grazing in 1998 in both protected areas and reserved forests, plantations area and near water sources and embarked on stricter enforcement. Cattle sheds have since been removed from KNP. Trekking use is supported by pack animals resulting in some localized grazing impacts but generally the KNP is free from any major signs of overgrazing. A ban on the commercial exploitation of medicinal plants and aromatic plants used for incense was imposed in 2001 and continues even today. Hunting and trapping of birds and mammals has long been a part of traditional livelihood systems, both for food and medicinal purposes. It is today categorically banned, i.e. considered as poaching.

### **Steps taken by the Government to preserve the cultural significance of KNP.**

The Government of Sikkim has taken several steps to preserve the cultural significance of the KNP. In 2001, the State Government of Sikkim issued Notification No.70/Home/2001 listing sacred peaks, caves, rocks, lakes, chortens and hot-springs as “most sacred Buddhist places of worship in Sikkim and protected them under the provision of the places of Worship (Special Provision) Act, 1991: which as extended to Sikkim in July 1991.

The following natural elements and monuments located within the core zone of the KNP are protected under this Notification.

1. The peaks of Khangchendzonga, Mt.Kabru Gangtsen, Mt.Pandim, Mt.Simvo, Goecha Peak, Fork Peak and Mt.Siniolchu.
2. The rock of Yongdrok Drak.
3. and the following five lakes  
Phu Tsho Karpo/Omai Tsho, Sumoten Tsho, Dholoe Tsho, Kabru Lam Tsho, Yum Tsho/  
Mulotomg Lake (Green Lake)

### **World Heritage Site- KNP**

The Khangchendzonga National Park (KNP) is situated in North and West Districts of Sikkim and includes the world’s third highest peak. Mt.Khangchendzonga KNP has an extremely impressive altitudinal range, a vertical sweep of 7,366 meters (m) across an elevation range of 1,220 m to 8,586 m above sea level (asl) within a relatively small areas. The Himalayas are narrowest here resulting in extremely steep terrain which magnifies the distinction between the various eco-zones which characterize the area. As a consequence, KNP contains a remarkable range of Eastern Himalaya landscapes and wildlife from sub-tropical to alpine to Trans-Himalayan (Cold Desert) within a small geographical area, Culturally, the National Park is significant as it is considered to be the core of the sacred hidden land or “beyul” which was blessed by Guru Padmasambhava, Mount Khangchendzonga itself is revered as it is regarded as the guarding deity of all Sikkimese people.

On account of these natural and cultural features, Khangchendzonga National Park was declared as a World Heritage Site in July 2016 based on both natural and cultural criteria for mixed criteria), **India’s first mixed criteria World Heritage Site.**

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## Physical &amp; Financial Targets and Achievements of Centrally Sponsored Scheme Integrated Development of Wildlife Habitats at Khangchendzonga National Park, (90:10) for the year 2018-19.

(Rs.in lakhs)

Sl. No	Item of Work	Target			Achievement	
		Qty	Rate per Unit	Amt	Qty	Amt
<b>A</b>	<b>Non- Recurring Activities</b>					
13.	Purchase of gamow bags for treating altitude sickness 4. Chungthang 88°38'1.5", 27°36'56.5" 5. Dzongu 88°27'28.52" 27° 33'. 20' 6. Yuksom 88°13'30.8" 27°22'33.8"	2Nos.	2.5	5.00	2Nos.	5.00
14.	Habitat improvement of Red panda, Himalayan black bear 5. Thinchu 88°26'31.40" 27°41' 32.07" 6. Phyanguteng 88°26'26.43", 27°42'5.74" 7. Gunsu 88°10' 28.40", 27°26'39.02" 8. Neytham 88°06'49.66" 27°19'58.83"	15 ha	0.49/Ha	7.35	15 ha	7.35
			<b>Sub-Total</b>	<b>12.35</b>		<b>12.35</b>
<b>B</b>	<b>Recurrent Activities</b>					
15.	Renovation & Maintenance of Interpretation Centre-cum-Range Officer Quarter at Yuksom 88°13'30.8" 27°22' 33.8"	LS	6.00	6.00	LS	6.00
16.	Restoration of patrolling path from Yuigang to German Orar 3. Yuigang 88°36'41.708" 27°38'18.396" 4. German Orar 88°34'35.4" 27°39'29.6"	6kms	2.00/km	12.00	6kms	12.00
17.	Creation of fire lines and mobilization of staffs during forest fire season 4. Chungthang 88°38'1.5" 27°36'56. 5" 5. Dzongu 88°27'28.52" 27° 33'. 20' 6. Yuksom 88°13'30.8" 27°22'33.8"	3ranges	LS	3.00	3ranges	3.00
18.	Anti-poaching activities-patrolling to check encroachment ,poaching and demolition of traps 4. Chungthang 88°38'1.5" 27°36'56. 5" 5. Dzongu 88°27'28.52" 27° 33'. 20' 6. Yuksom 88°13'30.8" 27°22'33.8"	3ranges	2.00	6.00	3ranges	6.00
19.	Livestock Immunization 4. Chungthang 88°38'1.5", 27°36' 56.5" 5. Dzongu 88° 27'28.52" 27° 33'20" 6. Yuksom 88°13' 30.8" 27°22'33.8"	300 nos.	LS	2.00	300 nos.	2.00
20.	Laying of salt licks 6. Turgongtum 88°26'30.62" 27°41'30.59" 7. Thepala 88°32'58.68" 27°42'26.10" 8. Lamuney 88°11'9.58" 27°32'44.23" 9. Majurpokhari 88°04'13.70" 27°28'16.85" 10. Gawthalidara 88°07' 51.37" 27°32'18.39"	1500 Kgs	0.001/kg	1.50	1500 Kgs	1.50
21.	Ex-gratia payment and Compensation for crop damage by Wild animals	LS	5.00	5.00	LS	5.00
22.	Mobilization of rescue team during Himalayan black bear menace	LS	4.50	4.50	LS	4.50
23.	Garbage Management 4. Chungthang 88°38'1.5" 27°36'56. 5" 5. Dzongu 88°27'28.52" 27° 33'. 20' 6. Yuksom 88°13'30.8" 27°22'33.8"	3ranges	LS	3.00	3ranges	3.00
24.	Control and management of Feral dogs 5. Chungthang 88°38'1.5" 27°36' 56.5" 6. Chongri 88°38'1.5" 27°36'56.5" 7. Nayapatal 88°05'44.38" 27°22'15.33" 8. Sopakha 88°02'45.68" 27°17'34.46"	LS	3.00	3.00	LS	3.00
			<b>Sub-Total</b>	<b>46.00</b>		<b>46.00</b>
			<b>Grand Total</b>	<b>58.35</b>		<b>58.35</b>

## Chapter- 16

### HIMALAYAN ZOOLOGICAL PARK (HZP)

#### Function and mandate of the zoo

The zoo was established with the aim to fulfill the following objectives

- To promote ex-situ conservation breeding of endangered wild animals of the Himalayan region.
- To promote wildlife education, conservation, research and create awareness among people especially children about the importance of wildlife.
- To protect and preserve the natural flora and fauna of the Zoological Park campus.
- To provide entertainment to the visitors.
- To generate employment for the local people and help support their sustenance in their livelihood.
- **And with a vision** to ensure conservation of all endangered animals and their environment through a holistic approach towards captive management, education and research.

#### Men in position:

Sl. No.	Designation	Staff in Position	Remarks
1	Director	1	
2	Additional Director	1	
<b>Executive Personnel</b>			
3	DFO	1	
4	ACF	1	
5	BO	1	
6	FGs	2	
7	Asst. Zoo Conservation Biologist	1	On consolidated pay.
<b>Vet. Section /Animal Section Personnel</b>			
8	Veterinarian	1	On consolidated pay.
9	Vet Compounder	1	On deputation from State AHLF & VS Department.
10	Animal keepers	17	
11	Drivers	2	
12	Sr.Accountant	1	
<b>Establishment Section Personnel</b>			
14	Jr.Mali	2	

**Present animal stock**

Sl. No.	Species	As on 31.03.2019			
		M	F	U	T
1.	Red Panda	0	3	0	3
2.	Common Leopard	2	1	0	3
3.	Yak	1	1	0	2
4.	Goral	10	5	0	15
5.	Blue Sheep	2	1	0	3
6.	Himalayan Black Bear	1	1	0	2
7.	Barking Deer	3	3	1	7
8.	Large Indian Civet	0	1	0	1
9.	Himalayan Palm Civet	1	1	2	4
10.	Leopard Cat	3	4	2	9
11.	Porcupine	1	0	3	4
12.	Lady Amherst's Pheasant	1	1	0	2

Sl. No.	Species	As on 31.03.2019			
		M	F	U	T
1.	Golden Pheasant	1	1	0	2
2.	Silver Pheasant	1	1	0	2
3.	Kaleej Pheasant	1	3	0	4
4.	Indian Peafowl	1	1	0	2
5.	Satyr Tragopan	0	1	0	1
6.	Himalayan Tahr	2	1	0	3
7.	Himalayan Serow	0	1	0	1
8.	Himalayan Griffon Vulture	0	0	1	1

# ENVIRONMENT & SOIL CONSERVATION



**WORLD ENVIRONMENT DAY:****State-wide celebration of World Environment Day 2018**

World Environment Day 2018 with the UNEP theme “Beat Plastic Pollution” was celebrated in grandeur throughout the State of Sikkim on Tuesday the 5th of June hugely participated by students and teachers, panchayats, municipalities, NGOs, JFMCs, EDCs, urban and local bodies, private companies, political dignitaries and public at large. While the entire State was engrossed with the Mother Nature taking up plantation, weeding, cleanliness drives and other environment wellbeing actions for spreading awareness highly maintaining the consciousness stature of the State. At the schools, World Environment day was celebrated with the events such as plantation drives, cleanliness drives, eco-competitions on essay writing, painting, slogan, debates, and skits suitably highlighting the natural and cultural.



The state level event was organised by the Forest Department at Biraspati Parsai Government Senior Secondary School Ranipool East Sikkim. While the district level events were organised at Kabi North Sikkim, Tashiding West Sikkim and Nadugaon South Sikkim. Various programmes such as plantation drive, cleanliness drive, eco-competitions on essay writing, painting and debates; rally were organised at the school and local level by district/ divisions of the State Forests, Environment and Wildlife Management. The district level programmes were graced by local political dignitaries as the chief guest and participated in numbers by students, teachers, panchayats, local NGOs, private companies, government officers and general public.



**National Level World Environment participates at New Delhi:**

Forest & Environment Department also set up an exhibition on environmental initiatives on World Environment Day at New Delhi to showcase / exhibit specific theme related to environmental conservation.



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Short video clips / photos with sub-titled heritage trees, miths trees, srimiti van, environmental initiative such as ban on plastic carry bags and fire crackers waste segregation, zero waste initiatives were also exhibited.



## Chapter- 18

### NATIONAL WETLAND CONSERVATION PROGRAMME

#### **Wetlands of Sikkim: Introduction**

Wetlands are important ecosystems and their benefits and services are immense. Wetlands are a critical part of our natural environment. They protect our shores from wave action, reduce the impacts of floods, absorb pollutants and improve water quality. They provide habitat for animals, plants and many contain a wide diversity of life, supporting plants and animals that are found nowhere else. Wetlands also provide significant economic, social and cultural benefits. Wetlands are important for primary products such as agriculture, fisheries and forestry. Many coastal and inland and high altitude wetlands are popular for tourism and recreational activities such as swimming, boating, fishing, camping and bird watching. Wetlands perform environmental functions, including: helping to reduce the impacts from storm damage and flooding, maintaining good water quality in rivers, recharging groundwater, storing carbon, helping to stabilize climatic conditions, controlling pests, acting as important sites for biodiversity. Wetlands have Aboriginal cultural significance, historical significance and are important for science and education.

There are a number of wetlands in the State of Sikkim and all most all of them are located above 2500 meter in high altitude areas of the state. All wetlands small or big are fresh water except Gyamtsona in North District of Sikkim which is brackish and is a reminiscent of Tethys Sea. Majority of wetlands in the state are located in North and East Districts, the rest are distributed in West District of Sikkim. A number of small lakes / wetlands form wetland complexes in Sikkim Himalaya. Wetlands are the source of drinking water, rivers, streams and important tourism destinations in the State.

The Department of Forest, Environment and Wildlife Management has identified 521 numbers of wetlands in the State using Remote Sensing Data along with their GPS coordinates. Around 95% wetlands are within the Reserve Forest / forest or protected areas as 82% of the State's geographical area falls under forest land and all most all of them are natural. Majority of lakes in Sikkim are snow fed and glacial. All these wetlands / wetland complexes are protected and managed under the relevant State / Central Acts and laws as enforced from time to time. Problem of siltation is substantial in some of the wetlands due to degradation of catchment areas, climate change such as erratic rainfall, early melting of snow in the mountains. The Department is preparing a Brief Document of 521 wetlands of Sikkim as per the Wetlands (Conservation and Management) Rules, 2017 as a reference document in collaboration with an external expert agency (ies).

Lakes such as Tsomgo in East, Khecheopalri in West, Gurudongmar and Tsho Lhamo in North, Kathok in West have been notified by the State Government vide Notification No.70/HOME/2001 dated 20.09.2001 as Holy lakes. People in the state are God fearing and they never tend to pollute or degrade such lakes, instead they come for prayer and obtaining blessings from natural deity fulfilling wishes. People come forward to protect and preserve the wetlands in the State. However, for sustainable and wise use of wetlands and their resources is must and plan accordingly for future generation and mankind as a whole.

The Department is preparing a Brief Document of 521 wetlands of Sikkim as per the Wetlands (Conservation and Management) Rules, 2017 as a reference document in collaboration with an external expert agency (ies).

In order to achieve goal of sustainable use of wetland resources, protection and conservation of wetlands, the Forest Department, Government of Sikkim started seeking fund from the Ministry of Environment and Forests, Government of India from the year 2007-08 under National Wetland Conservation Programme, a centrally sponsored scheme of the Ministry. The grants released by the Government of India was 100% CSS till 2014-15 and the funding pattern changed to 80:20 during 2015-16 and 90:10 from January 2017, cost sharing between the Centre and the State.

Following wetland complexes of Sikkim are included in National Wetland Conservation Programme by the Ministry of Environment and Forests, Government of India.

1. Gurudongmar wetland in North District
2. Tembao wetland in North District
3. Tamzey wetland in North and East District
4. Tsomgo wetland in East District
5. Bedang / Kupup wetland in East District
6. Khecheopalri wetland in West District



Gurudongmar wetland in North Sikkim

Year-wise and Wetland-wise fund allocation by the Ministry on above wetlands are as under;  
(Amount in lakh)

S N	Name of wetland	Year									
		2009- 10	2010- 11	2011- 12	2012 -13	2013 -14	2014 -15	2015 -16	2016- 17	2017- 18	2018- 19
1	Tsomgo	15.00	13.95	0.00	18.50	0.00	0.00	0.00	0.00	0.00	0.00
2	Gurudongmar	14.00	22.95	7.65	0.00	0.00	0.00	21.06	26.316	0.00	0.00
3	Bedang	16.60	13.00	0.00	12.50	0.00	0.00	0.00	0.00	0.00	0.00
4	Khecheopalri	38.19	0.00	40.15	0.00	0.00	0.00	21.28	26.60	83.353	73.205
5	Tamzey	0.00	0.00	0.00	0.00	0.00	0.00	35.64	23.76	100.387	178.613
6	Tembao	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60.00
Total		83.79	49.90	47.80	31.00	0.00	0.00	77.98	76.676	183.74	311.818

State share contribution on above wetlands (Amount in lakh)

S N	Name of wetland	Year									
		2009 -10	2010 -11	2011 -12	2012 -13	2013 -14	2014 -15	2015- 16	2016- 17	2017- 18	2018- 19
1	Tsomgo	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.28	0.00
2	Gurudongmar	0.00	0.00	0.00	0.00	0.00	0.00	10.53	0.00	00.00	0.00
3	Bedang	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.39	0.00
4	Khecheopalri	0.00	0.00	0.00	0.00	0.00	0.00	10.64	0.00	5.53	19.14
5	Tamzey	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.848	1.25	0.00
6	Tembao	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.66
Total		0.00	0.00	0.00	0.00	0.00	0.00	21.17	13.598	10.45	25.80

Tsomgo wetland in East Sikkim is 35km from the state capital Gangtok and is threatened wetland in the state due to siltation and anthropogenic activities. There are defense settlements on the northern and eastern catchment of the lake and also human settlement on the eastern catchment. Earlier, northern periphery of the lake along the road leading to Nathula Pass was teemed up with around 45 to 50 *kutcha* sheds for running shops, local people selling eatables and garments which had polluted the lake.

Later the State Government / Forest Department rehabilitated the people shifting them from the lake area down to diverted forest land below the lake. Since then the level of pollution has decreased in the lake.

The State Government also issued notification for conservation and protection of lakes in the State with constitution of *Pokhari Sangrakshan Samiti* (Lake Conservation Committee) in 2006. *Pokhari Sangrakshan Samiti* has been constituted for Tsomgo Lake in East District and Khecheopalri Lake in West District of Sikkim and the committees are working actively for conservation of those lakes in the State.

## **RAMSAR SITES PROPOSAL FROM SIKKIM**

Ramsar Site is a wetland site designated of international importance under the Ramsar Convention. Ramsar Convention is an intergovernmental environmental treaty established in 1971 in Iranian City of Ramsar and came in force in 1975. It provides for national action and international cooperation regarding conservation of wetlands, wise and sustainable use of wetland resources. There are presently 26 Ramsar Sites in India.

The following wetland complexes from Sikkim were proposed for designating Ramsar Sites.

1. Tsomgo-Bedang Tso wetland complex
2. Khecheopalri-Khangchendzong-Lhonak wetland complex
3. Tso Lhamo Plateau-Lashar-Yumesamdong-Tembaowetland complex

Ministry of Environment, Forest and Climate Change, Government of India intimated the State Government vide letter No.J-22012/68/89-CS (W) Pt-VII dated 28<sup>th</sup> November 2018 that the proposal for designating three Ramsar Sites in Sikkim has not recommended by the Ministry of Defence due to proposed sites located near the tri junction area of India with international boundaries with China, Nepal and Bhutan.

## Chapter-19

### ENVIRONMENTAL INFORMATION SYSTEM - (ENVIS)

**Subject Area: “On Status of Environment & Related Issues”**

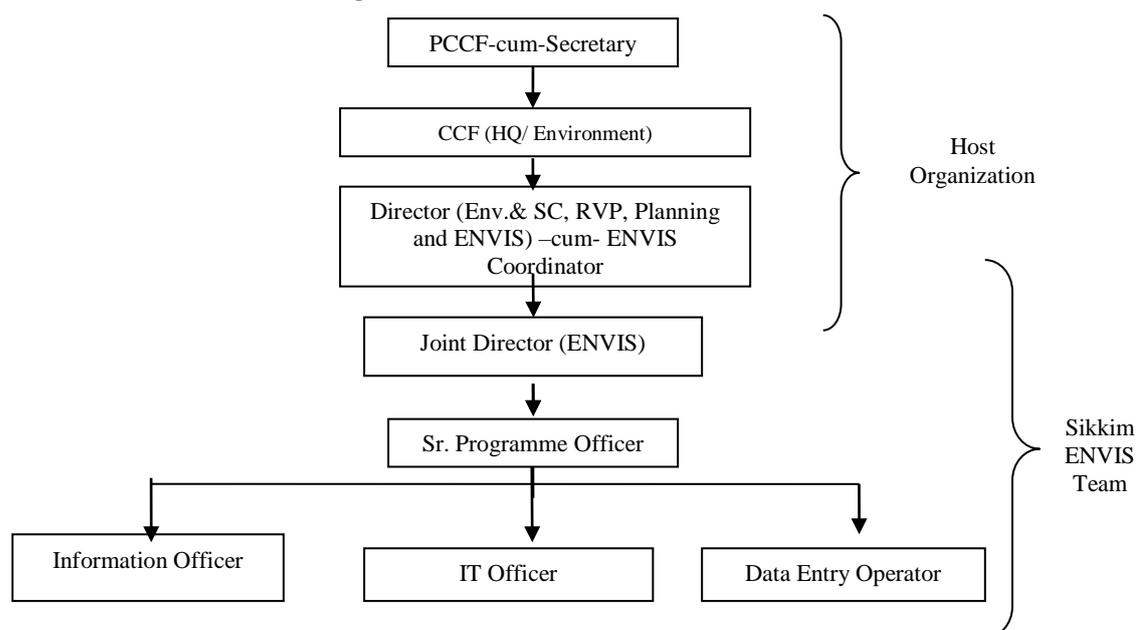
**Official Website:** [www.sikenvis.nic.in](http://www.sikenvis.nic.in) **Email:** [sik@envis.nic.in](mailto:sik@envis.nic.in)

Established in 2002 and fully operational by 2006, Environmental Information System (ENVIS) is a plan programme (100% CSS) under the Ministry of Environment, Forests & Climate, Government of India. ENVIS is a distributed environmental information network with the mandate of collection, collation, storage, retrieval and dissemination to varying users, which include decision-makers, researchers, academicians, policy planners, research scientists, etc. The Focal Point of ENVIS is located in the Ministry that coordinates the activities of all the ENVIS network partners to make ENVIS a web-enabled comprehensive information system.

The ENVIS scheme is being actively implemented by Forests, Environment & Wildlife Management Department as SIKKIM STATE ENVIS HUB (*erstwhile Sikkim State ENVIS Centre*) under the revamped scheme from 2017-18 onwards. Under the revamped scheme, ENVIS is also mandated for taking up new initiatives such as Grid based Decision Support System (GRIDSS), Green Skill Development Programme (GSDP) and Community-driven Environmentally Sustainable Villages Programme (CESVP) with the support from the Ministry of Environment, Forests & Climate Change, Government of India.

This Centre is under the overall administrative control of the PCCF-cum-Pr. Secretary with the support of Chief Conservator of Forests, Director of Forests and Joint Director. The day to day affairs of the ENVIS centre are being managed by one Sr. Programme Officer, one Information Officer, one IT Officer and one Data Entry Operator.

**Working Environment:** The ENVIS team in Sikkim considers the following hierarchy in its effort in collection, collation, storage and dissemination of Environmental & related information.



*Host Organization: Forest & Environment Department, Government of Sikkim*

**Sikkim State ENVIS Hub Team:**

1. Mr. B. B. Gurung, Director (E&SC, RVP, Planning) -cum- ENVIS Coordinator
2. Mrs. Kusum Gurung Joint Director
3. Mr. Rajen Pradhan, Senior Programme Officer
4. Mr. Laxuman Darnal, Information Officer
5. Ms. Renu Gurung IT Officer
6. Ms. Tulsha Gurung, Data Entry Operator

**Services**

1. Website Development and Updation: [www.sikenvis.nic.in](http://www.sikenvis.nic.in), [www.sikkimforest.gov.in](http://www.sikkimforest.gov.in)
2. Publication of Quarterly Newsletters including special edition 'PANDA'
3. Preparation and publication of State of Environment Reports
4. Updation of ISBEID (Indian State-level Basic Environment Information Database)
5. Online/ in-person Query Response System
6. Library Facility
7. Other Publications/Reports/ Archives on Himalayan Journal
8. IT support/ LAN/ Intranet/Internet maintenance and services
9. Grid based Decision Support System (GRIDSS)
10. Green Skill Development Programme (GSDP)
11. Community-driven Environmentally Sustainable Villages Programme (CESVP)
12. Environment Awareness Programmes: **National Green Corps (NGC)** School Eco-Club programme amongst 856 schools and colleges of Sikkim; Green Teachers Training; Orientation Workshops, provision of environment kits and awareness material etc.
13. Coordination of Chief Minister's Green School Rolling Trophy and State Green School Awards.
14. Continuous Engagement Programme for imparting environment awareness, education and training with agencies like Centre for Science and Environment (CSE) New Delhi, earthain WIPRO, etc.
15. Exchange of information with the Ministry, Research Agencies and promotion of national and international cooperation and liaison for exchange of environment related information.

**Major Achievements of Sikkim State ENVIS Hub**

1. Received National Award as '**Best State ENVIS Centre 2014-15**' from the Ministry of Environment, Forest & Climate Change. The award certificate was presented by Shri Prakash Javadekar, the then Minister of State (Independent Charge) for Environment, Forest and Climate Change at New Delhi on 17<sup>th</sup> February, 2016.
2. Sikkim ENVIS was tagged as '**GURU CENTRE**' during 2012-13 by the Ministry to take a lead role in providing assistance to other ENVIS network of the country.
3. Sikkim ENVIS Website hosts major publications of the government such as State of Environment Report, Climate Change of Sikkim, Biodiversity of Sikkim, Rapid Biodiversity Surveys, collection of Journals and Scientific Papers, Environment Initiatives of the State Government, etc.
4. The implementation of Environment Education, Awareness and Training amongst school eco-clubs have brought **several national awards to Sikkim Schools** conferred by reputed agencies like CSE, CEE and WIPRO on annual basis since 2002.

5. Active coordination and implementation of ‘**Chief Minister’s Green School Rolling Trophy and State Green School Awards**’ since 2011. The award is being presented to eight schools annually on the occasion of World Environment Day on 5<sup>th</sup> of June.

**Year-wise Financial Grant-in-Aid for ENVIS Scheme (100% CSS) from the Ministry**

SN	Year	Amount (in lakh)	Major Activities and Achievements
1.	2006-07	5.25	<ul style="list-style-type: none"> <li>• Development of database</li> <li>• ENVIS Website officially launched.</li> </ul>
2.	2007-08	6.09	<ul style="list-style-type: none"> <li>• Report on Treatment of Landslide &amp; Erosion Control under TDET Project – South Sikkim prepared</li> <li>• State of Environment Report 2007 prepared for the first time.</li> </ul>
3.	2008-09	6.52	<ul style="list-style-type: none"> <li>• State of Environment Report 2007 Published</li> <li>• Compilation and designing of EIA &amp; EMP of Rangit II HEP (60 MW). ENVIS Centre assisted the host department and Sikkim Power Ventures Pvt. Ltd. in preparation of the reports.</li> <li>• A report on Treatment of Landslide &amp; Erosion Control under TDET Project – West Sikkim prepared.</li> </ul>
4.	2009-10	6.52	<ul style="list-style-type: none"> <li>• Centre released a Report on “Impact of Landslide and Erosion Control Treatment” West Sikkim. Panda Newsletter Published and Launched.</li> <li>• ENVIS Centre launched the Gobar Times Green School Programme (GTGSP) in Sikkim at a state level, the first of its kind in the state.</li> </ul>
5.	2010-11	6.52	<ul style="list-style-type: none"> <li>• Participated in the first ever week long National Green Corps Meet of Children and Youth at Hyderabad Centre along with five students selected from across the State. Sikkim contingent was adjudged ‘Greenest of the Green’.</li> </ul>
6.	2011-12	7.50	<ul style="list-style-type: none"> <li>• Baseline Study to assess the Environment Consciousness in Sikkim Citizen</li> </ul>
7.	2012-13	9.75	<ul style="list-style-type: none"> <li>• Redevelopment of website into CMS structure</li> </ul>
8.	2013-14	11.48	<ul style="list-style-type: none"> <li>• Started quarterly issue of newsletter publication</li> </ul>
9.	2014-15	12.80	<ul style="list-style-type: none"> <li>• Organized first ever CMS Veteran Environment Film Festival in Sikkim</li> </ul>
10.	2015-16	13.54	<ul style="list-style-type: none"> <li>• Associated with WIPRO Bengaluru for earthian schools programme in Sikkim.</li> </ul>
11.	2016-17	14.35	<ul style="list-style-type: none"> <li>• Awarded as the Best State ENVIS by the Ministry.</li> </ul>
12.	2017-18	19.54	<ul style="list-style-type: none"> <li>• State of Environment Report 2016 finalized for the second time.</li> </ul>
13.	2018-19	20.73	<ul style="list-style-type: none"> <li>• Launched new initiatives such as GSDP, GRIDSS., CESVP etc.</li> </ul>

## 1. National Green Corps (NGC)- School Eco-Club Programme

National Green Corps (NGC) Programme is 100% Central Sector Scheme sponsored by the Ministry of Environment, Forests and Climate Change, Government of India to set up Eco-Clubs in a ceiling of 250 schools per district to take up environment related activities. In Sikkim, at state level, NGC programme is being coordinated by ENVIS on behalf of the State Environment Agency constituted by the Forest, Environment & Wildlife Management Department, Government of Sikkim.

The main objective of the programme is to spread environmental awareness among the school children with the focus on action oriented environmental programme through the active involvement of the student. In addition to stimulation of awareness among the school children through physical programme of activities related to the environmental conservation and protection issues, the programme visualizes the role of children as agents of change and for dissemination of environmental information among the public at large.

Year-wise Financial Grant-in-Aid for NGC (100% CSS) School Eco-Club Programme from the Ministry

SN	Year	Amount (in lakh)	Major Activities and Achievements
1.	2006-07	10.25	• 354 school eco-clubs were disbursed grant of Rs 2500/- each.
2.	2014-15	20.55	• 766 school eco-clubs were disbursed grant of Rs 2500/- each.
3.	2016-17	21.15	• 766 school eco-clubs were disbursed grant of Rs 2500/- each.
4.	2018-19	44.80	• 856 school eco-clubs were disbursed grant of Rs 5000/- each.

### List of Sikkim School Awardees at the NATIONAL LEVEL

SN	Year	School Awardees	Award/ By
1.	2007	Govt. Sec. School, Daramdin, West Sikkim	CSE *
2.	2010	Govt. Sec. School, Reshi, West Sikkim (Top 10 NS)	-do-
3.		Govt. Sec. School, Linkey, East Sikkim (Best Manager in Air)	-do-
4.		Govt. Sec. School, Namcheybong, East Sikkim (Best Manager in Energy)	-do-
5.	2011	Govt. Sec. School, Middle Camp, East Sikkim (Top 10 NS)	-do-
6.		Govt. Sec. School, Lower Samdong, East Sikkim (Top 10 CM)	-do-
7.	2012	Govt. Sec. School, Dentam, West Sikkim (1 <sup>st</sup> Rank NS)	-do-
8.		Govt. Girls Sr. Sec. School, Deorali, East Sikkim (2 <sup>nd</sup> Rank NS)	-do-
9.		Govt. Sec. School, Tingley, South Sikkim (4 <sup>th</sup> Rank NS)	-do-
10.		Govt. Sec. School, Penlong, East Sikkim (2 <sup>nd</sup>	-do-

SN	Year	School Awardees	Award/ By
		Rank in NS)	
11.	2013	Govt. Sec. School, Tingley, South Sikkim (2 <sup>nd</sup> Rank in CM)	-do-
12.		Govt. Girls' Sr. Sec. School, Namchi, South Sikkim (NS)	-do-
13.		Govt. Sec. School, Lower Samdong, East Sikkim (CM)	-do-
14.	2014	Govt. Girls Sr. Secondary School, Namchi	Paryavaran Mitra Puraskar (Best Schools)
15.		Govt. Secondary School, Lower Samdong	Paryavaran Mitra Puraskar (Best Schools)
16.		Govt. Secondary School, Melli Gumpa -	Paryavaran Mitra Puraskar (Best Schools)
17.		Govt. Sec. School, Lingdong, North Sikkim (4 <sup>th</sup> Rank)	CSE *
18.		Govt. JHS, Mangzing, South Sikkim (8 <sup>th</sup> Rank)	-do-
19.		Govt. Sr. Sec. School, Gyalshing, West Sikkim	-do-
20.		Govt. Sr. Sec. School, Hee-Yangthang, West Sikkim	PARYAVARAN MITRA PURASKAR (Exemplar schools)
21.	2015	Govt. Sec. School, Bongten, West Sikkim	WIRPO'S EARTHIAN SCHOOL AWARDS & TN Khossoo Memorial Award
22.		Govt. Sec. School, Aho-Shanti, East Sikkim (8 <sup>th</sup> Rank)	CSE *
23.	2016	Govt. JHS, Raley, East Sikkim (Air)	-do-
24.		Govt. Sr. Sec. School, Hee-Yangthang, West (Energy)	-do-
25.	2018	Govt. Sr. Sec. School, Pelling, (Best Manager - Air)	-do-

\* **Gobar Times Green School National Awards – By Centre for Science and Environment (CSE), New Delhi**

“CHIEF MINISTER’S GREEN SCHOOL ROLLING TROPHY AND GREEN SCHOOL STATE AWARDS” PRESENTED ON THE OCASSION OF WORLD ENVIRONMENT DAY CELEBRATION ON 5<sup>TH</sup> OF JUNE ANNUALLY.

**Awardees**

**2011: Venue – Chintan Bhawan , Gangtok**

SN	SCHOOLS NAME	AWARDS AND CASH PRIZES
1	Govt. Sec. School, MIDDLE CAMP, East Sikkim	Rolling Trophy/ Certificate/ Rs. 5.0 lakhs
2	Govt. Sec. School, Reshi, West Sikkim	Green Leaf Trophy/ Certificate/ Rs. 1.0 lakh
3	Govt. Sec. School, Lower Samdong, East Sikkim	Green Leaf Trophy/ Certificate/ Rs. 1.0 lakh
4	Govt. Sec. School, Linkey, East Sikkim	Green Leaf Trophy/ Certificate/ Rs. 1.0 lakh
5	Govt. Sec. School, Lingchom, West Sikkim	Green Leaf Trophy/ Certificate/ Rs. 1.0 lakh

**2012: Venue – Pangthang, East Sikkim**

SN	SCHOOLS NAME	AWARDS AND CASH PRIZES
1	Govt. Sr. Sec. School, <b>Dentam</b> , West Sikkim	Rolling Trophy/ Certificate/ Rs. 5.0 lakhs
2	Govt. Sec. School, <b>Rong</b> , South Sikkim	Green Leaf Trophy/ Certificate/ Rs. 1.0 lakh
3	Govt. Sec. School, <b>Tingley</b> , South Sikkim	Green Leaf Trophy/ Certificate/ Rs. 1.0 lakh
4	Govt. Girls Sr. Sec. School, <b>Deorali</b> , East Sikkim	Green Leaf Trophy/ Certificate/ Rs. 1.0 lakh
5	CM Rai Govt. Sec. School, <b>Jarrong</b> , South Sikkim	Green Leaf Trophy/ Certificate/ Rs. 1.0 lakh

**2013: Venue – Saramsa Garden, Ranipool**

SN	SCHOOLS NAME	AWARDS AND CASH PRIZES
1	Govt. Sec. School, <b>Penlong</b> , East Sikkim	Rolling Trophy/ Certificate/ Rs. 5.0 lakhs
2	Govt. Sr. Sec. School, <b>Tadong</b> , East Sikkim	Green Leaf Trophy/ Certificate/ Rs. 1.0 lakh
3	Govt. Sr. Sec. School, <b>Yuksam</b> , West Sikkim	Green Leaf Trophy/ Certificate/ Rs. 1.0 lakh
4	Govt. Sec. School, <b>Bongten</b> , West Sikkim	Green Leaf Trophy/ Certificate/ Rs. 1.0 lakh
5	Govt. Sr. Sec. School, <b>Rateypani</b> , South Sikkim	Green Leaf Trophy/ Certificate/ Rs. 1.0 lakh
6	Govt. Sr. Sec. School, <b>Mangan</b> North Sikkim	Green Leaf Trophy/ Certificate/ Rs. 1.0 lakh

**2014: Venue – Namchi SSS**

SN	SCHOOLS NAME	AWARDS AND CASH PRIZES
1.	Govt. Girls' Sr. Sec. School, Namchi, South Sikkim	Rolling Trophy/ Certificate/ Rs. 5.0 lakhs
2.	Govt. Sec. School, Melli Gumpa, South Sikkim	Green Leaf Trophy/ Certificate/ Rs. 1.0 lakh
3.	Govt. Sec. School, Lingchom, West Sikkim	Green Leaf Trophy/ Certificate/ Rs. 1.0 lakh
4.	Govt. Sec. School, Lower Samdong, East Sikkim	Green Leaf Trophy/ Certificate/ Rs. 1.0 lakh
5.	Govt. Sr. Sec. School, Hee-Gyathang, North Sikkim	Green Leaf Trophy/ Certificate/ Rs. 1.0 lakh
6.	Govt. Primary School, Bigyani, South Sikkim	Trophy/ Certificate/ Rs. 50,000/-
7.	Govt. Primary School, Samdur, East Sikkim	Trophy/ Certificate/ Rs. 50,000/-

**2015: Venue – TNSSS, Gangtok**

SN	SCHOOLS NAME	AWARDS AND CASH PRIZES
1.	Sonamati Memorial Govt. Sr. Sec. School, Khamdong, East Sikkim	Rolling Trophy/ Certificate/ Rs. 5.00 lakhs
2.	Govt. Sr. Sec. School, Hee- Yangthang, West Sikkim	Trophy/ Certificate/ Rs. 1.00 lakh
3.	Govt. Sec. School, Singhik, North Sikkim	Trophy/ Certificate/ Rs. 1.00 lakhs
4.	Govt. Sec. School, South Regu, East Sikkim	Trophy/ Certificate/ Rs. 1.00 lakhs
5.	Govt. Sr Sec. School, Yangyang, South Sikkim	Trophy/ Certificate/ Rs. 1.00 lakhs
6.	Govt. Jr High School, Rabitar, South Sikkim	Trophy/ Certificate/ Rs. 50,000/-
7.	Govt. Primary School, Titribotey, East Sikkim	Trophy/ Certificate/ Rs. 50,000/-
8.	St. Xavier's School, Pakyong, East Sikkim (Pvt.)	Trophy/ Certificate/ Rs. 50,000/-

**2016: Venue – Mangan, North Sikkim**

SN	SCHOOLS NAME	AWARDS AND CASH PRIZES
1.	Sonam Choda Lepcha Memorial, Govt. Sec. School, Lingdong, North Sikkim	Rolling Trophy/ Certificate/ Rs. 5.00 lakhs
2.	Govt. Sr.Sec.School, Hee-Yangthang, West Sikkim	Rolling Trophy/ Certificate/ Rs. 5.00 lakhs
3.	Govt. Sec.School, Bongten, West Sikkim	Trophy/ Certificate/ Rs. 1.00 lakh
4.	Govt. Girls Sr. Sec. School, Gyalshing, West Sikkim	Trophy/ Certificate/ Rs. 1.00 lakh
5.	Govt. Sec. School, Aho Shanti, East Sikkim	Trophy/ Certificate/ Rs. 1.00 lakh
6.	Govt. Jr. High School, Mangzing, South Sikkim	Trophy/ Certificate/ Rs. 50,000/-
7.	Govt. Pr. School, Som Busty, West Sikkim	Trophy/ Certificate/ Rs. 50,000/-
8.	Greenvale Academy, Machong, East Sikkim (Pvt.)	Trophy/ Certificate/ Rs. 50,000/-

**2017: Venue – Kaluk BAC, West Sikkim**

SN	SCHOOLS NAME	AWARDS AND CASH PRIZES
1.	Govt. Sr. Sec. School, Buriakhop, West Sikkim	Rolling Trophy/ Certificate/ Rs. 5.00 lakh
2.	Govt. Sr. Sec. School, Kewzing, South Sikkim	Trophy/ Certificate/ Rs. 1.00 lakh
3.	Govt. Sr. Sec. School, Lingmoo, South Sikkim	Trophy/ Certificate/ Rs. 1.00 lakh
4.	Govt. Sec. School, Passingdong, North Sikkim	Trophy/ Certificate/ Rs. 1.00 lakh
5.	Govt. Sec. School, Sopakha, West Sikkim	Trophy/ Certificate/ Rs. 1.00 lakh
6.	Govt. Jr. High School, Raley, East Sikkim	Trophy/ Certificate/ Rs. 50,000/-
7.	Govt. Primary School, Tingda, North Sikkim	Trophy/ Certificate/ Rs. 50,000/-
8.	Sunshine English School (Private), Melli Bazaar, South Sikkim	Trophy/ Certificate/ Rs. 50,000/-

**2018: Venue – Golitar, East Sikkim (June 21) – Mithini Reverence Programme**

S N	School Name& District	Awards and Cash Prizes
1	Govt. Secondary School, Singhik, North Sikkim	CM Rolling Trophy/ Certificate/ Rs. 5.0 lakh
2	Govt. Sr. Sec. School, Pelling, West Sikkim	Trophy/ Certificate/ Rs. 1.0 lakh
3	Govt. Sr. Sec. School, Dikchu, East Sikkim	Trophy/ Certificate/ Rs. 1.0 lakh
4	Govt. Sec. School, Chuba, South Sikkim	Trophy/ Certificate/ Rs. 1.0 lakh
5	Govt. Sr. Sec. School, Phodong, West Sikkim	Trophy/ Certificate/ Rs. 1.0 lakh
6	Govt. JHS, Pakyong, East Sikkim	Trophy/ Certificate/ Rs. 50,000/-
7	Govt. PS, Bakcha, North Sikkim	Trophy/ Certificate/ Rs. 50,000/-
8	Govt. PS, Singpheng, West Sikkim	Trophy/ Certificate/ Rs. 50,000/-
9	St. Joseph's School, Rhenock, East Sikkim	Trophy/ Certificate/ Rs. 50,000/-

**Chapter- 20****JAL SHAKTI ABHIYAN:**

Ministry of Jal Shakti, Government of India has indentified South District of Sikkim under drought and water stressed areas. Due to global warming and climate change impact, many of our water bodies will dry up and there will be scarcity of water in near future. In order to restore and rejuvenate water resources, the Forest and Environment Department have taken up extensive afforestation in eight water stressed Blocks of South District during 2019 under Jal Shakti Abhiyan to ensure water security by integrating different schemes. The aims and objectives of Jal Shakti Abhiyan are being dispersed throughout the State and this mission/campaign is also being done by Eco-Clubs in schools. The State Government has been making concerted efforts for protection and preservation of the State's rich biodiversity. We are very rich in biodiversity. Due to strict implementation of relevant Acts and Forest laws, protection and conservation measures taken up, the water bodies in the State has increased by 2 km<sup>2</sup> during 2015 and tree cover by 1 km<sup>2</sup> during 2019 as people are now more aware of towards protection of environment.

**Plantation done during June to September 2018 under Jal Shakti Abhiyan in South Sikkim**

Sl. No	Block	Implementing Circles/Divisions	Area in ha.	Seedlings (in no.)	Schemes
1	NAMTHANG	a) Wildlife	-	-	-
		b) Env.& Soil Conservation	40	37000	CAMPA
		c) Territorial	70	47520	SBFP
		SUB-TOTAL -	110	84520	
2	NAMCHI	a) Wildlife	-	-	-
		b) Env.& Soil conservation	10	4000	CAMPA
		c) Territorial	50	34320	SBFP
		SUB-TOTAL -	60	38320	
3	TEMI	a) Wildlife	-	-	-
		b) Env.& Soil conservation	28	23125	CAMPA
		c) Territorial	10	7040	SBFP
		SUB-TOTAL -	38	30165	
4	YANGYANG	a) Wildlife	84	53200	SBFP & FDA
		b) Env.& Soil conservation	20	8000	CAMPA
		c) Territorial	40	26400	SBFP
		SUB-TOTAL -	144	87600	
		a) Wildlife	88	48250	SBFP & FDA

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5	RAVANGLA	b) Env.& Soil conservation	-	-	-
		c) Territorial	30	20240	SBFP
		SUB-TOTAL -	118	68490	
6	SUMBUK	a) Wildlife	-	-	-
		b) Env.& Soil conservation	33	25125	CAMPA
		c) Territorial			
		SUB-TOTAL -	33	25125	
7	JORETHANG	a) Wildlife	4	2600	FDA
		b) Env.& Soil conservation	-	-	-
		c) Territorial	20	13200	SBFP
		SUB-TOTAL -	24	15800	
8	MELLI	a) Wildlife	-	-	-
		b) Env.& Soil conservation	-	-	-
		c) Territorial	10	7040	SBFP
		SUB-TOTAL -	10	7040	
		GRAND TOTAL-	537	357060	

# SCHEMES / PROJECTS

## Chapter-21

### State Level Nodal Agency (S.L.N.A.)

#### PRADHAN MANTRI KRISHI SINCHAYEE YOJANA-WATERSHED DEVELOPMENT COMPONENT

#### 1. Mandate / Functions:

Pradhan Mantri Krishi Sinchayee Yojana-Watershed Development Component (PMKSY-WDC) the erstwhile Integrated Watershed Management Programme is a programme of the Department of Land Resources with an objective of optimum use of resources, sustainable outcomes and integrated planning. The main objectives of the programme are:

- a) Prevention of soil erosion, regeneration of natural vegetation, rain water harvesting and recharging of the ground water table.
- b) Construction of Water harvesting structures such as check dams, farm ponds, tanks etc.
- c) Capacity building, entry point activities, ridge area treatment, drainage line treatment, soil and moisture conservation, nursery raising, afforestation, horticulture, pasture development, livelihood activities for the asset-less persons and production system & micro enterprises for small and marginal farmers.
- d) Effective rainfall management like field bunding, contour bunding/trenching, staggered trenching, land levelling, mulching, etc.

#### 2. Men in Position

- i. PCCF-cum-Secretary as Chairman
- ii. CCF as Member Secretary
- iii. DFO as Chief Executive Officer
- iv. DFOs as Project Implementing Agencies
- v. Staffs of State Level Nodal Agency for technical, administrative and accounting assistance.

Sl. No	NAME	EXISTING DESIGNATION	REMARKS
1	Amosh Basnet	Jr. Accountant, North	Contractual
2	Sanat Kumar Sharma	Account Officer	Contractual
3	Kamala Timshina	GIS Expert	Contractual
4	Rohit Rasaily	Data Entry Operator, SLNA	Contractual
5	Purna Bahadur Darjee	Accountant, West	Contractual
6	Rudra Prasad Bhattarai	Prog. Co-ordinator	Contractual
7	Neera Sharma	Data Entry Operator, East	Contractual
8	Sailendra Das	Accountant, East	Contractual
9	Prem Kumar Pradhan	Data Entry Operator, North	Contractual
10	Rachit Dewan	Programmer, SLNA	Contractual
11	Nirmala Basnet	Data Entry Operator, South	Contractual
12	Pradeep Gurung	Peon	Contractual
13	Jigmey Hissey Bhutia	Tech. Expert (Livelihood)	Contractual
14	Chumey Y. Bhutia	Tech. Expert (IT)	Contractual
15	Bimla Sharma	LDC	Contractual
16	Ranjana Rai	Jr. Supervisor	Contractual
17	Reuben Cintuary	Driver	Contractual

**3. Project/Schemes/Work Components:**

As per the Central Common Guidelines, the programme consists of the following components

SL.NO	BUDGET COMPONENT	% OF TOTAL PROJECT COST (AS PER COMMON GUIDELINES 2008)	REVISED % OF TOTAL PROJECT COST (AS PER COMMON GUIDELINES 2011)
1	ADMINISTRATIVE EXPENSES	10	10
2	MONITORING	1	1
3	EVALUATION	1	1
4	ENTRY POINT ACTIVITIES	4	4
5	INSTITUTION AND CAPACITY BUILDING	5	5
6	DETAILED PROJECT REPORT	1	1
7	WATERSHED DEVELOPMENT WORKS	50	56
8	LIVELIHOOD ACTIVITIES	10	9
9	PRODUCTION SYSTEM AND MICRO ENTERPRISE	13	10
10	CONSOLIDATION PHASE	5	3
	<b>TOTAL</b>	<b>100</b>	<b>100</b>

with the distribution of budget in a specified watershed project:

**4. Common Activities (eg. JFMC, EDC)**

The programme is implemented through Watershed Committee constituting of ten office bearers and members formed with the approval of the Gram Sabha.

**5. Key Achievements**

- i. Constructed village marketing centres/sheds at Damthang and Turuk in South Sikkim enabling the villagers to sell their produce in the village itself.
- ii. Created livelihood opportunities for the Self Help Groups, women and individuals of the project area through capacity building programmes and livelihood activities.

Implemented by	2017-18		Total	2018-19		Total
	State Share	Central Share		State Share	Central Share	
SLNA	70.00	140.00	<b>210.00</b>	7.20	64.80	<b>72.00</b>

**Chapter- 22****GREEN INDIA MISSION (GIM) – SIKKIM**

The National Mission for a Green India (GIM) was announced as one of the eight Missions under the NAPCC. GIM envisages a unique strategy for holistic treatment of landscapes selected on the basis of their predicted vulnerability to climate change and status of forest degradation for overall improvement / restoration of forests, local ecology and enhancing alternate and forest based livelihood opportunities of forest dependent communities, including tribals and other poor people along with capacity building of the communities. Further, the mission is also mandated with the reduction in carbon emission by using the energy saving devices and making people accountable for the emission.

The Mission aims at addressing climate change by:

- ✓ enhancing carbon sinks in sustainably managed forests and other ecosystems;
- ✓ enhancing the resilience and ability of vulnerable species/ecosystems to adapt to the changing climate; and
- ✓ enabling adaptation of forest dependant local communities in the face of climatic variability.

The National Mission for a Green India (GIM) recognizes that climate change phenomena will seriously affect and alter the distribution, type and quality of natural biological resources of the country and the associated livelihoods of the people. The Mission aims at responding to climate change by a combination of adaptation and mitigation measures.

The State of Sikkim located in the Eastern Himalaya is one of the biodiversity rich areas in India and the world. The State has a wide variety of flora and fauna. One of the main reasons behind having this diversity is the physiography and its location. However, this rich biodiversity is under threat. There is a threat of existence of the unique plants and animals and this ever increasing threat may also affect the livelihood of people of the State. This threat is universal and it affects all of us in the form of Climate Change.

In Sikkim, State Forest Development Agency has proposed 25 L2 Landscapes (Milli Watershed) in 6 (Six) L1 Landscapes (Watershed) for Phase I implementation of the project on the basis of a combination of criteria & indicators including projected vulnerability to climate change, forest cover and forest types (with status of degradation), wastelands, and presence of STs / SCs, dependence on forests, and poverty levels. The forests of this landscape display a great floristic diversity due to wide variation in topography, altitude, climate, rock & soil. These selected watersheds are unique in their eco-system.

To create and improve optimum employment opportunities for Scheduled Tribes (ST), Scheduled Castes (SC), Primitive Tribal Groups (PTG) as well as other economically marginalized class of population living in and around the forest areas enhancing their livelihood opportunities and ensuring the socio-economic upliftment. The selection process follows a hierarchical approach, and aims at identifying broad landscapes of importance (L1) and narrowing down to operational units/landscapes (L2) for planning and executive of activities under various sub-missions. JFMC/EDC/Village level units (L3) will be actual units which have to be collated with landscape/operational unit level plans. These operational units will comprise various land-use components including private lands, panchayat and community lands etc. in additions to the forest areas.

### **Criteria for intervention**

The mission envisages addressing the issue of climate change as main one of the problematic issues bothering every one. Thus the criteria for the selection of project areas under the mission are based on:

- the vulnerability to climate change projections on the forest,
- natural resources and life and livelihood of the people,
- potential of the areas for enhancing carbon sinks,
- enhancing the ecosystem services provided by the forest,
- recharging natural springs of hilly areas,
- enhance the forest services and
- long term sustainable use of resources.

### **Objectives:**

The objectives under GIM for Sikkim state are:

- a. To improve forest in terms for increasing or enhancing the forest stands and forest in terms carbon sequestration.
- b. To increase the forest/tree cover of 154.60 sq.km. of degraded forests lands and improve the quality of forest cover through JFMC/EDC and through convergence with other department in the selected landscapes of Sikkim state.
- c. To enhance the forest/tree cover by 12.38 sq. Km. in urban and peri-urban areas through promotion of Farm-forestry, Agro-forestry and Urban-forestry.
- d. To cover the roads with greenery by road side plantation by convergence with other department on State (State Highway & PMGSY Roads) & National High way.
- e. To improve the ecosystem services including biodiversity, hydrological services, and carbon sequestration from the 166.98 sq. Km. of forest/non-forest lands mentioned above.

- f. To improve the rural energy security by energy efficiency measures and alternate energy sources.
- g. To enhance the annual CO<sub>2</sub> sequestration in Sikkim state through creating new carbon sinks and adopting cleaner technologies to reduce carbon emission.
- h. To create and improve optimum employment opportunities for tribal, scheduled castes as well as other economically marginalized class of population living in and around the forest areas for enhancing their livelihood opportunities and ensuring the socio-economic upliftment.

### **Extent of convergence/ involvement of line departments**

As regards the core activities under GIM sub missions, which pertain primarily to reforestation/ afforestation activities, various State Plan afforestation and reforestation schemes as well as such permissible schemes under CAMPA will be converged at the level of the department. MGNREGA will also be converged for afforestation activities as per Govt. of India guidelines.

In case of promotion of alternate energy and livelihood (including forest-based ones), convergence of schemes of various line departments/ govt. organisations besides the Forest Department, such as MGNREGA, NRLM, Agriculture/ Horticulture, Fishery, etc. will be converged.

### **Financial Requirements and Expected outcomes**

It is proposed to implement the 25 L-2 landscape Perspective Plans at a total cost of Rs. 157.00 crore over a period of ten years from 2015-16 to 2024-2025 during which 15460 ha of degraded forests and 1596 ha of non-forest land, a total of 16956 ha will be treated and reforested/afforested. It will generate tangible benefits through livelihood interventions worth Rs. 19.77 Crore along with the intangible benefits of emission reduction, carbon sequestration, reduced soil erosion, increased water table, reduced migration and increased bio diversity. It will also have better climatic resilience of the people by better adaptation and mitigation capabilities.

### **Achievement till date**

#### **2018-19**

Advance works for total 1475 ha of plantation works and creation of 29 km of avenue plantations have been carried out in all the districts of the State with a total financial expenditure for 2018-19 of Rs. 428.28 Lakhs. Total of 1475 ha. of plantation advance works include 1230 ha. of Aided Natural Regeneration (advance works), 130 ha of Artificial Regeneration (advance works), 10 ha. of Silvipasture Development (advance works), 30 ha. of sea buck thorn plantation (advance works), 10 ha of Urban plantation (advance works), and 65 ha of agro forestry (advance works).

Implemented by	Name of Scheme	Sub Major Head	2018-19		Total
			State Share	Central Share	
9 Nos.of FDAs	Green India Mission	01.101.11.0082-GIM Central share	42.82	385.45	<b>428.28</b>
		01.101.11.0084-GIM State Share			

## Chapter- 23

### **SECURE HIMALAYA:**

#### **(Securing Livelihood, Conservation, Sustainable Use and Restoration of High-range Himalayan Ecosystems)**

##### **Brief description of the project:**

The Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India along with UNDP has commenced a new GEF funded project SECURE Himalaya (Securing livelihoods, conservation, sustainable use and restoration of high range Himalayan ecosystems) in Jammu & Kashmir, Himachal Pradesh, Uttarakhand and Sikkim.

The project aims to support the Government of India and State Governments to effectively promote sustainable land and forest management in alpine pastures and forests in high range Indian Himalayan ecosystems that secure sustainable livelihoods and ensured conservation of globally significant biodiversity and threatened species. It will engineer a paradigm shift from the current approach of conservation to demonstrate a new approach of landscape- based conservation. This is an integrated approach, which focuses on working with various sectors and partners in areas within and outside protected areas, to effectively reduce threats to biodiversity of local, national and global significance.

The project is being implemented over a period of six years in the high altitude trans-Himalayan region and has the following major outcomes”

- (1) Improved management of high range Himalayan landscapes for conservation of Snow Leopard and other endangered species and their habitats and sustaining ecosystem services.
- (2) Improved and diversified livelihood strategies and improved capacities of community and government institutions for sustainable natural resource management and conservation.
- (3) Enhance enforcement, monitoring and cooperation to reduce wildlife crime and related threats.
- (4) Effective knowledge management and information systems established for promotion of sustainable management practices in the High range Himalayan ecosystems.

Project landscape in Sikkim: Khangchendzonga – Upper Teesta: The Khangchendzonga-Upper Teesta Landscape falls within biogeographic province 2C and 1C of India (Rodgers & Panwar 1988), located in North & West Districts of Sikkim. This landscape spans over an area of about approximately 3600 km<sup>2</sup>. In North, the landscape forms international boundary with Tibetan Autonomous Region of China while in the East and West it is bordered by Bhutan and Nepal respectively. The landscape includes Khangchendzonga National Park and Singba Rhododendron Sanctuary as Protected Areas and also the Tso-Lhamu Plateau in the northern Trans-Himalayan

Zone as a proposed conservation area. Mount Khangchendzonga, the third highest peak in the world and adjacent Singalila range strongly govern the relief features on the western part of the landscape while Chola range plays prominent role in determining physiography on the eastern part. The general elevation of the landscape starts from 1500 and the northernmost parts are located above the tree-line, at over 4000 meters elevation. The highest point in the landscape is the summit of Mount Khangchendzonga at 8586m. The chief ridge of Khangchendzonga range is aligned in north-south inclination with west-east running transverse spurs. The major valleys in the southern and south-eastern part of the park are oriented north-south thereby creating east and west aspects. On the other hand, the valleys in the central and northern portions of the park are east west oriented having mostly north and south aspects. The landscape is the major catchment of river Teesta that originates from Tso Lhamu Lake in the north. Together, these ranges strongly influence the atmospheric circulation and regional climate in the region but also affect the climate of adjacent regions.

The varying aspects and slopes have led to the occurrence of different climatic zones in Sikkim, however, the predominant features of this landscape are only alpine (4,000-5,000m) and cold deserts (>5,000m). The rainy season extends from May to September in the summers and from November to March in the winters. Spring and autumn occur for a very short time during the months of April and October respectively. The successive west-east ridge formations obstruct the monsoon winds blowing from the southwesterly direction causing heavy precipitation and as a result the amount of rainfall decreases towards the north.

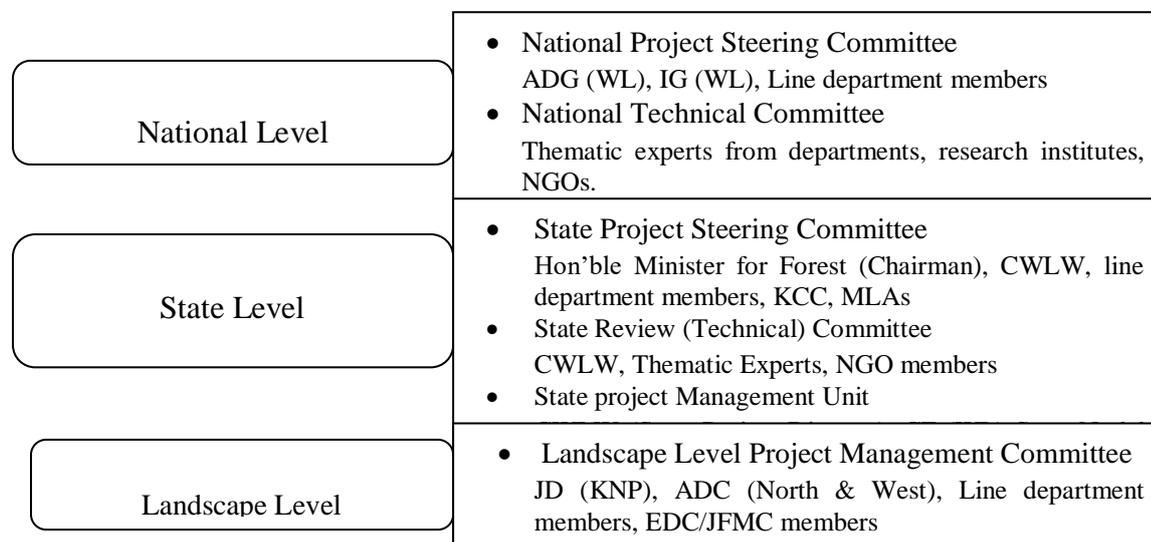
#### The project villages

As of now, a total of 27 villages and settlements in the project landscape have been notified for future implementation of activities and addressing issues like livelihood enhancement, community-based vigilance, etc. The list includes 16 villages from the North and 11 villages from the West district and shows immense diversity in terms of geography, ethnological make up and demography from the large semi-urban centers like Yuksom, Lachen to the remote Lepcha villages of Dzongu including Sakyong-Pentong, to the highest settlement of them all-Muguthang, home to only the Yak-herders.

Depending on the baseline assessments and subsequent in the state, different activities and pilots shall be planned for these settlements, base on their current ecological and socio-economic status.

The Project management structure SECURE Himalaya has a three-tier approach to the overall project management. At the core level, all administrative and other decisions are taken by the National Project Steering Committee, which is headed by the ADG (WL), MoEF&CC, with the IG (WL), MoEF&CC being the National Project Director. The technical aspects of the project and its

activities are assessed by the National Technical Committee. Each of the four project states also have a similar management structure at the state level, with the final ground level committee being designated as the Landscape Level Project Management Committee. The following diagram is aimed to provide an overview of the project management structure of SECURE Himalaya.



SECURE Himalaya Sikkim: Timeline of important events and progress till August 2019:

- In 2017, the Project Validation Workshop was held in Mangan and the formal agreements were signed between the State Forest Department and the MoEF&CC regarding the SECURE Himalaya Project.
- In early 2018, the State Project Steering Committee & the Landscape Level Project Management Committee were duly notified through State gazette.
- From July 2018, the State Project Management Unit started functioning from the Forest Secretariat, Gangtok with recruitment of State Project Officer and Project Associates.
- In October 2018, the 1<sup>st</sup> State Project Steering Committee of SECURE Himalaya was held where the Annual Work Plan for 2018-19 was approved.
- In October 2018, the 3<sup>rd</sup> National Project Steering Committee meeting for SECURE Himalaya was held at the MoEF&CC where the AWP 2018-19 was presented for Sikkim, However, the AWP was not approved due to the technical reasons.
- From November 2018 onwards, a total of 15 assignments related to the project targets of SECURE Himalaya were commissioned by the National Project Management Unit for Sikkim. The assignments were awarded to competing agencies based on their technical and financial proposals.

- In April 2019, the 2<sup>nd</sup> State Project Steering Committee meeting was held where the Annual Work Plan of 2019-20 was presented and approved. However, due to lack of final approval of AWP 2018-19, its activities were suggested to be merged with 2019-20.
- In June 2019m the 4<sup>th</sup> National Project Steering Committee meeting for SECURE Himalaya was held where the AWP of 2019-20 was presented ad approved for Sikkim subject to minor revisions. The final revised AWP was for INR 5.11 crores with an UNDP support component of 3.50 crores and State Grant-in-Aid amount of INR 1.61 crores.
- In July 2019, the Project Inception Workshop for SECURE Himalaya Project Sikkim was held at the Chintan Bhawan, Gangtok. The Event was presided over by the Hon'ble Minister for Forest, Government of Sikkim and had presence of the Principal Secretary-cum-PCCF, other HoDs from various line departments, community members from project villages, students, and academicians. A total of 300 participants enthusiastically participated in the workshop and gave their inputs for better execution of the project.

## Chapter- 24

### **SERICULTURE:**

The Sericulture Directorate was established in the year 1977-78 under the umbrella of Forests, Environment & Wildlife Management Department, Government of Sikkim and is responsible for development of Sericulture in Sikkim. Sikkim is a non-traditional state with respect to Sericulture in comparison to other North Eastern states of India wherein it is taken up traditionally and is very important source of livelihood.

The main objectives of the Sericulture Directorate are:

- Rearing of improved variety of silkworms at farms.
- To familiarize sericulture in the state.
- Implementation of Central Sector Projects in state.
- Providing training, financial assistance, infrastructure and other inputs for silkworm cultivation in the state.
- Organizing awareness camps in the villages.

Sericulture in Sikkim provides subsidiary income to the farmers/beneficiaries with less inputs and labour in a very short interval. This sector has been pivotal in giving social and economic empowerment to the women of rural areas. The benefits from the project are directly provided to the beneficiaries in cash and kind through Direct Benefit Transfer in PFMS mode. Due to adoption of DBT all the women beneficiaries have opened their respective saving accounts in the nationalized banks. The economic empowerment has aided the women beneficiaries to fulfill their basic needs.

Till date **885 women beneficiaries have been benefited** from the project. Out of these beneficiaries 37 nos. Mahila Resham karmis have been selected for 37 Self help groups for providing required assistance to the women beneficiaries at village level and they are being paid an honorarium of Rs. 5000/- per month.

Sericulture and silk industry are considered as effective tool for poverty alleviation and also to curb migration of rural population to urban areas in search of jobs. Since sericulture is agro-based industry and the plantations are of perennial nature, it contributes to forest cover as tree outside forest. The plantation of host plants like mulberry, castor, kutmero, tapioca can be done along with other agricultural crops with less inter- culture operations and other inputs like manure. Sericulture is in- sync with the organic farming and organic culture in Sikkim. This plantations also helps in soil conservation.

The post cocoon activities also provide employment opportunities to wide range of age groups and social stratum. The activities like reeling, spinning and weaving are decent work and will help in the economic growth.

Since the major consumers of silk are from the developed countries, sericulture would help in flow of equity from rich to poor.

This Directorate aims at holistic development of sericulture in all its spheres from plantation development to production of fabrics with value addition at every stage of production chain. The details of the fund released for IBSD Project by the funding agency are as follows:

Sl.No.	Year	Amount Released (In lakhs)
01.	2016-2017	Rs. 550.00
02.	2017-2018	Rs.950.00
03.	2018-2019	Rs. 1010.98
04.	-	Rs. 108.24 (withheld by the Ministry)
Total		Rs. Rs.2643.00

**Project Village under Intensive Bivoltine Sericulture Development project:**

District	1 <sup>st</sup> year (Beneficiaries)	2 <sup>nd</sup> year (Beneficiaries)	3 <sup>rd</sup> year (Beneficiaries)	Total
West	100 farmers (Budang, Mulbasey, Pakkigoan)	179 farmers (Tikpur, Chingthang, Tashiding)	120 farmers(Tikpur, Sangadorjee,Peuthang, Mabong)	399
Existing Farmer	107 farmers (CDP)	-	-	107
South Sikkim	100 farmers (Wok, Upper Omchu, lower Omchu)	159 farmers (Kamrang, Jarong,Suldung Kamling)	60 farmers (Katyang,Borong,Wok)	319
East Sikkim	-	-	60 Farmers (Shaku, Amba/Kaizaley,Kamarey)	60
Total	885 farmers			

**Activities for the period of 2017-2018 and 2018-2019:****a. Propagation of Mulberry seedlings:**

Distribution of the saplings/cuttings to the villagers (BC-259 & Kosen mulberry varieties). 500 Nos. (min.) of mulberry plantation per beneficiary under CDP Scheme and 2500 Nos. (min.) per beneficiary under IBSDP Scheme.

Sl.no.	Year	No. of Sapling planted ( In Numbers)	Amount for plantation (In lakhs)
01.	2017-2018	8,50,000	Rs. 88.69
02.	2018-2019	6,00,000	Rs. 62.60
03.	2019-2020(proposed)	2,88,000	Rs. 30.00



- b. Establishment of Kisan nursery: For raising mulberry saplings, local farmers were selected and provided assistance to raise nursery and provide sapling to the project. These farmers were provided assistance Rs. 1.20 lakh/hectare to raise the nursery to provide 1, 30,000 nos. of high yielding variety of mulberry saplings.
- c. Providing training, financial assistance, infrastructure and other inputs for silkworm cultivation in the state: The beneficiaries have been provided with the hands on training and all the Irrigation and rearing equipments have been provided to them. Total 538 farmers have been provided with all the assistance and equipments like Training on Rearing of mulberry silkworm, fencing, Vermicompost, Water tank and polypipe, Rearing equipment, Rearing house, Disinfectant materials and equipments etc.

**Farms Under Directorate:**

Under Directorate of Sericulture there are three Governemnt Sericulture farms in three district viz. South, West and East Districts. There are various activities like, Silkworm rearing, Nursery raising for mulberry and other food plants and Chawki rearing of silkworm for the farmers, which are going on simultaneously under DoS, Sikkim. Along with mulberry silkworm rearing, other two types of Silkworm rearing are being carried out at farms namely, Eri silkworm raering and Muga Silkworm Rearing.

**Eri Silkworm Rearing:****Marketing**

Actual problem being faced by the state is marketing of cocoons, out of the four crops only last crop harvested in the month of October had been disposed off to the private grainers as Seed cocoon, that too at very low price. However, there are chances of better co-ordination between the two states of Sikkim and West Bengal in marketing the all three types of cocoons produced in this state. DoS plans to operate in symbiosis with West Bengal after post cocoon activities have started.

**Projects/Scheme/Work components.**

<b>COMPONENT OF INTENSIVE BIVOLTINE SERICULTURE DEVELOPMENT PROJECT</b>	
<b>A</b>	<b>Organisation of Women Groups &amp; Sensitization</b>
1	Social Mobilization & Group formation including thrift fund through CBOs, Honorarium for Mahila Resham Karmis and Para Extension Worker.(Unit cost is worked out for a Cluster Level Association comprising 200 Women members for 3 years period)
2	Support for organizing Women Sericulture Co-operative Society
<b>B</b>	<b>Capacity Building &amp; Skill Upgradation</b>
1	Training for Extension Staff
2	Orientation training for 50 Mahila Resham Karmis
3	Training for Women Sericulturists & Weavers
4	Exposure Visit for progressive women Sericulturists / Weavers
<b>C</b>	<b>Support to Individual Sericulturists</b>
1	Support for development of Kisan Nursery
2	Support for Mulberry Plantation Development
3	Maintenance/ rejuvenation cost for existing Mulberry Plantation [SoR Rs.200/- per day]
4	Assistance towards fencing of Mulberry Gardens
5	Support for construction of Vermicompost shed @ 5 units/ group of 20 Women 90:10
6	Assistance for irrigation and other Water Conservation and usage techniques @ 1 unit for 4 Women Sericulturists 90:10
7	Supply of Rearing Appliances ( including improved mountages) / farm equipments to farmers ) 100%
8	Assistance for Construction of Rearing House 80:20
9	Assistance towards construction of Mounting hall 80:20
<b>D</b>	<b>Support for creating Linkages</b>

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1	Assistance for raising & maintenance of Chawkie gardens, construction of Chawkie Rearing Centre (CRC) with equipments and Incubation Centres
2	Door to Door Service Agents for Disinfetion and inputs supply & Assistance for Sericulture Poly-Clinics ( One centre / 50 acres)
3	Establishment of Mulberry Industrial Seed Grainage
4	Support for Cocoon Storage Centres
5	Support for setting up of Hot-Air Drier (50 Kg capacity electrical)
6	Support for Multiend Reeling Unit - 60 Basins 60 ends
7	Support for Twisting Plant ( 480 spindles)
8	Support for construction of reeling shed
9	Improved Certified looms 90:10
<b>E</b>	<b>Manpower Support to RECs</b>
1	Engaging Technical Consultants for the Cluster @ Rs.45,000/- pm for 2 Consultants for 3 years
<b>F</b>	<b>Project Implementation &amp; Monitoring</b>
1	Project implementation, Diagnostic study, Publicity, Monitoring and Evaluation
2	Information, Education and Communication (IEC)
3	Diagnostic study

## Chapter- 25

### Externally Aided Project (EAP):

#### Sikkim Biodiversity Conservation & Forest Management Project (SBFP).

The purpose of the project in Sikkim state is to conserve biodiversity, strengthen forestry management skills and improve the income of local residents by implementing activities such as baseline surveys, establishment of new protected areas, procurement of needed equipments, promotion of ecotourism and livelihoods improvement, thereby contributing to balanced socio-economic development and environmental conservation in the region. Regarding the effects of greenhouse gas effects through afforestation activities is also anticipated.

While adopting the Joint Forest Management approach with the active participation of local communities and the State Forest Department, activities to conserve invaluable biodiversity that inhabit this region are also planned in the project. The loan will be applied to biodiversity conservation activities such as baseline surveys, strengthening of the management capacity of protected areas, and promotion of ecotourism, it will also be applied to activities such as regional development and livelihoods improvement, organization and strengthening of basic activities by the State Forest Department and consulting services.

This project will work in collaboration with the Technical Cooperation Project, “Project for Capacity Building of State Forest Trainings Institutions and State Forest Service Colleges” started in March 2009, aimed at strengthening the skills of field forestry officers in Sikkim State. In addition, it will assist in formulating the states ecotourism policy in cooperation with external experts.

#### List of High-Power Steering Committee members

Title	Name of post and department
Chairperson	Chief Secretary, Government of Sikkim
Member	Head of department, Development Planning, Economic Reforms and North Eastern Council Affairs
Member	Head of department, Finance and Expenditure
Member	Head of department, Horticulture and Cash Crops Development
Member	Head of department, Animal Husbandry Livestock, Fisheries and Veterinary Services
Member	Head of department, Rural Management and Development
Member	Head of department, Sport and Youth
Member	Head of department, Tourism
Member	Head of department, Urban Development and Housing
Member	Secretary PCCF, Forest Department

## List of PMU Governing Body Member

Title	Name of post and Department
Chairperson	PCCF, Forest Department
Member	Additional PCCF, Forest Department
Member	One Senior Member of Executive Body of PMU
Member	Project Director, JICA Project

## List of PMU Executive Body Member

Title	Rank of officers to be deputed and/or contracted	Main function
Project Director (1 person)	Additional PCCF (Forest Department)	To hold overall management responsibility of project
Additional Project Director (2 person)	CCF or CF (Forest Department)	To assist the Project Director for overall management responsibility of the Project
Planning and Monitoring Specialist (1 person)	DFO or ACF (Forest Department)	To manage the planning as well as monitoring and evaluation of the project under the guidance of the Project Director
Biodiversity Conservation Specialist (1 Person)	DFO or ACF (Forest Department)	To manage the biodiversity conservation component of the project under the guidance of the Project Director
Ecotourism Specialist (1 person)	DFO or ACF (Forest Department)	To manage the Ecotourism component of the project under the guidance of the Project Director
Divisional Engineer (4 years)	Engineer (Forest Department)	To supervise and control infrastructure development and construction work
Assistant Engineer (4 years)	Assistant Engineer (Forest Department or Contractual)	To supervise and control infrastructure development and construction work
Junior Engineer (4 years)	Junior Engineer (Forest Department or Contractual)	To supervise and control infrastructure development and construction work
Accountant	Certified Chartered Accountant (Contractual)	To manage all financial matters, including preparations of budgets, monitoring of project funds, disbursement status, preparation of reimbursement requests and other financial activities under the guidance of Project Director

### Mandate/Functions

#### **I. High powered Steering Committee (HPSC)**

- 1) To approve and endorse the management manual of the PMU
- 2) To approve and endorse the establishment of the PMU and terms of reference of the PMU
- 3) To approve and endorse the annual work plans and budgets of the Project prepared by the Governing Body of the PMU.
- 4) To hold meetings to review the project's progress once or twice a year
- 5) To provide advice and/ or to resolve issues, problems, and conflicts
- 6) To coordinate among concerned departments in the Government of Sikkim for sharing the experiences and lessons learned related to the project
- 7) To lead and facilitate processes of policy change to improve the service delivery mechanism of the Forest Department based on the experience and needs of the Project.

#### **II. Project Governing Body**

- 1) To prepare required documents and information, and register the PMU as society in Sikkim
- 2) To provide guidance to the PMU in developing the PMU management manual
- 3) To review the annual work plans and budgets prepared by the PMU Executive Body and to present them to the HPSC for approval and endorsement
- 4) To facilitate the integration of the approved plan and budget of the PMU into the annual plans and budgets of the Forest Department
- 5) To disburse funds to the Project in timely manner
- 6) To monitor the financial and physical progress of the Project
- 7) To hold meeting to monitor and review the project progress every quarter at minimum
- 8) To represent the PMU in the HPSC and to work closely with it to propose policy change as and when necessary
- 9) To demonstrate leadership in the PMU as and when necessary

#### **III. Project Executive Body**

- 1) To procure a consultant team and staff members of the PMU
- 2) To prepare the annual work plans and budgets
- 3) To implement the project as per the approved work plan and budget allocation
- 4) To manage the project funds, including disbursement and coordination with JICA
- 5) To coordinate with the Forest Department and concerned and stakeholders related to the project in project implementation
- 6) To provide guidance to the DFU and the Range Support Unit (RSU)
- 7) To utilize the technical assistance provided by a consultant team, who is contracted under the project
- 8) To monitor and evaluate the project progress
- 9) To document and share the project progress, lessons, best practices with concerned stakeholders
- 10) To perform any other duties as required.

Men in positions: Men in position under JICA assisted Sikkim Biodiversity Conservation and Forest Management Project (SBFP);

SN	Category		Numbers	
1	Deputation	IFS	3	
		SFS	4	
		Accountant	1	
		Divisional Engineer	1	
		Assistant Engineer	2	
2	Contractual		61	
3	Home Guard		1	
4	Nursery Mali		66	
5	NGOs (3 nos)	Ecotourism & Conservative Society of Sikkim (ECOSS)	Community Organizers	29
		Voluntary Health Association of Sikkim (VHAS)		
		Khangchendzonga Conservation Committee (KCC)		
TOTAL			168	

Projects/Schemes/Work Components

Work Components	Particulars
Forest and Biodiversity Conservation	<ul style="list-style-type: none"> <li>Rapid Biodiversity Survey</li> <li>- 1,000 sample plots throughout Sikkim</li> <li>- 300 sample plots on hotspots</li> <li>Other Study &amp; Survey</li> <li>- Climate Change on Himalayan Ecosystem</li> <li>- Grazing in Himalayan Ecosystem</li> <li>- Flagship Species Habitats</li> <li>- Preservation Plot Survey (60 plots)</li> <li>- World Heritage Nomination File Preparation of Khangchendzonga National Park</li> <li>- Biodiversity Research &amp; Extension</li> <li>Rationalization of Protected Area Boundaries</li> <li>- 1 Khangchendzonga National Park</li> <li>- 7 Wildlife Sanctuaries</li> <li>Establishment of New Protected Areas</li> <li>- Nimphu Wildlife Sanctuary (200km<sup>2</sup>)</li> <li>- Fairrieanum Conservation Reserve (0.6km<sup>2</sup>)</li> <li>Ex-situ Conservation</li> <li>- Upgradation of Himalaya Zoological Park</li> <li>- Establishment of a Biodiversity Conservation Center</li> <li>- Establishment of at Butterfly Park</li> <li>Creation of Propagation Nursery</li> <li>- 5 Propagation Nurseries</li> <li>- 1 Floricultural Nursery</li> </ul>

Eco-tourism	<p>Ecotourism Policy &amp; Strategy</p> <ul style="list-style-type: none"> <li>- Formulation of Ecotourism Policy through Consultative Committee &amp; Public Consultation</li> <li>- Ecotourism Public Campaign</li> <li>- Formulation of Five-Year Ecotourism Marketing Strategy</li> <li>Ecotourism Marketing</li> <li>- Establishment of Ecotourism Marketing Cell</li> <li>- 5 Overseas PR Tour with Private Operator</li> <li>- 10 National PR Tour with Private Operator</li> <li>- Establishment of Funding Mechanism for Sustainable Ecotourism Marketing</li> <li>- Creating Links Between Tour Operator and Local Communities</li> <li>Development of Eco-friendly Infrastructure</li> <li>- Trekking Route (260km)</li> <li>- Wildlife-Watching Areas (20 locations)</li> <li>- 9 Interpretation Centers</li> <li>- 9 Forest Rest Houses</li> <li>Solid Waste Management</li> <li>- Comprehensive Study for Solid Waste Management</li> <li>- Facility for Solid Waste Management</li> </ul>
Joint Forest Management	<p>JFM/EDC/PSS Activity</p> <ul style="list-style-type: none"> <li>- 180 target villages with cluster approach</li> <li>- Creation of 540 SHGs</li> <li>- 3,600 ha Afforestation or Regeneration (additional 700 ha afforestation or regeneration will be conducted by religious institutions)</li> <li>- Entry Point Activities</li> <li>- Action Research on Sustainable Use of Forest Resources</li> <li>- Trainings for Capacity Development</li> </ul>
Supporting Activities	<ul style="list-style-type: none"> <li>- Preparation Works</li> <li>- Institutional Strengthening of PMU/DFU/RSU</li> <li>- Establishment of New Training Facility</li> <li>- Training of Forest Department Officers</li> <li>- Monitoring and Evaluation</li> <li>- Phase-Out Works</li> </ul>
Consulting Services	<p>International: 40M/M Local: 207M/M Supporting staff: 224M/M</p>

Source of Funding/State govt. / Central govt.

As this project is Externally Aided Project (EAP) and funded by Japan International Cooperation Agency (JICA) by reimbursement made against the expenditure incurred through Central Government.

The total project funding is as follows:

1. JICA JPY 5,384 million (Rs. 280.47 Cr.); 85% (rounded)
  2. State JPY 963 million (Rs. 50.16 Cr.); 15% (rounded)
- Total JPY 6,347 million (Rs. 330.57 Cr.)

## Overall financial progress made by the project since inception

Particulars	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	Total
[1]										
<b>JICA Share</b>	<b>98,08,391</b>	<b>7,26,56,266</b>	<b>18,57,93,138</b>	<b>15,84,58,767</b>	<b>20,02,59,854</b>	<b>17,53,81,394</b>	<b>15,40,07,368</b>	<b>26,28,18,778</b>	<b>34,22,83,502</b>	<b>156,14,67,458</b>
1 C1 Preparatory Work	2,10,000	18,000	12,000	4,02,005	41,450	0	64,494	10,332	0	7,58,281
2 C2 Forest and Biodiversity Conservation	4,50,000	46,99,614	1,71,25,637	98,73,330	1,51,72,208	2,06,48,241	3,92,32,119	7,16,02,195	5,38,58,312	23,26,61,656
3 C3 Ecotourism	6,86,210	3,49,425	3,54,273	15,06,512	86,86,690	2,21,79,453	1,32,72,886	8,72,53,728	12,24,02,083	25,66,91,260
4 C4 Joint Forest Management	0	1,42,53,834	2,51,00,781	2,12,81,552	5,13,08,119	4,92,65,100	3,34,14,687	6,32,44,177	9,21,36,389	35,00,04,639
5 C5 Organizational strengthening of the Forest Department	84,62,181	2,43,60,330	7,16,19,498	5,19,48,239	8,26,29,087	2,45,46,951	1,62,61,820	2,86,12,575	5,40,48,377	36,24,89,058
6 Consulting Services	0	2,89,75,063	3,41,49,852	2,92,24,096	1,90,48,871	1,93,16,877	1,86,90,295	58,95,573	47,08,715	16,00,09,342
7 Price Escalation	0	0	0	0	0	53,01,046	9,06,532	37,17,739	78,32,288	1,77,57,605
8 Physical Contingencies	0	0	3,74,31,097	4,42,23,033	2,33,73,429	3,41,23,726	3,21,64,535	24,82,459	72,97,338	18,10,95,617
<b>State Share</b>	<b>49,23,164</b>	<b>1,46,13,986</b>	<b>4,72,19,812</b>	<b>2,98,40,760</b>	<b>1,66,10,778</b>	<b>1,81,40,469</b>	<b>1,86,58,200</b>	<b>3,51,18,481</b>	<b>3,91,07,621</b>	<b>22,42,33,271</b>
9 (a) General Administration	36,00,000	58,53,573	76,73,887	42,43,456	0	26,36,495	17,12,884	49,47,009	29,17,067	3,35,84,371
10 (b) Taxes & Duties	8,96,061	42,51,849	1,87,90,760	1,14,68,534	1,01,47,175	86,06,535	64,12,397	2,34,48,586	1,25,52,588	9,65,74,485
11 (c) Commitment Charges	4,27,103	32,07,170	37,24,533	38,38,120	43,48,993	47,06,110	62,77,083	65,07,802	80,65,604	4,11,02,518
12 (d) IDC	0	0	0	0	0	0	0	0	0	0
13 Other Costs	0	13,01,394	1,70,30,632	1,02,90,650	21,14,610	21,91,329	42,55,836	2,15,084	1,55,72,362	5,29,71,897
<b>PROJECT COST</b>	<b>1,47,31,555</b>	<b>8,72,70,252</b>	<b>23,30,12,950</b>	<b>18,82,99,527</b>	<b>21,68,70,632</b>	<b>19,35,21,863</b>	<b>17,26,65,568</b>	<b>29,79,37,259</b>	<b>38,13,91,123</b>	<b>178,57,00,729</b>

Common Activities:C3 Component:

## 1. Macro Level Interventions

- a. Ecotourism Policy: Formulation and Dissemination
- b. Ecotourism Institutionalization: Ecotourism Directorate
- c. Ecotourism Marketing: Ecotourism Marketing Cell – Linkage to National and International Markets
- d. Ecotourism Infrastructure: Interpretation Centres & Renovation of Forest Rest Houses for Ecotourism
- e. Micro Level Interventions
- f. Development of 11 Ecotourism Zones in Sikkim
- g. Ecotourism Product & Services: Development and Enhancement Nature Based Products, Culture & Heritage Based Products, Adventure Products, etc.
- h. Capacity Building & Training on Ecotourism: Ecotourism Enterprise Management, Interpretation, Visitor Management, etc. - EDC /JFMC Members and others  
Solid Waste Management System in Tourist locations

2. C4 Joint Forest Management:

Under C4 (JFM) component of SBFP 171 JFMC/EDC has been adopted for intervention under the SBFP. NGOs namely Khangchendzonga Conservation Community (KCC), Voluntary Health Association of Sikkim (VHAS) and Ecotourism and Conservation Society of Sikkim (ECOSS) are associated with the project for providing services and assistance at field level to these JFMCs/EDCs. Community Organisers assist NGOs (COs)

1. In pursuance to Notification No: 79/GOS/PCCF-PS/FEWMD dated 04/06/2016 General Meeting is conducted in the month of May and November every year of the General Body to discuss the physical and financial achievements and way forward etc. NGOs and COs coordinate with District Facilitation Units for organising these meetings.
2. Microplan has been prepared for all JFMCs and EDCs in the batches of four. Presently review of all microplan including convergence with other departments is underway and the revised microplan is to be printed by the end of this year. The microplan will be valid for a period of 05 years.
3. JFMC/EDCs helps the forest Department during forest fire, wild animal conflict etc.
4. Creation of plantation activities completed for all JFMCs/EDCs as per the schedule of the four batches of JFMC/EDC
5. Entry Point activities like repair of monastery, waiting shed, sound system etc are being carried out in JFMC/EDC.
6. 450 Self Help Groups under various JFMC/EDC are involved in Income Generating Activities wherein loan is under the project at minimal interest rate through JFMC/EDC. The IGAs include Cardamom cultivation, piggery, goatery, handicrafts and handloom etc.

Key Achievements:

C-2 Biodiversity Conservation

Key Achievements

C-2 Forest and Biodiversity Conservation

1. Creation of following layer from toposheet 1:50,000 scale.
2. Thematic maps of proposed for World Heritage Site i.e. KNP
3. Forest compartment maps, forest type, beat, reserved forest, block and range data were converted from Indo-Bangladesh projection to WGS 84 UTM 45N projection and exported to Geo- database. Correction of data in 1:50,000 from 1:25,000 scale for the layers like drainage, state district boundary etc. were also completed.
4. Atlas created
5. Prepared GIS layers and prepared GIS maps for Wildlife Sanctuaries Management
6. RBS survey completed in 59 plots and RBS Report – I, was published
7. Rapid Biodiversity Survey Report-II released by Hon'ble Chief Minister on 15<sup>th</sup> May 2015
8. RBS Report - III and RBS Report - IV were published.
9. Study of RBS on otters and freshwater prawns in Sikkim by Research and Extension Cell, FEWMD
10. Study of impact of ban on Grazing in Himalayan Ecosystem in Sikkim studies undertaken by The Mountain Institute (TMI)
11. 2<sup>nd</sup> phase of Wildlife population estimation during the year 2018-19
12. Study of Red Panda is undertaken by WWF – India, Gangtok.
13. Inscription of Khanchendzonga National Park in World Heritage site in Mixed Category i.e. Natural and Cultural

14. Construction work for Butterfly Park, Rangrang, North is in progress
15. Establishment of Floricultural Propagation Nursery at Bulbuley, East Sikkim.
16. Construction of main office building of Himalayan Zoological Park and veterinary care facility work is completed
17. Printing of book titled “Wildlife Population Estimation for all PAs of Sikkim”.
18. Ongoing maintenance work undertaken at different propagation nursery during the year 2018-19

### C3 – Ecotourism

#### Key Achievements

#### 1. Publications:

- I. Sikkim Ecotourism Policy: 2012
- II. Handbook on Nature Based Festivals of Sikkim:
- III. A Journey towards Organizing an Ecotourism Festival: 2015
- IV. Trek Route Development in Sikkim: General Guidelines Manual: 2016
- V. Birds of East Pendam: 2017

#### 2. Awards:

- I. Most Promising New Destination: Ttf Mumbai, 2016

#### 3. Events:

- I. Taxi 2016: Awareness On Swm Practices Exclusively for Taxi Drivers of Gangtok
- II. Ecotourism Conclave 2017: Familiarization Tour-Cum-Workshop For Tour Operators Within & Outside State

### C4: Joint Forest Management Committee

#### Key Achievements:

3R Exercise: A major exercise called 3R (Rationalization, Re-organization and Re-constitution) of JFMC/EDC was done in the year 2016. The exercise resulted in proper demarcation of the boundaries avoiding the overlapping working area as was the case before this exercise. This exercise led to convergence of JFMC/EDC with Panchayati Raj. Proper sensitization of the masses during the exercise led to increased sense of ownership among the locals.

Plantation: 3495 ha of plantation completed by JFMC/EDC and 700 ha of plantation in religious area.

Entry Point Activities: An amount of Rs.3,00,000/- ( Rupees three lakh only) per JFMC/EDC under SBFP released for carrying out EPA. The amount was released in a batch of four, which has been completed.

Block grants: Each JFMC/EDC was given a block grant of Rs.1,80,000/- (Rupees One lakh and eighty thousand only) to be given as loan to Self Help Groups @Rs.60,000/- per SHG for their Income Generating Activities. The interest rate is minimal which is deposited at Village Development Fund Account.

Workshop/Training/Exposure Visit: With an aim to build the capacity of JFMC/EDC, NGOs and COs Training Programme on Financial and Administrative Management have been organised. Training on IGA activities like Cardamom cultivation, goaterry, and piggery have been conducted.

### C5- Organisational Strengthening of Forest Department

1. Financially supported the Induction Training for 19 nos. of direct recruited Assistant Conservator of Forests, 30 nos. of Block Officers, 147 nos. of Forest Guards
2. Training of Forest Officers/frontline staff at Wildlife Institute of India, Indian Institute of Forest Management, Bhopal, National Remote Sensing Institute, Hyderabad to enhance the capacity of the Forest Department to deliver forest management and biodiversity conservation services efficiently
3. Training of IFS Officers of Forest Department for induction training for “professional skill upgradation course” w.e.f 6th November to 12th January, 2018 at IGNFA, Dehradun
4. Training on operation of Drone at HZP Bulbuley, East Sikkim
5. On-going construction of first ever Forest Training Institute at Bulbuley
6. Procurement of certified fire-fighting equipments for territorial sectors and Wildlife Sectors
7. Construction of SBFP building/D-Block
8. Mid-Term Review of the Project by the JICA Mission w.e.f 03<sup>rd</sup> -05<sup>th</sup> March 2018, where they were particularly impressed with the pro-activeness of the Self-Help Groups(SHG)s
9. Operational expenses to District Facilitation Units(4 Territorial+4 Wildlife+1KNP)
10. Overseas exposure visit-cum-study tour of PMU Officers, SBFP to Japan during April, 2019.
11. Programs & Publication

Details of the books published under the component C2- Biodiversity Conservation

1. Wetlands of Sikkim : (2012-13)
2. Biodiversity - All creatures great and small : (2012-13)
3. Sikkim Biodiversity Action Plan : (2012-13)
4. Topographical and Forest Resource Atlas of Sikkim : (2015-16)
5. Environmental Initiatives of the State Government (1994-2016) : (2016:17)
6. Rapid Biodiversity Report –I : (2014-15)
7. Rapid Biodiversity Report – II : (2014-15)
8. Wildlife Population Estimation for all Protected Areas of Sikkim : (2017-2018)
9. Rapid Biodiversity Report – III : (2018-2019)
10. Rapid Biodiversity Report – IV : (2018-2019)

### **Any Unique features/ activities/ functions of the Sector:**

STAGES OF C3 ECOTOURISM DEVELOPMENT UNDER SBFP IS A UNIQUE FEATURE OF THE PROJECT AS UNDER:

#### **1. PREPARATORY PHASE**

- Identification of Ecotourism areas (Existing & Potential)
- Evaluation of the shortlisted destinations based on Criteria & Indicator – (Nature, Culture, Existing tourism activities, organisational presence, etc.)
- Short-listing of 11 Ecotourism Zones

**2. DEVELOPMENT PHASE**

- Awareness Workshops involving stakeholders
- Detailed ecotourism mapping and assessment
- Training and Capacity building – (Basic ecotourism, Interpretation, Activity training, Organisational management, Visitor Management, etc.)
- Package and itinerary building
- Preparation of Ecotourism Enterprise plan (Micro Plan)
- Product trials before launch

**3. OPERATIONAL PHASE**

- Product promotion and marketing
- Finalisation of the Ecotourism Enterprise plan
- Product Final launch
- Advanced training
- Continuous product up gradation and innovation

**4. Revenues Collected:**

Details of the revenue collected at Plant Conservatory, Bulbuley, East Sikkim from December 2015 onwards (Rs.in lakhs)

Sl. No.	Period	Amount		Remarks	Amount Debited	Remarks	Fund status
		Deposited	Bank				
1	14.12.2015 to 4.2.2017	12.73	Central Bank of India, Tadong	Collected by East Territorial Division	2.12	For construction of 4 unit toilet at Plant Conservatory	10.61
2	5.2.2017 to 20.01.2018	4.21	Central Bank of India, Tadong	Collected by East Territorial Division	-	-	4.21
3	1st year contract price for ticket counter (1st March 2019 to 29.02.2019)	13.00	State Bank of Sikkim, Gangtok	Submitted by Marigold Labour Co-operative Society Ltd., Burtuk, East Sikkim	-	-	13.00

REVENUE COLLECTED: under C3 component the revenues are collected through the concerned District Facilitation Units remitted to concerned Revenue Heads

PORTAL LAUNCHED: <http://www.ecotourismsikkim.com> 15<sup>TH</sup>MAY 2015 DURING THE EVENT “International Conference on Conservation of Natural and Cultural Values of Khangchendzonga National Park”.

