



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



**ANNUAL ADMINISTRATIVE
REPORT FOR THE YEAR
2015 - 2016**

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MANAGEMENT DEPARTMENT**



Minister,
*Forest, Environment and Wildlife
Management/Mines, Minerals &
Geology and Science & Technology
and Climate Change Department,
Government of Sikkim.
Phone: 03592-280228*

MESSAGE

The critical role played by Forest, Environment & Wildlife Management Department in our lives is now increasingly well understood. Forest provides a range of essential eco-system services. The very system of human society depends on sustenance of forest eco-system and conservation of bio-diversity. However, with the ever increasing demands on the forest resources for goods & services, the forests are under tremendous biotic pressures.

Forestry is the major land use in the State and nearly 83% of the total geographical area of the State is under the administrative control of the State Forest Department.

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

In the last 22 years, the State Government has taken several initiatives towards conserving the environment such as ban on grazing of cattle and green felling in reserved forest areas, prohibitions on manufacture, use and sale of firecrackers, prohibition on use of plastic carry bags in addition to green initiatives like State Green Mission, Ten Minutes to Earth & Paryavaran Mahotsav. Environmental Education has been introduced in all Government Schools along with Green Awards for Schools so that the students inculcate environment friendly activities in their day-to-day lives.

The State Government is committed to conservation & protection of forests, environment and wildlife and has initiated a number of measures to safeguard the biological resources of the State.

I hope that this report will serve as a useful source of information for policy makers, planners, academicians, civil society groups and all those who are interested in forest management & conservation.

Tshering Wangdi Lepcha



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FOREWORD

Sikkim measuring 7096 sq.km has varied eco-system from humid Tropical Valleys to temperate habitat, alpine meadows and trans-Himalayan cold desert. Forest land constitutes one of the richest natural resources of the State on which depends the well being & prosperity of not only of Sikkim but that of neighboring States & countries. Over a period of time, forestry management in the State has gradually shifted from production oriented forestry to protection oriented and finally to conservation oriented forestry.

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

The last decade has seen significant increase in green initiatives towards achieving the national goal of 66% forest cover among which State Green Mission, Ten Minute to Earth, Paryavaran Mahotsav, Environmental education in Schools curriculum, Green Awards, are important ones.

The forest cover, as a result of these initiatives, has increased to 47.80% from 44 % in 1994 as per State of Forest Report 2015. But perhaps the greatest achievement is the awareness among the general people about the need to protect and conserve our rich and natural resources.

Due to these initiatives and efforts of the Government and Forest, Environment & Wildlife Management Department, Khanchendzonga National Park has been inscribed as UNESCO's World Heritage Site on a mixed criteria of Cultural and Natural Heritage on 17th.July, 2016 by the World Heritage Committee in Istanbul, Turkey.

The Annual Administrative Report 2015-2016 brought out by the Planning & Statistical Cell of the Department has attempted to highlight various programmes of different projects / schemes as well as achievements of the Forest, Environment & Wildlife Management Department.

I am sure, this publication will prove interesting & useful to all those who are connected with forestry at various levels within and outside the State.

(Dr.Thomas Chandy, IFS)

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Chapter - 1

INTRODUCTION:

Sikkim, located in the Eastern Himalayas is the 2nd 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, 2015, presently stands at 47.80% 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, Environment & Wildlife Management 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, Env. & Wildlife Management Department, Government of Sikkim.

The State Government’s Green Policies such as ban on grazing in forest areas, introducing programmes like the State Green Mission, 10 Minute to Earth, Paryavaran Mahotsov, strengthening of frontline staff and increasing of protected areas network has played a pivotal role in protection and conservation of the State’s pristine environment. Introduction of Environmental Studies in School syllabus has been one of the major steps taken by the State Government. Sikkim is also the first State in the country to launch the Green School Programme (GSP) at the State level.

In recognition of all steps initiated by the State Government as well as the department, the State has won several accolades such as the Greenest Chief Minister Award, Nirmal Rajya Puraskar. Recently Khanchendzonga National Park has been declared as a UNESCO World Heritage Site. Further, the Department has initiated several valuable activities for carbon sequestration, improving quality of air, environment, greenery development and such other education programmes to impart quality services. The State also has dedicated 30.77% of protected areas network for habitat maintenance, animal corridor and expansion activities for qualitative results.

On the above lines, Forests, Environment & Wildlife Management Department is open to adopting new methods and approaches new ideas evolved through management, research and development for providing qualitative results on biodiversity.

Chapter - 2

KEY STATISTICS OF SIKKIM

Geographical Area	7096 sq.km
Capital	Gangtok
No. of Districts	4
No. of Sub-Divisions	16
Block Administrative Centre	31
Gram Panchayat Unit	176
Panchayat Ward	989
Municipal Corporation / Nagar Panchayat / Nagar Palika	7
Population	610577
Density Population	86 persons per sq.km
Climate	Tropical, Temperate and Alpine
State Flower	Nobile Orchid- <i>Dendrobium nobile</i>
State Tree	<i>Rhododendron niveum</i>
State Bird	Blood Pheasant- <i>Ithaginis cruentus</i>
State Animal	Red Panda
Protected Area Network	2183.10 sq.km (30.77%)
No. of important Mountains & Peaks	28
No. of Glaciers	84
No. of Lakes (Wetlands)	521
No. of Hot Springs	9
No. of Rivers & Streams	104
Major Rivers of the State	Teesta and Rangit

No. of Species:

Flowering Plants –5500	Mammals – 144
Rhododendron – 38	Birds – 568
Orchids – 557	Reptiles – 33
Conifers – 16	Amphibians – 50
Ferns & allies – 362	Fishes – 48
Tree Ferns – 9	Butterflies – 689
Bamboos – 28	Frogs - 16
Oaks – 11	Bees – 30
Medicinal Plants – 1681	Moths – 7000
Bushes - 112	Beetles - 994
Small Grasses- 257	Insects – 5892

Source – ENVIS.

Chapter-3

News and Events during 2015-16.

- Government Senior Secondary School, Hee-Yangthang, West Sikkim awarded Paryavaran Mitra Puraskar for being one of the best two exemplary schools of the country for 2015 by the Centre for Environment Education, Ahmadabad on 11th January, 2016.
- WIPRO, Bangalore awarded Government Secondary School, Bongten, West Sikkim as Best Earthian School amongst top 15 earthian schools of the country and also awarded T.N.Khoshoo Memorial Award on the basis of its project “Sustainability and Biodiversity”. The school was awarded certificate and cash prize of Rs.1.00 lakh during the awards function held on 5th February, 2016 at Bangalore.
- ENVIS (Environmental Information System) Centre at Forest, Environment & Wildlife Management Department, Government of Sikkim was awarded the Best State ENVIS Centre of the country by the Ministry of Environment, Forests & Climate Change, Government of India. The certificate has handed over by Shri Prakash Javadekar, Minister of State (Independent Charge) Environment, Forests and Climate Change during the inaugural function of National Evaluation workshop of ENVIS Centres held on 17th February 2016 in New Delhi.
- CSE awarded three Sikkim Schools under Gobar Times Green Schools National Award in 2015.
 1. Sonam Choda Lepcha Memorial Government Secondary School, Lingdong, Upper Dzongu, North Sikkim (Rank 4)
 2. Government Junior High School, Mangzing, South Sikkim (Rank 8)
 3. Government Girl's Senior Secondary School, Geyzing, West Sikkim (First school to complete and submit audit report online). The Green Leaf Trophies and Certificates were presented on 23rd February 2016 at Stein Auditorium, India Habitat Centre, New Delhi.
- Fulfils UNESCO's criteria for both natural and cultural heritage, and is the first site in India to be awarded the status of a mixed World Heritage Site on 17 July 2016 by the World Heritage Committee at Istanbul, Turkey.
- The State Government through Gazette Notification No.13 dated 27th January 2015 imposed prohibition on the burning of agricultural waste, leaves, litter, paper wastes and garbage within the State of Sikkim. The prohibition shall however, not cover the use of processed agricultural wastes, leaf litter and garbage as fuel and control burning of forest litter for the purpose of scientific management of forest fires.
- Sikkim State celebrated 3rd successive fifteen day (June 15-30) environment festival 'Paryavaran Mahotsav', a noble and unique initiative conceived by the Chief Minister Shri Pawan Chamling himself. This fifteen day festival witnessed the various events such as Greenathon (Green Run), environment lectures on low carbon life styles at various schools, cleanliness drives at major towns, awareness campaigns and State's flagship plantation programmes; 7th successive phase of Ten Minutes to Earth and 10th

successive phase of State Green Mission with a total plantation of 3,56,803 seedlings throughout the State.

- The Sikkim becomes the first Indian State to ban on use of mineral water bottles in government programmes. State Government through Notification No.25/Home/2016 dated 19/05/2016 has imposed ban on use of packaged drinking water bottles in any government functions and meetings to reduce the creation of garbage. Use of filtered water or large reusable water dispensers or reusable water bottles during government functions encouraged.
- State Government through Notification No.26/Home/2016 dated 19/05/2016 has imposed ban on sale and use of disposable items such as cups, plates, containers etc made from Styrofoam throughout the State with immediate effect.
- Recognizing the silvicultural importance and ecosystem values of the historically significant trees found all over the State, the Government vide Notification No.83/GoS/FEWMD/Pr.Secy-PCCF dated 04/06/2016 notified 21 number of trees under forest land as “Heritage Trees” of the State. Another 32 trees have been added to the list and now the total figure of Heritage Trees stands at 53.
- The State Government through Gazette Notification No.544 dated 19th December 2014 imposed prohibition on the manufacture, sale and use or bursting of all types of firecracker including any sound emitting or illuminating type of firecrackers within the State of Sikkim.
- In the last two decades 1995-2016, following upon the Green Initiatives of the government led by Shri Pawan Chamling Chief Minister of Sikkim, we have documentation of not only the flora and fauna but also the diversity of micro-organisms, domesticated biodiversity and introduced naturalized exotic species. From mere documentation we have graduated from survey-collection to more management oriented outputs involving use of sophisticated instruments like GIS, GPS, camera traps, mist-nets and increment borers, in one of the most challenging places in the Himalayas, Sikkim.
- In order to promote awareness about traditional usage of medicinal plants among the urban and rural household and public at large, the National Medicinal Plants Board financed the establishment of Home Herbal Garden. Hence, State Medicinal Plants Board identified 50 household and a grant of Rs.2000/-per Home Herbal Garden was distributed to them.

Chapter - 4

Area Statistics of Sikkim (In Sq Kms).

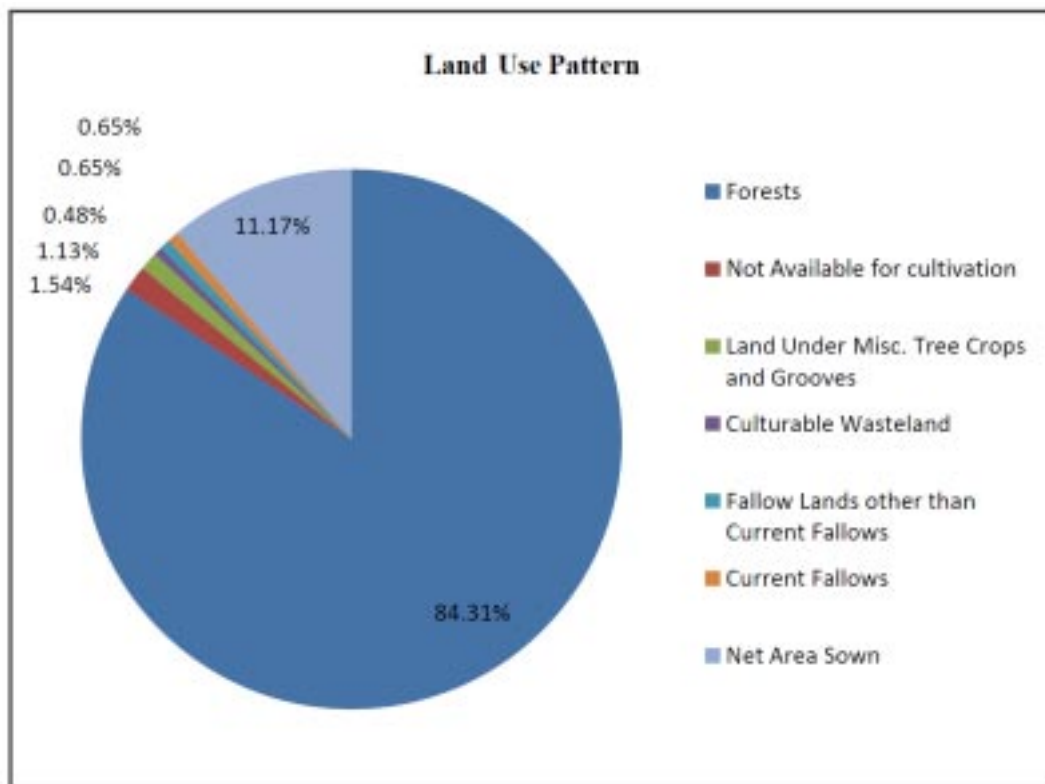
Sl. No.	CLASS	RESERVE FOREST	REVENUE BLOCK	TOTAL	% OF TOTAL
1	CROP LAND (TERRACED/ SEMI TERRACED)	0.00	604.85	604.85	8.52
2	FALLOW/SCRUB IN REVENUE BLOCKS	0.00	155.69	155.69	2.19
3	SAL DENSE FOREST	5.30	0.77	6.07	0.09
4	SAL OPEN FOREST	15.93	1.54	70.47	0.25
5	SAL DEGRADED FOREST	3.32	0.71	4.03	0.06
6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

Source : FEWMD AAR, 2009.

Land Use Pattern

Land Use	Area in '000 ha	Percentage
Total Geographical Area	710	
Reporting area for land utilization	693	100
Forests	584	84.31
Not available for cultivation	11	1.54
Permanent pastures and other grazing lands	0	0
Land under Misc. Tree crops and grooves	8	1.13
Culturable wasteland	3	0.48
Fallow lands other than current fallows	4	0.65
Current fallows	4	0.65
Net area sown	77	11.17

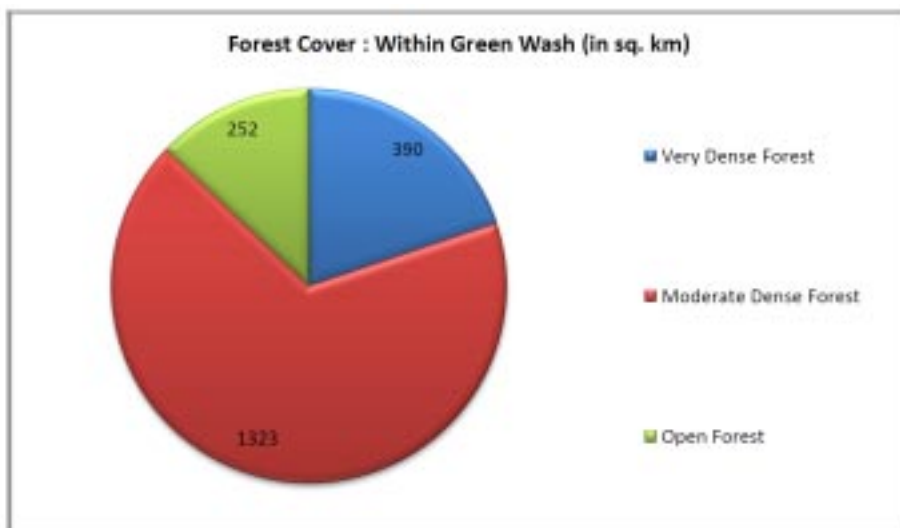
Source: Land use Statistics, Ministry of Agriculture, GOI, 2012-13.

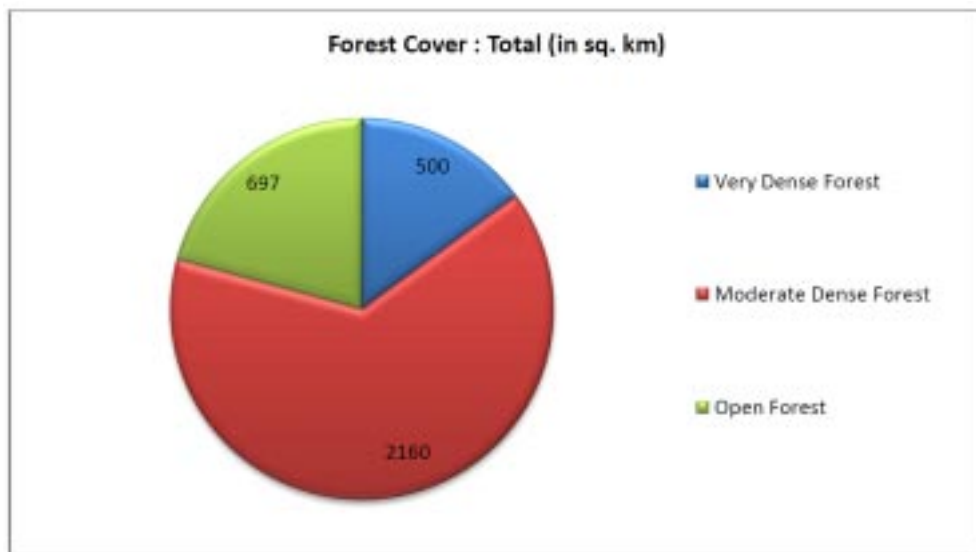
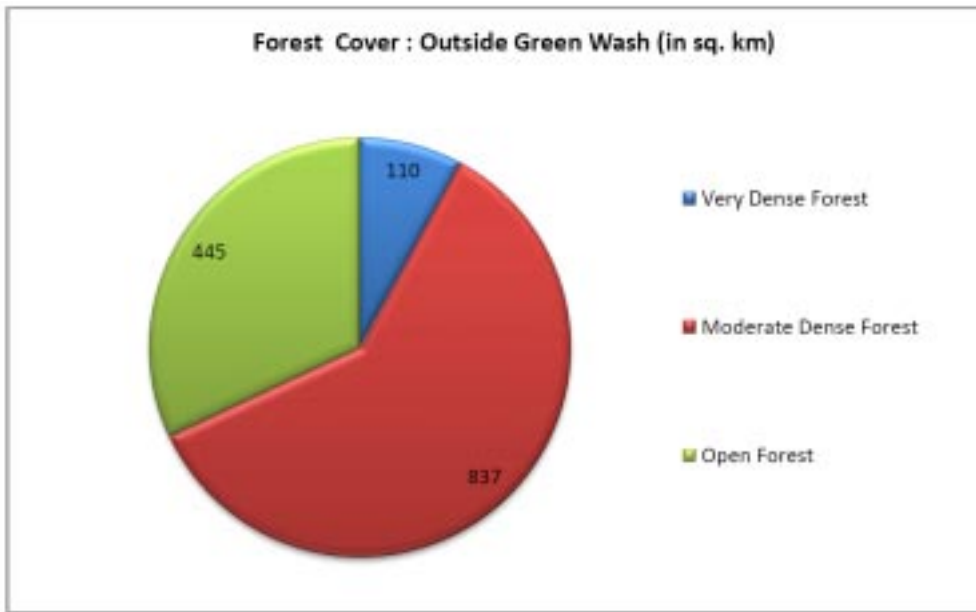


Forest Cover

1	Very Dense Forest	Within Green wash (sq.km)	Outside Green wash (sq.km)	Total(sq.km)
		390	110	500
2	Moderate Dense Forest	1323	837	2160
3	Open Forest	252	445	697
	Total	1965	1392	3357
4	Tree Cover			35
5	Total Forest and Tree Cover			3392
6	Per capita forest and tree cover			0.556
7	Of State's Geographical Area			47.80%
8	Of India's Forests and Tree Cover			0.43%

Source: FSI Report, 2015.

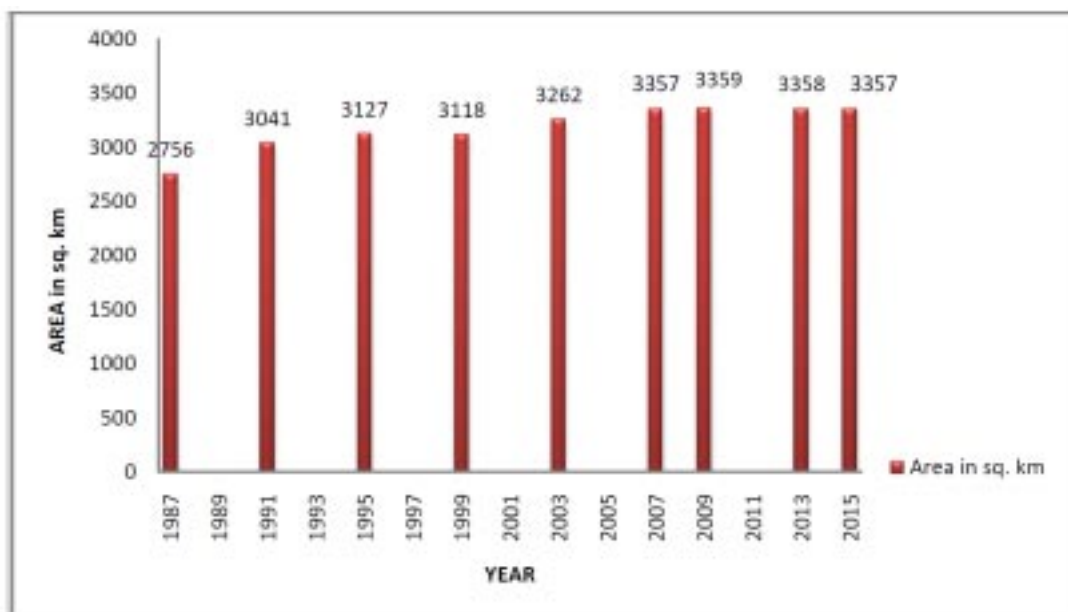




Increase In Forest Cover

Increase in Forest cover since 1987 in the State

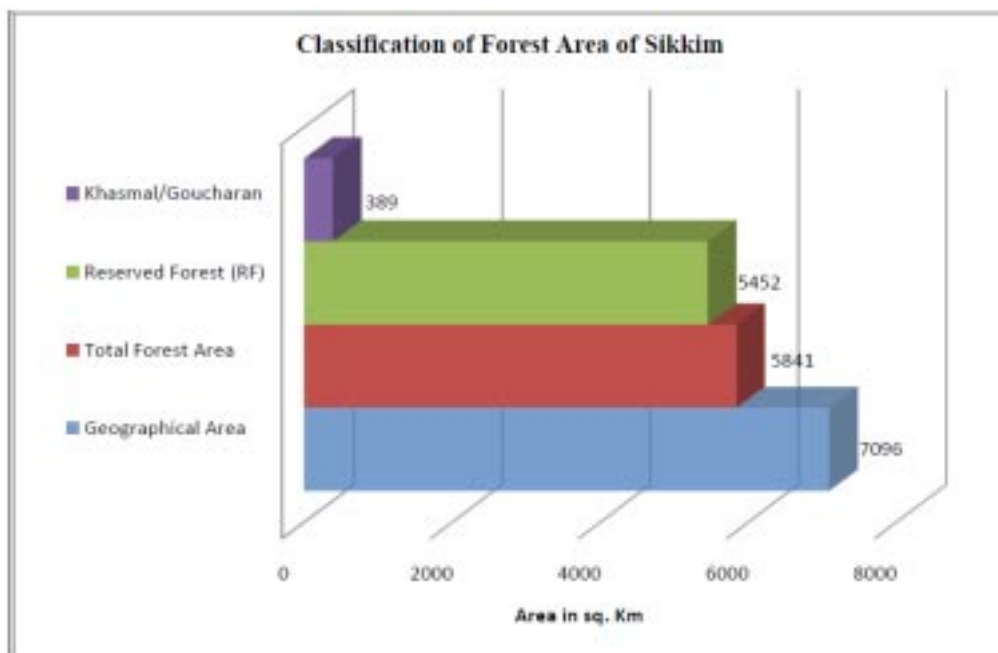
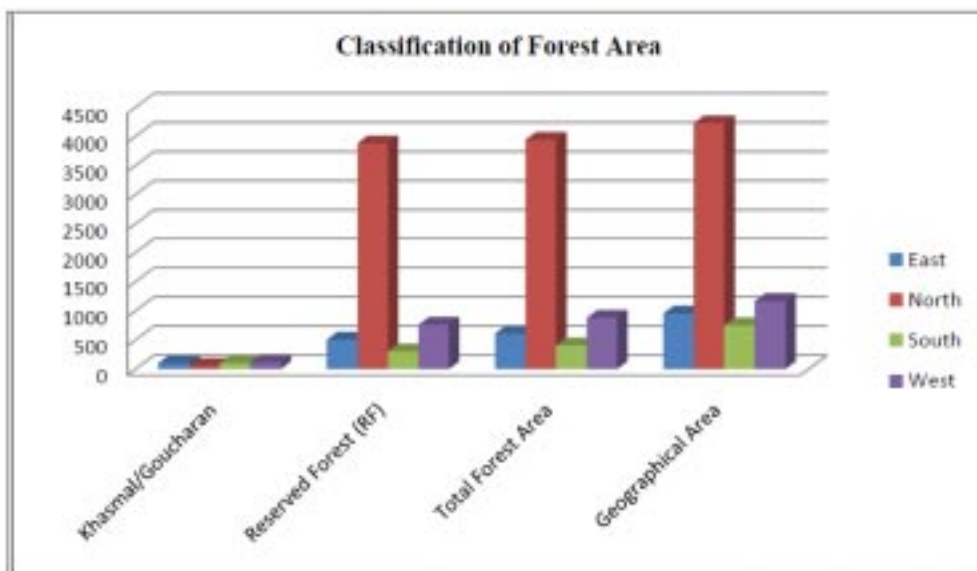
Forest Cover	Area in Km ²
1987	2756
1991	3041
1995	3127
1999	3118
2003	3262
2007	3357
2009	3359
2013	3358
2015	3357



District Wise Classification of Forest Area

District	Khasmal/Goucharan	Reserved Forest (RF)	Total Forest Area	Geographical Area
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
Total	389.00	5452.00	5841.00	7096.00

Source: FCA Division.



Comparative statement of Increase in Forest Cover

As per State of Forest Report (SFR) published by Forest Survey of India

	As per 2003 SFR		As per 2009 SFR		As per 2013 SFR		As per 2015 SFR	
	National	State	National	State	National	State	National	State
Very Dense Forest	1.56	6.454	2.54	7.05	2.54	7.05	2.61	7.05
Moderately Dense Forest	10.32	26.832	9.71	30.45	9.70	30.45	9.59	30.44
Open Forest	8.76	12.683	8.77	9.81	8.99	9.82	9.14	9.82
% of Total Forest of Geographic Area	20.64	45.97	21.02	47.31	21.23	47.32	21.34	47.31
Tree cover	-	0.38	-	0.28	-	0.44		0.49
% of Total Forest & Tree Cover of Geographic Area	20.64	46.35	21.02	47.59	21.23	47.76	21.34	47.80
Recorded Forest Area in % of Geographic Area	23.57	82.31	-	82.31	-	82.31	-	82.31



Chapter -5

MAN POWER:

In the Administration hierarchy, the Department is headed by Principal Secretary-cum-PCCF and assisted by the officers of the rank of Joint Secretary, Deputy Secretary & Under Secretary. They are supported by Office Superintendents, Head Assistants, Upper Division Clerks, Lower Division Clerks and other Group 'D' Staff. The Administrative Section mainly deals with the matters pertaining to general and personnel administration and the functions like management of Estate (entire compound Forest Secretariat, Deorali), Movable and Immovable Assets of the department, like buildings, furniture and fixture, Vehicles, etc.. The section coordinates with the sectional heads of circles and divisions with regard to matters of general administrative nature, daily attendance, causal leave account and communicating various directions and activities of the department as well as issuance of notifications, circulars and office orders issued by the government in time to time.

Under the personnel administration, the functions include maintenance of various records of officers and staff of the department. The personal files of the members of Sikkim State Subordinate Forest Service, Sikkim State Subordinate Ministerial & Executive Service, Sikkim State Subordinate Accounts Service and other unorganized isolated services like Sericulture, State Pollution Control Board (SPCB), ENVIS, State Bio-diversity Board(SBB), etc. functioning under the Sikkim Forest, Environment & Wildlife Management Department.

The other personnel activities are maintenance and updating of Sikkim State Subordinate Forest Service (Cadre) Rules, recruitment and training of new members (Range Officer, Block Officer, Head Forest Guard and Forest Guard) under Sikkim Forest Subordinate Service, the posting of the new recruits as well as the transfer and posting of other senior members of the said service. The Maintenance of leave account, grant of Annual Increment, Leave Encashment, Advancement Grade/Assured Career Progression (ACP), Promotions and Retirement of all group 'C' and 'D' employees of the department.

For misconduct, Disciplinary action is taken under The Sikkim State Subordinate Forest Service (Discipline and Appeal) Rules, 2006, for the members of the Sikkim State Subordinate Forest Service and The Sikkim Government Servants' (Discipline & Appeal) rules, 1985, for the members of the other subordinate (organised / isolated) services in the department. All cases pertaining to administrative nature under Right To Information Act, 2005 (RTI) are also dealt with by the Administrative Section in coordination with the Nodal SPIO of the department. In addition to that, personal details of the individual gazetted officers' of the department is also maintained in their part files for their record and reference.

Among the important achievement of the department, the administrative section has successfully conducted the recruitment process of 147 Forest Guards and 30 Block Officers along with the compassionate appointment in the year reported upon.

SL. No	IFS CADRE	DESIGNATION	IN POSITION
I	01	PCCF-cum-Principal Secretary	01
	02	Chief Conservator of Forest	01
	03	Conservator of Forest	06
	04	Deputy Conservator of Forest	04
	05	Additional Project Directors	02
	06	IFS Probationers	-
	07	On Higher Study	-
	08	On Central Deputation	09
	09	On State Deputation	07
A. TOTAL IFS (GAZETTED)			30
SFS CADRE			
II	01	Principal Director	-
	02	Director	-
	03	Additional Director	02
	04	Joint Director	01
	05	Divisional Forest Officer	30
	06	Assistant Conservator of Forest	69
	A. GAZETTED		102
	01	Range Officer	92
	02	Block Officer	65
	03	Head Forest Guard	154
04	Forest Guard	161	
B. NON-GAZETTED			472
TOTAL A+B			574
SERICULTURE			
III	01	Principal Director	-
	02	Additional Director	01
	03	Deputy Director	01
	04	Assistant Director	01
	A. GAZETTED		03
	01	Sericulture Range Officer	01
	02	Sericulture Block Officer	01
	B. NON-GAZETTED		02
TOTAL A+B			05

IV	STATISTICAL SERVICE		
	01	Joint Director	-
	02	Deputy Director	01
	03	Assistant Director	01
	A. GAZETTED		02
	04	Statistical Officer	04
	05	Statistical Inspector	01
	06	Statistical Investigator	-
	B. NON-GAZETTED		05
	TOTAL (A+B)		07
V	FINANCE AND ACCOUNTS SERVICE		
	01	Additional Director	01
	02	Chief Accounts Officer	01
	03	Sr. Accounts Officer	01
	04	Accounts Officer	01
	A. GAZETTED		04
	04	Senior Accountant	03
	05	Accountant	13
	06	Junior Accountant	13
	07	Accounts clerk	03
	B. NON-GAZTTED		32
	Total (A+B)		36
	STATE CIVIL SERVICE		
	01	Special Secretary	0
	02	Joint Secretary	01
03	Deputy Secretary	01	
04	Under Secretary	01	
VI	A. GAZETTED		03
	05	Office Superintendent	03
	06	Head Assistant	08
	07	Upper Division Clerk	33
	08	Lower Division Clerk	51
	B. NON-GAZETTED		95
	TOTAL (A+B)		99

OTHERS				
VII	01	Principal Scientist	02	
	02	Principal Chief Research Officer	01	
	03	Scientist ' B'	01	
	04	Assistant Scientific Officer	01	
	05	O.S.D	01	
	06	Assistant Engineer (Civil)	02	
	07	Assistant Engineer (Environment)	01	
	08	Junior Technical Officer	03	
	09	Planning Assistant	01	
	A.GAZETTED			13
	10	Senior Technical Assistant	-	
	11	Cartographer	01	
	12	Surveyor	-	
	13	Assistant Surveyor	02	
	14	Draftsmen	02	
	15	Tracer	01	
	16	Junior Engineer (Civil)	01	
	17	Tally Clerk	01	
	18	Sub-Inspector Wireless	01	
	19	Supervisor	24	
	20	Junior Lab Assistant	01	
	21	Bearer	01	
	22	Chowkidar	67	
	23	Cook	01	
	24	Peon	88	
	25	Mali	117	
	26	Driver	57	
27	Pipe Fitter	01		
B.NON-GAZETTED			366	
TOTAL (Other A + B)			379	
VIII	STENOGRAPHER SERVICE			
	01	Principal Private Secretary	-	
	02	Senior Private Secretary	02	
	03	Private Secretary	03	
	A. GAZETTED			05
	04	Stenographer	02	
	B NON-GAZETTED			02
TOTAL (A+B)			07	

ABSTRACT:

SL.NO	PARTICULARS	IN POSITION
1	TOTAL GAZETTED OFFICERS	162
2	TOTAL NON-GAZETTED EMPLOYEES	974
3	WORK-CHARGED EMPLOYEES	07
	GRAND TOTAL	1143

LIST OF FRESH RECRUITMENT DURING 2015-16

SL.NO	NAME OF POST	NUMBER
1	B.O	31
2	L.D.C	-
3	F.G	151
4	Peon	05
5	Chowkidar	-
6	Bearer	-
7	Driver	-
8	Other if any	-
	GRAND TOTAL	187

Chapter – 6

Statement of Revenues Realized during last Ten years.

Sl.No.	Financial Year	Estimated (in lakhs)	Realised (in lakhs)	Percentage	Remarks
1	2006-2007	800.00	802.00	100.25	Excess 0.25%
2	2007-2008	700.50	800.26	114.24	Excess 14.24%
3	2008-2009	800.00	848.09	106.01	Excess 6.01%
4	2009-2010	1000.00	879.00	87.90	Shortfall 12.1%
5	2010-2011	1100.00	1115.17	101.37	Excess 1.37%
6	2011-2012	1100.00	1253.05	13.90	Excess 13.90%
7	2012-2013	1348.00	919.98	68.25	Shortfall 32%
8	2013-2014	1450.00	1066.68	73.56	Shortfall 26.44%
9	2014-2015	1115.35	933.74	83.72	Shortfall 16.28%
10	2015-2016	1206.00	1246.56	103.36	Excess 3.36%

STATEMENT OF EXPENDITURE DURING LAST FIVE YEARS.

(Rs.in lakhs)

SECTORS	ACTUAL EXPENDITURE						
	PLAN	C.S.S		FCA	NEC	EAP	N-PLAN
		100%	90:10%				
Soil and water conservation							
2011-2012	76.06						260.52
2012-2013	87.41						335.96
2013-2014	87.41						87.41
2014-2015	84.55						
2015-2016	78.25	630.00					426.12
Forestry & Wildlife							
2011-2012	3145.57	177.38		501.49	88.13		2396.65
2012-2013	1839.73	258.28			47.90	1062.56	3217.39
2013-2014	1311.20	258.28	7.20		47.90		2624.08
2014-2015	2347.97	887.21			75.05	1955.51	3432.63
2015-2016	1692.23	547.79					3385.39
Ecology & Environment							
2011-2012	35.34	88.13					
2012-2013	32.93	7.20					258.07
2013-2014	0.01						1.20
2014-2015	44.95		12.81				3779.23
2015-2016	1585	1211.89					-

Chapter-7

ENVIRONMENTAL INFORMATION SYSTEM (ENVIS) CENTRE

ENVIS is an acronym for Environmental Information System. ENVIS is a 100% CSS of MoEF& CC, Govt. of India with the main objective of data and information collection, collation and dissemination on the subject area "On Status of Environment & its Related issues"

The main activities of ENVIS Centre during financial year 2015-16

- 1) Website development and hosting for e-governance support.
- 2) Development of ISBEID (Indian State-Level Basic Environment Information Database)
- 3) National Environment Awareness Campaign
- 4) State Green School Programme at 200 Sr. Secondary and Secondary levels with green teacher's training and GSP coordination effective implementation.
- 5) Chief Minister's Green School Rolling Trophy –cum- State Green School Awards of eight meritorious school of the state.
- 6) Paryavaran Mitra Programme at School eco-clubs for action based environment awareness and education.
- 7) WIPPRO: Earthian Programme
- 8) Online Query response service
- 9) Newsletter Publication- PANDA/ENVIS Quarterly Newsletter
- 10) PCRA Painting and Essay writing Competition among 50 Schools.
- 11) E- Media hosting of journals, department reports and other publication.

1. Training, Extension and Awareness Activities by ENVIS during 2015-16



ENVIS Centre headed the technical committee in organizing this international conference at Gangtok on 15-16 May 2015. ENVIS Sikkim provided full technical support in launching the web portals of Sikkim Ecotourism Directorate and State Biodiversity Board; creation of digital compendium of power point presentation of various delegates; media and IT support to the host organization.

2. Chief Minister's Green School Rolling Trophy and State Green Schools Award 2015



ENVIS Centre actively played a role of the resource agency in scrutinizing and screening the reports from about 180 schools for the State's most prestigious award scheme, the Chief Minister's Green School Rolling Trophy and State Green Schools Award 2015. ENVIS Centre has been playing the role of nodal agency in implementing this award scheme in the State since its inception in 2011.

The 2015 awards were presented to eight schools during the State level celebration of World Environment Day on 5th June 2015 at Sir Tashi Namgyal Government Sr. Secondary School, Gangtok, East Sikkim.

3. Paryavaran Mahotsav 2015 Celebration



ENVIS Centre played active role in coordinating the 3rd successive Paryavaran Mahotsav in Sikkim from June 15 to June 30, 2015. This fortnightly event which included the 10th Phase State Green Mission and 7th Phase Ten Minutes to Earth programme was carried out throughout the State through active participation of local populace from all walks of life.

The Centre's role was to spread mass awareness and publicity through online and print media. The centre designed and printed programme banners, posters, signages for signature campaign on green pledges, Greenathon stickers for green run and walk, certificates, Go Green stickers for vehicles. The centre coordinated eco-competitions (debate, seminar, paintings, quiz) at various school eco-clubs and publicized the event report online and print media in the form of newsletter.

4. E-Launching of EC portal for Category B projects



ENVIS Centre facilitated the Sikkim State level Environment Impact Assessment Authority (SEIAA) and State level Expert Appraisal Committee (SEAC) in e-launching of environment clearance portal through video conferencing at State NIC unit on July 2, 2015. ENVIS is also playing the role of nodal agency to provide IT support to State's SEIAA and SEAC for implementing the online EC process.

5. Inception Workshop for Preparation of State of Environment (SoE) Report for Sikkim



ENVIS Centre at Forest, Environment and Wildlife Management Department, Government of Sikkim in collaboration with the Development Alternatives, New Delhi organized a one day inception workshop for preparation of State of Environment (SoE) Report for Sikkim on the 24th of July 2015 at Forest Conference Hall, Deorali, Gangtok.

The workshop was inaugurated by the Hon'ble Minister for Forest, Environment & Wildlife, Mines, Minerals & Geology, Science & Technology and Climate Change Departments Shri Tshering Wangdi Lepcha. Participated by officer representatives from different government departments, institutions and NGOs throughout the State, the workshop was also participated by senior officers Shri M. P. Johnson, Statistical Adviser and Dr. M. Salahuddin, Director from the Ministry of Environment, Forests & Climate Change, Government of India.

6. Green Teacher's Training for 250 schools of Sikkim



ENVIS Centre at Forests, Environment & Wildlife Management Department, Government of Sikkim organized a Three Days Green Teacher's Training programme for 250 schools on 20th – 22nd of August 2015 at Forest Conference Hall, Gangtok as an ongoing effort towards strengthening the National Green Corps (NGC) programme being implemented in Sikkim.

7. PCRA Painting and Essay writing Competition



ENVIS Centre Sikkim coordinated with as many as 50 schools of the State to participate in the National level Painting and Essay competition for students from Class VI to IX during August –September 2015 on invitation from the Petroleum Conservation Research Association (PCRA) under the Ministry of Petroleum and Natural Gas, Government of India.

8. Customized Hands-on Bhuvan Training for ENVIS Centres at Shillong



ENVIS Sikkim participated in the 2-day customized hands-on training Programme on Bhuvan portal held at North East Space Application Centre (NESAC), Shillong, Meghalaya on 19th -20th November 2015.

9. ENVIS Sikkim activities during SECAS visit at New Jalpaiguri (NJP) Railway Station on 30-31 December, 2015

Sikkim State ENVIS Centre *On Status of Environment and its Related Issues* hosted by Forests, Environment & Wildlife Management Department, Government of Sikkim, Gangtok actively conducted various pre-event and platform based awareness build up activities on environment related issues during the visit to Science Express – Climate Action Special (SECAS) at New Jalpaiguri (NJP) railway station on 30-31 December 2015. In order to spread awareness amongst the local people and educate the school children on issues of climate change, ENVIS Sikkim conducted the following pre-event activities;

Awarded as Best State ENVIS Centre for 2014-15



The Hon'ble Minister of State (Independence Charge) Shri Prakash Javdekar handing the certificate to Sikkim State ENVIS Centre during inaugural function of National Evaluation Workshop on 17th February 2016 at New Delhi.

Chapter - 8

FOREST FIRE

Calendar Year	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
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	-	-	-	-	-

(Source: Territorial Circle)

District Wise fire incidents during 2014 and 2015.

Sl. No.	Year	District	No. Of Incidents	Area damage (Hac)
1	2014	North	5	35
		East	25	178
		South	35	385
		West	15	283
		Total -	80	881
2	2015	North	7	40
		East	43	113
		South	27	201
		West	26	148
		Total -	103	502



Chapter-9

Nurseries under Forest, Env. & Wildlife Management Department.

Sl.No.	District	Name of Nursery	Name of Division	No. of Nursery	Area in Ha.
1	2	3	4	5	6
High Altitude					
1	West	i) Noonthalay	Wildlife	1	1
2		ii) Tersey		1	1
		Sub Total		2	2
3	North	i) Lachen	Territorial	1	0.5
4		ii) Lachung		1	0.5
		Sub Total		2	1
5	East	Kyongnosla Herbal	NTFP	1	1
6	North	Thangu RET		1	1
		Sub Total		2	2
7	East	Kyongnosla	EPC	1	0.6
		Sub Total		1	0.6
Grand Total :				7	5.6

Sl.No.	District	Name of Nursery	Name of Division	No. of Nursery	Area in (Ha.)
1	2	3	4	5	6
Low Altitude					
1	East	Gurdum	WL	1	0.65
2		Rakshey		1	1.00
3		Likchu		1	0.50
Sub total:				3	2.15
TOTAL (LA) WILDLIFE				3	2.15
4	North	Bhop	Env.& SC	1	1.50
5		Phidang		1	1.00
6		Gnon Samdong		1	1.00
Sub total:				3	3.50
7	West	Gyalshing	Env. & SC	1	2.00
8		Sumphu		1	1.20
9		Begha		1	1.00
Sub total:				3	4.20
10	East	Burung	Env. & SC	1	1.00
11		Dhanbari		1	2.50
12		Parakha		1	0.30
13		Chewribotey		1	0.20
14		Dipudara		1	1.00
15		Rongli		1	1.00
16	Lagyap	1	0.5		
17	East	Jitlang	Env. & SC	1	0.5

Sub total:			8	7.00	
18	South	Mangba-Samatar	Env. & SC	1	1.00
19		Passi & Mamring		1	0.70
Sub-total:			2	1.70	
TOTAL (LA) ENV. & SC.			16	16.40	
20	East	Karthok	Territorial	1	1.00
21		Sangchem		1	2.00
22		Bagey Khola		1	1.60
23		Baluwakhani		1	0.50
24		Pangthang		1	0.50
25		Lingdum		1	1.00
Sub total:			6	6.60	
26	West	Yuksom	Territorial	1	1.00
27		Gyalshing		1	0.50
28		Ridge Park		1	2.00
29		Buriakhop		1	1.20
30		Okhrey		1	0.50
31		Tikpur		1	1.50
32		Hee Kyongbari		1	1.00
33		Phedimbotay		1	1.00
Sub total:			8	8.70	
34	North	Pakshep	Territorial	1	2.00
35		Tingchim		1	1.00
36		Heegyathang		1	2.00
37		Lingdong		1	2.00
38		Phodong		1	0.40
39		Rafom		1	0.50
40		Mensithang		1	2.50
41		Kabi		1	1.00
42		Chawang		1	0.60
43		Mangan		1	
44		Dzongu		1	
Sub total:			11	12.00	
45	South	Dorongpani	Territorial	1	1.80
46		Melli		1	2.00
47		Baguwa 10th Mile		1	2.00
48		Public Garden Rock Garden nursery (Chamgoan Park) (LA)		1	2.00
49		Ravong Dew		1	0.40
50		Ralong Deorali		1	1.40
51		Kamdaley		1	2.40
52		Bhanzyang		1	1.00
53		Chisopani		1	1.20
Sub total:			9	14.20	
TOTAL (LA) TERRITORIAL			34	41.50	

Sl.No.	District	Name of Nursery	Name of Division	No. of Nursery	Area in (Ha.)
1	2	3	4	5	6
54	East	Lagyap Nursery	Social Forestry	1	2.60
55		B-II Nursery		1	2.00
56		Assam-Lingzey		1	1.20
57		Burtuk Nursery		1	1.00
58		Gaidhara		1	2.00
59		Salingay Bagey		1	1.00
Sub total:				6	9.80
60	North	Namprikdang	Social Forestry	1	1.00
61		Dikchu Laborbotey		1	1.00
Sub total:				2	2.00
TOTAL (LA) SOCIAL FORESTRY				8	11.80
62	West	Okhrey	SBFP	1	1.50
63		Kaluk		1	1.00
64		Tikjuk		1	1.00
65		Daramdin		1	1.00
66	West	Sherethang	SBFP	1	1.00
Sub total:				5	5.50
67	South	Rayong	SBFP	1	1.00
68		Mamring Ursery		1	1.00
69		Sagbari		1	1.00
Sub total:				3	3.00
70	East	Pangthang	SBFP	1	2.00
Sub total:				1	2.00
71	North	Namprikdang Nursery	SBFP	1	1.00
72		Butterfly Park Nursery Rangrang		1	0.50
Sub total:				2	1.50
TOTAL (LA) SBFP				11	12.00

Sl.No.	District	Name of Nursery	Name of Division	No. of Nursery	Area in (Ha.)
1	2	3	4	5	6
73	South	Mamring	NTFP	1	1.00
Sub total:				1	1.00
74	West	Sipsu	NTFP	1	1.00
Sub total:				1	1.00
75	East	Pangthang TSP Nursery	NTFP	1	1.00
76		Rorathang Amla Nursery		1	1.00
Sub total:				2	2.00
77	North	Namsing TSP Nursery	NTFP	1	1.00
78		Tingda Amla		1	1.00
Sub total:				2	2.00
TOTAL (LA) NTFP				6	6.00
79	South	Bharikhola Nursery	Silviculture	1	1.50
Sub total:				1	1.50
TOTAL (LA) SILVICULTURE				1	1.50
80	East	Pinetum Nursery/ Forest Colony	EPC	1	0.40
Sub total:				1	0.40
TOTAL (LA) EPC				1	0.40
81	North	Mensithang	KNP	1	1.00
Sub total:				1	1.00
TOTAL (LA) KNP				1	1.00
82	East	Bulbulay Nursery	FCA	1	2.00
Sub total:				1	2.00
TOTAL (LA) FCA				1	2.00
TOTAL(LA)				82	94.75
TOTAL (HA)-				07	5.60
GRAND TOTAL:-				89	100.35

FORESTRY AND WILDLIFE

Chapter – 10

(A) FORESTRY:

**Twenty Point Program
TARGET AND ACHIEVEMENT UNDER 20 POINT PROGRAMME.**

52 a – Area covered under plantation					52 b- Seedling planted		
					(in lakhs)		
Sl.No	Year	Target	Achievement (ha)	% Ach.	Target	Achievement	% Ach.
1	2	3	4	5	6	7	8
1	1971-80		7463			6.59	
2	1980-85		3332.65			3.38	
3	1985-86		1666.25			2.79	
4	1986-87		1470			2.45	
5	1987-88		1511.25			2.52	
6	1988-89		1616.25			2.69	
7	1989-90		1852.5			3.09	
8	1990-91		3416.25			5.69	
9	1991-92		4622.47			7.9	
10	1992-93		5484			9.14	
11	1993-94		5786.7			9.64	
12	1994-95		6900			11.5	
13	1995-96		7189.5			11.99	
14	1996-97		7500			12.5	
15	1997-98		6356.56			13.05	
16	1998-90		7537			2.5	
17	1999-00		6923			20.91	
18	2000-01		8048			15.15	
19	2001-02	12000	6217	51.81	22	12.42	56.45
20	2002-03	7500	3696	49.28	22	14.73	66.95
21	2003-04	7500	6125.19	81.67	22	8.66	39.36
22	2004-05	8000	6191	77.39	22	10.32	46.91
23	2005-06	12000	8012.87	66.77	15	6.13	40.86
24	2006-07	15000	3550.26	23.66	15	9.75	65
25	2007-08*	12000	3456.73	28.8	*78	30.84	39.54
26	2008-09	12000	3862.37	32.2	78	23.04	29.55
27	2009-10	25000	8006.85	32.02	162.5	48.61	29.54
28	2010-11	5000	2734.07	54.68	32.5	55.68	105.6
29	2011-12	6000	7454.76	124	39	50.33	129.06%
30	2012-13	7450	9019.23	121.06	48	60.27	125.57
31	2013-14	6160	4805.00	78.00	40.04	31.92	79.72
32	2014-15	6160	4095.30	66.48	40.04	23.07	57.62
33	2015-16	4810	1324.76	27.54	31.27	16.30	52.14

Chapter -11

STATE GREEN MISSION:

The Government of Sikkim launched a unique and innovative programme called “State Green Mission” with the view to raise avenue plantation along the roads and beautification of all vacant lands to further reinforce wide spread recognition of Sikkim being a Green State.

Hence the State Government has taken initiative to generate Avenue Plantation in massive scale by using all the manpower in various departments in the Government and other nature lovers from the Government and Non Governmental Organization including different Eco clubs and Self Help Groups. Accordingly Government had taken out a notification vide no 15/ Home/06 dated 24/2/2006 in this regard. The Hon’ble Chief Minister Shri Pawan Chamling formally launched this Mission On 27th. February 2006 in the presence of all Ministers, officers and the public of Sikkim in the programme organized by the Forest Environment and Wildlife Management Department at Chintan Bhawan, Gangtok.

Aims and Objectives

The major objectives of the programme are to create green belt and avenues for meeting aesthetic recreational needs of the people and beautify the areas for tourist attraction. This programme is expected to provide fringe benefits like reduction in the surface run-off discharge and checking erosion in the downhill side and will also create a store house of genetic diversity by planting all the indigenous trees, shrubs, herbs, climbers, creepers, conifers and green foliages including fruits and medicinal plants.

The greenery generated out of this programme will also reduce noise pollution to the neighboring household population, attract the avifauna, butterflies, squirrels etc and their shelter. Sikkim becoming a Garden State, the mission will also work with objective to promote tourism as a sustainable and eco friendly activity in the state of Sikkim. The programme is also expected to generate awareness on environment & forests and bringing in sense of participation and ownership among people in the whole process.

Implementing Mechanism

A State Level Committee under the chairmanship of Hon’ble Chief Minister is formed to oversee and to provide policy and administrative support to this mission. The Forest, Environment and Wildlife Management Department is the Nodal Department. At constituency level, there is Green Task Force headed by the Area MLA to implement the programme in the Field. One District level officer is appointed as Nodal Officer for each constituency. The Forest Department will provide all technical guidance, saplings and manure for the programme. All the Government departments will provide managerial and labour force from the existing establishment. At ward level, one village protection committee is constituted headed by the concerned ward Panchayat Member.

No. of seedlings planted from 2006-07(Phase I) to 2015-16 (Phase X) - Updated

District	Phase I	Phase II	Phase III	Phase IV	Phase V
	2006-07	2007-08	2008-09	2009-10	2010-11
East	2,65,625	2,11,357	73,885	5,56,518	1,52,824
West	1,58,389	2,74,577	1,48,019	1,19,411	1,11,900
North	33,000	3,40,008	2,19,497	96,032	75,456
South	1,18,603	1,87,572	56,697	4,79,390	23,240
Year wise total	5,75,617	10,13,514	4,98,098	12,51,351	3,63,420

District	Phase VI	Phase VII	Phase VIII	Phase IX	Phase X
	2011-12	2012-13	2013-14	2014-15	2015-16
East	3,98,397	63,530	1,23,210	79,180	77,378
West	11,340	45,400	27,756	34,535	38,567
North	8,044	8,386	51,960	10,570	46,669
South	66,843	25,000	63,458	38,000	1,15,172
Year wise total	4,84,624	1,42,316	2,66,384	1,62,285	2,77,784



Source : ENVIS

(a) PARYAVARAN MAHOTSAV:

In order to keep up with the vision of developing Sikkim into a model green State, the Chief Minister of Sikkim, Shri Pawan Chamling declared June 15-30 as Paryavaran Mahotsav fortnight in Sikkim. The declaration came during his public address on the occasion of launching 8th phase of State Green Mission on the 15th day of June, 2013 at the divine venue Tathagata Tsal, Ravangla in South Sikkim.

Parayavaran Mahotsav or the 'Environment Festival' is a people's programme celebrated throughout the State from 15th to 30th June every year. Paryavaran Mahotsav has added vigor and dynamism to the green Sikkim campaign. It has set up a holistic platform duly integrating the state's flagship programmes viz.State Green Mission and Ten Minutes to Earth which have now become the integral part of Parayavaran Mahotsav celebrated every year by the State Government.

During this fortnightly festival, various activities are carried out throughout the State.

- Flag off programme on 15th June every year, setting up of free seedling distribution booths, information booths.
- Mass plantation and sensitization drives as a part of State Green Mission.
- Ten Minutes to Earth plantation drive on 25th of June from 10.30 am onwards every year.
- Greenathon (Green Run and Green Walk) for a clean and green Sikkim.
- Signature campaign, awareness programmes, lectures, talk shows through media, rally, banner campaign, street plays etc.
- Mass cleanliness drives of major towns and village.
- Eco-paintings/Essay Writing/Debate/Quiz competition at all school eco-clubs.



(b) TEN MINUTES TO EARTH:

Ten Minutes to Earth is a novel, unique and innovative programme conceptualized and initiated by the Chief Minister of Sikkim Shri Pawan Chamling during 2009 in which the 25th.day of June every year is observed by every citizen of the State as an annual ritual by dedicating ten minutes of their time in plantation, protection and conservation of Mother Earth.

During the first year of its implementation in 2009, a total of 6, 10,694 saplings were planted in a stipulated 10 minutes time to beat the world recorded. As the clock ticked 10.30 thousands of people stopped all other activities to pledge themselves to Mother Earth for 10 minutes. The people supported the program enthusiastically in all parts of the State to participate in the historic moments of planting saplings more than the population of State. The stipulated time was from 10.30 am to 10.40 am. The idea was to plant trees equivalent to the population of Sikkim in ten minutes. One tree for one person. This was also a record that within 10 minutes the plants numbering the population of the State were planted anywhere. This ten minutes activity would also help in sequestration of 1400 tons of carbon dioxide annually.

It is people’s programme where every person of Sikkim participates in planting on the same day and at the same time. Sikkim has successfully completed the 8th.successive year of Ten Minutes to Earth programme with more than 15 lakh saplings planted through active participation of the nature loving people of the State.

The department provides free seedlings through distribution booths set up at every forest check post and several other prime locations throughout the State.

**No. of seedlings planted during Ten Minutes to Earth Programme on 25th.June (2009 to 2015)
(Updated)**

District	1 st year	2 nd year	3 rd year	4 th year	5 th year	6 th year	7 th year
	2009	2010	2011	2012	2013	2014	2015
East	2,03,740	1,85,000	64,277	54,255	54,115	50,110	46,169
West	1,86,039	1,15,586	21,895	17,305	10,775	6,721	4,416
North	60,465	54,104	9,224	7,541	14,105	2,009	10,094
South	1,60,450	1,17,341	18,472	8,232	5,365	6,000	18,340
Year wise total	6,10,694	4,72,031	1,13,868	87,333	84,360	64,840	79,019

Source: ENVIS.





Chapter – 12

FOREST CONSERVATION CELL:

Forest Conservation (FC) Cell, a separate working unit headed by the Nodal Officer, is dealing the forest land diversion cases with the inception of Forest (Conservation) Act 1980. This is a unique piece of legislation, enacted by the Parliament in the year 1980, and came into force in the State of Sikkim with the subsequent Rules and Guidelines framed by the Govt of India from time to time.

The Govt. of India launched the on-line submission of Proposals in the web site portal “On-Line Submission & Monitoring of Forest Clearance Cases” designed by the Ministry of Environment Forests & Climate Change, New Delhi and made it mandatory with effect from 15th August 2014. Accordingly, the proposals are being received through the on-line as well as in off-line mode also and processed at each level of authority procedurally, and monitored simultaneously till the forest clearance are granted on case to case basis.

Since 1980, the Act has facilitated various developmental activities like construction of power projects, irrigation project roads, railway lines, school, hospitals, rural electrification, telecommunication, drinking water facilities, mining and others etc in forest lands and checked the indiscriminate diversion of pristine forest areas. The followings are the achievements made by the FC Cell till the year under Report:-

ACHIEVEMENT UNDER FOREST (CONSERVATION) ACT, 1980 (UPDATED TILL THE YEAR ENDING MARCH 2016)

Sl No	Description	Achievement
1	Total number of approved cases as on 31-3-2016	422 Nos
2	Total forest land diverted for non-forestry purposes	2482.87 Ha
3	Total Compensatory afforestation stipulated under the Act	4905.53 Ha.
4	Total CA achieved and updated since 1980 to 31-3-2016	2463.41 Ha

Diversion of forest land

Sl No	Category of approved cases	North		East		South		West		Total	
		No.	Area	No.	Area	No.	Area	No.	Area	No.	Area
1	Defence	9	197.287	6	414	0	0	0	0	15	611.29
2	Drinking Water	0	0	16	3.73	14	20.2	4	4.075	34	28.01
3	Hydel	13	122.77	15	241.7157	5	138.295	5	46.241	38	549.02
4	Irrigation	0	0	1	3.21	3	0.88	1	0.35	5	4.44
5	Mining	1	0.0464	1	0.6176	0	0	0	0	2	0.66
6	Others	28	19.172	55	68.84	31	118.88	15	12.81	129	219.70
7	Road	41	472.14	40	202.74	47	55.46	30	41.61	158	771.95
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	1.92
10	Transmission	4	26.8003	13	64.8031	16	151.63	4	40.765	37	284.00
	Total	96	838.216	150	1013.408	117	485.405	59	145.851	422	2482.88

Chapter - 13

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 2015-2016.

Sl.No.	Forest Produce	Rate/Unit	Quantity extracted & sold (in cft/pile/No.)	Revenue realised (in lakhs)
1	Industrial Wood			
	a) Hard Wood	cft.	1096	6.71
	b) Soft Wood	cft.	5592	14.29
	c) off cut	cft.	103	0.13
2	Fire Wood	pile	212	1.27
3	Disposed trees	No.		
4	Disposed logs/pole	No.	477	4.78
5	Sawing charge	cft.	2370	0.71
6	Charcoal	bag		
7	T.P.Charge			0.31
8.	Miscellaneous			
	Total			28.21
9	Import Fee			
	a) Timber	cft.	100568.40	26.00
	b) Bamboo	No.	100	
	c) License fee			0.55
	Total			26.57
	Grand Total			54.78

(Rupees- Fifty four lakhs seventy eight thousand) only.

Total volume of Timber distributed to REDRH/CMRHM beneficiaries from Government Sawmill under Utilization Circle in 2015-16.

Sl.No.	Name of GVK	District	Date of release	Released from	Quantity (in cft)
1	Tarku GVK	South	29/04/2015	Govt.Sawmill, Bhadikhola, Jorethang, South Sikkim.	120
2	SIRD, Karfectar	South	11/5/2015	Govt.Sawmill, Bhadikhola, Jorethang, South Sikkim.	200
3	Sumbuk GVK	South	26/5/2015	Govt.Sawmill, Bhadikhola, Jorethang, South Sikkim.	20
4	Jorethang, GVK,Salghari	South	16/6/2015	Govt.Sawmill, Bhadikhola, Jorethang, South Sikkim.	140
5	Jorethang GVK,Dhargaon	South	16/6/2015	Govt.Sawmill, Bhadikhola, Jorethang, South Sikkim.	120
6	Temi GVK	South	18/6/2015	Govt.Sawmill, Bhadikhola, Jorethang, South Sikkim.	20
7	Jorethang GVK,Dong, Tinek,Chisopai GPU	South	14/7/2015	Govt.Sawmill, Bhadikhola, Jorethang, South Sikkim.	340
8	Jorethang GVK, Lalshore, Borboday,Tinek, Chisopani GPU	South	6/8/2015	Govt.Sawmill, Bhadikhola, Jorethang, South Sikkim.	120
9	Rhenock GVK	East	3/9/2015	Govt.Sawmill, Bhadikhola, Jorethang, South Sikkim.	220
10	Chumbung GVK	West	2/11/2015	Govt.Sawmill, Bhadikhola, Jorethang, South Sikkim.	120
11	Jorethang GVK, Salghari	South	2/11/2015	Govt.Sawmill, Bhadikhola, Jorethang, South Sikkim.	140
12	Soreng GVK,Singling	West	19/11/2015	Govt.Sawmill, Bhadikhola, Jorethang, South Sikkim.	100
13	Chumbung GVK	West	20/11/2015	Govt.Sawmill, Bhadikhola, Jorethang, South Sikkim.	160
14	Soreng GVK, Singling	West	24/11/2015	Govt.Sawmill, Bhadikhola, Jorethang, South Sikkim.	20
15	Soreng GVK, Tharpu	West	24/11/2015	Govt.Sawmill, Bhadikhola, Jorethang, South Sikkim.	40
16	Soreng GVK, Tharpu	West	25/11/2015	Govt.Sawmill, Bhadikhola, Jorethang, South Sikkim.	20
17	Jorethang GVK	South	1/12/2015	Govt.Sawmill, Bhadikhola, Jorethang, South Sikkim.	20
18	Rhenock GVK	East	7/12/2015	Govt.Sawmill, Bhadikhola, Jorethang, South Sikkim.	80
19	BAC Gyalshig	West	18/12/2015	Govt.Sawmill, Bhadikhola, Jorethang, South Sikkim.	300
20	Soreng BAC	West	28/12/2015	Govt.Sawmill, Bhadikhola, Jorethang, South Sikkim.	20
21	Hee Martam BAC	West	4/2/2016	Govt.Sawmill, Bhadikhola, Jorethang, South Sikkim.	300
22	Soreng GVK	West	4/2/2016	Govt.Sawmill, Bhadikhola, Jorethang, South Sikkim.	60
23	Soreng GVK	West	5/2/2016	Govt.Sawmill, Bhadikhola, Jorethang, South Sikkim.	60
24	Soreng GVK	West	25/2/2016	Govt.Sawmill, Bhadikhola, Jorethang, South Sikkim.	60
25	Soreng GVK,Timburbong	West	31/3/2016	Govt.Sawmill, Bhadikhola, Jorethang, South Sikkim.	20
26	Martam, Namli	East	31/3/2016	Govt.Sawmill, Bhadikhola, Jorethang, South Sikkim.	20
				Total for FY 2015-16	2840

Chapter – 14

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

The State Medicinal Plants Board (SMPB) has been set up under Non-Timber Forest Produce sector, Forest Environment & Wildlife Management Department, Government of Sikkim by State Government as a State Level Body (Nodal Agency) vide Notification No. 100/FEWMD, dated the 10th June 2002 to look after formulation of policy, 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.

Action Plan for Conservation, Development and Sustainable Management of medicinal plants has been prepared by the NTFP/SMPB for development of medicinal plants in the Forest areas under Central Sector Scheme as per the guidelines issued by the National Medicinal Plant Board, Department of AYUSH, Ministry of Health and Family Welfare, Government of India since 11th Five Year Plan and it is further reviewed to 12th Five Year Plan Period.

Accordingly, NTFP Sector of the Department is implementing the schemes for Conservation and Propagation of Rare and Endangered medicinal plants species in Forest areas under Central Sector Schemes funded by the National Medicinal Plants Board (NMPB), Department of AYUSH, Ministry of Health & Family Welfare, Government of India. All the grants-in-aid are provided to NTFP Sector by National Medicinal Plant Board through State Medicinal Plant Board. The details of schemes being implemented by NTFP Sector during the 2015-16 are as under:

Work carried out under the following Schemes/Projects during 2015-16.

Sl.No	Schemes	Physical Achievement	Financial Achievement
1	Conservation, Development and Sustainable Management of selected Rare, Endangered & Threatened (RET) species of Medicinal Plants through Ex-situ Conservation in Forest areas	Rs. 300 Ha	Rs. 92.52 lakhs
2	Resource augmentation of selected species of medicinal Plants (Tree, shrubs and herbs) in Alpine and Sub-Alpine Forest, North District, Sikkim	250 Ha	Rs. 134.98 lakhs
3	In-situ conservation of rich medicinal plants resource areas in the natural habitat and Establishment of Medicinal Conservation Area of High Altitude medicinal plants species	800 Ha	Rs. 9.31 lakhs
4	Financial assistance to Joint Forest Management committee (JFMC) for value addition, warehousing and marketing	14 Units	Rs. 32.45 lakhs

Details of work carried out under NTFP/SMPB during 2015-16.

SI.No	Name of Project / schemes.	
I	Conservation, Development and Sustainable Management of selected Rare, Endangered & Threatened (RET) species of Medicinal Plants (Trees, shrubs and herbs) in different altitudinal zones of Forest areas Project No: CONS/SK-01/2014	
a.	Work implemented at (location)	North: Rombalakha Yumisamdong RF, Rumkung/Phemokaru Lachen RF East : Changudara & 20 th Mile Latui RF South: Boteytar RF, Tamley Chaur RF, Samardong RF West: Bayong Tar RF, Oitey, Deorali, Maneybung RF
b.	Activities Undertaken	1. Plantation of Perennial Herbs and Shrubs having medicinal values in Alpine Forest. 2. Mixed Plantation of trees having medicinal values in Sub-Alpine Forest.
c.	Physical Achievement	North : 85 Ha East: 95Ha South 45 Ha West: 75 Ha
d.	With Particular reference to the Plan schemes in Financial and Physical terms	Physical: Rs. 300 Ha Financial : Rs. 92.52 lakhs
e.	Mention Other Achievement, Innovations, Reforms etc of significant natures	Regeneration through Ex-situ Conservation of Rare, Endangered and Threatened spp. Of herbs, shrubs and trees having high medicinal and aromatic value.
f.	Tangible Outputs	In regeneration and Conservation stage.
g.	Intangible outputs	Conservation of bio-diversity.
h.	Others	Conservation and promotion of highly valued medicinal and aromatic potential through artificial regeneration.

SI.No	Name of Project / Schemes	
II	Resources augmentation of selected species of medicinal plants (tree, shrub and herbs) in Alpine & Sub Alpine forest, North District, Sikkim.	
a.	Work implemented at (location)	North: Lachen RF, Goma Lachen RF, Takshap Lachen RF, Gakun Lachen RF, Sola Chopta/Thangu RF
b.	Activities Undertaken	1. Plantation of Perennial Herbs and Shrubs having medicinal values in Alpine Forest. 2. Mixed Plantation of trees having medicinal values in Sub-Alpine Forest.
c.	Physical Achievement	North : 250Ha
d.	With Particular reference to the Plan schemes in Financial and Physical terms	Physical: 250 Ha Financial : Rs. 134.98 lakhs
e.	Mention Other Achievement, Innovations, Reforms etc of significant natures	Regeneration through Ex-situ Conservation of Rare, Endangered and Threatened spp. Of herbs, shrubs and trees having high medicinal and aromatic value.
f.	Tangible Outputs	In regeneration and Conservation stage.
g.	Intangible outputs	Conservation of bio-diversity.
h.	Others	Conservation and promotion of highly valued medicinal and aromatic potential through artificial regeneration.

Chapter – 15

State Biodiversity Board:

The Sikkim Biodiversity Board (SBB) was established as a statutory body under the government in 2006, after notification of the Sikkim Biological Diversity Rules in 2006, to enable (i) Conservation of our biodiversity, (ii) Sustainable use of bio-resources and (iii) Fair and Equitable Sharing of Benefits under an Access and Benefit Sharing (ABS) mechanism. Headquartered in Forest Secretariat, Deorali, Gangtok, its principal mandate is the establishment of grass-root level Biodiversity Management Committees (BMCs) at GPU level, whose priority is documentation of the existing bio-resources including traditional knowledge holders, village elders, etc. in People's Biodiversity Registers (PBRs), among several other activities such as identification of Biodiversity Heritage Sites (BHS).

Over the decade, annual celebration of International Biodiversity Day in all districts is a regular phenomenon. In 2010 the International Year of Biodiversity (IYB-2010), a One-Species-Per-Day initiative in local media was successfully carried out and was the only one of its kind in the country. A unique exhibition on Seeds and Stamps on Biodiversity was organized, as were others like "Sikkiim: an Island in the Sky".

Documenting of Heritage Trees of Sikkim started in 2009; Pictorial Field Guides (Books) on Mushrooms of Barsey Rhododendron Sanctuary and Ferns & Fern Allies of Sikkim; Posters on Butterflies, State Symbols, Endangered Wildlife of Tso Lhmo Plateau; Compilation of lists of Threatened Species of Sikkim for formal notification by MoEFCC.

The SBB secured a UNEP-GEF-MoEFCC-ABS project "Strengthening the Implementation of the Biological Diversity Act with focus on its Access & Benefits Sharing Mechanism" and along with Grant-in-Aid from the Government of Sikkim formed 28 BMCs to date; one PBR facilitated by Foundation for Revitalizing of local Health Traditions (FRLHT) Bengaluru; four more PBRs in the pipeline; a batch of Village Botanists trained by FRLHT, documentation of Tradeable Bio-resources; at least two ABS Agreements in pipeline.

Gist of Achievement of SBB:

- Activities:**
1. Formation of Biodiversity Management Committees: 28 BMCs at GPU level.
 2. Preparation of one People's Biodiversity Register by Lingee Sokpay BNC, South Sikkim, three more in the making for 03 BMCs.
 3. Awareness programmes at various level for Panchayats, Line Departments, Research institutions, local entrepreneurs and legislators of Sikkim; use of media such as All India Radio (AIR), Gangtok.
 4. Organized training and workshops.
 5. Hosting of website at: www.sbbsikkim.nic.in; launched during International Seminar on Khangchendzonga National Park, Chintan Bhawan, Gangtok.

Sl.No	Particulars	Details
1	Function and Objectives	Implementation of Biological Diversity Act 2002
2	Plan and Non-Plan allocations	PLAN (CESS): Rs.15.00 lakhs and also Funded by NBA 1. Celebration of IBD: Rs.3.5 lakhs 2. Printing of booklets:Rs.4.00 lakhs
3	Work implemented at (location)	Across Sikkim
4	Activities Undertaken	1. Formation of BMC 2. Awareness programme to various stakeholders regarding the act. 3. Printing of booklets.4. UNEP-GEF-MoEF-ABS Project.
a)	With Particular reference to functions of the Department	Formation of 27 BMCs Awareness programmes.
b)	With Particular reference to the Plan schemes in Financial and Physical terms	Operational fund
5	Tangible Outputs	Formation of BMCs
6	Intangible outputs	Mass awareness on Biological Diversity Act 2002
7	Policy/ Notification/ Publication (if any)	Notification: 50/Home/2015 dated 13.10.2015
8	others	Sikkim Biodiversity Board is a statutory body formed under Sec 22 of Biological Diversity Act 2002.SBB came into existence after the notification of "Sikkim State Biological Diversity Rules"2006. The objective of the Act is Conservation of biodiversity, Sustainable use and fair and equitable sharing of benefits. The mandate of the Board is to implement BD Act 2002 in the State.

Formation of Biodiversity Committees in Sikkim:

Biodiversity Management Committee is a statutory body formed under Biological Diversity Act 2002 under Sec 41. It is a seven member committee comprising of Chairperson and Member Secretary with 05 members. In Sikkim BMC is formed at GPU level. Till date 27 BMCs have been formed.

Sl. No.	District	Name of BMC	Member's Name	Designation / Category	Date of constitution
1	NORTH	1 Singhik-Sentam	PemTshering Lepcha	Chairman	30.08.2014
			Karma Galey Lachungpa	Member Secretary	
		2 Toong-Naga	Dorjee Tak Lepcha	Chairman	21.09.2014
			Karma Galey Lachungpa	Member Secretary	
		3 Passingdang-Saffu	Ugen Lepcha	Chairman	13.10.2014
			Karma Wongyal lepcha	Member Secretary	
		4 Lachen	Tamding Chewang lachenpa	Chairman	18.05.2016
				Member Secretary	
		5 Hee-Gyathang	Sambru Ugen Lepcha	Chairman	07.01.2016
			Norden Zangpo Bhutia	Member Secretary	
		6 Lachung	Hishey Lachungpa	Chairman	17.05.2016
			Pradeep Subba	Member Secretary	
2	EAST	1 West Pendam	Sonam Tsh. Lepcha	Chairman	12.06.2014
			T.R Sharma	Member Secretary	
		2 Martam-Nazitam	Sonam Palzor Machungpa	Chairman	01.08.2014
			Manip Chettri	Member secretary	
		3 Tumin	Yog Prasad Sapkota	Chairman	17.09.2014
			Govind Neopaney	Member Secretary	
		4 Assam Lingzey	Dawa Tsh. Bhutia	Chairman	12.01.2016
				Member Secretary	
		5 Dalapchand	Chandramaya Rai	Chairman	28.12.2015
			Meena Gautam	Member Secretary	
3	WEST	1 Pechrek-Hee Patal	Denzam Bhutia	Chairman	06.06.2015
			Binod Chettri	Member Secretary	
		2 Gyaten-Karmatar	Laxu Man Chettri	Chairman	05.09.2014
			Bindhya Subba	Member Secretary	

		3 Ribdi	Phur Tempa Sherpa	Chairman	
			Manjil Kharel	Member Secretary	06.09.2014
		4 Yuksom	Dechen D.Wangchuk Bhutia	Chairman	11.09.2014
			Keshab Chettri	Member Secretary	
		5 Martam	Diken Chettri	Chairman	10.06.2015
			Binod Chettri	Member Secretary	
		6 Labing Garethang	Santa Kumar Limboo	Chairman	23.09.2014
			Keshab Chettri	Member Secretary	
		7 Bermiok-Berthang	Laxmi Pd. Bhattarai	Chairman	10.06.2015
			Rajiv Gurung	Member Secretary	
		8 Maneybong Sopakha	Maina Kumari Limboo	Chairman	12.06.2015
			Rajiv Gurung	Member Secretary	
4	SOUTH	1 Lingi-Sokpay	Sonam Pintso Lepcha	Chairman	11.06.2014
			Durga Pd. Sharma	Member Secretary	
		2 Lingmoo Payong	Dr. Bhoj Kr. Acharya	Chairman	02.06.2015
			Jigdal Bhutia	Member Secretary	
		3 Kitam-Manpur	Savitri Chettri	Chairman	03.08.2014
			Hari maya Thapa	Member Secretary	
		4 Yangang Rangrang	Phuchung Bhutia	Chairman	06.06.2015
			Jigdal Bhutia	Member Secretary	
		5 Niya Mangzing	Tek Nath Sharma	Chairman (now appointed as FG)	03.06.2015
			DL Chettri	Chairman (new)	
			Jigdal Bhutia	Member Secretary	
	6	Rabong Sangmoo	Wang Tashi Bhutia Jigdal Bhutia	Chairman Member Secretary	10.06.2015

	7	Ralong Namlung	Dak Man Rai	Chairman	08.06.2015
			Jigdal Bhutia	Member Secretary	
	8	Borong Phamtam	Binod Gurung	Chairman	04.08.2015
			Jigdal Bhutia	Member Secretary	



WILDLIFE SECTOR

Chapter – 16

(B) WILDLIFE

Wildlife Conservation:

Wildlife Conservation has become worldwide priority sector now-a-days, National Parks and Sanctuaries which act as *sanctum sanctorum* have been commissioned all over the world for better protection and conservation of wildlife. India with the total forest cover of 77.47 million hectares which is 23.57 % of the total land mass of 328.7 million hectares is treasure trove of natural wealth and is one of the 12 mega bio-diversity countries of the world. There are 606 Protected Areas comprising 96 National Parks and 510 Wildlife Sanctuaries with overlapping of 28 Tiger Reserves and 25 Elephant Reserves covering an area of 15.59 million hectares which make up about 4.58% of the total geographic area and 22.12% of total forest cover of the country. In addition to this, there are 150 recognized Zoological Parks having around 40,000 wild animals in captivity in the country. The Wildlife (Protection) Act, 1972 is the umbrella legislation for wildlife conservation in the country.

Sikkim, the 22nd State of India in the north-eastern region lying in the Eastern Himalayas which is one of the 18 biodiversity provinces in the world is a bio-diversity “hotspot”. In the landmass of just 7096 Sq.kms, the State has varied eco-systems from humid tropical valleys to temperate montane habitat, alpine meadows and trans-Himalayan cold desert. It is a veritable house of rich bio-diversity.

In the field of wildlife conservation, the State of Sikkim has made significant progress with the establishment of one National Park, one Biosphere Reserve with the National Park as the Core Zone, seven Wildlife Sanctuaries and one Wildlife Conservation Reserve for the purpose of protection and conservation of wildlife. Details of Wildlife Protected Areas (WPA) are as under:

Sl. No.	Name of WPA	Location	Area (Sq.km)	Date of Notification.
1.	Khangchendzonga National Park	North-West	1784	August, 1977, May, 1997 (expansion)
2.	Shingba Rhododendron Sanctuary	North	43	25-01-1999
3.	Fambonglho Wildlife Sanctuary	East	51.76	02-04-1984
4.	Kyongnosla Alpine Sanctuary	East	31	05-12-1992
5.	Pangolakha Wildlife Sanctuary	East	128	25-01-1999
6.	Kitam Bird Sanctuary	South	06	17-06-2006
7.	Maenam Wildlife Sanctuary	South	35.34	25-01-1999
8.	Sling Dong Fairreanum Orchid Conservation Reserve	South	0.06	05-11-2008
9.	Barsey Rhododendron Sanctuary	West	104	08-07-1996
	Total area		2183.16	

The Wildlife Protected Area covers as much as 30.77 % in terms of geographic area (7096 sq.kms) and 37.37% in terms of total recorded forest area (5841.39 sq.kms) of the State. It is the highest and best covered State in PA network in the country today.

Another heartening aspect of endeavours of the State Government towards protection of mute plants and animals is the declaration of the wildlife heritages.

- (a) The fine and rare Rhododendron species, *Rhododendron niveum* as the State Tree.
- (b) One of the finest decorative Orchid, *Dendrobiumnobile* as the State Flower.
- (c) The cute Cat-Bear, the Red Panda *Ailurusfulgens* found in the temperate bamboo forest as the State Animal and
- (d) The gaudy Blood Pheasant, *Ithaginisruentus* found in alpine land as the State Bird of Sikkim.

State Government is committed to protect and conserve bio-diversity including wildlife resources and it has prioritized this in its agenda for protection, preservation and propagation in in-situ as well as ex-situ habitats.

Wildlife Protected Area Network

- Wildlife Sanctuaries - 7 Nos
- National Park - 1 No
- Biosphere Reserve - 1 No

Total Protected Area
2183.16 sq km

i.e. 30.77% of the State's TGA



Chapter- 17

KHANGCHENDZONGA NATIONAL PARK

A. Khangchendzonga – High Altitude National Park

I. Name, Location, Constitution and Extent:

a. Name	Khangchendzonga National Park
b. Declaration No	Sikkim Official Gazette 95
c. Declaration Date	26 th August 1977 with an initial area 850 sq.kms
d. Area	Extended to 1784.00 sq km. Vide Not. No. 1/KNP/WL/F27 dated 19.05.1997
e. Altitude	1220m – 8586 m
f. Nearest Town	Mangan & Chungthang in North District & Gyalsing in West Districts of Sikkim
g. Road Head	Chungthang, Lachen, Thangu, Lingya-Beh in North, Bermeli-Phamtam in South and Yuksom, Tashiding-Labdang, Uttarey in West Sikkim.
h. Range	Chungthang, Dzongu and Yuksom
Sub-Divisions	KNP Sub-Division North and KNP Sub-Division West

The Khangchendzonga National Park occupies as much as 25.14 percent of the total geographical area of the State of Sikkim. The major portion of the Park lies in the North District and 1/3 area lies in West district. The major portion of the National Park comprises of Glaciers, mountains and lakes. There are about 18 Glaciers and prominent amongst them are, South Lhonak, Langbu, Changsang, Hidden, Tent and Nepal Gap Glacier, Tongshiong, Talung, Onglakthang, East Rathong, Zumthul Phuk and the largest among all is Zemu Glacier. Besides, over 17 crystal clear and placid lakes, the Khangchendzonga National Park is blessed with more than 19 mountain peaks and they boast some of the most magnificent scenery of snow clad in the world. It is place of beauty, charm, peace and remote from the main streams of events. Amongst all the peaks, the most glamorous, magnificent, panoramic and predominant peak is the Mount Khangchendzonga (8586m.), world's third highest peak, which literally narrates the Guardian Deity of Sikkim, along with the other peaks namely: in the middle flank is the beautiful Mount Narsing (5825 m.), Mount. Pandim (6691m.) Mount Kuberon the Southern side, the Twin (7350 m.), NepalPeak (7150 m.), Tent Peak (7365 m.) etc. These lofty peaks, totally or partly have occupied the Khangchendzonga National Park and has influenced the climate of the region and rendered a conducive environment for divers bio-resources including, valuable, rare and endangered species of flora, fauna and avi-fauna. Besides various fauna and avi-fauna, the Park is also the store-house of medicinal plants and other valuable floras.

There are programmes and activities which are being undertaken by the State Forest Department through a Centrally Sponsored Scheme “**Integrated Development of Wildlife Habitats (IDWH)**”, MoEF & CC, Government of India to improve the Park from different means of management, viz.

1. Afforestation activities.
2. Intensification of management and protection of natural resources of the National Park
3. Habitat improvement works and immunization of livestock of fringe villages
4. Soil and Moisture Conservation works
5. Awareness generation and nature education activities

6. Health camps for populace of fringe villages
7. Construction and creation of amenities for frontline forest staff.
8. Research and monitoring works.
9. Management of regulated Eco-tourism
10. Social welfare activities for sustainable development of buffer villagers
11. Conservation and documentation of Natural resources of the Park, etc.

II. Physical and Financial Achievements of Khangchendzonga (High Altitude) National Park under “Integrated Development of Wildlife Habitats” (90:10)

Sl.No	Item of Works	Sanctioned Amount (in lakhs)	Achievement	
			Phy.	Fin. (in lakhs)
1.	Landslide control measures by construction of dry stone wall	16.63	500cum	16.63
2.	Habitat management of Red Panda & Himalayan black bear	4.90	10 ha	4.90
3.	Purchase of Rescue equipments	1.00	LS	1.00
4.	Purchase of GPS Handsets	1.00	LS	1.00
5.	Wetland Development at high altitude areas to rejuvenate & restore the natural lake from siltation	1.00	4 Nos.	1.00
6.	Anti poaching activities- patrolling to check encroachment, poaching	2.00	3Nos.	2.00
7.	Livestock immunization	2.00	LS	2.00
8.	Laying of salt licks	1.8	200kg	1.8
9.	Ex-gratia payment and compensation for crop damage by wild animals	3.00	LS	3.00
10.	Mobilization of rescue team during Himalayan black bear menace	3.00	LS	3.00
11.	Awareness and extension education	1.50	2 Nos.	1.50
				43.83
		Total Central Share (90%)		21.915

(Rupees- Forty-three lakhs and Eighty-three thousand) only

III. Statement of revenue collection and number of tourist inflow in KNP:

Sl. No.	Year	No. of Tourists		Total	Revenue (in Rs.)
		Foreigner	Indian		
2.	2015-16	542 Nos.	1608 Nos.	2150 Nos.	18,67,808/-

IV. Achievements & Progress:

Established Interpretation Centre at Yuksom in 2015 with the assistance of Centre for Environment and Education, Bangalore.

- In December 2015 a tranquilizing operation was carried out at Tashiding by KNP, West field staffs, Himalayan Zoological Park tranquilizing team and Territorial field staffs. A female Himalayan Black Bear which was wandering in the surrounding areas since few months posing threat to the lives and the properties of the locals was successfully tranquilised and caged by the team with the co-operation of the locals and brought to Himalayan Zoological Park.

Inscription Process of Khangchendzonga National Park into the World Heritage Site:

- International Conference on the Natural and Conservation values of KNP was successfully conducted on 14-15 May 2015. Both National and International delegates were present. There was also field visit to western part of KNP.
- During Sept-Oct 2015 there was a Mission Visit from ICOMOS (International Council on Monuments and Sites) and IUCN (International Union for Conservation of Nature) for the evaluation process. The team also had trekking from Yuksom to Dzongri.



From L-R: Smt. R. Ongmu, Chief Secretary; Shri Somnath Poudyal, Hon'ble Minister for Agriculture; Shri G.M. Gurung, Hon'ble Minister for Raods & Bridges; Shri Pawan Chamling, Hon'ble Chief Minister of Sikkim; Shri T.W. Lepcha, Hon'ble Minister for Forest, Env. & WL Mngt. Deptt.; Dr. Thomas Chandy, IFS, Pr. Secretary-cum-PCCF; Dr. M.C. Mathur, Director, WII, Deheradun.



Interpretation Centre at Yuksom, West KNP

B. KHANGCHENDZONGA BIOSPHERE RESERVE:

The boundaries of Khangchendzonga Biosphere Reserve and National Park were amended as suggested by the Survey of India; and whereas since the Khangchendzonga Biosphere Reserve is located in a trans-boundary Himalayan range, the western and the north-west boundary taken is India – Nepal and India – China international boundary and for the remaining areas, Reserve Forest line, as per Topo-sheets (Survey of India) and prominent structures, natural boundaries, like streams, rivers, ridges, peaks and mountains etc. have been taken as the boundary line of the Biosphere Reserve; and whereas the last notification of the year 2000, the total area of the Biosphere Reserve was 2619.92 Km², out of this, an area of 1784 Km² forming Khangchendzonga National Park and 835.92 Km² around this Park comprises the buffer zones, respectively; Now therefore, in order to cover all the fringe villages which have direct or indirect dependency on the adjoining buffer zones for the effective management of the KBR, participation of the people is a must, by involving them from the forest fringe villages in various forestry activities, including, seasonal works, eco-tourism, protection and conservation of natural resources, which may bring the sense of ownership among the people. As well, in majority of the places within these areas the private lands and forest lands are so closely positioned, i.e. almost intermixing, thus, the chances of encroachment of forest areas are extremely high. Consequently, the management of the Biosphere Reserve with a limited and handful of forest frontline staff would become quite difficult without involving the people of the fringe villages. Therefore, by declaring a transition zone, the concept of co-existence of nature and human being while respecting the needs of each other would be fulfilled. In view of above facts and figures, the State Government has notified the details of the Khangchendzonga Biosphere Reserve as under:

I. Total Area of Khangchendzonga Biosphere Reserve as Core Zone, Buffer Zone and Transition Zone:

(a.)	<u>Area of Core Zone:</u> (Khangchendzonga National Park)	1784.00 Km ²
(b.)	<u>Area of Buffer Zone:</u> (i) Buffer Zone – I: (ii) Buffer Zone-II: (iii) Buffer Zone-III: (iv) Buffer Zone-IV:	154.48 Km ² 55.29 Km ² 29.37 Km ² 596.78 Km ²
	Total Buffer Zone:	835.92 Km ²
	Total area of Core & Buffer zones:	2,619.92 Km ²
(c)	<u>Area of Transition zone:</u> (i) Transition zone Part I : (ii) Transition zone Part II: (iii) Transition zone Part III:	28.58 Km ² 111.15 Km ² 171.47 Km ²
	Total area of Transition zones:	311.20 Km ²
	Total area of KBR [(a) Core, (b) Buffer and (c) Transition zone]:	2,931.12 Km ²

II. Important aspects of the Khangchendzonga Biosphere Reserve:

- (a) The core and buffer zone and manipulation activities which may be permitted in the buffer zone will be in conformity with general guidelines for management of biosphere reserves.
- (b) A Transition Zone, where the management structure of the department comprising civil society and other stakeholders play an effective role, would be mandatory
- (c) The core zone of the Biosphere Reserve will be kept absolutely undisturbed.
- (d) The constitution of the Biosphere Reserve by itself will not in any way change the status of legal ownership of land and forests nor affect the rights of tribal and local people in any way.
- (e) State Government will constitute a Biosphere Reserve Management Committee at the state level in accordance with the guidelines for ensuring scientific management of the Biosphere Reserve.
- (f) The Government of Sikkim will nominate an officer as Director of the Biosphere Reserve. He/She may be an existing functionary who may not necessarily be an exclusive functionary for this purpose.

III. Physical and Financial Achievements of Khangchendzonga Biosphere Reserve under “Management Action Plan (MAP) for Conservation and Management of KBR” during FY-2015-16.

The fund was sanctioned by MoEF & CC towards the fag end of the FY-2015-16 vide F.No.-9/13/2011-CS/BR dated: 24th Feb.2016, hence the activities of Khangchendzonga Biosphere Reserve Under “Management Action Plan (MAP) for Conservation and Management of KBR” for FY-2015-16 will be carried out in FY-2016-17.



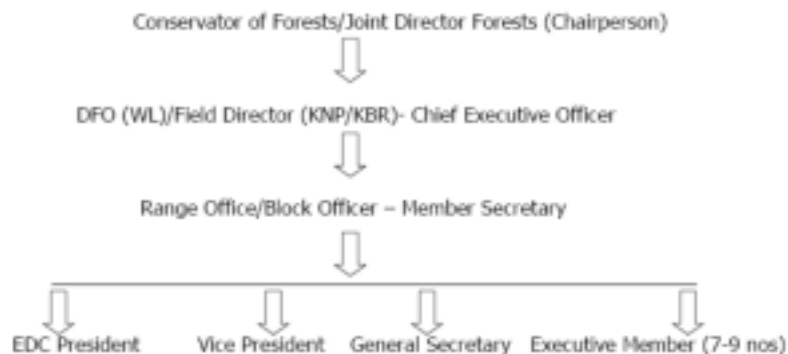
Chief Wildlife Warden, IUCN and ICOMOS Mission along with KNP officials to Dzungri Trek during October 2015 at Yuksom

C. Khangchendzonga National Park-Forest Development Agency:

Forest Development Agency (FDA) under National Afforestation and Eco-Development Board of National Afforestation Programme(NAP), Government of India. All the activities are carried out through the Eco-Development Committees representing all the buffer villages of the Park.

I. Structure/Composition of EDCs (Eco-Development Committees)

The following chart depicts the structure and composition of EDCs under KNP- FDA



Eco-Development Committee Members (One member of every household of respective village is enrolled as EDC members). Each EDC comprises of 10 to 12 Executive members, as the part of elected body. It should be noted that all the executive members are elected by the respective villagers after every two years and also nominate two Panchayat members from Gram Panchayat Unit in each EDC. The EDCs formed under Transition zone of KBR are listed out as follows:

II. List of Eco-Development Committees (EDCs) in the Proposed Transition Zone under KNP-FDA:

S.No.	NAME OF EDC	RANGE/BEAT
I. YUKSOM RANGE: WEST SIKKIM		
1	Khyongtey	- do -
2	Chong	- do -
3	Hongry	Yuksom
4	Neesha	Tashiding
5	Naku	- do -
6	Labdang	- do -
7	Karjee	Tashiding
8	Chongri	Yuksom
9	Dhupi-Narkhola	Tashiding
II. CHUNGTHANG RANGE:NORTH SIKKIM		
10	Muguthang	Lachen
11	Lachen	Lachen
12	Peyong	Chungthang
13	Tumlong	Chungthang
14	Theng	Chungthang
III. DZONGU RANGE: NORTH SIKKIM		
15	Sakyoung	Dzongu
16	Bay-Pentong	- do -
17	Lingzya	- do -
18	Tingvong	- do -
19	Leek	
20	Saffo	- do -
21	Shipgyer	- do -
Total: 21 EDCs		

III. Physical and Financial Achievements of Khangchendzonga National Park under KNP-FDA during FY-2015-16

Sl. No	Items	Physical Target (area in ha.)		Financial Target (in Lakhs)	
		Low Altitude(LA)	High Altitude(HA)	Low Altitude(LA)	High Altitude(HA)
1	Aided Natural Regeneration (200 plants/ha)				
	a) Advance work	0	0	0	0
	b) Creation 30	30	2.35	3.41	
	c) Maintenance I year	0	0	0	0
	II year	25	10	0.53	0.34
	III year	20	10	0.43	0.34
	Sub-total	30	30	3.31	4.10
2	Artificial regeneration (1100 plants/ha)				
	a) Advance work	0	0	0	0
	b) Creation	50	20	7.48	4.41
	c) Maintenance I year	0	0	0	0
	II year	20	10	0.72	0.54
	III year	20	10	0.72	0.54
	Sub-total	50	20	8.92	5.49
3	Bamboo plantation (625 plants/ha)				
	a) Advance work	0	0	0	0
	b) Creation 15	15	1.27	1.82	
	c) Maintenance I year	0	0	0	0
	II year	10	10	0.18	0.28
	III year	50	5	0.88	0.14
	Sub-total	15	15	2.33	2.24
4	Pasture development / Silvi pasture (400plants/ha)				
	a) Advance work	0	0	0	0
	b) Creation	20	0	1.85	0
	c) Maintenance I year	0	0	0	0
	II year	10	0	0.24	0
	III year	148	5	3.56	0.18
	Sub-total	20	0	5.65	0.18
5	Planting of canes (625 plants/ha)				
	a) Advance work	0	0	0	0.00
	b) Creation	25	0	2.20	0.00
	c) Maintenance I year	0	0	0	0.00
	II year	10	0	0.27	0.00
	III year	10	0	0.27	0.00
	Sub-total	25	0	2.74	0.00

6	Mixed plantation of trees having MFP and Medicinal values (1100 plants/ha)				
	a) Advance work	0	0	0	0
	b) Creation	25	10	3.71	2.22
	c) Maintenance I year	0	0	0	0
	II year	10	5	0.34	0.26
	III year	55	10	1.89	0.51
	Sub-total	25	10	5.94	2.99
7	Perennial herbs and shrubs (2000plants/ha)				
	a) Advance work	0	0	0.00	0
	b) Creation	0	10	0.00	2.60
	c) Maintenance I year	0	0	0.00	0
	II year	0	5	0.00	0.32
	III year	0	10	0.00	0.64
	Sub-total	0	10	0.00	3.56
8	Artificial Regeneration (Seabuckthorn Plantation)				
	a) Advance work	0	0	0.00	0
	b) Creation	0	0	0.00	0
	c) Maintenance I year	0	0	0.00	0
	II year	0	7	0.00	0.44
	III year	0	0	0.00	0
	Sub-total	0	0	0.00	0.44
	Total of works	0	0	28.87	18.99
9	Entry Point Activities			0.00	0.00
10	Monitoring & Evaluation			0.00	0.00
11	Overheads			0.00	0.00
12	Balance of 2013-14			0.00	0.00
	Total of High + Low				47.86

IV. Mechanism of participation:

Management of the Protected Area and Biosphere Reserves with people's participation is an approach, which requires changes in the mindset of the officials, field level functionaries and people participating in joint bio-resource management concept. The constitution of the Eco-development committees was a mandatory requirement as per the FDA guidelines issued by NAEB, MOEF, Government of India. After constitution of Eco-development committees with wide mass base, micro planning exercise with PRA tools of each EDC was carried out in detail with the help of NGOs. At present there are 21 EDCs of the KNP through which all the field activities sanctioned under the CSS of KNP/KBR are carried out/implemented. There are still some, left out villages which are to be brought under EDC network in the near futures.

Chapter - 18

Himalayan Zoological Park:

Sikkim by virtue of its location has a wide range of altitudinal variations, which has created an equally wider array of faunal activities. The high altitude faunal species are also in varied forms and most of the larger animals are included in the animal collection plan for education, ex-situ conservation under captivity, research and eco-tourism in the Himalayan Zoological Park, Gangtok. The valuable wildlife species found in the Sikkim Himalaya can hardly be seen by the wildlife conservationists, naturalists, biologists, zoologists and the general public due to harsh climatic condition and mountainous terrain. The Himalayan Zoological Park is the ex-situ conservation area to house the animal species mainly found in the Sikkim Himalayas and Himalayan Ranges. The Zoological Park has a vision to ensure conservation of endangered animals and their environment through a holistic approach towards captive management for education, research and eco-tourism. The area has natural temperate forests of trees smaller bamboos, scrubs, shrubs, herbs, ferns and grasses and is located at an optimal altitudinal zone for the Himalayan fauna under captivity. The Red Panda which is also the State Animal of Sikkim, serow, barking deer, goral, large Indian civet, Himalayan palm civet, etc. are some of the free living animals found in the campus. The Zoological Park has witnessed the successful breeding of Red Panda, Blue Sheep, Ghoral, Leopard Cats, Barking Deer, Tibetan Wolf, Some Pheasants, etc. in the recent past. It has formed a very good habitat for the resident free living animals due to dense-forested hill slopes, which provide both cover for shelter and food to the resident animals.

1. OBJECTIVES:

The Himalayan Zoological Park was established mainly to achieve the following objectives.

- ✓ To promote ex-situ conservation through captive breeding of endangered, threaten 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 recreation to the visitors.
- ✓ To generate employment for the local people and help support their sustenance in their livelihood.

3. In exercise of the powers conferred by Section 64 along with the Sections 38 A to J and other relevant Sections of the Wild Life Protection Act 1972 and the Wildlife Protection (Amendment) Act.2006 and guided by the National Zoo Policy, 1998, the State Government, hereby, declares the following area as per boundaries detailed hereunder as Himalayan Zoological Park, Gangtok with a view to ensure the preservation of its zoological, ecological, geo-morphological and biological significance.

4. BOUNDARIES:

a) South- East:

The Boundary of Himalayan Zoological Park commences from the point just below entry gate opposite of the Ganesh Tok Temple and the hillside 50 ft. away from center of the Northern Bye Pass road and the boundary runs approximately one km. towards southern side, where the boundary turns up towards Hanuman Tok passing through Teen-Chulay and runs along the boundary of Royal Crematorium area and just below Hanuman Tok boundary. The Himalayan Zoological Park boundary runs along the ridge of Lukshyam and towards 4th Mile Ridge till 5th Mile Ridge, on the top of the 2485 m. altitude Topo-sheet contour line. The boundary line of the Himalayan Zoological Park, as described above has been demarcated with Barbed wire and Angle Iron posts.

b) North:

The boundary line of the Himalayan Zoological Park on the Northern side starts from 5th Mile Ridge point above Radio Station colony and runs downward along the small valley of seasonal stream, a tributary of Maney Khola, on the southern side of Radio Station and the boundary line meets with the Public Health Engineering Department Road towards Rateychu water source below Radio Station colony, on the point of 2075 m altitude Topo-sheet contour line. The boundary line of the Himalayan Zoological Park, as described above has been demarcated with Angle Iron posts with Barbed wire fence.

c) West:

The Himalayan Zoological Park boundary line before joining the PHED Road towards Rateychu water source below Radio Station colony turns at the point 27 feet above from the center of the Road towards Ganesh Tok till it joins the Northern Bye Pass near class IV quarter for zoo staff. The Boundary line proceeds further on the 50 feet above from the center of the road up to Ganesh Tok. The boundary line, as described above has been demarcated with Angle Iron posts with Barbed wire fence.

5. LOCATION AND EXTENT OF AREA

The Himalayan Zoological Park is situated about 6.00 km from Gangtok Town and has an area of 230 Hectares in Bulbulay R.F. The Park lies at latitude 20 ° 21 ' North and Longitude 88 ° 39 ' East and has an altitudinal range of 6545 – 8152 feet (1995-2485m) above sea level The Zoological Park is spread over an area of mountainous land with moderate slope terrain suitable for captive management of high altitude animals.

6. LEGAL STATUS OF LAND:

The land where the Zoological Park presently exists is a part of the Bulbulay Reserve Forest, a Government land under the custody of the State Forest, Environment and Wildlife Management Department.

If any offence/offences related to flora, fauna, defilement of natural rocks, uprooting & defilement of signboard, uprooting and shifting of fencing/boundary pillars/posts, vandalism and encroachment of land of Himalayan Zoological Park, Bulbulay, occurs or is detected within the premises of Himalayan Zoological Park, Bulbulay, the offender/culprit shall be prosecuted as per the provisions of the Wildlife (Protection) Act, 1972 (amended up to 2006), Forest Conservation Act, 1980, Environment Protection Act, 1986, Sikkim Forests, Water Courses and Road Reserve Preservation and Protection Act.1988 and other laws of the land.

7. The animals of interest under captivity are:

A Mammals:

- i) Red Panda, (State animal of Sikkim)
- ii) Snow Leopard,
- iii) Tibetan Wolf,
- iv) Common Leopard,
- v) Clouded Leopard
- vi) Himalayan Black Bear,
- vii) Large Indian Civet,
- viii) Palm Civet,
- ix) Leopard Cat,
- x) Yak,
- xi) Goral,
- xii) Barking Deer
- xiii) Porcupine
- xiv) Blue Sheep
- xv) Himalayan Tahr

B Pheasants (Birds);

- i) Kalij Pheasants
- ii) Indian Blue Peafowl
- iii) Lady Amherst Pheasant
- iv) Golden Pheasant
- v). Silver Pheasant.
- vi) Satyr Tragopan

8. Animal Rescue:

The Tranquilizing team under HZP are doing rescue work in the whole area of the state. This year the following animals were rescued:

SL.No.	Species	No. of Animals	Rescued from
1.	Himalayan Black Bear	4	Kyongnosla W/L Sanctuary, East Sikkim
2.	Himalayan Black Bear	1	Tashiding, West Sikkim
3.	Himalayan Palm Civet	1	Gangtok, East Sikkim.

Infrastructural Development:

The Administrative building, Rescue Centre and Post-mortem house with Incinerator are under construction. Apart from these, major works such as installation of CCTV, Eco-trail for the Day hike, Feeding House of Himalayan Black Bear and minor works like repairing of enclosures, visitors' gallery, enrichment of enclosures, wooden flooring etc. were done which enriched the zoo in a greater way.

Future Action Plan

Majority of the people or visitors would agree that they visit zoo for entertainment while the zoo managers keep the wild animals in captivity mainly for their important justifications viz. conservation, education and research.

Many of us have not been able to see the wild animals in their natural habitat. The reasons are many. Wild animals live in places which are not easily accessible to human beings or in other words, they (the animals) don't invite onlookers and some animals are nocturnal so they don't come out in day time.

Zoo is an institution and unless there is entertainment, people would not visit. Therefore, captive wild animals play a vital role to entertain the visitors who, in turn learn a lot more about the animals. A sound zoo speaks itself about its management and the collections of interesting and rare animals. More the number of interesting animal, more the number of visitors and then, the zoo gets support to run the show through entry fees and the grants from the wildlife lovers.

Animal Collection Plan as per Master Plan:

Class	Schedule wise species				Other species	Total species
	I	II	III	IV		
Mammals	24	11	3	-	-	38
Birds	13	-	-	15	-	28
Exotic Birds	-	-	-	-	12	12
Total	37	11	03	15	12	78

Himalayan Zoological Park, Gangtok, is therefore proposed to be developed as the best ex-situ housing facility in the state. The future actions would also ensure better and optimum utilization of the area available which has a vast scope of expansion and development. The facilities and visitor amenities are proposed to be upgraded and provided at strategic locations. The staffing pattern would be strengthened and emphasis would be given to carry out fruitful works in the field of research and development. Veterinary section would be upgraded to provide better vet care to animals in the zoo and protected areas. A 10 kilometre nature trail along the boundary is proposed to be built which would not only cater to the need of the nature lovers but also ensure better management and protection of the park.

Safari Parks for birds and ungulates have been proposed which would showcase the faunal diversity of the state and would be an excellent attraction to the visitors.

Entry Fee for Himalayan Zoological Park:

Particulars	Quantity	Rate	
		Indian in Rs.	Foreigner in Rs.
Adult	Per day	25/-	50/-
Children between 5-14yrs.	Per day	10/-	50/-
Educational visit of school/ college students with uniform escorted by teachers	per student	Free	
Heavy Vehicles (Bus, etc)	Per vehicle	120/-	
Medium Vehicles(Suv,Muv,Utilities, etc)	Per vehicle	100/-	
Light Vehicles(Cars, Sedans, etc)	Per vehicle	50/-	
Two wheelers	Per vehicle	15/-	
Film making Fees (Commercial)	Per Film	15,000/-	
Film making charges (Educational)	Per Film	3,000/-	
Documentary Film Making Fee (Commercial)	Per Film	7,500/-	
Documentary Film Making Fee (Educational)	Per Film	1,500/-	



1. Functions & Objectives:

- To improve the Infrastructure with respect to the Animals Enclosure.
- To provide the essential supporting instruments for the animals.
- To improve the behavioral enrichment of the animals.
- To provide the qualitative feeds to the captive animals.
- To improve the animals' health and numerical strength of the animals through the captive breeding.
- Conservation of endangered species of Himalayan fauna.
- To educate the students and publics on the importance of wild animals and need of its conservation.

2. Activities undertaken:

Following activities were under taken during the Financial Year -2015-16.

Sl. No.	Items of Work	Physical Target	Financial Target (Rs In Lakhs)
1.	Repairing and Carpeting of main Roads (2.34 KM)	2.5Km	75.00
2.	Construction of Visitor's galley at Large Indian Civiet, Himalayan Palm Civet and Leopard Cat	160m	3.00
3.	Cleaning and clearing of jungles inside all Enclosures, Roads and footpaths	87683sqft	3.00
4.	Engagement of Safai Karmachari at the Public amenities on contractual basis (22 days / month)	1 nos (consolidated 500/- month)	0.6
5.	Water source development and repairing of water supply connection	2. source	6.00
6.	Repairing of Keepers' duty shed	1nos	3.00
7.	Development of fodder plots through plantation.	1 Phase	1.70
8.	Construction over breeze on the way to Himalayan Black bear Feed house	2 nos	5.00
9.	Installation of CCTV at the entry gate of HZP	L.s	2.00
10.	Repairing of existing Enclosure of Red Panda Breeding Center and Thar enclosure.	2 nos	5.00
11.	White washing / disinfection of feeding house of all enclosure.	14nos	2.00
12.	Kraal Area in Blue Sheep enclosure	1 nos	5.00
13.	Water pond in all the enclosure	14 nos	2.00
14.	Printing of Entry Tickets (800 book of 50 leafs) = 40,000 tickets.	40,000 tickets.	2.00
15.	FMD Vaccination in the Fringe Villages of Himalayan Zoological Park, Bulbuley.	1.80
	Grand Total =		117.10

Sl. No.	Items of Work	Physical Target	Financial Target (Rs In Lakhs)
01.	Procurement of Animal Feed/ Essential Items/ Medicines at Himalayan Zoological Park	65 nos. of animals	40.00
TOTAL			Rs 40.00

3. Physical Achievements:

a. With Particular reference to the functions of the department:

SL. No	Particulars	Physical Achievements
1.	Captive Breeding	8 New births of captive animals occurred during year. Blue Sheep-1, Ghoral-2, Barking deer-1, Kalij Pheasant-4.

b. Mention of other achievements, Innovations, Reforms etc. of significant nature:

SLNo	Particulars	Achievements, Innovations, Reforms etc.
1.	Revenues	Annual Revenues has been increased from 14.00 Lakhs to 16.17 Lakhs.
2.	Captive Breeding	Successful breeding of Blue Sheep, Ghoral, Barking deer and Kalij Pheasant.
3.	Fodder Plot	Approx 3hac. area developed into Fodder Plot.
4.	Zoo Education	Address on the importance of wildlife and ex-situ conservation to the students and trainees.

4. Intangible Outputs:

- a. Zoo Education: School students and College students, Trainees from different institutions visited zoo and they had been addressed about the Zoo, Ex-situ-conservation, its role and importance. Apart from these, annually 39,653 visitors visited during this financial year and might have enjoyed and acquired knowledge from the zoo.
- b. Day trekkers have enjoyed the 3.74 km long trekking trail which provides not only the walk but also the wild witness of animals, birds and plants.

RESEARCH

Chapter:-19

(I) WILDLIFE RESEARCH :

Biodiversity Research Cell under Directorate of Research, Education & Extension is located in Forest Secretariat building and is headed by Principal Research Officer assisted by five Staff comprising of Range Officer, UDC, LDC cum Herbarium Staff, LDC cum Computer Assistant and Peon.

A. Important Achievements of Biodiversity Research Cell during 2013 to 2016.

- a) Heritage State Forest Herbarium: Biodiversity Research Cell under Directorate of RE&E has mounted 20 different floras from Japanese expedition collection specimens in the State Forest Herbarium.
- b) Survey to find *Cycas petinata* in wild, private holdings, road side areas;
- c) Upgradation of Herbarium;
- d) Construction of wooden box to house the Sikkim Stag Antlers recovered from 'Ocean Lake' Gyam Tsona.
- e) One Day 'Workshop on Disease in Goral, Other Ungulates and Human-WL Conflict' at Sidkeong Tulku Forest Conference Hall, Gangtok on 6 Feb'16 involving subject experts from IISER-Kolkata, Buxa Tiger Reserve, Sikkim Police, Line Departments and Foresters.
- f) Sensitization cum Awareness Programme at Borong, South Sikkim, followed by distribution and administration of essential medicines and health supplements for domesticated livestock along with any treatment in the most affected areas by Forest team (Biod. Research & South WL Div) and Veterinarians from AHLF&VS, Resource Persons (Veterinarians and Paravets)
- g) Specimens treated and mounted in Herbarium. Talks & Lectures delivered in different institutions to promote Research Education & Extension programmes of the Department
- h) Covered most affected areas fringing KBR in this region thro' livestock immunization

B. Education- Lectures/ Seminars/ Talks Delivered

1. 30 May 14: Judged Painting and slogan writing contest of school students around Gangtok on theme "Small Island and Climate Change" at Forest conference Hall by Tsomgo Pokhri Sanrakshan Samiti, organized by WWF-India.
2. 14 Jun 14: Delivered talk on "Environment" at Tashi Namgyal Academy on the occasion of World Environment Day.
3. 19 Sep 14: Judged Combined District & State Level Exhibition cum Project Competition at Sikkim Science Centre, Marchak organized by DST, Govt. of Sikkim
4. 29 Oct 14: Delivered lecture on "Biodiversity Conservation in the Himalayas: Issues and Challenges" in Department of Zoology Sikkim University, 6 Mile Tadong.
5. 16 Jan 15: Attended workshop and delivered talk on "Hamara Jal- Hamara Jeevan" during celebration of "Indian Water Week 2015" at PHE Hall, Nirman Bhawan, Gangtok.

6. 16-29 Jan 15: Delivered talk on Bio-diversity Inventory Technique, Herbarium Collection and Preservation during two weeks General Refresher course for the Frontline Staff at Forest Conference Hall.
7. 12 Mar 15: Delivered talk on Biodiversity Conservation in Sikkim as a Panelist at Chintan Bhawan during CMS Vatavaran Programme.
8. 23 Mar 15: Delivered presentation on “Biodiversity and its importance for sustainable living in the mountains” at SAMETI Hall, Tadong, organized by Spices Board, Gangtok.
9. Wrote Chapter on Flora and Fauna of Sikkim for Class V Term Book by HRDD, GoS.
10. 18 -19 Feb 2016: Delivered a lecture on Biodiversity & Bioresource management in relation to Spices cultivation during District level seminar of Spices Board under MIDH for promotion of Organic farming on focused Spices crops like Large Cardamom, Ginger, Chilli for increased at He- Gyathang, North Sikkim.
11. 27 Apr 2015: Delivered a talk on Importance of butterflies, bees, birds etc. in pollination at Forest Conference Hall.
12. 28 Apr 2015: Deliver a talk on Bio-diversity Inventory Technique, Herbarium Collection and Preservation at Forest Conference Hall
13. 16 Feb 2016: To sensitize student of Taktse International School on Biodiversity issues during their program at Taktse International School
14. 18 Mar 2016 :Deliver a talk on Biodiversity Conservation and Development at Sidkeong Tulku Forest Conference Hall, Deorali, Gangtok

C. Extension – Meeting attended

1. 12 May 14: Invited to review Syllabus of Env. Studies of Undergrad, Courses at Dept. of Geology, Sikkim Univ. Gangtok 10-11 May: Attended Meeting of Research Advisory & Monitoring Committee of BSI at Sikkim Himalayan Regional Centre BSI Gangtok by BSI.
2. 12-13 May 14: Attended training program on Climate Change, Greenhouse Gas Inventories, Vulnerability, Mitigation and Adaptation for Forest Department Officials at Forest Conference hall by USAID and Forest PLUS.
3. 19 May 14: Nomination for potential chapter writers on “Flora & Fauna in Sikkim” for the proposed term book for Classes I-V for all the School of Sikkim for the Session 2015 at Education Secretariat, Conference hall by Human Resource Development Department Govt. of Sikkim Tashiling, Gangtok.
4. 26 Jun 14: Attended XXII ARC meeting on large cardamom held at Tourism Department, (Metro Point) Tadong.
5. 29 Sep 14: Attended workshop on Supporting Urban sustainability & Disaster Risk Reduction at GMC Conference Hall.
6. 18 Oct 14: Attended the Cleanliness Drive Function at Girls School (Paljor Namgyal Sr. Secondary School) Auditorium.
7. 8 Nov 14: Inspection of Garbage Dumping Yard with Hon'ble Mayor, Deputy Mayor and Councilors of GMC at Martam on invitation by GMC.

8. 17-19 Nov 14: Attended workshop on Conservation Assessment and Management Prioritization (CAMP) for Medicinal Plants of Sikkim at Namgyal Institute of Tibetology, Deorali, Gangtok.
9. 19 Jan 15: Attended an interactive meeting with Hon'ble Chief Minister at Saramsa Garden East Sikkim regarding Media/photography.
10. 28 Feb 15: Attended the function on National Science Day 2015 at Sikkim Science Centre.
11. 23 Mar 15: Attended a meeting with GAIA representatives at GMC Conference hall.
12. 10 Apr 2015: Attended Inaugural function of Plant Conservatory and Foundation stone laying ceremony of IC at Bulbuley, East Sikkim
13. 25 Apr 2015: Attended to discuss the pending International Conference has to be convened at Tragopan Meeting Room
14. 7-9 June 2015 Attended State Coordinators ' Workshop of Indian Bird Conservation Network (IBCN) at Khandala, Maharashtra
15. 16 June 2015: Attended Technical Session IV: Strengthening the Management of Khangchendzonga National Park at Mt. Sinolchu Hotel.
16. 1 June 2015: Attended Meeting for Submission of Requirement of Funds under State Plan for current financial Year 2015-16 to DPER & NEC Affairs Department, Government of Sikkim at Tragopan Meeting Room.
17. 25 June 2015: Attended 10 minutes to Earth plantation programme at VIP Colony, Gangtok
18. 29 June 2015: Attended " Paryavaran Mahotsav" 2015 Activities with major Department of State Govt. at Urban Development & Housing Department, Gangtok
19. 30 June 2015: Attended " Paryavaran Mahotsav" 2015 Activities with major Department of State Govt. at Food, Civil Supplies & Consumer Affairs Department, Gangtok
20. 30 June 2015: Attended " Paryavaran Mahotsav" 2015 Cleanu-up Campaign with Ranipool Nagar Panchayat, Area MLA, etc. at Ranipool Bazar and surrounding
21. 28 June 2015: Attended 1st Butterfly Meet Butterflies & Moths of Sikkim-2015 (Bamos), at Yuksam Residency, West Sikkim
22. 17-21 July 2015: Attended 1st Butterfly Meet, Sikkim 2015 at Yuksam, West Sikkim
23. 9 Aug 2015: Attended one day workshop for sharing the initiative of developing Climate Change resilience strategies for Gangtok City at Conference Hall, GMC, Deorali
24. 19 Sep 2015: Attended a final debate competition "Your take your stake" at Tadong Government College
25. 19 Sep 2015: Attended Inaugural Function of the School level workshop on Life Skills at J155 Tayakhim, Daragaon, Tadong.
26. 26 Sep 2015: Judged the student in events "UDAAN"- The Flight of creativity, an Inter School Scholastic Festival at Chintan Bhawan

27. 16 Oct 2015: Judged the Debate on the Topic “ Sikkim can Achieve Swanchh Status well Ahead of 2nd October, 2019 at HPI, Majitar, East Sikkim
28. 16 Nov 2015: Attended Large cardamom productivity award function organised by spices Board at Denzong Regency, Gangtok
29. 17-19 Nov 2015: Attended to be evaluators during Combined District and State Level Exhibition cum Project (D&Slep) Competition 2015 at Marchak, East Sikkim
30. 11 Dec 2015: Interaction with the Local NGO on occasion of International Mountain Day on Disaster Risk Reduction and Mountain Products at Chumbi Residency by IMF.
31. 18 Jan 2016: Attended the cultural programm being presented in honour of the Hon'ble Prime Minister of India, Shri. Narendra Modi at Manan Kendra, Gangtok
32. 23 Jan-3 Feb 2016: Field survey for Indian Bird Conservation Network (IBCN)/ Important Birds Areas IBA related work in Sikkim along with BNHS at Zuluk, Barsey, Kewzing, Maenam, Dentam, Tendong.
33. 26 Feb 2016: Attended Departmental Coordination Meeting at Sidkeong Tulku Forest Conference Hall, Deorali, Gangtok
34. 29-3 Mar 2016: Attended 8th National Workshop in role of JICA Project for “ Promoting Sustainable Participatory Forest Management and livelihoods” at Mayfair, Gangtok committee on ban sale of Forest produce in the open market at Tragopan Hall of the Forest Secretariat Building Deorali

D. Research

- a) Research on Wildlife Disease in Sikkim Goral, Tahr, Serow cases: Wildlife Disease surveillance Trainings for Foresters, JFMCs, EDCs, Himal Rakshaks and Public held in
 - a. February 2014 at Yuksom, West Sikkim
 - b. March 2014 Namprikdang, Dzongu, North Sikkim
 - c. Mar 2015 Ravangla South Sikkim

1. One Day ‘Workshop on Disease in Goral, Other Ungulates and Human-WL Conflict’ at Sidkeong Tulku Forest Conference Hall, Gangtok on 6 th Feb’16 involving subject experts from IISER-Kolkata, Buxa Tiger Reserve, Sikkim Police, Line Departments and Foresters

On the one hand where Sikkim’s wild biodiversity and close to pristine conditions are attracting world-wide attention, of late we are witnessing few instances of wild Goral, Serow and Shapi with skin diseases, as well as reports of increased Human-Wildlife Conflicts (HWC) in forest fringe areas in some parts of Sikkim. This matter was raised by the Hon’ble Chief Minister in his review meeting held with the officials of the Department on 25 January 2016, with directions to address the death of Gorals apparently due to *Sarcoptes* Mange infections. A need was felt to tackle the problems before they got out of hand. To address these two important issues the Department of Forest, Environment & Wildlife Management, Govt. of Sikkim organized a 1-day workshop at the Sidkeong Tulku Forest Conference Hall on 6 Feb 2016, with the twin objectives of (1) sensitization cum experience sharing on Disease in Goral, other Ungulates and Human-Wildlife Conflicts in Sikkim and (2) to enable the drafting of strategies and the way forward.

Participants included Dr. H. K. Chettri Principal Director Animal Husbandry, Livestock, Fisheries and Veterinary Services Department and his senior and field officials, Sub Divisional Magistrates of South, West and East Sikkim, Dr. Y. Siva Prasad IPS Addl. Superintendent of Police (East), along with concerned Forest Officials from all sectors of the Dept. including the Khangchendzonga National Park and Himalayan Zoological Park. The programme was chaired by Mr. C. S. Rao IFS CCF (HQ) cum Chief Wildlife Warden, Sikkim.

Two resource persons Dr. Guha Dharmarajan Disease Ecologist and Ramanujan Fellow from Indian Institute of Science Education and Research (IISER), Kolkata and Dr. Deepak Sharma Veterinary Officer, Buxa Tiger Reserve, North Bengal sensitized the participants about possible causes for and control of such outbreaks of skin diseases in wild Gorals and domestic goats as well as strategies for dealing with Human-Wildlife conflicts especially incursions of Himalayan Black Bear into urban and suburban habitats across Sikkim. Following presentations by the resource persons, by Mr. Nischal Gautam SFS DFO (WL /S), Dr. Madan K. S. Shanker Dy. Dir AHLFVS Dept.; Mr. N. W. Tamang IFS CF (WL), Mr. Tshering Pintso DFO (T/West), Mr. Karma Legshey IFS APD (SBFP) and Dr. Siva Prasad ASP (E), there was active discussion and brainstorming from all concerned. Mrs. Usha Lachungpa Prin. Research Officer & AD-Sikkim Biodiversity Board coordinated the workshop. A draft plan for tackling these two emergencies, following the brainstorming sessions, is being drafted for submission to the government upon finalization.

2. One Day Programme on Tackling Wildlife Disease issues in Forest Fringe areas on 22 June, 16 at Borong Panchayat Hall, South Sikkim

Government is taking serious note of increasing instances of skin diseases in wild ungulates such as Goral, Serow and Shapi in some forest fringe areas of Sikkim. While curable in domesticated livestock like goats, such diseases have led to mortality in the affected wild animals. To tackle this problem Dept. in collaboration with AHLF&VS Dept. conducted some trainings for field staff and local people of Yuksom (West), Dzongu (North) and Ravangla (South) in 2013-14-15 on sample collection procedures, and some preliminary information has also been collected. We also conducted a Workshop in Gangtok on 6 Feb '16, involving Wildlife Disease experts from outside the state.

An outcome of these exercises was that in addition to research on the causative organism/s, regular immunization of domesticated livestock of the forest fringe villagers (whose goats, etc. may stray into the forests and become potential vectors for disease transmission) could help to allay this danger to great extent.

In continuation of this initiative a sensitization cum awareness programme was organized at Borong Panchayat Hall, South Sikkim on 22 June 2016 for 60 nos. of public and Panchayat Members of affected areas of Ralong-Borong, EDC and BMC Members. This was followed by distribution and administration of essential medicines and health supplements for domesticated livestock along with any treatment in the most affected areas by our team of Resource persons (Veterinarians), Foresters and Paravets who also conducted House-to-House visits for the same.

Objective:

- Sensitization cum experience sharing on wildlife disease issues in Sikkim
- House-to-house Distribution of medicines, supplements and treatment of animals where required

Programme /WORKSHOP SESSION: (10.00am – 2.00pm followed by field visits over few days)

1. Registration, Arrival of Guests & Chief Guest; Welcoming of Guest, Resource Persons
2. Introduction to Workshop by Usha Lachungpa (Prin. Research Officer (W/L)-cum-AD (SBB))
3. Experience Sharing by VO (South) Dr. Basant, Dr. Sanjyog Rai VO Tashiding
4. Field modalities and advice by Dr. Karma Dorjee, Veterinarian
5. Distribution of token Health Pack to affected villagers
6. Address by Affected Villager/s, Chief Guest and Guests of Honour
7. Vote of Thanks followed by Field and House-to-House Visits



(II) SILVICULTURE/ HIGH ALTITUDE RESEARCH:

1. The project of Tendong Biodiversity Ecotourism prepared and approval accorded. The State Government is planning to establish a biodiversity park to portray the species available in the domain of the Sikkim Forests with prospective planning of community participation. Primary objective of the project is to develop a mechanism for the dynamic conservation Landscape Plan for the qualitative management of high valued biological resources as germplasm. Planning shall address some important issues concerning a) rare, endangered threatened species habitats developmental constraints b) Biodiversity conservation, prevention, protection, and expansion d) Traditional knowledge societies and their livelihood e) Planning for sustainability f) Forest health and vitality g) Conservation of soil and water resources h) Socio- cultural and spiritual values i) and benefit.

2. Cabinet approval and sanctioned for the establishment of Quality Control Laboratory of Silviculture and Research of Forests, Environment and Wildlife Management Department, Government of Sikkim. The State Government has undertaken several requisite measures for the protection and improvement of Forests, Environment, Wildlife, Organic Forests produces, Quality Organic bioresources and such other products. To strengthen the aforesaid activities, the Quality Control Laboratory of Silviculture and Research shall provide support to the Government of Sikkim for the qualitative and quantitative managements as Silviculture and Research Sector of Forests, Environment and Wildlife Management Department is actively involved in Research, Education and Extension activities of forests and forest related produces, and other allied subjects across the state for overall developments. The scientific evolved data of Quality Control Laboratory of Silviculture and Research shall extend support and basis for the policy formulation, upgradation of infrastructures within forest areas and farm sectors, health and safety for the qualitative and quantitative managements. Furthermore, it extends additional supports to the micro-industries, entrepreneurs, employment generation, and such other adopting single window operation. The objectives of the Quality Control Laboratory are to provide testing of pesticides and other components, support organic processed produces, strengthen the market of organic produces, evolve scientific basis for the State Plan, to become a state-of –the-art resource centre for traditional knowledge and practices, develop skilled manpower for quality control activities, generation of employment to youth and other stakeholders by providing technical information on produces and natural resources support system to local food produces, support and develop organic food products of Sikkim, health and safety, back ended support for the scientific data generation, to test the biochemical composition of different wild fruits and palatable items, empowerment of the forest researches and management by capacity building of human resources of Departments like Joint Forest Management Committees, Eco-development Committees, and other stakeholders, to conserve the bio-resources providing technical supports, pertaining to bio-diversity, bio-pesticides, herbal healing formulation etc., one step solution for testing and such other. The Quality Control Laboratory of Silviculture and Research shall provide training, research and development activities on value addition activities, courses, organize workshop, seminar, awareness, basis for policy formulation and such other as deemed fit to the aims and objectives of the State Government.

ENVIRONMENT & SOIL CONSERVATION

Chapter –20

Environment & Soil Conservation:

Environment and Soil Conservation functions to carry out environment, soil and moisture conservation measures. The Circle also imparts awareness regarding role of the Forest Department in conserving environment. It also functions in co-ordination with other line Departments in implementing the policies of the State Government. The Circle also co-ordinates with State ENVIS to impart awareness about environmental conservation in school children.

1. Work carried out under the following Schemes/projects under Env. & SC, West Division during 2015-16.

Sl. No.	Schemes	Physical Achievement (ha)	Financial Achievement (Rs.in lakhs)
01	CAT Plan of Rangit-II HEP		
a)	Artificial Regeneration	10	3.73
b)	Aided Natural Regeneration (HA)	15	4.54
c)	Aided Natural Regeneration(LA)	15	3.08
d)	Bamboo Plantation(Pareng)	10	2.86
e)	Pasture Development	10	1.87
f)	Nursery maintenance	2.8	11.10
g)	Broom grass	20	4.23
i)	Cardamom plantation	20	5.00

2. Work carried out under Cleanliness Drives in different location during 2015-16

Sl.No.	Location	Remarks.
1	Uttarey to Tenzing Hillary Park	Cleanliness drive along the road was conducted with active participation from local people and line Departments.
2	Lingchom	Cleanliness drive along the road with active participation from the school children.

3. Statement showing the details of work carried out under Env. & S.C.North Division during 2015-16

(Rs.in lakhs)						
Sl. No.	Name of schemes or Project	Name of work	Name of location	Phy.	Fin.	Achievement
01	Sikkim Ecology fund & Env.Cess	Creation of Soil & Moisture Conservation work	Raboom	07 Ha	4.77	100%
02	Conservation & Management of Gurudongmar wet land	(1)Conservation of Dry stone wall	(1)Gurudongmar in an around Lake area	1 km	8.71	100%
		(2) Construction of Dry rubble stone massang	(2)”.....	300 cum	5.76	100%
		(3) Creation of seabuk thorn.	(3) Raboom selop	13.85 Ha	12.83	100%

ECOLOGY AND ENVIRONMENT

Chapter- 21

STATE POLLUTION CONTROL BOARD

The State Pollution Control Board-Sikkim is entrusted with the implementation of following Acts & Rules:

1. Water (Prevention & Control of Pollution) Act, 1974
2. Water (Prevention & Control of Pollution) Cess Act, 1977
3. Air ((Prevention & Control of Pollution) Act, 1981
4. The Environmental (Protection) Act, 1986
5. Hazardous Waste (Management & Handling) Rules, 1989
6. Hazardous Waste (Management, Handling and Transboundary Movement) Rule, 2008
7. Public Liability Insurance Act, 1991
8. Bio-Medical Waste (Management & Handling) Rules, 1998
9. The Recycled Plastics Manufacture & Usage Rules, 1999
10. Environment (Protection) (Second Amendment) Rules, 1999 regarding standard of fire works
11. Noise Pollution (Regulation & Control) Rules, 2000
12. The Municipal Solid Wastes (Management & Handling) Rules, 2000
13. Ozone Depleting Substances (Regulation & Control) Rules, 2001
14. The Batteries (Management & Handling) Rules, 2001

1. Objectives of SPCB-Sikkim:

As defined by the Water (Prevention & Control of Pollution) Act, 1974, the State Pollution Control Board is to perform the following functions:

1. To plan a comprehensive programme for the prevention, control or abatement of Pollution of streams and wells in the State and to secure the execution thereof;
2. To advice the State Government on any matter concerning the prevention, control or abatement of water pollution;
3. To collect and disseminate information relating to water pollution and the prevention, control or abatement thereof;
4. To encourage, conduct and participate in investigations and research relating to problems of water pollution and prevention, control or abatement of water pollution;
5. To collaborate with the Central Board in organizing the training of persons engaged in programme relating to prevention, control or abatement of water pollution and to organize mass education programmes relating thereto;
6. To inspect sewage or trade effluents, works and plants for the treatment of sewage and the trade effluents and to review plans, specifications or other data relating to plans set up for the treatment of water;

7. Lay down, modify effluent standards for the sewage and trade effluents and for the quality of receiving waters resulting from the discharge of effluents and to classify waters of the State;
8. To evolve methods of utilization of sewage and suitable trade effluents in agriculture;
9. To inspect air pollution control equipments and give such directions as may be considered necessary for pollution control.

2. Role of State Pollution Control Board:

Issuance of various environmental permits, which include:

- a) Consent to establish
- b) Consent to operate
- c) Authorization for hazardous waste management
- d) Authorization for bio-medical waste management; and
- e) Permission for import and storage of hazardous chemicals:
 - Ensuring control of pollution through such instruments,
 - Generation and dissemination of data related to environmental quality through regular monitoring and surveillance;
 - Conducting research and development activities on environmental matters;
 - Encouraging and promoting environmental research by academicians and institutions;
 - Imparting training on environment;
 - Building environmental awareness for the community;
 - Addressing public grievances through redressal of environmental problems.

3. Activities of State Pollution Control Board:

Projects implemented by SPCB funded by CPCB are:

- a) National Air Quality Monitoring Programme (NAMP)
 - b) Monitoring of Indian National Aquatic Resources (MINARS)
- The above schemes were funded by CPCB and MOEF and implemented as per the guidelines given by CPCB & MOEF.

National Air Quality Monitoring Programme (NAMP):

The primary aim of the ambient air quality standard is to provide a basis of protecting public health from adverse effects of air pollution and for eliminating or reducing to a minimum, those contaminants of air that are known or likely to be hazardous to human being, animals, vegetative and historical monuments.

Under the National Air Quality Monitoring Programme (NAMP) sponsored by CPCB, MoEF, New Delhi, SPCB is monitoring the air quality of Gangtok town at two established stations, one at White Hall Complex (Sensitive zone) and the other at Hospital Point (Commercial Zone).

Air sampling is analyzed in the SPCB-Sikkim laboratory for various pollutants like SPM, Oxides of Nitrogen and Sulphur di-oxide. The data generated is forwarded to CPCB for compilation and further use.

Monitoring of Indian National Aquatic Resources (MINARS):

The major objectives of water quality monitoring are:

- To warrant appropriate pollution Control and to discharge reaching the water bodies;
- To identify any deficiency in the 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.

Under the MINARS programme the SPCB-Sikkim collects water samples from River Teesta and its tributaries at nine stations and from River Rangit and its tributaries at five stations. This programme is totally funded by CPCB.The details of sampling stations are as follows:

<u>Sl. No.</u>	<u>Station Name</u>	<u>Station Code</u>	<u>Sl.No.</u>	<u>Station Name</u>	<u>Station Code.</u>
1.	Chungthang	1801	10.	Rangit-NHPC(Dam site)	1810
2.	Dikchu	1802	11.	Legship	1811
3.	Burtuk	1803	12.	Reshi	1812
4.	Adampool	1804	13.	Jorethang	1813
5.	Ranipool	1805	14.	Triveni	1814
6.	Singtam	1806			
7.	Singtam (D.S.)	1807			
8.	Rangpo	1808			
9.	Melli	1809			

SCHEMES / PROJECTS

Chapter – 22

(A) Centrally sponsored schemes (CSS)

(I) Integrated Watershed Management Programme (IWMP)

The Integrated Watershed management Programme (IWMP) was initiated in the year 2009-2010. Its nomenclature has now been changed to Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) and Agriculture Department is the Nodal Department in the state. The main objective of the programme with the motto of “Hark het ko Pani” substantial dependency on rainfall hampers the agricultural production. Empirical evidences suggest that protective irrigation by the way of watershed management encourages farmers to invest more in farming technology and inputs leading to productivity enhancement and increased farms income. The objective of the programme of PMKSY (Watershed Development) envisaged multiple components as under.

- a. To achieve convergence of investment of fund in irrigation at the field level by preparing required District Level water use plan.
- b. Enhance the physical access of water on the farm and expand cultivable area to assured “Her Khet Ko Pani”
- c. Integration of water sources distribution and its efficient use to make best use of water through appropriate technology and practices.
- d. Improve on farms water use efficiency to reduce wastage and increase available both in duration and extent.
- e. Introduce sustainable water conservation, arresting runoff, providing livelihood and other natural resources management activities.
- f. Promote extension activities relating to water harvesting, water management and crop production enhancement for farmers and grass root level field functionaries.
- g. This will help to increase agricultural production, productivity and enhance farmer income.

To achieve above objectives, the IWMP under PMKSY focus on the following components.

- a. Creation of new water sources: repair of existing structures, restoration and renovation of defunct water sources; construction of water harvesting structures enhancing potentials of traditional water bodies at watershed areas, etc.
- b. Promotion of scientific moisture conservation and run off control measures to improve water sources to create opportunities for farmers to access the water.
- c. Farmers oriented activities like capacity building, training and exposure visits, demonstration and skill developments in water and crop management practices including large scale awareness on more crop per drop of water.

PMKSY (watershed components) will have the following programme components for effective management of runoff water, soil and moisture conservation activities, rain water harvesting in situ moisture conservation and other allied activities on watershed basis. There are:

- Water harvesting structures such as small check dams in gullies, Nala bund, Farms ponds, tanks etc.

- Capacity building entry point activities, ridge area treatment, drainage line treatment, soil and moisture conservation, nursery raising, afforestation, Horticultural, Pasture development, livelihood activities for the asset less persons and production system & micro enterprises for small and marginal farmers etc

Budget Provision and achievement for the year 2015-16 has been given in the table.

Detail of Integrated Watershed Management Programme – Sikkim

YEAR OF Sanction (2009-10)	AREA	PROJECT COST	C.S (90%)	S.S (10%)
BATCH-I	Ha.	Rs.	Rs.	Rs.
IWMP-I EAST	4,000	60,000,000	54,000,000	6,000,000
IWMP-II EAST	4,000	60,000,000	54,000,000	6,000,000
IWMP-I NORTH	6,500	97,500,000	87,750,000	9,750,000
TOTAL (A)	14,500	217,500,000	195,750,000	21,750,000

YEAR OF Sanction (2010-11)	AREA	PROJECT COST	C.S (90%)	S.S (10%)
BATCH-II	Ha.	Rs.	Rs.	Rs.
IWMP-I SOUTH	4,599	68,985,000	62,086,500	6,898,500
IWMP-II SOUTH	4,990	74,850,000	67,365,000	7,485,000
IWMP-I WEST	4,450	66,750,000	60,075,000	6,675,000
TOTAL (B)	14,039	210,585,000	189,526,500	21,058,500

YEAR OF Sanction (2011-12)	AREA	PROJECT COST	C.S (90%)	S.S (10%)
BATCH-III	Ha.	Rs.	Rs.	Rs.
IWMP-III EAST	5,200	78,000,000	70,200,000	7,800,000
IWMP-IV EAST	3,400	51,000,000	45,900,000	5,100,000
IWMP-III SOUTH	5,600	84,000,000	75,600,000	8,400,000
TOTAL (C)	14,200	213,000,000	191,700,000	21,300,000

YEAR OF Sanction (2012-13)	AREA	PROJECT COST	C.S (90%)	S.S (10%)
BATCH-IV	Ha.	Rs.	Rs.	Rs.
IWMP-IV SOUTH	3,843	57,645,000	51,880,500	5,764,500
IWMP-II WEST	3,103	46,545,000	41,890,500	4,654,500
TOTAL (D)	6,946	104,190,000	93,771,000	10,419,000

YEAR OF Sanction (2014-15)	AREA	PROJECT COST	C.S (90%)	S.S (10%)
BATCH-VI	Ha.	Rs.	Rs.	Rs.
IWMP-V EAST	3,727	55,905,000	50,314,500	5,590,500
IWMP-II North	4,494	67,410,000	60,669,000	6,741,000
IWMP-V SOUTH	4,612	69,172,500	62,255,250	6,917,250
IWMP-III West	2,865	42,975,000	38,677,500	4,297,500
TOTAL (E)	15,698	235,462,500	211,916,250	23,546,250

Status of Integrated Watershed Management Programme for the F.Y.2015-16

District	No. & Name of Projects	Year of Sanction	Total Project Cost	Date of commencement	Date of completion	Financial
North	2	2009-10 & 2014-15	1,649.10	2009-10	under progress	6.02
East	5	2009-10 to 2013 & 2014-15	3,049.05	2009-10	under progress	18.22
South	5	2010-11 to 2013 & 2014-15	3,546.53	2010-11	under progress	5.94
West	3	2010-11 to 2013 & 2014-15	1,562.70	2010-11	under progress	0.61

(II) Development of Eco tourism at Golitar in Fambonglho Wildlife Sanctuary, East Sikkim (NEC):

Development of Eco-tourism at Golitar in Fambonglho Wildlife Sanctuary, a project to develop the area as the best eco-tourism destination near the State capital has been initiated by the East Wildlife Division, Forest, Env. & Wildlife Management Department. Nature Interpretation Centre-cum-Office, NIC-cum-Reception Centre, Eco-Huts, Forest Guard Barrack, viewing deck, cafeteria, Gazebo, traditional entry gate etc. are included in the project.

- The Project is sanction by the North Easter Council (NEC) Secretariat, Shillong under the Ministry of Development of North Easter Region, Government of India.
- Cost of Project Rs.394.63 lakhs (Rupees three crores ninety four lakhs sixty three thousand) only.

(III) Creation of Banbas Project in Barsey Rhododendron Sanctuary at Hee-Bermiok (NEC).

Objective of the Project:

To promote sustainable eco-tourism for overall development of the local community with a better understanding and appreciation of natural and cultural values. The project is also aimed at providing a unique close-to-nature based eco-tourism that involves education and interpretation of the natural environment to the people in general.

Details

- The Project is sanctioned by the North Eastern Council (NEC) Secretariat, Shillong under the Ministry of Development of North Eastern Region, Government of India.
- Cost of the Project Rs.280 lakhs (Rupees two crores eighty lakhs) only on the sharing basis of 90:10 between the North Eastern Council and the State Government respectively.

(IV) Development of Eco-tourism & allied activities at Chauridara, Green Village, South Sikkim (NEC).

Chauridara, a small village falls in South District in the State of Sikkim. It is situated in the Payong Kau Gram Panchayat Unit under 16 Tumin Lingi Constituency and on the base of the Maenam Wildlife Sanctuary with Bhalley-dhunga at the top and crowned by the religious Maenam Gumpa. The village is bordered by Simana Khola in the South, Sukwa Khola in the West, Dhamala dara in the East and Maenam Wildlife Sanctuary in the North. It is a small village with just 62 households including the part of Darakharka village with the population of 357 numbers. The village is mostly dominated by a community of Most Backward Classes (MBCs) with majority of numbers of Rai community. Substantial population is also represented by people of Other Backward Classes (OBCs) and small number being represented by Scheduled Tribes. With this background, the people of Chauridara village have proposed for declaration of this village as 'Green Village' and the same has been agreed by the Chief Minister, Government of Sikkim in his village to village tour in 2009. Chief Minister with the opinion of the local people have suggested for development of infrastructures in a very eco-friendly approach and with green concept. It should also be supported by home-stay facilities in the village itself. This would in turn give them a sustainable livelihood through eco-tourism and reduce their dependence on forests. They have agreed to prevent hunting of wild animals and felling of trees in their area and have resolved for conservation of the environment and nature. They have proposed to go for organic agricultural and horticultural practice and use of eco-friendly utilities.

Objective:

1. To provide eco tourism related inputs at Chauridara, South Sikkim.
2. To create economic value and protection for resources which otherwise have no perceived value to residents or represent a cost rather than a benefit.
3. To give alternative source of livelihood for the poor people of the area through eco-tourism.
4. To create awareness of this useful resource amongst the local people.
5. To introduce a concept of Education through Recreation.

The Government of India, North Eastern Council Secretariat, Nongrim Hills, Shillong-793003 vide Letter No.NEC/TRSM/SK/ECO-TOURISM/302/2012 dated Shillong, the 18th March, 2013 has accorded Administrative Approval to the project "Development of Eco-Tourism and Allied Activities at Chauri Dara, Green Village in South Sikkim" at an estimated cost of Rs.363.41 lakhs (Rupees- three crores sixty three lakhs forty one thousand) only on 90:10 basis, out of which Rs.327.07 lakhs will be borne by the Government of India and the rest Rs.36.34 lakhs (Rupees- thirty six lakhs thirty four thousand) only by the State Government.

(V) Establishment of Sidkeong Tulku Bird Park, Rabdentse, West Sikkim.

The construction of Sidkeong Tulku Bird Park, Rabdentse, West Sikkim was conceived with an objective to pay homage to the Father of Forestry (the then king of Sikkim) who had first introduced modern forestry in Sikkim. This Rabgdentse are (Old Palace) having historical importance also housed myriads of birds and in order to show case this magnificent hotspot to outside world to attract unstinted tourist both domestic and foreigners is the basic idea behind this thereby boosting business of the stakeholders. The infrastructures were created to give the best ideal natural habitat to these birds within this Park and also to attract migratory birds to rest for a while and facilitate breeding also.

Background of the Project:

The project was initiated in the year 2008-2009 involving an area of 13,000 sqm. at the total cost of Rs.684,85 lakhs including 15% above on civil cost sanctioned under one time grants ACA/SPA in the year 2008.

National Afforestation Programme (NAP): Forest Development Agency North, East, South & West (Territorial & Wildlife) and KNP

NAP is a flagship program of the Ministry of Environment, Forests and Climate Change which aims at augmenting the forest and tree covers of the country in pursuance of the goals enshrined in the National Forest Policy 1988. It is being implemented in the participatory mode of involving the grass roots level communities, the Joint Forest Management Committees (JFMCs) and the Eco-Development Committees (EDCs). The plantation are planned and executed by these JFMCs and EDCs in their own areas. The hierarchy of objectives of the Scheme described in the Logical Framework' format is as follows: (i) Super-Goal: Sustainable development and management of forest resources. (ii) Goal: Increase and / or Improve Forest and Tree Cover (ITC) (iii) Purpose: Rehabilitation of degraded forests and other areas by institutionalizing decentralized/ participatory forest management and supplementing livelihoods improvement processes.

Project Area:

The Scheme will be implemented to regenerate, afforest or reforest degraded forests and adjoining lands, under both public as well as private tenure. Due priority will be given to the treatment of problem, eco sensitive and disaster prone areas, such as coastal areas, mangroves, ravines, shifting cultivation areas, cold and hot arid areas, tank foreshore, strips along public infrastructure etc. Project area will be selected in a manner that the major part is forest or public lands. Agro-forestry model may be permitted on non-forestlands, including for rehabilitation of shifting cultivation lands and tree plantation in cold arid areas. Preferably blocks of 5 hectares and above will be taken-up for treatment under a project; however, smaller area may be taken up in the JFMC/EDC has agreed to offer additional voluntary support required for regeneration and maintenance of a smaller area.

(V) Green India Mission:

The National Mission for a Green India has been approved by the Prime Minister's Council on Climate Change. The Mission is one of eight missions under India's National Action Plan on Climate Change (NAPCC). The Mission aims to increase the quantity and quality of 10 million ha. of forest area, achieving an annual CO² sequestration of 50 to 60 million tones by 2020.

Mission Objectives:

The Mission objective is to increase forest/tree cover on five million ha. of forested and degraded forest land and improved quality of forest cover on another 5 million ha – a total of 10 million ha. The Mission will also focus on improvement of ecosystem services, including biodiversity, hydrological services and carbon sequestration and aim to increase forest-based livelihood incomes for 3 million forest dependent families. In terms of carbon sequestration, the mission aims to reach an annual CO² sequestration of 50 to 60 million tones by 2020, which will increase the share of green house gas(GHG) emissions offset by India's forest and tree cover to around 6 percent as compared to 4.5 percent that would have been offset in the absence of the Mission. The perspective plan of this Mission for Sikkim has been formulated.

(B) Externally Aided Project (EAP):

1. State Biodiversity Conservation and Forest Management Project (JICA).

Sl no	Particulars	Details	
1	Name of Circle /Division /Directorate /Other	4 circles <ul style="list-style-type: none"> • Wild life circles – (all forest division) • Territorial circles – (all forest division) • KNP • Working Plan 	
2	Function and Objective	<p>Function – Project function in following areas:</p> <ul style="list-style-type: none"> • Preparatory work • Forest and Biodiversity Conservation • Ecotourism • Joint Forest Management • Organizational strengthening <p>Objective</p> <ul style="list-style-type: none"> • To strengthen biodiversity conservation activities and forest management capacity including organizational strengthening of the forest department, and • To improve livelihood for the local people by promoting sustainable biodiversity conservation 	
3	Plan and non plan allocation in Cr Rs.	C1: Preparatory Works	0.01
C2: Biodiversity Conservation		8.38	
C3: Ecotourism		8.75	
C4: Joint Forest Management		8.41	
C5: Organizational Strengthening		6.40	
Price escalation (for construction works, labour, purchase of equipment etc.)		1.01	
Physical Contingency		7.69	
Consulting Services		3.28	
Taxes and Duties		3.19	
General Administration		1.18	
Total Annual Planned allocation 15-16		48.30	

4.	Work implemented at (Location)	<p>Project being implemented in 4 Districts (East, West, North, South) and 9 divisions. The list is given below:</p> <ol style="list-style-type: none"> 1. East (T) 2. East (WL) 3. West (T) 4. West (WL) 5. South (T) 6. South (WL) 7. North (T) 8. North (WL) 9. KNP 	
5.	Activities undertaken	C1 Preparatory Work	<ol style="list-style-type: none"> 1. Preparation of 6th Annual Plan of Operation (APO) and printing of APO for fiscal year 2015-2016 2. Post advertised, written examination conducted for the appointment of survey expert (1), JRF (1), Accountant (3), Junior Accountant (1), Office Assistants (1), Peon(2), Driver (9)and Safai karmachari (2) on contractual basis 3. Printing of Project Implementation Manual
		C2 Forest and Biodiversity Conservation	<ol style="list-style-type: none"> 1. GIS Lab up graded and satellite images procured 2. Atlas – prepared and a book was released by Hon'ble Chief Minister on 15th August 2015 3. Rapid Biodiversity Survey Report – II released by Hon'ble Chief Minister on 15th May 2015 4. RBS Works, Survey conducted in Pangolakha Wildlife Sanctuary 5. Climate Change Study, Proposal on Study on Climate Change in Himalayas is by Sikkim University, was under review by SBFP 6. Proposal on Study on Impact of Ban on Grazing, received from CLAY, Mumbai and TMI, Gangtok; Initiated evaluation process 7. Engage WII, Dehradun for evaluating management effectiveness of the protected area plan and up gradation of the management plan including technical guidance in coordination with wild life sector, FEWMD. WII conducted workshop and study. 8. Identification of Flagship Species, list of potential 39 Flagship species finalized and draft booklet prepared

		<p>C3 Ecotourism</p>	<ol style="list-style-type: none"> 9. MOU signed with WWF, Sikkim and study of Red Panda undertaken by them. 10. Study of Musk Deer is being conducted in collaboration with WII, at Panchpokhary (Lungdohnay) Musk Deer Conservation Zone, KNP. 11. Study of Rhododendrons is in progress in Shingba Rhododendron Sanctuary, Lachung, North Sikkim with technical assistance from Regional Centre of GB Pant Institute of Himalayan Study, Gangtok 12. Preservation plot survey is being done at North Sikkim. 13. 3 Preservation plots and 6 permanent sample plots created under Working Plan sector 14. Dossier was finalized and submitted to UNESCO through MoEF & CC in September 2014. A joint mission comprising members from ICOMOS and ICUN visited KNP sites during September 30~October 8, 2015. FEWMD responded to the queries by ICOMOS in November 2015. 15. Design and estimate of proposed butterfly park at Rang Rang completed and DPR submitted to Building and Housing Department for vetting 16. Maintenance of plant Conservatory (Nursery), high and low land nurseries continued. 17. Construction of main office building of Himalayan Zoological Park and veterinary care facility Work was in progress; 18. Design and estimate of Biodiversity Center at Damthang finalized and approval for E tendering by Hon'ble Chief Minister <ol style="list-style-type: none"> 1. Participated in International Travel Expo 2015, Vietnam during 10-12 September 2015 2. Organized Okhrey Ecotourism Carnival on 17-19 October 2015; Okhrey, West Sikkim 3. Participated in National Trade Fair SATTE 2016, New Delhi from 29-31 January, 2016; and 'Destination North-East 2016' at Pargati Maidan, New Delhi from 12-14 February 2016;
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		<ol style="list-style-type: none"> 4. Web-hosting done on May 15, 2015 during International Workshop on Inscription of KNP 5. Printed following materials, <ul style="list-style-type: none"> • Brochure on Ecotourism • Bird's posters • Butterfly posters • Ecotourism zone posters • SBFP approach towards ecotourism posters • Product development posters • Handbooks , nature based festivals 6. Organised follow up of Tinjurey Ecotourism Festival on 12th & 13th March 2016, in Nampong-Lingdok zone 7. Workshop on organic farming based ecotourism was organised at East Pendam, East District on 19 March 2016 8. Survey of 3 trekking trails completed 9. Developed, approved and printed guideline for developing trek route in Sikkim 10. Technical sanction accorded for Melli IC and renovation and upgrading of FRHs at Dentam and Hilley under progress. 11. Also exploring possibility to work with the IIT Guwahati for SWM study. 12. Held Sikkim Butterfly Meet organised by BAMOS, supported by SBFP from 1 to 19 July 2015 at Yuksom 	
		<p>C4 Joint Forest Management</p>	<ol style="list-style-type: none"> 1. Revised manuals - JFMC, EDC and Microplanning 2. Contract with M/S Echostream was revised 3. 8 District level workshops conducted for all level of Forest Officials to strengthen JFM and Ecotourism activities under the project 4. Rationalization, Reorganization and Reconstitution (3R), Completed in 229 JFMC/ EDC; 226 JFMCs/EDCs are reconstituted and notified 5. Selection of 45 JFMC/EDC /SEVs (3rd batch of villagers) based on the identified criteria were completed 6. Micro-Plans, Registers for JFMC/EDC and SHG for keeping record (Accounts, meeting, loan etc), guideline for loan disbursement and implementation of

		<p>IGAs by SHGs in JFMCs, EDCs and PSS printed as per required number</p> <ol style="list-style-type: none"> 7. EPA completed in 45 JFMCs /EDCs (2nd Batch) of four districts 8. Fire fighting equipment for Batch-1 and 2 61 villages, procured and distributed. 9. 420 ha plantation undertaken in 90 JFMC/EDCS 10. Maintenance of central nurseries of 8 ha continued 11. Maintenance of plantation continued in JFMs/EDCs <ul style="list-style-type: none"> • Batch 1: 3rd year maintenance of 225 ha. done as per routine; • Batch 1: 1st year maintenance 450 ha. done as per routine; • Batch 1: Planting 225 ha. accomplished as per plan; • Batch 2: 1st year maintenance of 450 ha. done as per routine; • Batch 2: Planting 225 ha. accomplished as per plan; 12. 100 ha plantation undertaken at religious area 13. Identified 168 SHGs and similar no of IGAs in 80 villages and fund blocked for release to Self Help Groups. Payment cheques issued top the Presidents of JFMC/EDCs to further disbursement to SHGs as microfinance. 14. Skill development training, designed by Ecostream for Self Help Group on selected income generation activity planned 15 Follow-up Interpretative Guide Training during 10-11 February 2015 at Okhrey held 	
		<p>C5 Organizational Strengthening</p>	<ol style="list-style-type: none"> 1. 95% work of SBFP building completed 2. Range Office, Block Office cum Quarters at Gyalshing, West Sikkim completed 3. Procurement of 2 Bolero; 3 Thar, and one Pick-up accomplished; 4. Procurement of 10 Motor Cycles accomplished 5. Training on managing forest for multiple function in the perspective of National Working Plan Code 2014 , at CASFOS , Dehradun conducted

			<ol style="list-style-type: none"> 6. 18 ROs/ BOs trained at Tamil Nadu Forest Academy, Coimbatore 7. Annual Review Meeting Governing Body involving all DFUs, CF/ CCF held 8. HPSC meeting organized 9. Equipment were purchased
6)	Physical Achievement	C1 Preparatory Work	<ul style="list-style-type: none"> • APO 2015-16 was approved in HPSC meeting • Appointment of survey expert (1), JRF (1), Accountant (3), Junior Accountant (1), Office Assistants (1), Peon(2), Driver (9) and Safai karmachari (2) on contractual basis
		C2 Forest and Biodiversity Conservation	<ul style="list-style-type: none"> • Atlas – Up gradation and Land use map was released by Hon'ble Chief Minister on 15th August 2015 • Rapid Biodiversity Survey Report – II released by Hon'ble Chief Minister on 15th May 2015 • Management Effectiveness Evaluation of Protected Area was done in collaboration with WII , Dehradun • MOU was signed with WWF, Sikkim for the study of Red Panda as flagship species • 3 Preservation plots and 6 permanent sample plots created under Working Plan sector • Butterfly park at Rang Rang tendered • Plant Conservatory with indigenous flowering species, established at Bulbuley was inaugurated by Hon'ble Chief Minister on 10th April 2015. Rs. 5.5 lakh (approx.) collected as entry fee(@ Rs10/- per head) since November 2015. • Design and estimate of Biodiversity Center at Damthang finalized and approval for E tendering by Hon'ble Chief Minister • Design and estimate of Training Institute at Pangthang completed
		C3 Ecotourism	<ul style="list-style-type: none"> • Marketing of Ecotourism products undertaken in Vietnam Mart • Guidelines for development of Trekking Routes • "A Journey towards organizing an Ecotourism Festival" document printed.

			<ul style="list-style-type: none"> • Organised Okharey Ecotourism Carnival on 17-19 October 2015, in Okharey Ecotourism zone. • Organised follow up Tinjurey Ecotourism Festival from 12th & 13th March 2016, in Nampong-Lingdok zone. • Workshop on organic farming based ecotourism was organised at East Pendam, East District on 19 March 2016 • Survey of 3 trekking trails completed; • Renovation and upgrad of FRHs at Dentam and Hilley continued
		<p>C4 Joint Forest Management</p>	<ul style="list-style-type: none"> • Skill development training, designed by Ecostream for Self Help Group on selected income generation activity received by PMU • Rationalization, Reorganization and Reconstitution (3R), Completed in 229 JFMC/EDC. 226 JFMC/EDCs reconstituted and notified • Socio-Economic Baseline Survey Proposals received by PMU. • 8 District level workshops conducted for all level of Forest Officials to strengthen JFM and Ecotourism activities under the project. • Selection of 45 JFMC/EDC /SEVs (3rd batch of villagers) based on the identified criteria were initiated and approval accorded. • Equipment procured for Batch I, & II villages, and distributed to 61 JFMCs and EDCs • Management of central nurseries of 8 ha. done. • Identified about 168 SHGs and similar no of IGAs in 80 villages and disbursement of loan initiated for JFMCs/EDCs • 420 ha. plantation undertaken in 90 JFMC/EDCS • 100 ha plantation undertaken at religious area • Continued support to 3 NGOs and 27 community organizers for community mobilization and strengthening of JFMCs /EDCs

		C5 Organizational Strengthening of Forest Department	<ul style="list-style-type: none"> • 95% of the construction of Head Quarter Office completed • 1 Range cum Block office at Gyalshing and 1 Block office at Pakyong completed • Design and cost estimation of proposed Training Institute at Bulbuley completed • Two-week certificate course for forest officials on biodiversity conservation and forest management at IIFM, Bhopal completed. • Training on managing forest for multiple functions in the perspective of National Working Plan Code 2014, at CASFOS, Dehradun held. • Training for RO and BO on Forest Rights cum Conservation of Biodiversity at Tamil Nadu completed.
a)	With particular reference to function of the Department	All the above activities are being implemented by Forest Environment and Wildlife Management Department (FEWMD)	
b)	With particular reference to the Plan Schemes in the financial and physical term	Financial Progress : 38.99% Physical Progress : 40%	
7)	Tangible outputs	Plantation, infrastructure, GIS maps, microplans of JFMs/EDCs	
8)	Intangible outputs	Improved environment, greenery, enhanced capacity of stakeholders, frontline staff and officers of Forest Department	

