



**GOVERNMENT OF SIKKIM
FOREST & ENVIRONMENT DEPARTMENT**

ANNUAL ADMINISTRATIVE REPORT
2019-2020



Minister,
Forest and Environment,
Mines & Geology and
Science & Technology Department,
Government of Sikkim
Phone (O) 03592-201228

MESSAGE

Forest and Environment Department, Government of Sikkim is the administrative custodian of recorded forest land covering about 82.31% of the state's geographical area. Sikkim has the largest Protected Area Network (PAN) in the country covering 30.77% of the state's geographical area. The Khangchendzonga National Park being the only National Park in country that was inscribed as a UNESCO World Heritage Site in July 2016 under the mixed category of nature and culture, which is a feather in the cap.

The Forest & Environment Department also empowers local people in participatory forest management through Joint Forest Management Committees, Eco-development Committees, Himal Rakshaks, Pokhri Sangrakshan Samitees and other mechanisms. Development in the state of Sikkim is unparalleled and our government has achieved it without hurting the environment, which has made it a model for other states to follow. Our government understands that the ecosystem services provided by the forests are indispensable.

Under the visionary leadership of Shri Prem Singh Tamang, Hon'ble Chief Minister, the government of Sikkim is committed to increase further the forest cover in the state and to accord inspection to the conservation efforts of the Forest & Environment Department. The government has already initiated afforestation through mass public participation with flagship programs like A Day for Mother Earth, Van Mahotsav, scheme for planting of wild edible fruits, scheme focusing on raising of good planting materials in nurseries, rejuvenation of Oaks and threatened species of flora etc. alongside many other centrally sponsored schemes like National Afforestation Program, Green India Mission etc.

Nevertheless, the arduous task of conservation and sustenance of these natural resources lie on the shoulder of the foresters and I take this opportunity to thank all of them for their sincere efforts.

It gives me a great joy to learn that the Department of Forest and Environment is releasing an Annual Administrative Report that updates forestry statistics while also showcasing the department's accomplishments. I hope that everyone will benefit much from this report.

(Karma Loday Bhutia)



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FOREWORD

The state of Sikkim is time and again talked about in diverse forums for its massive biodiversity (about one fourth of country's Biodiversity) despite having only 0.22% of the geographical area of the country; but to protect and conserve these natural resources alongside development poses us a biggest challenge.

Despite overwhelming development in the state of Sikkim in recent years, the state has not compromised with the environment. Forest cover in the state of Sikkim is 47.11% of the total geographic area despite having over 30% of its areas under perpetual snow cover. The department has already received many laurels at National level and accomplished numerous milestones in past few years. We have been able to improve on our infrastructural strength with modern-day cutting-edge technology. Thanks to JICA assisted SBFP for the needful support.

Modernization of forest force and technology-based interventions in forestry sector is the need of the hour. For better growth, the department needs to augment institutional competence and excellence across all sectors, it also needs to inculcate the scientific temperament in the minds of the field foresters as well as frame policies for collaborations with premier institutions in the country and abroad.

At this juncture, I convey my pleasure over the Annual Administrative Report that the Forest and Environment Department's Planning and Statistical Cell produces on a regular basis. I also applaud everyone's concerted effort to present the department's statistical reports in the most précis manner possible, which should be useful to forestry enthusiasts from across the planet. Any suggestions or constructive criticism are always appreciated.

(M.L.Srivastava), IFS

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Chapter -1

MAN POWER:

ADMINISTRATIVE SECTION (HO):

The Administration section of the Department is headed by Principal Secretary-cum-PCCF followed by CCF (HQ), Joint Secretary, Deputy Secretary & Under Secretary. The above officers are supported by Office Superintendents, Head Assistants, numerous other clerical assistants and Group D Staff. The main task of Administration Cell is to deal with 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 such unorganized services associated with the Forest Department. Files related to leave, increment, transfer, retirement. Beside those activities the Administration Cell also deals with the matter of promotion, recruitment and training of employees. The Cell also deals with allotment of vehicles to officers, part files of all the officers posted to Forest, & Environment Department and booking of Forest Rest House and Conference Hall.

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

- Clearance of files pertaining to conduct rules.
- Clearance of pending files of employees regarding Assured Career Progression Scheme (ACPS)
- Successfully disposing of RTI related cases

MAN POWER: AS ON 31.03.2020 (REGULAR, TEMPORARY EMPLOYEE)

FOREST & ENVIRONMENT DEPARTMENT		REGULAR
IFS CADRE		
SL NO	DESIGNATION	IN POSITION
1	PCC-cum-Pr. Secretary	1
	Chief Conservator of Forest	2
	Conservator of Forest	4
	Deputy Conservator of Forest	1
	Additional Project Director I & II	2
	Director	1
	On Central Deputation	7
	On State Deputation	5
A. TOTAL IFS (GAZETTED)		23
SFS CADRE		
SL NO	DESIGNATION	IN POSITION
2	Director	2
	Additional Director	2
	Joint Director	6
	Deputy Conservator	39
	Assistant Conservator	53
A. TOTAL SFS (GAZETTED)		102
FRONTLINE STAFF		
SL NO	DESIGNATION	IN POSITION
3	Range Officer	66
	Block Officer	173
	Head Forest Guard	148
	Forest Guard	161
B. TOTAL NON-GAZETTED		548
TOTAL (A+B)		650
A. TOTAL GAZETTED		
SL NO	DESIGNATION	IN POSITION
4	Sericulture Range Officer	1
	Sericulture Block Officer	Nil
B. TOTAL NON-GAZETTED		1
TOTAL (A+B)		1

STATISTICAL SERVICE		
SL NO	DESIGNATION	IN POSITION
5	Joint Director	1
	Assistant Director	6
A. TOTAL GAZETTED		7
SL NO	DESIGNATION	IN POSITION
6	Statistical Officer	1
	Inspector	1
B. TOTAL NON-GAZETTED		2
TOTAL (A+B)		9
FINANCE AND ACCOUNTS SERVICE		
SL NO	DESIGNATION	IN POSITION
7	Director	1
	Additional Director	1
	Chief Account Officer	1
	Accounts Officer	2
A. TOTAL GAZETTED		5
SL NO	DESIGNATION	
8	Senior Accountant	6
	Accountant	10
	Junior Accountant	4
	Accounts Clerk	18
B. TOTAL NON-GAZETTED		38
TOTAL (A+B)		43
STATE CIVIL SERVICE		
SL NO	DESIGNATION	IN POSITION
9	Joint Secretary	1
	Deputy Secretary	1
	Under Secretary	3
A. TOTAL GAZETTED		5

SL NO	DESIGNATION	IN POSITION
10	Office Superintendent	6
	Head Assistant	35
	UDC	29
	LDC	31
	Office Assistant	65
	Jr Supervisor	42
	Assistant Sawyer	1
	Office Attendant	93
	Chowkidar	17
	Jr. Chowkidar	81
	Cook	1
	Jr. Cook	2
	Driver	49
	Jr. Driver	32
	Field Assistant	2
	Jr. Field Assistant	1
	Mali	14
	Jr. Mali	205
	Jr. Cess collector	1
	Jr. Computer Operator	14
	Jr. Electrician	1
	Jr. Forest Guard	1
	Jr. Lab.Asstt	1
	Jr. Receptionist	1
	Jr. Safaikarmachari	5
	Jr. Sawyer	1
	Jr. Watcher	2
	Jr. Wireless Attendant	1
	Jr. Zoo Keeper	19
	Surveyor	2
	B. TOTAL NON-GAZETTED	755
	TOTAL (A+B)	760

SL NO	DESIGNATION	IN POSITION
11	Principal Scientist, HARC	1
	Sr. Vigilance Officer	1
	Divisional Engineer (Civil)	2
	Sr. Scientific Officer	2
	Dy. Chief Draughting Officer	1
	Deputy Director (Technical)	3
	Executive Environment Engineer	1
	Assistant Engineer	3
	Draughting Officer	1
	A. TOTAL GAZETTED	15

SL NO	DESIGNATION	IN POSITION
12	Inspector (Wireless)	1
	Junior Engineer (Civil)	5
	Sr. Draughtsman	1
	Draughtsman	1
	Cartographer	1
	Vet Compounder	1
B. TOTAL NON-GAZETTED		10
TOTAL (A+B)		25
STENOGRAPHER SERVICE		
SL NO	DESIGNATION	IN POSITION
13	Principal Private Secretary	1
	Sr. Private Secretary	1
	Private Secretary	4
A. TOTAL GAZETTED		6
SL NO	DESIGNATION	IN POSITION
14	Steno-G-III	1
B. TOTAL NON-GAZETTED		1
TOTAL (A+B)		7
(A) ABSTRACT (REGULAR):		
SL NO	PARTICULAR	IN POSITION
15	GAZETTED	163
	NON- GAZETTED	1355
	TOTAL REGULAR	1518

DETAILS OF TEMPORARY EMPLOYEE AS ON 31-03-2020			
SL NO	NATURE OF APPOINTMENT	POST	NO OF EMPLOYEE
1	OFFICER ON ADHOC	Project Officer	1
		Astt. Zoo Conservation Biologist	1
		Advocate	4
		Consultant	2
TOTAL			8
SL NO	NATURE OF APPOINTMENT	POST	NO OF EMPLOYEE
2	MUSTER ROLL	LDC/Office Assistant	14
		Computer Operator	7
		Supervisor	13
		Driver	11
		Mali	62
		Office Attendant	8
		Chowkidar	16
		Zoo Keeper	1
		Nursery Worker	380
		Watcher	5
		Road Khalasi	3
		Security Guard	4
		Safaikarmachari	14
		Tracer	1
TOTAL			539
SL NO	NATURE OF APPOINTMENT	POST	NO OF EMPLOYEE
3	CONSOLIDATED	LDC/Office Assistant	4
		Computer Operator	2
		Office Attendant	4
		Typist	1
		Driver	1
TOTAL			12
SL NO	NATURE OF APPOINTMENT	POST	NO OF EMPLOYEE
4	WORK-CHARGE	Sr. Programme Officer, ENVIS	1
		Information Officer, ENVIS	1
		Office Assisntnt	1
		Safaikarmachari	1
TOTAL			4

SL NO	NATURE OF APPOINTMENT	POST	NO OF EMPLOYEE
5	ADHOC	A.I (Cess)	5
		Computer Assistant	1
		Block Officer (Sericulture)	3
TOTAL			9
SL NO	NATURE OF APPOINTMENT	POST	NO OF EMPLOYEE
6	ADHOC/MR (CAMPA)	Account Clerk	1
		Computer Operator	2
		JE	1
		LDC	33
		Supervisor	58
		Record Keeper	1
		Dispatcher	1
		Typist	1
		Driver	3
		Chowkidar	49
		Office Attendant	2
		Mali	2
		Safaikarmachari	1
		Nursery Worker	1
TOTAL			156
SL NO	NATURE OF APPOINTMENT	POST	NO OF EMPLOYEE
7	CONTRACTUAL (SBFP)	Accountant	3
		Community Organizer	29
		Computer Assistant	6
		Driver	11
		Events and Festival Assistant Manager	1
		Events and Festival Manager	1
		Finance Officer	1
		GIS Engineer	1
		Jr. Accountant	2
		Office Assistant	8
		Peon	10
		Product, Sales and Advertisement Assistant Manager	1
		Product, Sales and Advertisement Manager	1
		Safai Karmachari	3
		Survey Assistant	4
		Survey Expert	4
TOTAL			86

SL NO	NATURE OF APPOINMENT	POST	NO OF EMPLOYEE
8	CONTRACTUAL (SLNA)	Account Officer	1
		Accountant	2
		Data Entry Operator	4
		GIS Expert	1
		Jr. Accountant	1
		Supervisor	1
		Jr. Supervisor	1
		LDC	1
		Peon	1
		Programme Coordinator	1
		Programmer, SLNA	1
		Tech. Expert (IT)	1
		Tech. Expert (Livelihood)	1
TOTAL			17
SL NO	NATURE OF APPOINMENT	POST	NO OF EMPLOYEE
9	CONTRACTUAL (SBB)	Survey Expert/Technical/Scientific Associate	1
		Finance Assistant/Accountant	1
		Computer Assistant	1
		Multi Purpose Office Assistant-I	1
		Office Attendant	1
		Sr. Research Fellow	1
		Multi Purpose Office Assistant-II	1
TOTAL			7
SL NO	NATURE OF APPOINMENT	POST	NO OF EMPLOYEE
10	CONTRACTUAL (SPCB)	Field Assistant	10
		Junior Scientific Assistant	1
		Junior Scientific Assistant	3
		Laboratory Assistant	4
		Project Assistant	5
TOTAL			23

SL NO	NATURE OF APPOINTMENT	POST	NO OF EMPLOYEE
11	ONE FAMILY ONE JOB	Attendant cum-Chowkidar	1
		Chain Saw Operator	1
		Chowkidar	11
		Data Entry Operator	2
		Driver	9
		Environmental Assistant	886
		Forest Guard	1
		Labour/ Gardener	1
		LDC	9
		Mali	8
		Marketing Assistant	3
		Multi Task Office Staff	11
		Nursery Labour	2
		Office Assistant	23
		Office Assistant cum Chowkidar	1
		Office Attendant	26
		Office Helper	1
		Safaikarmachari	6
		Safaikarmachari/Mali	1
		Stenographer	1
		Village Police Guard	1
		Wildlife Protection Guard	1
		Wildlife Protection Guard	1
TOTAL			1006

ABSTRACT TEMPORARY EMPLOYEE	
TYPE OF EMPLOYEE	Total
OFFICER ON ADHOC	8
MUSTER ROLL	539
CONSOLIDATED	12
WORK CHARGED	4
ADHOC	9
CAMPA	156
JICA	85
SLNA	15
SBB	7
SPCB	23
ONE FAMILY ONE JOB	1006
TOTAL	1864

Chapter-2

Consolidated Statement of Revenue Receipts:

(Rs.in thousands)

PARTICULARS AND NATURE OF THE RECEIPTS INDICATING MAJOR, MINOR AND DETAILED HEADS	BE (2019-20)	RE (2019-20)	Revenue Realised (2019-20)
1	2	3	4
0406-Forestry & Wildlife			
01 Forestry			
101-01= Receipt from Utilisation	5500	5500	14114
101-02=Receipt from Territorial Circle	13500	13500	13083
800-02=Receipt from Sericulture Activities	300	300	241
800-03=Royalties from Forest produce	135000	145000	108318
800-04=Other misc.receipt	17400	17400	17302
Total 01-Forestry	171700	181700	153058
02-Env.Forestry & Wildlife			
112-01=Receipt from Epica garden Saramsa	2500	2500	2906
112-02=Receipt from Rongnichu water garden	530	530	162
800-01=Receipt from Wildlife Sanctuaries	220	220	1163
800-02=Fees & Fines from Territorial Circles	50	50	473
Total 02- Env.Forestry & Wildlife	3300	3300	4704
Total -	175000	185000	157762

*The main reason for shortfall in revenue collection was due to the impact of COVID-19 pandemic in the State.

CONSOLIDATED STATEMENT OF EXPENDITURE:

Sl.No	Scheme	BE(2019-20)	RE(2019-20)	Actual Expenditure
1	2	3	4	5
I	State Sector			
1	Salaries	908637000	1019613000	1017489049
2	Wages	151028000	104638000	111274893
3	TA	2184000	2165000	2122517
4	OE	5308000	5389000	5333522
5	Supplies & Materials	3000000	3000000	3000000
6	Minor Works	2440000	2352000	2323460
7	Other Charges	17044000	70043000	17042997
8	Maintenance	412000	382000	382328
9	Propagation & conservation of wildlife products	363000	363000	362865
10	Operational expenses	1299000	1299000	1298823
11	Lump sum provision for revision of Pay & Allowances	106278000	0	0
		1197993000	1209244000	1160630454

II	State Earmarked	BE(2019-20)	RE(2019-20)	Actual Expenditure
1	Grant in Aids	5000000	5000000	5000000
2	Integrated Water Shed Management Programme (IWMP)	1000	0	0
3	Forest Development Agency	1000000	0	0
4	Green India Mission	1500000	3470000	3470000
5	Biodiversity of Kanchendzonga Biosphere Reserve	1500000	2290000	2249800
6	Promotion of Sustainable Forest Management (LICA-EAP)	0	10676000	10676000
7	Development of Fambonglho Sanctuary	2993000	557000	543970
8	Development of Phangolakha Sanctuary	1000	684000	683000
9	Development of Kyongnosla Alpine Sanctuary	1000	454000	452931
10	Barsey Rhododendron Sanctuary	1000	520000	520000
11	Development of Barsey Rhododendron Sanctuary	0	271000	271000
12	Development of Singhba Rhododendron Sanctuary	100	425000	423850
13	Development of Maenam Sanctuary	1000	526000	526391
14	Development of Kitam Bird Sanctuary	1000	358000	351000
15	Development of Kanchendzonga National Park	1000	612000	612000
16	Conservation & Management of Khechuperli Wetland	1000000	0	0
17	Conservation & Management of Tamzey (Hans Pokhari)	1000000	0	0
18	Conservation & Management of Tembao Wetland	666000	666000	665545
19	Conservation & Management of Tsomgo Wetland	500000	0	0
20	Conservation & Management of Nakuchu Wetland	500000	1157000	1155374
21	Integrated Forest Protected Scheme	1833000	1820000	1819811
		17500000	29486000	29420672

III	Central Schemes	BE(2019-20)	RE(2019-20)	Actual Expenditure
1	Secure Himalaya	62851000	0	0
2	Promotion of sustainable Forest Management (JICA-EAP)	530107000	237274000	237274000
3	Dev.of Ecotourism activities at Chauridara Green Village (NEC)	1000	6541000	6540658
4	Integrated Water Shed Management Programme (IWMP)	50000000	0	0
5	Forest Development Agency	11486000	0	0
6	Green India Mission	50000000	31242000	31242000
7	Biodiversity of Kanchendzonga Biosphere Reserve	20581000	20581000	20581222
8	Grassland Dev.&Grass Reserve	15000000	0	0
9	Development of Fambonglho Sanctuary	50000000	4954000	4941600
10	Development of Phangolakha Sanctuary	1000	6156000	6013900
11	Development of Kyongnosla Alpine Sanctuary	1000	4086000	4083869
12	Barsey Rhododendron Sanctuary	1000	7126000	7114280
13	Development of Singha Rhododendron Sanctuary	1000	3834000	3833012
14	Development of Maenam Sanctuary	1000	4742000	4742443
15	Development of Kitam Bird Sanctuary	1000	3159000	3159050
16	Development of Kanchendzonga National Park	1000	6062000	6060734
17	Assistance under ENVIS(100% CSS)	2500000	1219000	1218808
18	Assistance under ENVIS(100% CSS)	1180000	0	0
19	Conservation & Management of Khechuperli Wetland	26600000	0	0
20	Conservation & Management of Tamzey (Hans Pokhari)	35000000	0	0
21	Conservation & Management of Bedang Tso Wetland	10000000	0	0
22	Conservation & Management of Tembao Wetland	16860000	6000000	5999750
23	Conservation & Management of Tsomgo Wetland	10000000	0	0
24	Conservation & Management of Nakuchu Wetland	11800000	10408000	10407803
25	Integrated Forest Protected Scheme	20000000	18955000	18955074
		923973000	372339000	372168203

IV	State Compensatory Afforestation	BE(2019-20)	RE(2019-20)	Actual Exp.
1	Interest	100293000	100293000	100293000
2	Compensatory Afforestation	94912000	94912000	94912000
3	Catchment Area Treatment Plan	65399000	65399000	65399000
4	Integrated Wildlife Management Plan	40035000	40035000	40035000
5	Net Present Values	159905000	107084000	107075000
6	Others	41787000	41787000	41787000
		502331000	449510000	449501000

	BE	RE	Actual Expenditure
TOTAL	2641797000	2060579000	2011720329

Chapter-3

Forest Fire:

a) District & Year wise Forest Fire Incidences and area damages during last five years:

Sl.No.	District	Year	No.of forest fire incidences	Area damaged(in ha)
1	East	2016	19	152.2
2		2017	43	259.71
3		2018	6	61
4		2019	2	5
5		2020	4	11.5
Total-			74	489.41
1	West	2016	20	46.1
2		2017	9	32.5
3		2018	5	23.5
4		2019	17	81
5		2020	12	78.5
Total -			63	261.6
1	North	2016	6	47
2		2017	4	19
3		2018	1	2
4		2019	0	0
5		2020	0	0
Total -			11	68.5
1	South	2016	9	62
2		2017	6	17.5
3		2018	41	219
4		2019	4	9
5		2020	58	760
		Total-	118	1067.5
		Grand Total-		1887.01

b) Details of approved sites for collection of stone and sand for the year 2019-2020.

District	No.of Sites	Total areas (in sq.ft.)	Total offset value put on tender (in Rs.)
North	18	2,74,500	9,22,320
South	54	70,03,584	70,03,584
East	101	54,62,150	54,62,150
West	25	12,56,808	12,56,808
Total-	198	1,46,44,862	1,46,44,862

**Progress Report of Works under Forest Fire Prevention & Management Scheme
(FPMS) for Sikkim State for the year 2019-20.**

(Rs.in lakhs)

Sl. No	Items	Unit	Unit rate	Target		Ach.		Remarks
				Phy	Fin	Phy	Fin	
1	Maintenance of existing fire lines.	Km	0.040	350	14.00	350	0.00	***
2	Fire Camps.	Nos.	0.500	25	12.50	25	12.48	
3	Creation of Infrastructures							
a.	Water storage tanks.	Nos.	6.000	4	24.00	4	0.00	***
b.	Up gradation of forest check posts.	Nos.	3.000	5	15.00	5	0.00	***
c.	Forest Guard Barrack.	Nos.	25.000	1	25.00	1	24.91	
d.	Inspection huts / Fire Camps.	Nos.	0.5000	25	12.50	25	0.00	***
4	Engagement of the fire watchers.	Nos.	0.3630	50	18.15	50	18.14	
5	Awareness Camps.	Nos.	0.6000	20	12.00	20	0.00	***
6	Publicity in print media.	Nos.	0.050	75	3.75	75	0.00	***
7	Publicity in electronic media.	Nos.	0.200	20	4.00	20	0.00	***
8	Training & capacity building on fire fighting methods for frontline staff, NGOs and Village communities.		0.10	16	1.60	16	0.00	***
9	Incentivizing village / communities for protection against forest fire under the participatory forest management approach.	No	0.50	4	2.00	4	0.00	***
	Sub-total-				144.50		55.54	
	Imprest Money (5%)				7.23		0.00	
	Monitoring and review (2%)				2.89		0.00	
	Short term research / survey of forest fire related issues (3%)				4.34		0.00	
	Total-				158.95		55.54	

(Rupees- Fifty-five lakh fifty four thousand) only.

Note ***: physical target-achieved/financial target-not achieved.

a. Total project cost	Rs. 158.95 lakh
b. Unspent balance of 2018-19	Rs. 6.89 lakh
c. 1 st installment received as Central Share	Rs. 96.47 lakh
d. Amount received as State Share	Rs. 10.34 lakh
e. Fund utilized (Central share)	Rs. 45.20 lakh
f. Fund utilized (State share)	Rs. 10.34 lakh
g. Balance (Central share) (b+c+e)	Rs. 58.16 lakh
h. Fund to be received (a-b-c)	Rs. 55.59 lakh

Note- There has been a calculation error of Rs.14.00 lakhs on sl.no.1 which has not been added on the totaling of Rs.143.55 lakhs. The actual totaling of APO comes to Rs.158.95 lakhs.

Progress Report of “Additional APO” under Forest Fire Prevention & Management Scheme (FPMS) for Sikkim State for the year 2019-20.

(Rs.in lakhs)

Sl. No	Items	Unit	Unit rate	Target		Ach.		Remarks
				Phy	Fin	Phy	Fin	
1	Procurement of fire fighting equipments	no	0.60	5	3.00	5	0.00	***
2	a.Maintenance of existing fire lines.	Km	0.040	350	14.00	350	13.72	
	b. Fire camps.	No	0.50	25	12.50	25	0.00	***
	c. Control burning.	Km	0.030	300	9.00	300	0.00	
3	Creation of Infrastructures							
	a. Construction of water storage tank.	Nos	6.00	1	6.00	1	0.00	***
	b.Up gradation of forest check posts.	Nos	3.00	1	3.00	1	0.00	***
	c. Forest Guard Barrack.	Nos	25.00	1	25.00	1	25.00	
	d. Inspection huts / Fire Camps.	Nos	0.500	12	6.00	12	0.00	***
4	a. Procurement of field vehicle.	Nos	17.00	1	12.00	1	0.00	PI for vehicle obtained
	b. Procurement of mini fire tender vehicles	nos	30.78	4	123.12	4	113.52	Only 90% claimed as advance as per the provision of SFR
5	Engagement of fire watchers	nos	0.363	50	18.15	50	0.00	***
6.	Awareness camps.	Nos	0.60	10	6.00	10	0.00	***
7.	a. Publicity in print media.	Nos	0.050	75	3.75	75	0.00	***
	b. Publicity in electronic media.	No	0.20	20	4.00	20	0.00	***
8	Training & capacity building on fire fighting methods for frontline staff, NGOs and village communities.	No	0.10	16	1.60	16	0.00	***
9	Incentivizing village/communities for protection against forest fire under the participatory forest management approach	no	0.50	4	2.00	4	0.00	***
	Sub-total-				249.12		152.24	
	Imprest Money (5%)				12.46		0.00	
	Monitoring and review (2%)				4.98		0.00	
	Short term research / survey of forest fire related issues (3%)				7.47		0.00	
	Total-				274.03		152.24	

(Rupees-one crore fifty-two lakhs and twenty-four thousand) only.

Note ***: physical target-achieved/financial target-not achieved.

a. Total project cost	Rs. 274.03 lakh
b. 1 st installment received (Central Share)	Rs. 197.30 lakh
c. Amount received as State Share	Rs. 7.99 lakh
d. Fund utilized (Central share)	Rs. 144.38 lakh
e. Fund utilized (State share)	Rs. 7.86 lakh
f. Balance (Central share) (b-c)	Rs. 52.92 lakh
g. Fund to be received (a-b)	Rs. 76.73 lakh

Details of Physical, Financial targets achieved by Territorial Circle under National Mission for Green India during 2019-2020.

Sl.no	District	Target		Achievement		Seedlings planted (in nos)
		Physical	Financial	Physical	Financial	
1	East	255	46.44	255	46.44	86450
2	West	186	26.07	255	26.07	50300
3	North	270	53.80	270	53.80	105000
4	South	300	44.10	300	44.10	91200
		1011	170.41	1080	170.41	332950

Revenue Details for the Financial Year 2019-2020 under Territorial Circle:

Year	Month	Districts			
		East	West	North	South
2019	April	Rs.28,43,440.00	Rs.9,87,165.00	Rs.4,90,991.00	Rs.25,23,375.00
2019	May	Rs.23,56,959.00	Rs.11,77,644.00	Rs.23,58,445.00	Rs.16,59,327.00
2019	June	Rs.24,60,848.00	Rs.9,43,091.00	Rs.7,18,763.00	Rs.15,22,759.00
2019	July	Rs.23,51,350.00	Rs.3,29,245.00	Rs.3,99,557.00	Rs.10,61,536.00
2019	August	Rs.25,62,920.00	Rs.4,45,630.00	Rs.56,63,877.00	Rs.62,71,299.00
2019	September	Rs.30,31,641.00	Rs.8,26,703.00	Rs.13,77,001.00	Rs.23,72,635.00
2019	October	Rs.41,68,563.00	Rs.2,53,655.00	Rs.11,38,951.00	Rs.11,13,128.00
2019	November	Rs.24,33,313.00	Rs.7,17,299.00	Rs.4,69,552.00	Rs.31,48,477.00
2019	December	Rs.29,22,295.00	Rs.8,18,063.00	Rs.18,41,892.00	Rs.24,23,555.00
2020	January	Rs.28,26,797.00	Rs.30,79,700.00	Rs.20,85,686.00	Rs.18,01,407.00
2020	February	Rs.34,45,436.00	Rs.10,98,137.00	Rs.9,20,280.00	Rs.21,09,752.00
2020	March	Rs.39,65,242.00	Rs.10,92,000.00	Rs.6,77,333.00	Rs.12,68,666.00
Total-		Rs.3,53,68,804.00	Rs.1,17,68,332.00	Rs.1,81,42,328.00	Rs.2,72,75,916.00
Grand Total-					Rs.9,25,55,380.00

The Scheme owes its origin in IX Five Year Plan. During the plan with the assistance of UNDP a project was launched for minimizing fire hazards and controlling forest fire in two States of the country. Later the project was extended to all the States and Uts including the state of Sikkim. Encouraged with the results and to consolidate the gains, the project was formalized to the X Five Year Plan into a “Centrally Sponsored Scheme namely “Integrated Forest Protection Scheme (IFPS)”. During the XI Plan, the scheme was expended with inclusion of four new components and was rechristened as “Intensification of Forest Management Scheme (IFMS)”.

At the end of XII Plan the scheme was reviewed by the Ministry and was recommended that the scheme may be restructured to focus solely on the issue of Forest Fire Prevention and Management Scheme to address the growing concern over adverse effects of forest fires.

The scheme aims for timely preparation and to combat Forest Fire with minimum damage to flora, fauna and forest of the State. The activities like maintenance of fire lines, engagement of temporary fire watcher, control burning etc. are taken up in this scheme. This year a major addition was purchase of 4 (four) nos of fire tender vehicle which has boosted the morals of the field staff to combat forest fire. The fire tender vehicles are stationed at fire prone and strategic locations in four districts of Sikkim.

Chapter- 4

State Domestic Product-(Production & Value) for the last two years:

(Rs.in lakhs)

Sl.No.	Particulars	2018-2019		2019-2020	
		Quantity	Value	Quantity	Value
1	2	3	4	5	6
1	Industrial Wood (in cft)	8069	38.75	8062.15	44.17
2	Fire Wood (in piles)	117	0.91	86	0.69
3	Sand (in cft)	31575476	331.54	16096497	169.02
4	Stone (in cft)	17114210.30	154.02	16525207	148.72
5	Stone Chips (in cft)	70743008.30	1273.37	16708236	300.74
6	Silk Cocoon				
i	Mulberry (in kg)	714.60	0.93	1042.30	4.10
ii	Eri (in kg)	-	-	-	-
iii	Muga(in nos.)	-	-	-	-

Chapter – 5

Survey & Demarcation:

1. Key function and Role:

The primary mandate of the Survey & Demarcation Division is to survey and demarcate forest areas for establishment of clear boundaries of forest areas through erection of boundary pillars for better administration and control of forest land. The Survey & Demarcation Division operates across all four districts of the State.

Apart from above activities, the Survey & Demarcation Division also receives regular requests for joint survey and inspection of private land that shares its boundary with forest land, especially in matters pertaining to issue of NOC for mutation of land and orders from Hon'ble Courts.

These types of surveys are classified as On-demand surveys and do not receive any special funding. Approximately, 55 such on-demand surveys were conducted in the financial year 2019-20.

2. Manpower:

The list of man power posted under the Survey & Demarcation Division is shown under:

Sl. No.	Designation	Nos.
1.	Divisional Forest Officer	1
2.	Assistant Conservator of Forest	0
3.	Range Officer	1
4.	Block Officer	2
5.	Assistant Surveyor	1
6.	Senior Draughtsman	1
7.	Tracer (M/R)	1
8.	Environment Assistant (OFOJ)	1
9.	UDC	1
10.	LDC	1
11.	Peon	1
12.	Driver	1

3. Source of Funding:

The salary of staff posted under the Division, Office expenses, Travel expenses are borne from the annual Budget allocation. Detail of budget allocation for the year 2019-20 is shown below:

M.H.	2406	Forestry and Wildlife	
	01	Forestry	
	01.005	Survey & Utilisation of Forest Resources	
	63	Demarcation Survey	<i>Rs. In thousands</i>
	63.00.01	Salaries	9464
	63.00.02	Wages	122
	63.00.11	Travel Expenses	38
	63.00.13	Office Expenses	22
Total	63	Demarcation Survey	9646

The fund provision for project execution for survey and demarcation of forest land is primarily through projects and schemes v.i.z. JICA assisted SBFP and State CAMPA.

4. Physical and Financial Achievement:

During the financial year 2019-20, the Survey & Demarcation Division has successfully implemented the following works:

Sl. No.	Item of Work	Scheme	Achievement		Location	District
			Phy	Fin		
1	Demarcation of Reserve Forest boundaries	NPV (20%) under State CAMPA	9.2 kms or 93 pillars	Rs. 9,99,191/-	Detail list at Annexure – I	West
2	Demarcation of Compartment boundaries	JICA assisted SBFP	38.22 kms 382 pillars	Rs. 39,11,435/-	Detail list at Annexure – II	East, South & West
3	Georeferencing of 1952 Cadastral Maps	JICA assisted SBFP	429 blocks	Rs. 10,85,086/-	All districts	All districts
4	Demarcation of Areas to be managed jointly (demarcation of working areas of JFMC/EDCs) Phase 1	JICA assisted SBFP	88 JFMC / EDCs	Rs. 1,65,29,645/-	24 in East 24 in West 13 in North 27 in South Detail list at Annexure – III	All districts

Detail list showing location of Reserve Forest Boundary Demarcation*Annexure-I*

Division	Range	Reserve Forest	No. of Pillars	Phy target	Unit
West (T)	Gyalshing (T)	Tsingthang RF (T)	16	1600	m
		Lungmu (Singrapong) RF (Lu)	22	2200	m
		Lungphung (Yampung) RF (La)	20	2000	m
		Mesar RF (M)	55	5500	m
Total				9200	m
Or				9.20	Km.

Annexure-II**Detail list showing location of Compartment Boundary Demarcation**

Division	Range	Reserved Forest	Compartment Name & No.	Target	Unit
East (T)	Singtam (T)	Sumin RF	Sumin 6	753.81	m
			Sumin 5	1452.88	m
			Sumin 4	287.06	m
			Sumin 3	584.3	m
			Sumin 2	1636.39	m
	Pakyong (T)	Karthok RF	Karthok 1/2	1063.88	m
South (T)	Namthang (T)	Tsalumthang RF	Tsalumthang 1	892.98	m
			Tsalumthang 2	1137.77	m
		Samardong RF	Samardong 1/2	733.87	m
West (T)	Soreng (T)	Jhum RF	Jhum 1	324.78	m
			Jhum 2	956.96	m
	Dentam (T)	Maniping RF	Maniping 1	3854.83	m
			Maniping 2	1959.99	m
			Maniping 3	3619.34	m
		Pherek RF	Pherek 1	2953.28	m
			Pherek 1 (Dentam)	3469.59	m
			Pherek 2	3314.18	m
			Pherek 3	3001.97	m
			Pherek 4	1536.3	m
	Geyzing (T)	Cidang RF	Cidang 1	2036.84	m
			Cidang 2	1716.18	m
		Omchung RF	Omchung 1/2	937.1	m
Total				38224.28	m
Or				38.22	Km.

Annexure-III**Detail list showing villages taken up for Demarcation of areas to be managed jointly**

Sl. No.	District	Phy Target	Remarks
1	East District	24 villages	13 JFMCs and 11 EDCs

DEMARCATED JFMCs IN EAST DIVISION			
Sl No	BATCH	RANGE	NAME OF JFMC
1	IIV Batch I	Rongli (Territorial)	Sudunglakha-Kopchey-Mulukay JFMC
2		Singtam(Territorial)	Sirwani-Chisopani JFMC
3	SEV II	Phadamchen (Territorial)	Lingtam JFMC
4		Rongli (Territorial)	Lamaten JFMC
5		Pakyong (Territorial)	Pakyong-Karthok JFMC
6			Amba JFMC
7		Ranipool (Territorial)	Assam-GairiGaon JFMC
8		Singtam (Territorial)	Central Pendam JFMC
9	SEV III	Barapathing (Territorial)	Parakha JFMC
10	SEV IV	Rongli (Territorial)	Rolep JFMC
11		Singtam (Territorial)	Bordang Singleybong JFMC
12		Ranipool (Territorial)	Changey Senti JFMC
13		Pakyong (Territorial)	Pachey Phirphirey JFMC
	TOTAL	13 JFMCs	

DEMARCATED EDCs EAST DISTRICT			
Sl No	BATCH	RANGE	NAME OF EDC
1	II V Batch I	Kyongnosla(Wildlife)	Tsangu EDC
2		Fambonglho (Wildlife)East	Sang-Beyond EDC
3			Ranka EDC
4		Fambonglho (Wildlife)West	Tumin EDC
5	SEV II	Kyongnosla (Wildlife)	Kyongnosla EDC
6	SEV III	Fambonglho West (Wildlife)	SamdongKambal EDC
7			Lingdok-Namphong EDC
8			Simick-Linzey EDC
9			Rakdong-Tintek EDC
10		Fambonglho East (Wildlife)	Rumtek EDC
11	SE V IV	Fambonglho (Wildlife)	Nazitam –Lingtam EDC
		11 Committees	Total

Sl. No.	District	Phy Target	Remarks
2	West	24 villages	14 JFMCs & 10 EDCs

DEMARCATED JFMCs WEST DISTRICT			
Sl No.	BATCH	RANGE	NAME OF JFMC
1	IIV Batch I	Geyzing (Territorial)	Nambu JFMC
2			Geetang-Karmater JFMC
3		Dentam (Territorial)	Maneybong-Sophaka JFMC
4		Soreng (Territorial)	Malbasey JFMC
5			Chakung JFMC
6	SEV II	Soreng (Territorial)	Zoom JFMC
7			Soreng JFMC
8		Geyzing (Territorial)	Darap-Simpeng- JFMC
9		Yuksom (Territorial)	Melli Aching Topong JFMC
10	SEV III	Soreng (Territorial)	Suldung-Kamling JFMC
11			Sangadorjee JFMC
12		Geyzing (Territorial)	Gyalshing-Omchung JFMC
13	SEV IV	Geyzing (Territorial)	Changey –Bongten JFMC
14		Soreng (Territorial)	Deythang Maneydara JFMC
		14 Committees	Total

DEMARCATED EDCs WEST DISTRICT			
Sl No.	BATCH	RANGE	NAME OF EDC
1	IIV Batch I	Dentam (Wildlife)	Uttarey EDC
2		Yuksam (KNP)	Labdang EDC
3	SEV II	Yuksom (KNP)	Yuksam Rangaythang EDC
4		Soreng (Wildlife)	Ribdi Bhareng EDC
5		Dentam (Wildlife)	Bega Mangmoo EDC
6	SEV III	Yuksam (KNP)	Naku EDC
7		Soreng (Wildlife)	Sribadam EDC
8		Soreng (Wildlife)	Tarey-Bhir EDC
9	SEV IV	Yuksam (KNP)	Hungri EDC
10		Yuksam (KNP)	Nesha – Upper Chongrang EDC
		10 Committees	Total

Sl. No.	District	Phy Target	Remarks
2	West	24 villages	14 JFMCs & 10 EDCs

DEMARCATED JFMCs NORTH DISTRICT			
Sl No.	BATCH	RANGE	NAME OF JFMC
1	SEV II	Phodong (Territorial)	Upper Chwang JFMC
2		Chungthang (Territorial)	Chungthang JFMC
3		Mangan (Territorial)	MeyongManul JFMC
4			Mangshila JFMC
5			NamokSwayen JFMC
6	SEV III	Dzongu (Territorial)	GorTareng JFMC
7			Phidang-Shagyong JFMC
8		Mangan (Territorial)	Upper Singhik JFMC
9			PakshepKazor JFMC
10			KalowNampatam JFMC
11	SEV IV	Mangan (Territorial)	Tingchim JFMC
12		Phodong (Territorial)	Lower Chawang JFMC
13			Menrongong JFMC
		13 Committees	Total

Sl. No.	District	Phy Target	Remarks
4	South District	27 villages	21 JFMCs and 6 EDCs
DEMARCATED JFMCs SOUTH DISTRICT			
Sl. No.	BATCH	RANGE	NAME OF JFMC
1	II V Batch I	Namchi (Territorial)	Chuba Phong JFMC
2			Wok-Omchu JFMC
3		Melli (Territorial)	Salghari JFMC
4			Sorok-Shyampani JFMC
5			Mellidara-Paiyong JFMC
6		Rabong (Territorial)	RabongSangmoo JFMC
7	SEV II	Namthang (Territorial)	Rameng-Niz-Rameng JFMC
8		Namchi (Territorial)	Temi JFMC
9		Melli (Territorial)	Lungchok Kameray JFMC
10			Turuk Ramabong JFMC
11		Rabong (Territorial)	Kewzing-Bakhim JFMC
12	SEV III	Namthang (Territorial)	Kateng-Pamphok JFMC
13		Namchi (Territorial)	Ghurpishay JFMC
14			Damthang-Jaubari JFMC
15			Tarku JFMC
16		Melli (Territorial)	Sadam-Suntaley JFMC
17		Rabong (Territorial)	Barfung-Zarrong JFMC
18			Ben-Namprik JFMC
19	SEV IV	Namthang (Territorial)	DonakMamring JFMC
20		Melli (Territorial)	TanziBikmat JFMC
21		Rabong (Territorial)	Legship JFMC
		21 JFMCs	Total

DEMARCATED EDCs IN SOUTH DISTRICT			
Sl. No.	BATCH	RANGE	NAME OF EDC
1	IV Batch I	Ravangla (Wildlife)	Yangang-Rangrang EDC
2	SEV II	Namchi (Wildlife)	MayurKitam EDC
3	SEV III	Rabongla (Wildlife)	Pathing EDC
4	SEV IV	Rabongla (Wildlife)	Kau –Chowridara EDC
5			Niya – Manzing EDC
6			Borong EDC
		06 EDCs	Total

Chapter- 6

UTILIZATION CIRCLE:

Utilization Circle deals with cutting, felling and extraction of trees and poles on account of diversion of forests land for widening of roads, extraction of trees posing danger, poles from thinning of plantations. The converted timber and firewood is done through the Circles as per the notified rates. The Circle operates two sawmills, at Chuba, East Sikkim and Bharikhola, Jorethang, South Sikkim.

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

Key Achievements: The Utilization Circle has notified schedule of rates for sale of timber and firewood. The revenue generated from various sale of forest produce during the years 2019-2020 the Circle has generated maximum revenue of Rs.1,41,14,395/- and target was 55 lakhs.

Men in position:

Sl No.	Designation	Nos.
01	Additional Director	1
02	Divisional Forest Officer	1
03	Asstt.Conservator of Forest	1
04	Range Officer	2
05	Block Officer	2
06	Head Forest Guard	1
07	Junior Supervisor	1
08	Junior Chowkidar	1
09	Office Superintendent	1
10	Head Assistant	1
11	Upper Division Clerk	1
12	Office Assistant	1
13	Office Attendant	2
14	Driver	5
15	Saw Chain Operator	1
16	Sawyer	2
17	Helper(Govt.Saw Mill Chuba and Bharikhola)	10
18	Safai Karmachari	1

Revenue detail on sale of Forest Produce, Import fee and License fee under Utilization during the year 2019-2020

Sl. No.	Month	Timber		GST	Firewood		Auction of logs	
		Qty.in cft.	Amount		Qty.in pile	Amount	Qty.in cft	Amount
1	Apr-19	264	140270	225454	5	3900	1522	1112250
2	May-19	548.15	342704	284841	12	9360	1439.99	1239745
3	June-19	417	284310	134092	6	4680	603	460642
4	Jul-19	1225	846167	279072	5	3900	750	704232
5	Aug-19	1236	615160	162589	11	8580	335	288113
6	Sep-19	1382	639925	147800	3	2340	404.24	181185
7	Oct-19	148	71000	87030	14	13650	1064	412500
8	Nov-19	672	334490	118512	4	3120	828	323912
9	Dec-19	812	469950	108398	20	15600	330	132270
10	Jan-20	572	252271	115020	2	1560	808	386725
11	Feb-20	456	177580	57244	0	0	414.17	140440
12	Mar-20	330	244000	47880	4	3120	49.94	22000
Total-		8062.15	4417827	1767932	86	69810	8548.34	5404014

Sl. No.	Month	Off Cut		Import Fee		License fee	Total Amount
		Qty.in cft	Amount	Qty.in cft	Amount	Amount	
1	Apr-19	0	0	9105	242012	0	1723886
2	May-19	6	960	8471.83	231188	0	2108798
3	June-19	10	1600	6356	174000	0	1059324
4	Jul-19	100	16000	7113	207213	0	2056584
5	Aug-19	0	0	7156	198825	0	1273267
6	Sep-19	0	0	10062	294928	0	1266178
7	Oct-19	0	0	3455	93180	0	677360
8	Nov-19	0	0	6209	179506	0	959540
9	Dec-19	35	5600	9739	284196	0	1016014
10	Jan-20	15	2400	7468	225431	0	983407
11	Feb-20	0	0	6084	188378	0	563642
12	Mar-20	0	0	2898	70395	39000	426395
Total-		166	26560	84116.83	2389252	39000	14114395

Abstract:			
Sl.No.	Particulars	Quantity	Amount
1	Timber	8062.15	4417827
2	Auction of Logs	8548.34	5404014
			9821841
3	G.S.T.	-	1767932
4	Firewood	86	69810
5	Off cut	166	26560
6	Import Fee	94116.83	2389252
7	License Fee	-	39000
	Total-		14114395

Chapter- 7

WORKING PLAN CIRCLE:

The geographical area of the State is 7096 sq.km.out of which State has recorded forest area (RFA) about 5841 sq km which is 82.31% of its geographical area. The reserved and protected areas are 93.34% and 6.66% of RFA respectively (FSI Report 2019)

As per National Working Plan Code 2014, preparation of Working Plan is highly technical exercise undertaken at regular interval of 10 years in each forest division. There is four working plan in Sikkim for four Divisions. The preparation of 2nd PWPR for South Division is under process, the WP of which has expired in 2020-21. The Working Plan for remaining three divisions needs revision by 2021-2023. The preliminary field work by collecting the data from sample plots for revising WP has been carried out during 2020-21 which has incurred the expenditure of Rs.50.00 lakhs. The field data of growing stock, trees outside forest (TOF) from 30 sample plots were collected and analysed.

The upgradation of GIS lab is also under process. The Arc-GIS server has been procured at the cost of Rs.45.00 lakhs, for creating and managing GIS web services, application and data. Besides, the digitization of forest boundary work (Khasmal and Goucharan) has been initiated in collaboration with Survey and Demarcation Division.

Chapter-8

SILVICULTURE DIVISION:

Work done under Silviculture Division during 2019-20 Financial Year

Sl. No.	Items of work done	Physical Achievement	Financial Achievement	Result
1	Identification, selection and marking of Mother trees in all district of Sikkim for all nurseries.	Selected 3200 mother trees.	Rs. 8.673 lakhs	Seeds are collected only from the selected mother trees for quality seedling production.
2	Printing, publishing of Conventional Nursery techniques book for the major tree species for forest nurseries in Sikkim including distribution among all Officers and field staffs	1000 copies	Rs. 5.726 lakhs	Facilitated the field officers and staffs for knowledge of nursery techniques.

Chapter-9

Twenty Point Programme (TTP):

TARGET AND ACHIEVEMENT UNDER 20POINT 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	2003-04	7500	6125.19	81.67	22	8.66	39.36
2	2004-05	8000	6191	77.39	22	10.32	46.91
3	2005-06	12000	8012.87	66.77	15	6.13	40.86
4	2006-07	15000	3550.26	23.66	15	9.75	65
5	2007-08*	12000	3456.73	28.8	*78	30.84	39.54
6	2008-09	12000	3862.37	32.2	78	23.04	29.55
7	2009-10	25000	8006.85	32.02	162.5	48.61	29.54
8	2010-11	5000	2734.07	54.68	32.5	55.68	105.6
9	2011-12	6000	7454.76	124	39	50.33	129.06%
10	2012-13	7450	9019.23	121.06	48	60.27	125.57
11	2013-14	6160	4805.00	78.00	40.04	31.92	79.72
12	2014-15	6160	4095.30	66.48	40.04	23.07	57.62
13	2015-16	4810	1324.76	27.54	31.27	16.30	52.14
14	2016-17	4095	3376.47	82	26.62	22.98	86
15	2017-18	3410	364.70	11	22.17	2.36	10.64
16	2018-19	3225	40.92	1%	20.96	16600	0.79%
17	2019-20	1860	2510.13	135	12.09	1725041	143

Chapter- 10

Wildlife Circle:

1. 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 7,01,673 Km² which is 21.34 % of the total land mass of 3,28,263 Km² is treasure trove of natural wealth and is one of the 12 mega bio-diversity countries of the world. The Protected Areas comprising National Parks and Wildlife Sanctuaries with Tiger Reserves and Elephant Reserves covering an area of 1,62,024.69 Km² which make up about 4.93 % of the total geographic area of the country is as mentioned in the following table. 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.

	No.	Total Area (km ²)	Coverage % of Country
National Parks (NPs)	103	40500.13	1.23
Wildlife Sanctuaries (WLSs)	543	118917.71	3.62
Conservation Reserves (CRs)	73	2547.19	0.08
Community Reserves	45	59.66	0.002
Protected Areas (PAs)	764	162024.69	4.93

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 and it includes:

Floral wealth:

- * Flowering plants: 4458 species of the Total 15000 species found in the Country.
- * Orchids: 527 of the total 1229 species
- * Rhododendrons: 38 of the total 90 species
- * Ferns: 480 of the total 1200 species
- * Lichens: 505 of the total 2302 species
- * Primulas: 58 of the total 102 species
- * Medicinal Plants: 424 species
- * Conifers: 9 species
- * Oaks: 11 species
- * Tree ferns: 8 species

Faunal wealth:

- * Mammals: 144 of the total 350 species
- * Birds: 552 of the total 1224 species
- * Butterflies: 689 species
- * Moths: 2000 species
- * Fishes: 48 of 2546 species
- * Amphibians (Frogs & Toads): 33 of the total 197 species
- * Reptiles: 35 of the total 408 species

2. Protected Areas of Sikkim:

	No.	Total Area (km ²)	Coverage % of Country
National Parks (NP)	1	1784	25.14
Wildlife Sanctuaries (WLSs)	7	399.10	5.63
Biosphere Reserves(BR)	One	2931.12	0.0
Protected Areas (PAs)	8	5114.22	30.77

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.

a) Details of Wildlife Protected Areas (WPA) are as under:

Sl.No.	Name	District	Total Area
1.	Shingba Rhododendron Sanctuary	North	43.00 Sq.km
2.	Fambonglho Wildlife Sanctuary	East	51.76 Sq.km
3.	Kyongnosla Alpine Sanctuary	East	31.00 Sq.Km
4.	Pangolakha Wildlife Sanctuary	East	128.00 Sq. Km
5.	Kitam Bird Sanctuary	South	6.00 Sq. Km
6.	Maenam Wildlife Sanctuary	South	35.34 Sq. Km
7.	Barsey Rhododendron Sanctuary	West	104 .00Sq. Km
8.	Khangchendzonga National Park	North/ West	1784 Sq.km

The Wildlife Protected Area covers as much as 30.77 % in terms of geographic area (7096 sq.kms) which is the highest PA network in the country as of today.

The State Government for the promotion and protection of plants and animals has declared as State Tree, State Flower, State Animal and State Bird of the following plants and animals:

- (a) Rhododendron species, *Rhododendron niveum*, as the State Tree.
- (b) Orchid *Dendrobium nobile*, as the State Flower.
- (c) Red Panda *Ailurus fulgens*, as the State Animal and
- (d) Blood Pheasant, *Ithaginis cruentus*, as the State Bird.

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

3. Physical & financial targets and achievements of schemes implemented by the Wildlife Sector during the year 2019-20 are as under:

INTEGRATED DEVELOPMENT OF WILDLIFE HABITATS (90:10):

Shingba Rhododendron Sanctuary, North Sikkim.

SL No	Item of work	Qty.	Amt. (Rs. in lakh)
	Non- recurring activities		
1.	Habitat improvement of protected Red Panda and Himalayan Black Bear	10 Ha	4.90
2.	Construction of bench terracing inside Shingba Sanctuary	3 Ha	12.00
3.	S.M.C.works control of soil erosion at Phuni	5 Ha	5.00
	Sub-Total -		21.90
	Recurring Activities		
4.	Anti-poaching and trap demolition activities within Shingba Sanctuary	2 camp	2.00
5.	Creation of fire lines and mobilization of staff during forest fire season at Yaksay	1 Range	100
6.	Engagement of Sanctuary Fire Watchers in fire outbreak	6 nos X900 md	4.05
7.	Immunization of domestic animals within the fringe village of Shingba Rhododendron Sanctuary	4 camp	1.00
8.	Mobilization of rescue during wild animals menace	LS	2.0
9.	Garbage Management inside Shingba Rhododendron Sanctuary,Lachung	4 camp	1.25
10.	Ex-gratia payments for crop damages, cattle lifting and human injury	LS	4.00
11.	Development and improvement of Salt Lakes at high altitude area	6 nos	2.40
12.	Strengthening of frontline staff by providing equipments such as sleeping bags, jackets, gumboots and tents etc.	15 nos	3.00
	Sub- Total		20.70
	Grand Total		42.60

Kyongnosla Alpine Sanctuary, East Sikkim

Sl.No.	Item of Work	Qty.	Amt. (Rs. in lakh)
	Non-recurring activities		
1	Development & upgradation of log house	1 no	8.00
2	Construction of approach road towards staff quarters(50ftx10ft)	55 sqft	4.22
3	Construction of iron boundary fencing with iron gate around Range office/quarter compound	1 no	6.00
	Sub-total-		18.22
	Recurrent Activities		
4	Repair of Watch tower near Rolep	1 no	5.00
5	Maint.of repairing of nature trail from Kheding to Watch Tower	5 km	10.00
6	Mobilization of Rescue team for Himalayan Black bear and anti poaching activities	LS	2.00

7	Engagement of fire watchers (for 4 months)	3 nos	1.18
8	Anti poaching and Trap demolition activities in & around the WLS	2 camps	2.00
9	Strengthening of frontline staff by providing field equipment	LS	2.00
10	Repair and maintenance of Sanctuary Main Gate at 19 th Mile	LS	3.00
11	Exposure tour for EDC & field staff	LS	2.00
			27.18
	Grand - total		45.40

Fambonglho Wildlife Sanctuary, East Sikkim

Sl.No.	Item of Work	Qty.	Amt.(Rs.in lakh)
	Non recurring activities		
1	Construction of patrolling path/trekking trail Rumtek Botanical Garden to Tumin Deorali for smooth patrolling and trekkers	6 km	12.00
2	Construction of Rain Water Harvesting storage of water especially during dry seasons	5 nos	3.50
3	Habitat improvement of protected area with seed dibbling of fruit bearing trees at Icibuta(Alu Bai) Rumtek, Dhanbari to provide food for wild animals and reduce conflict	10 ha	7.50
	Sub-total-		23.00
	Recurring activities		
4	Maintenance of Sang Pokhari	1 no	3.00
5	Maintenance of Water Hole at Tham Dara, Sang(Chuja), Kauley, Thartharey, Bhakali Chok, Chuli	6 no	3.00
6	Maintenance of Solar Fencing at Sumik	5 kms	4.00
7	Maintenance of Salt Lick	6 nos	3.00
8	Compensation and relief measures for crop damages by wild animals and ex-gratia payment for domestic animal kills by wild animals	L.S.	3.00
9	Mobilization of Rescue team for Himalayan Black bear and anti poaching activities	L.S.	2.00
10	Fire watchers for 4 month during peak season	L.S.	3.00
11	Creation of fire lines at fire prone area at Chuli, Tinjurey	2	2.00
12	Anti poaching and Trap demolition activities at Rakdong, Lingtam	2 nos	4.00
13	Awareness & Sensitizing Programme to motivate people for conservation of wildlife and their habitats	L.S.	2.00
14	Strengthening of frontline staff by providing field equipment	L.S.	3.00
	Sub-total-		32.00
	Grand-total-		55.00

Pangolakha Wildlife Sanctuary, East Sikkim

Sl.No.	Item of Work	Qty.	Amt.(Rs.in lakh)
	Non recurring activities		
1	Habitat improvement of protected area with seed dibbing of fruit bearing trees to provide food for wild animals and reduce conflict	6 ha	4.50
2	Construction of patrolling path/trekking trail from Bhatidara Kazi RF to Chikku Likkitam	6 kms	12.00
Sub-total-			16.50
	Recurring activities		
3	Repairing of patrolling hut at Phedi	1 no	3.00
4	Maintenance of trekking trail from AP Salami to Bhotey Phatak	5.00	5.00
5	Maintenance of entry gate at Dongzen	1.00	2.00
6	Repair of Watch Tower at Phusrey	1.00	3.00
7	Development of Trekking Trail Chandaney to Phusrey	5.00	10.00
8	Maintenance of Log bridge at Deoling Khola	1.00	2.00
9	Lake reclamation and conservation and its protection of Lamphokhari near Baluwater	1.00	3.00
10	Creation of fire lines at fire prone area at Chandaney to Phusrey Barrek	2	2.00
11	Crop compensation and relief measures for crop damages by wild animals and ex-gratia payment for domestic animal kills by wild animals	LS	3.00
12	Mobilization of Rescue team for Himalayan Black bear and anti poaching activities	LS	3.00
13	Fire watchers for 4 month during peak season	LS	3.00
14	Anti poaching and Trap demolition activities	1.	2.00
15	Awareness programme	L.S.	1.50
16	Maintenance of water holes at high altitude	4 nos	2.00
17	Provision of saltlick high altitude	6 nos	2.40
18	Strengthening of frontline staff by providing field equipment	LS	2.00
19	Problem mitigation of wild animals in urban and rural areas	LS	3.00
Sub-total-			51.90
Grand-total-			68.40

Maenam Wildlife Sanctuary, South Sikkim

Sl.No.	Item of Work	Qty.	Amt.(Rs.in lakh)
	Recurring activities		
1	Soil and Moisture Conservation within MWLS	10 Ha	6.705
2	Laying of underground pipes to bring water from the available source area to the dry and fire prone area and construction of water tank/placing of tank at Dareli	LS	6.00
3	Creation of water harvesting structure at 1. Jor Kharka: 2. Saleley: 3. Chawan Kharka: 4.Dhajey: 5.Nunthaley	5 nos	4.00
Sub-total-			16.705

Sl.No.	Item of Work	Qty.	Amt.(Rs.in lakhs)
	Non Recurring activities		
4	Mobilization of Rescue team to mitigate human animal conflict and other activities in fringe villages and town areas	LS	2.00
5	Fire protection within MWLS	LS	2.00
6	Ex gratia for crop damage killing of animal and animal attack by wildlife	LS	3.00
7	Waste Management (cleanliness drive, waste segregation and installation of waste bins along the trekking routes) in WLS & buffer areas	LS	2.00
8	Maintenance of Nature trail from Dhapper-Bhalleydhunga trail	7 km	7.00
9	Awareness / exposure programme	LS	2.00
10	Monitoring and trap demolition activities	LS	2.00
11	Livestock Immunization in fringe villages of MWLS	LS	1.00
12	Habitat improvement works within MWLS	LS	2.00
13	Repair, upgradation & furnishing of Range Office-cum-quarter at Rabongla	1 job	8.00
14	Wireless Communication sets and associates for field staff	LS	2.00
15	Repair of FG quarter at Rabongla	LS	3.00
Sub-total-			36.00
Grand Total			52.705

Kitam Bird Sanctuary, South Sikkim

Sl.No.	Item of Work	Qty.	Amt.(Rs.in lakhs)
	Non Recurring activities		
1	SMC work for control of soil erosion at Jor Kuwa	4 ha	2.68
2	Habitat Management at Sirisey Pakha	LS	3.00
	Sub-total-		5.68
	Recurring activities		
3	Forest Fire Protection	1job	4.00
4	Maintenance of Solar fence Sansari dara to Manpur Khola	1 job	2.00
5	Maintenance of natural trail Lower Kitam to Manpur Khola	3 km	2.40
6	Ex gratia payment for crop damages and injury by wildlife		5.00
7	Repairing of underground pipeline and water hole 1. Sirsey Pakha: 2.Hawa Dara: 3.Baguwa: 4. Tarey Bhiri: 5.Tarpin Golai	5 nos	0.50
8	Mobilization of Rescue team for monkeys, deer etc & others activities	LS	2.00
9	Immunization of livestock	LS	1.00
10	Awareness / Exposure programme	LS	2.00
11	Mitigation of Human Wildlife Conflict	LS	3.00
12	Signages for awareness	1 no	2.00
13	Upgradation and upkeep of first aid (rescue centre) 10 th mile Baguwa	LS	3.00
	Sub-total-		26.90
	Grand – total-		32.58

Barsey Rhododendron Sanctuary, West Sikkim

Sl.No.	Item of Work	Qty.	Amt.(Rs.in lakhs)
	Non Recurring activities		
1	Wetland Development along with saltlick provision	5 nos	1.00
2	Purchase of squeeze cages for bears and monkeys	4 nos	4.00
3	Creation of live hedge fencing within WLS	5 kms	5.00
4	Habitat Management of Red Panda and Himalayan Black bear	5 ha	3.50
5	Construction of entry gate cum Ticket counter at Hilley	1 no	10.00
	Sub-total-		23.50
	Recurring activities		
6	Repair and furnishing of DFO and field staff quarter at Geyzing	1 no	5.00
7	Anti poaching & trap demolition activities within Sanctuary	LS	2.50
8	Protection of forest fires by engaging 10(ten)no. of fire watchers for 4 (four) months in fire prone areas during the peak season of fires	1220 days	2.68
9	Mobilization of rescue team during wild animal menace	LS	3.00
10	Maintenance and clearing of existing nature trails for patrolling squads and wildlife tourism	10 kms	6.00
11	Wireless communication sets and associates for field staff	LS	2.00
12	Garbage management at Hilley & Uttarey	2nos	2.00
13	Procurement of field equipments such as leech guard, rucksacks, water bottles, torch lights, cuttings weapons, sleeping bags, tents, mattresses, jackets, walking sticks, resin coat, body protection, rescue stretcher, gears to prevent human injury while dealing with human-animals conflicts	LS	4.00
14	Creation of awareness generation programme on protection of Natural Resources of the Sanctuary	2 times	1.00
15	Ex-gratia payment for loss of crops, cattle and human injury	LS	8.00
16	Construction and repair of resting sheds and benches at Hilley to Barsey	LS	2.50
17	Installation of signages	LS	2.00
18	Repair / upgradation and furnishing of Range Office-cum-Quarter at Dentam	1 no	5.00
19	Minor repair of old Check Post-cum-FG Quarter at Chewabhanjyang	1 no	3.00
20	Contour burning at Achaley to Daruwa & Lidum & Upper Sangkhu & Tareybhiri to Chakmakey, Chinkharka to Ratomatey	10 kms	1.00
21	Maintenance of patrolling path at Gmpadara to Barsey N	5 kms	2.50
22	Rain water harvesting tank in dry areas Chinkharka/Deorali,Barsey/Daruwa-Kharka Chwok/Kalijhar-	5 nos	2.50
	Sub-total-		54.68
	Grand – total-		79.18

Other Activities:

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

b. The State Government with the recommendation of the Standing Committee of State Board of Wildlife on its 21st meeting held on 18th December, 2019 under the chairmanship of the Hon'ble chief Minister(Sikkim)-cum-Chairman(SBWL) has revised the rate of ex-gratis payment for the human

injury and death(outside the Protected Areas) due to attack by the wild animals. The same was notified by the Department vide No.311/WL/F&ED/98 dated 06/11/2020.

Sl.No	Type of injury	Previous Rates	Revised Rates
1	Human Injury (minor)	Rs. 25,000/-	Rs. 50,000/-
2	Human Injury (major)	Rs.1,00,000/-	Rs. 2,00,000/-
3	Human Death	Rs.4,00,000/-	Rs. 6,00,000/-

Tourist visited record and revenues collected (20% Govt.revenue) during 2019-20:

Amount in Rs.

Fambonglho WLS, E/Sikkim		Pangolakha WLS,E/Sikkim		Kyongnosla Alpine S,E/Sikkim		Maenam WLS, S/Sikkim		Kitam Bird S, S/Sikkim		Barsey Rhod.S, W/Sikkim	
Visitors	Amt.	Visitors	Amt.	visitors	Amt.	Visitors	Amt	Visitors	Amt.	Visitors	Amt.
4432 (Indian)	115202/-	57607	284075/-	11	1102/-	814 (Indian)	43800/-	35	875/-	2863 (Indian)	75114/-
109 (Foreigners)		0		0		32 (Foreigners)		0		16 (Foreigners)	

Human – animal conflict during the year – 2019-2020.

Human killed/injured		Animal deaths	Crop damage	No. of beneficiaries	Ex-gratia paid	Source of funding	Remarks
Death (In No.)	Injury (In No.)	In No.	In Ha.	In Nos.	In lakhs		
Nil	4	569	560 ha approx	675	31.00	IDWH-CSS	<p><u>Livestock includes:</u> Chicken, ox, cow, goat, sheep, pig, calf, yak, etc.</p> <p><u>Crop & vegetables includes:</u> Maize, cardamom, paddy, millet, vegetables (potatoes, peas, cabbages, tomatoes, beans, paddy etc.)</p> <p><u>Wild Animals involved:</u> Bear, monkey, peacock, barking deer & wild boar etc.</p>

Chapter-11

Himalayan Zoological Park (HZP) Bulbuley.

The Himalayan Zoological Park, Bulbuley, Gangtok was formally opened to the visitors in May 1997 as a larger more conservation based setup from the older version of the Zoological Collection at Rustonjee Deer Park. Over the last 24 years, despite several setbacks, the HZP has come a long way and now is host to conservation breeding programmes of flagship high altitude species unique to the Sikkimese Himalayas. Despite being a relatively young zoo in terms of management and administration and even construction, the HZP is still what appears to be the largest “Small Zoo” in the country considering its vast expanse of 230 Ha of forested area of which the zoo itself occupies 20%.

The HZP started off being managed as a part of Forest Services being provided under the Sikkim Forests, Environment and Wildlife Management Department, and has only very recently been declared a Society under the Central Zoo Authority; however considering its infancy, it continues to be managed under the State’s Forest Department. The HZP can now legally accept funds and donations from public and Private sectors, and even start Animal Adoption programs that can help support conservation breeding programs being carried out in the zoo.

The Himalayan Zoological Park is one of the few High-altitude Zoos in the country that focuses largely on local wildlife. Considering that most of the species housed in the HZP are native to the area, the terrain and vegetation have served well to enhance the “immersion exhibit” concept where enclosures are created such that the habitat inside is not very different from that outside, thus giving visitors the experience of being in the same space as the animals themselves while also allowing the animals the freedom to behave as they would in the wild. The HZP prides itself in the fact that most visitors comment on how animals here seem happier than those seen in other zoos in the country. The Himalayan Zoological Park however suffers difficulties in its endeavours to become the country’s largest High Altitude Zoo. Owing to its location and unusual microclimate, the zoo only sees clear weather for a few months during the dry season, between November and April, during which all animals are visible. This is the only time during the year that the Zoo has maximum visitor influx – both tourists and locals. However, for the rest of the year, the Zoo is shrouded in rainy weather, thus making for poor visiting options as well as causing management and veterinary problems. The rapidly growing vegetation also make visibility in enclosures difficult which is

managed to some extent by the respective animal keepers, however, in some cases changes have required to be made within the enclosure itself to facilitate visitor experience while also making animal management easier for the animal keeper. The Bear enclosure was bifurcated in order to be able to house at least two groups of bears within the same location.

Continuously cold and wet weather provide ideal conditions for spread of disease and infections. Canine Distemper is currently the most dreaded disease outbreak being faced by the HZP, having already resulted in the loss of 12 Red Pandas over two separate outbreaks – 2012 and 2016. This is also due to the lack of a proper barrier wall around the entire park which would prevent the entry of stray cattle and feral dogs carrying various diseases within the park. This has been addressed several times over the last ten years but unfortunately been ignored on grounds of insufficient funding. The Himalayan Zoological Park is currently the only facility in the state that is conducting conservation breeding programmes for Red Panda which is a flagship species for the state.

The HZP also have severely low numbers of animals on display owing to difficulty in procuring animals. Animals from other zoological collections are available, however transporting them to Sikkim not only difficult due to the road conditions and terrain of the state, but also very expensive.

Animal collection trips, if approved by the Government and CZA are also difficult due to the inaccessibility of the mountainous land where the climate is unforgiving and the animals are mostly shy and sensitive species. Sikkim is also a land of varying climatic and vegetative belts, resulting in wildlife that is also accordingly adapted. To bring animals from high altitude cold desert areas, to a relatively warmer and considerably wetter and more humid area like Bulbuley is difficult as they are very temperature sensitive. Thus, HZP has to rely mostly on a very small area for locally available wildlife like Red Panda, Leopard Cats, Himalayan Black Bears, Goral, Serow, Civets and few species of pheasants that are more adaptable to the unique climate of Bulbuley. With sufficient funding and unhindered support from the Forests and Environment Department, Government of Sikkim, HZP has the potential to rise to one of the finest high altitude zoological collections in the country.

The Himalayan Zoological Park has actively participated in the Conservation Breeding Programmes for Red Panda, Blue Sheep and Himalayan Tahr in the past. The last few years however have seen a lull in these programmes owing to a deficiency of viable animals to carry the programmes forward. Active efforts for live specimen collection with provisions for acclimation, quarantine and integration into the animal collection require support from the Forests and Environment Department in order to make these programmes a success.

Despite these setbacks the Himalayan Zoological Park has strived to maintain itself as the only conservation based zoological collection in the state. The large space of the Himalayan Zoological Park also provide scope for revenue generation through alternative means such as provision of sheltered picnic spots and children's park in designated areas away from the main display areas. Trekking trails are also available for short day hikes, however requiring constant maintenance due to rapid growth of vegetation, prompting the need for maintenance staffing. The HZP has already taken steps towards development of the Bamboo Grove into an area that will support education programmes and possible livelihood opportunities. Plans are in place to utilize these areas as a visitor interactive experience whereby conservation education may be imparted. Visitor amenities are also being improved through repairs and renovation of the road, visitor walkways to some of the enclosures as well as washroom facilities and rain sheds.

The state's first official wildlife rescue centre which also falls under the umbrella of the Himalayan Zoological Park responsibilities was also started to be utilized after necessary changes were made to ensure safe and hygienic housing for the animals to be housed within. The rescue centre currently houses two numbers of Himalayan Black Bear sub-adults that were rescued from Kyongnosla and Ngor Gumpa between December 2019 and October 2020 respectively. One vulture which was rescued from Namchi in March 2020 and was unable to be released due to poor health of the bird was also treated by the Zoo Veterinarian and then shifted to the Rescue Centre where the bird will have access to a larger enclosure where it may gain the strength to fly and be potentially released if possible. All enclosures have provisions to keep the animals safe along with sufficient vegetation to provide natural cover for the animals. The rescue centre however still requires a concrete barrier to ensure the safety and security of the animals from feral dogs and miscreants who may sought to vandalize the property. Animals housed in the rescue centre are often traumatized and sensitive to disturbance. Leaving the Rescue Centre without a security wall will leave the animals housed vulnerable to potential harassment and abuse.

The Himalayan Zoological Park Wildlife Rescue team has also been responsible for the rescue of several Himalayan Black Bears as well as Assamese and Rhesus Macaques from Man-animal Conflict cases over the years. The priority of the rescue team has always been to safely carry out the rescue and relocation of the conflict animals. The HZP Wildlife Rescue team has on an average carried out at least ten to fifteen successful rescue and relocations of Himalayan Black Bear, Assamese and Rhesus Macaques every year.

The stretch of road between the HZP Exit and the Radio station between which the Rescue Centre is located) is a known location for locals that engage in substance abuse and alcohol. There is a risk that such persons may harass the animals.

With additional financial aid from the Forests and Environment Department, Government of Sikkim, the Himalayan Zoological Park should be able to step into its 25th year in 2022 with a much improved infrastructural base that would ensure smooth and efficient functioning of the park.

1. Functions & Objectives:

- To improve Infrastructure with respect to Animal Enclosures.
- To provide the essential supporting infrastructure for the animals.
- To improve the behavioral enrichment for the animals.
- To provide highly quality nutrition to the animal collection.
- To improve animal health and numerical strength of the animals through conservation and captive breeding programs.
- Conservation of endangered species of Himalayan fauna.
- To educate students and public on the importance of wild animals and need for conservation.

Following detailed Annual Plan of Operation submitted for the Financial Year -2019-20.

A.

SL. NO.	Items of Work	Physical Target	Financial Target (Rs In Lakhs)
1	Roads Carpeting	2.5 km	20.00
2	Kraal area enclosure for Himalayan Thar		20.00
3	Galvanized chain link & angle iron fencing along the road side from entry gate to exit gate of the zoo		90.00
4	Bamboo groove for sensitization & education facilities and creation of livelihood opportunities		
5	Bifurcation of Himalayan Black Bear display enclosure to ensure clear sighting of the animal by visitors as the existing enclosure is very large Construction of main gate at entry point as there is no gate till date.		
6	Minor repair works of watch tower & visitors toilet.		
	Grand Total =		130.00
	(Rupees- One Crore thirty lakhs) only.		

B.

SL. No	Particulars	Physical Target	Financial Target (Rs In Lakhs)
01.	Procurement of Animal Feed		24,95,356.00
02.	Essential items		6,55,290.00
TOTAL		Rs	31,50,646.00

(Thirty one lakh fifty thousand six hundred forty six) only.

2. Mention Other achievements, Innovations, Reforms etc. of significant nature:

SL. No.	Particulars	Achievements, Innovations, Reforms etc.
1.	Revenues	Annual Revenue increased from ₹ 20.00 lakhs to ₹24.00 lakhs
2.	Captive Breeding	<u>Enclosed at Annexure I</u>
3.	Zoo Education	Guided tours and orientation programmes are conducted by the Zoo Conservation Biologist to trainee groups of Forest officials from various states including veterinary graduates who visit the park as part of their internship curriculum. Schools that place a request for guided tour are also entertained. The Forests and Environment Department., Government of Sikkim field staff are also provided with training on wildlife rescue and tranquilization by the Zoo Veterinarian, Zoo Conservation Biologist along with practical training by the HZP Rescue Team comprising of trained Zoo Keepers and the Zoo Veterinary Inspector.

3. Tangible Outputs:

a. Captive Breeding: **Enclosed at Annexure I**b. Revenues: **₹ 24,52,000.00**

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, **69,940(Sixty nine thousand nine hundred & forty) numbers** of visitors have visited during this financial year and might have enjoyed and acquired knowledge from the zoo.
- b. Day trekkers have enjoyed the 3.79 km long trekking trail which provides not only the walk but also the wild witness of animals, birds and plants.

Annexure - I**Annual Inventory Report for the Year: 2019 – 2020**

Endangered Species: Animals under Schedules - III and IV of wildlife (Protection) Act, 1972 & exotic species.

S.No.	Animal Name	Scientific Name	Schedule	Opening Stock as on: 01-04-19				Births		Acquisitions				Disposals			Deaths			Closing Stock as on: 31-03-20			
A. Bird				M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
1	Kalij Pheasant	<i>Lophura leucomelana</i>	I	1	3	0	4										1			1	2	0	3
2	Satyr Tragopan	<i>Tragopan satyra</i>	I	0	1	0	1													0	1	0	1
3	Himalayan Griffon Vulture	<i>Gyps Himalayensis</i>		0	0	1	1													0	0	1	1
4	Peafowl	<i>Pavo cristatus</i>	I	1	1		2													1	1	0	2
Total Birds				2	5	1	8	0	0	0	0	0	0	0	0	0	0	1	0	2	4	1	7
B. Mammal																							
1	Red Panda	<i>Ailurus fulgens fulgens</i>	I	0	3	0	3													0	3	0	3
2	Snow Leopard	<i>Uncia uncia</i>	I	0	0	0	0													0	0	0	0
3	Leopard Cat	<i>Prionailurus bengalensis</i>	I	3	4	2	9			1							1			3	4	2	9
4	Common Leopard	<i>Panthera pardus</i>	I	2	1	0	3													2	1	0	3
7	Yak	<i>Bos g. grunniens</i>	I	1	1	0	2													1	1	0	2
8	Himalayan Black Bear	<i>Selenarctos thibetanus</i>	II	1	1	0	2			1										2	1	0	3
9	Large Indian Civet	<i>Viverra zibetha</i>	II	0	1	0	1										1			0	0	0	0
10	Himalayan Palm Civet	<i>Paguma larvata</i>	II	4	0	0	4													4	0	0	4
11	Blue Sheep	<i>Pseudois nayaur</i>	I	2	1	0	3													2	1	0	3
12	Himalayan Thar	<i>Hemitragus jemlahicus</i>	I	2	1	0	3		1								1			1	2	0	3
13	Himalayan Serow	<i>Capricornis thar</i>	I	0	0	1	1													0	1	0	1
Total Mammal				15	13	3	31	0	1	0	2	0	0	0	0	0	2	1	0	15	14	2	31
C. Reptile/ Amphibians		No Reptile & Amphibians																					
D. Invertebrate		No Invertebrate																					
Total Animals				17	18	4	39	0	1	0	2	0	0	0	0	0	2	2	0	17	18	3	38

Annexure - I Part - IB

Endangered Species: Animals under Schedules - III and IV of wildlife (Protection) Act, 1972 & exotic species.

S.No	Animal Name	Scientific Name	schedule	Opening Stock as on: 01-04-19				Births			Acquisitions			Disposals			Deaths			Closing Stock as on: 31-03-20			
A. Bird				M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
1	Silver Pheasant	<i>Lophura nycthemera</i>	Exotic	1	1	0	2													1	1	0	2
2	Lady Amherst's Pheasant	<i>Chrysolopus amherstiae</i>	Exotic	1	1	0	2													1	1	0	2
3	Golden Pheasant	<i>Chrysolophus pictus</i>	Exotic	1	1	0	2													1	1	0	2
Total Birds				3	3	0	6	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	6
B Mammal																							
1	Goral	<i>Naemorhedus goral</i>	III	10	5	0	15	2												12	5	0	17
2	Barking Deer	<i>Muntiacus muntjak</i>	III	3	3	1	7	1									2			4	1	1	6
3	Procupine	<i>Hystrix indica</i>	IV	1	2	0	3			2		1	1							1	3	3	7
Total Mammal				14	10	1	25	3	0	2	0	1	1	0	0	0	0	2	0	17	9	4	30
C. Reptile/ Amphibians		No Reptile & Amphibians																					
D. Invertebrate		No invertebrate																					
Total Animals				17	13	1	31	3	0	2	0	1	1	0	0	0	0	2	0	20	12	4	36

Chapter- 12

RESEARCH:

High Altitude Research Centre (HARC):

1. RESEARCH ACTIVITIES

1.1 The Soil and Water samples of the Sikkim Forest nurseries investigated in the Quality Control Laboratory-HARC, F& ED.

The book on the Nurseries of Sikkim Forest and Environment Department 2019-2020 published. The parameters covered are as under:

(a) PHYSICAL PROPERTIES

1. pH
2. Conductivity
3. Specific Gravity
4. TDS
5. Soil Moisture

(b) MACRONUTRIENTS ANALYSIS

1. NPK
2. Nutrients

(c) SOIL CHEMISTRY

1. Phenolic Acid
2. Flavanoids in soil
3. Fulvic Acid
4. Humic Acid
5. Soil Organic Carbon

1.2 PUBLICATIONS

1.2.1 Publication of Proceeding titled “Natural Resources of Eastern Himalaya- Research Trends and opportunities -2020. ISBN: 9788194625803.

1.2.2 Report on National Seminar on Marketing of Medicinal Plants and High Valued bioresources of Sikkim and adjoining North East States, funded by NMPB, AYUSH, Government of India.

1.2.3 Wild Edibles and Fodder Plants of Sikkim. ISBN 978-93-5408-409-6.

2. NEW INITIATIVES

2.1 ESTABLISHMENT OF SIKKIM STATE FOREST HERBARIUM

Sikkim State Forest Herbarium notified vide 184/ GOS/ FED/ SECY dated 9.11.2020 and its acronym is SSFH. The State Government approval obtained for the prescribed rules of SSFH.

2.2. TAXONOMIC TREATMENT FOR TYPIIFICATION

2.3 DOCUMENTATION OF HERBARIA OF JAPANESE EXPEDITION.

All representative specimens of the Japanese expedition mounted to process to archive.

3. ACHIEVEMENTS/ RECENT PUBLICATIONS

3.1 Enumeration of specimens from Edinburgh Expedition to Northern Sikkim

deposited at Sikkim State Forest Herbarium-Part I. Pleione 14(2): 202-215, 2020.

3.2 Folk –Medicinal Uses of *Allium sikkimese* Baker (Alliaceae) in Sikkim Himalaya.

Explor. Anim. Med. Res. 2: 217-220, 2020.

3.3 Phytogeography of Saxifragaceae and Crassulaceae in the Sub-Alpine and Alpine

Sikkim Himalaya. In: Trends in Bio-Geography: Eastern Himalaya and North

Bengal (In press).

3.4 Notes on the typotype *Juncus tobdenii* Noltie in the Sikkim Himalaya (In press).

3.5 Do invasive species use for the medicinal purposes? (In press).

Chapter- 13

Environment & Soil Conservation:

Environmental Information System (ENVIS):

Official Website: www.sikenvis.nic.in **Email:** sik@envis.nic.in

ENVIS is a 100% central sector scheme of the Ministry of Environment, Forests & Climate, Government of India since 1982-83. The scheme was launched in Sikkim under the Forest, Environment and Wildlife Management in the year 2002-03 as ENVIS Node and later fully operational in 2006-07. ENVIS is a distributed environmental information network with the mandate of collection, collation, storage, retrieval and dissemination to varying users, which include decision-makers, researchers, academicians, policy planners, research scientists, etc. The ENVIS scheme is also mandated to implement Green Skill Development Programme (GSDP) to provide green skill training to school/ college drop outs, unemployed youths and enthusiasts for supporting livelihood through sustainable approaches. The ENVIS Secretariat located in the Ministry coordinates the activities of all the ENVIS network partners to make ENVIS a web-enabled comprehensive information system.

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

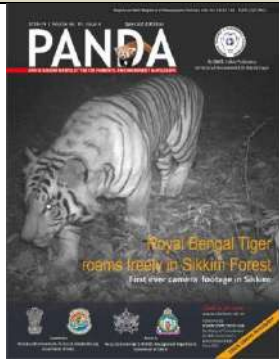
Sikkim State ENVIS Hub Team:

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

Services

1. Website Development and Updation: www.sikenvis.nic.in, www.sikkimforest.gov.in
2. Publication of Quarterly Newsletters including special edition 'PANDA'
3. Preparation of State of Environment Reports
4. Updation of ISBEID (Indian State-level Basic Environment Information Database)
5. Online/ in-person Query Response System
6. Library Facility
7. Other Publications/Reports/ Archives on Himalayan Journal
8. IT support/ LAN/ Intranet/Internet maintenance and services
9. Green Skill Development Programme (GSDP) on Beekeeping, Bamboo Crafts, Forest Fire Management and Solar Energy Systems. Total 90 candidates basically unemployed youths of rural background were provided green skill training to support new livelihood ventures.

10. Environment Awareness, Education and Training (EEAT): Implementation of EEAT include a network of 856 eco-clubs in schools and colleges across the State under the National Green Corps (NGC) School Eco-Club programme with a provision of Rs 5000/- financial grant-in-aid to support environment related activities.; The scheme also includes nature camps, green teachers training, orientation workshops on Green Schools Programme with CSE, Earthian Schools Programme with WIPRO and so on, provision of environment kits and awareness material etc.
11. Swachhta Action Plan (SAP) in line with Swachh Bharat Abhiyan is a scheme (100% CSS) funded by MoEF&CC, GoI for promoting Green Good Deeds, action based awareness campaigns on ODF, clean air and water, Harit Diwali, riverfront clean up, cleaning of jhoras and nallas in coordination with eco-clubs, local associations and stakeholders partnership.
12. Coordination of Chief Minister's Green School Rolling Trophy and State Green School Awards.
13. Continuous Engagement Programme for imparting environment awareness, education and training with agencies like Centre for Science and Environment (CSE) New Delhi, earthain WIPRO, Centre for Environment Education (CEE) Ahmadabad and Guwahati; etc.
14. Exchange of information with the Ministry, Research Agencies and promotion of national and international cooperation and liaison for exchange of environment related information.



Cover snapshot	Quarter/ Volume/ Issue/ Theme	Number of copies printed and circulated	URL of the PDF file in ENVIS website
	<p>2019 Special Newsletter edition title PANDA Vol. 11</p> <p>88 paged special edition ENVIS newsletter on scientific research articles on flora and fauna of Sikkim Himalaya, first ever sighting of Royal Bengal Tiger in Sikkim, exclusive write-ups on Lhonak valley, Lashar valley, Domung gora complex, Green lake and Muguthang expeditions carried out by foresters and scientist for rapid assessment of biodiversity.</p>	<p>2000 nos (88 Pages)</p> <p><i>Supported by host organization</i></p>	<p>http://sikenvis.nic.in/WriteReadData/Publication/PANDA%20Vol%2011%202019%20(2018-19).pdf</p>

Sikkim, a tiny Himalayan State in the North Eastern part of India has always been an explorer's paradise. The State flaunts with rich inheritance of diverse floral and faunal species fascinating researchers across the globe. The research expeditions here in Sikkim are nonpareil and conducive to new findings and discoveries, an indication of a healthy forest eco-system flourishing in our State.

The first ever sighting of Royal Bengal Tiger through camera trap installations at Sikkim forests during December 2018 is a major breakthrough amidst stories murmuring of its presence for centuries. The venture to estimate the wildlife population in the State has bred fruitful results. The wary and majestic predator of the high mountains, the Snow Leopard has been found in packs. Red Panda, the State animal has been estimated to be around 380. The wildlife Protected Areas in the State have good habitats for flourishing the native and endangered species.


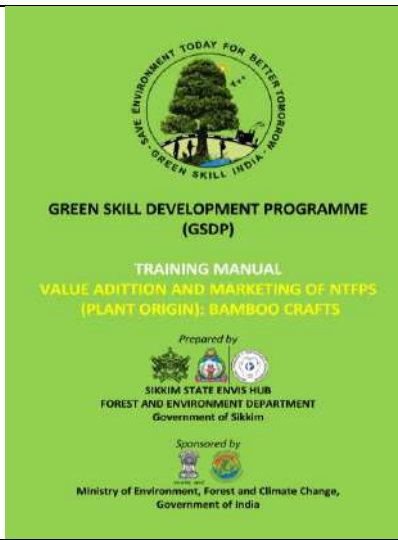


ENVIS Publication 'PANDA' Vol. 11 2019 edition being released by the Honorable Chief Minister of Sikkim Shri Prem Singh Tamang on the occasion of 73rd Independence Day Celebration on August 15, 2019 at Palzor Stadium, Gangtok

Cover snapshot	Quarter/ Volume/ Issue/ Theme Main Articles	Number of copies printed and circulated	URL of the PDF file in ENVIS website
<p><i>This edition of PANDA news magazine provides insights to such research and scholarly adventures of the mountain eco-system. The State has diverse cultural communities living in harmony with nature which is the basis for holistic and sustainable development amidst global threat of climate change and hardships of mountain life. The people of this peaceful Mountain State are endowed with immense responsibility to sustain the eco-friendly practices for safeguarding future generations. This edition intends to reflect and learn more of our own natural environment for wider and deeper understanding.</i></p>			
	<p>1st Qtr (Apr-Jun) Vol. 12, Issue 1</p> <p>Opportunities for Reaping the Benefits of REDD plus in Sikkim Himalaya for Conservation and Enhancement of Carbon Stock, Beat Air Pollution, World Environment Day, Chief Ministers Green School Rolling Trophy, Ambient Air Quality of Sikkim, Green Schools Audit, Plastic Freedom Challenge, Single use plastics, Green Good Deeds, Swachhata Pakwada,</p>	<p>500 nos.</p> <p>(12 Pages)</p>	<p>http://sikenvis.nic.in/WriteReadData/Publication/ENVIS%20NewsLetter%202019-20%20Vol%2012%20Issue%201%20(Apr-June).pdf</p>
	<p>2nd Qtr (Jul-Sep) Vol. 12, Issue 2</p> <p>A New Green Initiative - A day for Mother Earth, Floral traits determine pollinator visitation in Rhododendron species across an elevation gradient in the Sikkim Himalaya, Most Exclusive Leisure Product Award (Ecotourism) to Sikkim, Wards Trogon <i>Harpactes wardi</i> in Taal-Kharka East Sikkim, WIPRO Earthian schools programme, 32 years and healing, world ozone day, Swachhata abhiyan, Jal Shakti Abhiyan</p>	<p>500 nos.</p> <p>(12 Pages)</p>	<p>http://sikenvis.nic.in/WriteReadData/Publication/ENVIS%20NewsLetter%202019-20%20Vol%2012%20Issue%202%20(Jul-Sep).pdf</p>
	<p>3rd Qtr (Oct- Dec) Vol.12, Issue 3</p> <p>Challenges for biodiversity conservation, human wildlife conflict, student solar ambassador workshop, Karyanjali - Gandhi Global Solar Yatra, Wildlife conservation and emerging conflicts in Sikkim, Green Skill Development Programmes in Sikkim State, Forest and Tree Cover statistics of Sikkim (Excerpt of State of Forest Report 2019)</p>	<p>500 nos.</p> <p>(12 Pages)</p>	<p>http://sikenvis.nic.in/WriteReadData/Publication/ENVIS%20NewsLetter%202019-20%20Vol%2012%20Issue%203%20(Oct-Dec).pdf</p>

Other ENVIS publications/ information products brought out during the Financial Year 2019-20:

Cover snapshot	Publication/ Product Theme(s)/ Subject Area(s)	Number of copies printed and circulated	URL of the PDF file in ENVIS website
	Brochure: Ten Point Agenda to Implement Green Good Deeds (Reprint)	1000 copies (4 fold brochure)	http://sikenvis.nic.in/WriteReadData/Us erFiles/file/Sikkim%20SNA%20GGD%20Brochure.pdf
	GSDP Brochure: Value Addition and Marketing of NTFP Products (Animal Origin) – Wild Beekeeping and Processing	50 copies (3 fold brochure)	Not published online. Print copies used as reference material for GSDP candidates and trainers/ subject experts.
	GSDP Training Manual: Forest Fire Management Resource Manual	30 copies (148 pages)	Not published online. Print copies used as reference material for GSDP candidates and trainers/ subject experts.

Cover snapshot	Publication / Product	Number of copies printed and circulated	URL of the PDF file in ENVIS website
	GSDP Training Manual: Sustain and Enhance Technical Knowledge in Solar Energy System	30 copies (225 pages)	Not published online. Print copies used as reference material for GSDP candidates and trainers/ subject experts.
	GSDP Training Manual: Value Addition and Marketing of NTFP Products (Plant Origin) – Bamboo Crafts	30 copies (22 pages)	Not published online. Print copies used as reference material for GSDP candidates and trainers/ subject experts.

ENVIS Website (CMS based) URL: www.sikenvis.nic.in

Frequency of updating Website 2019-20(as on 31-Mar-2020)

The monthly average frequency of updation for 2019-20 is over **187 updates per month**. Total **2246 updates** have been made during 2019-20 as on 31st of March, 2020. The number of web updates has increased by 32% as compared to previous year.

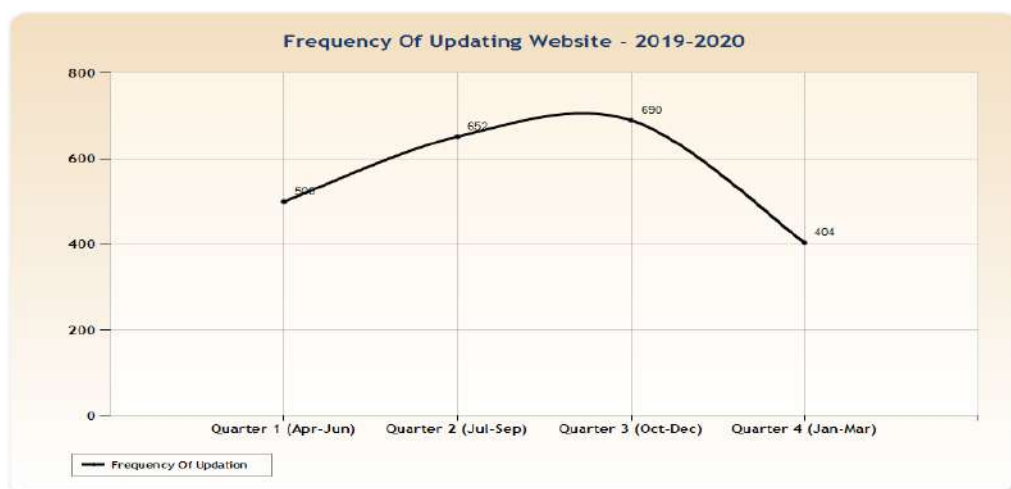


Table showing number of web updates module-wise and quarter-wise during 2019-20

Quarters	Publications	Subject Area	Bibliography	Major Activity	Upcoming Events	Latest News	Photo Gallery	Frequency of Updating
Quarter 1 (Apr-Jun)	4	54	405	0	5	17	12	500
Quarter 2 (Jul-Sep)	7	86	503	2	18	20	15	652
Quarter 3 (Oct-Dec)	7	91	560	1	10	21	0	690
Quarter 4 (Jan-Mar)	4	30	343	1	3	23	0	404
Total	22	261	1811	4	36	81	27	2246

User Engagement and Interaction (last three years)

<i>User engagement and interaction</i>		<i>FY 2017-18</i>	<i>FY 2018-19</i>	<i>FY 2019-20</i>
i.	Total number of visits	5,34,217	3,82,427	3,73,476
ii.	Number of unique visits	52,471	56,900	61,810
iii.	Reports Downloaded/Read	1,011	683	1,514
iv.	Total Number of Queries received*	1,898	2,919	3,632
v.	Number of Queries responded*	1,898	2,918	3,634

* including offline queries

Total number of visits on Website (2019-20): 3, 73,476 (As on 31-Mar-2020)**Number of unique visits on Website (2019-20): 61,810 (As on 31-Mar-2020)**

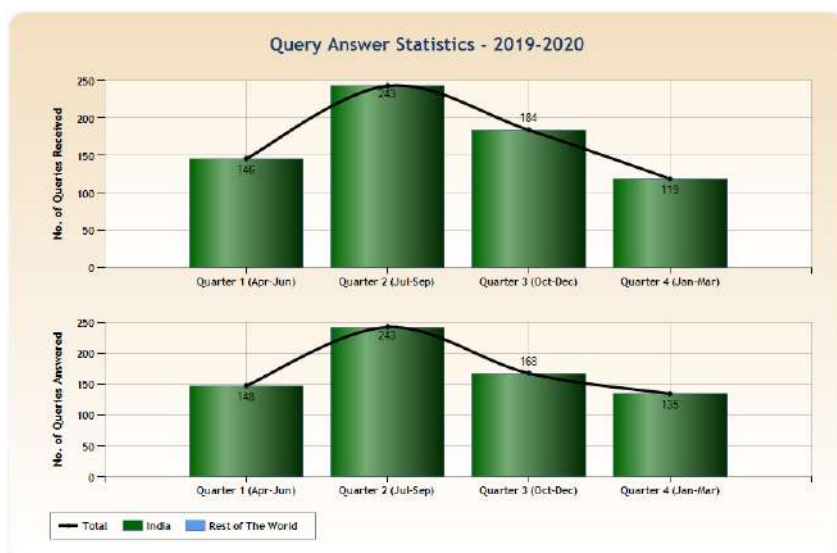
Months	Visits			Unique Visitors		
	Indian	Rest of the world	Total	Indian	Rest of the world	Total
Apr-2019	8461	20019	28472	3341	3170	6511
May-2019	12445	26575	39008	3591	3428	7019
Jun-2019	9670	21949	31616	3178	3195	6373
Jul-2019	11057	21012	32065	3083	3271	6354
Aug-2019	9405	18516	27911	3031	3140	6171
Sep-2019	8439	21189	29621	3198	3199	6397
Oct-2019	8469	25015	33477	3257	3279	6536
Nov-2019	13338	23387	36720	5055	4477	9532
Dec-2019	8173	20787	28959	3758	3387	7145
Jan-2020	6711	20074	26781	3246	3039	6285
Feb-2020	7816	21725	29536	3536	3053	6589
Mar-2020	6366	23129	29491	2745	2496	5241
01 Apr 2019 – 31 Mar 2020	110237	263311	373476	35531	26279	61810

Number of reports downloaded/ read by stakeholders: Total 1514 downloads (*through user login section only*) have been observed during 2019-20 as in which over 58% of the downloadable items have been accessed from the subject area module and over 41% of the items have been downloaded from the publications module. However, this figure is only restricted to sections of the website which require user login. The actual download figures is expected to be much more since 80% of the downloadable content of the website especially the frequently visited subject area, latest news, major activities etc have been uploaded with direct download option for enhancing the user accessibility.

Year	Publications	Subject Area	Others	Report Read/Downloaded
01 Apr 2019 - 31 Mar 2020	630	880	4	1514

Query-Answer Statistics 2019-20:

Mode of Query Receipt	Number of Queries Received	Number of Queries Responded	Reasons for shortfalls, if any, and action taken to rectify
Online(CMS based website)	692	694	2 backlog queries of previous FY have been responded during FY 2019-20
Email(official NIC server)	1800+	1800+	-
Postal/Telephonic (including hand post)	350	350	-
Physical(In person visits)	790	790	-
Total	3632+	3634+	



(Online query response graphical statistics 2019-20 – Quarter-wise)

Status of utilization of grant (100% CSS) during the financial year 2019-20 and reasons for shortfalls, if any:

ENVIS RECURRING GRANT

SN.	Sanctioned Object Head	Amount Sanctioned (in Rs.)	Expenditure incurred (in Rs.)	Available Balance (in Rs.) Refunded to GoI
1	Manpower	14,38,554	14,38,554	0
2.	Others (Database development, website maintenance, printing of Newsletters & Prakriti Map, contingency, stationery, consumables, AMC, Internet charges, training, inter-centre interaction workshops, expenses on monitoring, ISBEID Database development, Mobile App Development etc.)	4,65,300	4,65,300	0
3.	Travel etc.	1,50,000	61,364	88,636
Total		20,53,854	19,65,218	88,636

GSDP COURSES 2019-20

SN.	Sanctioned Object Head	Sanction Details (in Rs.)	Expenditure incurred (in Rs.)	Balance (in Rs.)
1	Value Addition and Marketing of NTFPs (Animal Origin): Wild Beekeeping and Processing – NSQF level 5, 200 Hrs (25 says), 25 candidates	Sanction No. 11/7/2019-EI (Vol-III) dated 18/11/2019 Rs.9,58,500/-	9,58,500	0
2.	GSDP Course: Value Addition and Marketing of NTFPs (Plant Origin)- Bamboo Crafts 400Hrs (45 days) 20 candidates NSQF level 5	Sanction No. 11/7/2019-EI (Vol-III) dated 24/12/2019 Rs.14,70,080/-	14,70,080	0
3.	GSDP Course: Forest Fire Managment 300Hrs (36 days) 20 candidates NSQF level 5	Sanction No. 11/7/2019-EI (Vol-III) dated 24/12/2019 Rs.13,38,480/-	13,38,480	0
4.	GSDP Course: Sustain and Enhance Technical Knowledge in Solar Energy Systems 240Hrs (30 days) 20 candidates NSQF level 5	Sanction No. 11/7/2019-EI (Vol-III) dated 24/12/2019 Rs.12,33,200/-	12,33,200	0

New Initiatives taken by Sikkim ENVIS Hub during the Financial Year (2019-20):

- ✓ Facilitated and Conducted Green Skill Development Programme (GSDP) on four certificate courses viz. Wild Beekeeping and Processing, Forest Fire Management, Sustain and Enhance Technical Knowledge in Solar Energy Systems and Bamboo Crafts. A total of 90 candidates trained and 80 are already entrepreneurs/ self-employed /in job.
- ✓



- ✓ Participated and conducted a global level event ‘Global Gandhi Solar Yatra – Students Solar Ambassador Workshop’ in coordination of IIT Bombay to commemorate 150th birth anniversary of Mahatma Gandhi at 20 schools engaging 100 students across the State in assembly of solar study lamps. IIT Bombay felicitated Sikkim ENVIS Hub with a Certificate of Appreciation.



- ✓ Prepared a short documentary film titled “Mith” in Nepali vernacular language to spread awareness on conservation and protection of trees by forging *Mithini*/ *Mith* (friendship) with trees, an age-old traditional practice of the State.



- ✓ Single-use Plastic Free Initiative #PlasticFreedomChallenge: Sikkim ENVIS Hub took a two-month (May-June 2019) long initiative to phase out single use plastics at schools and neighborhood. At least 28 government schools successfully adopted eco-friendly alternatives and declared their schools as ‘single-use plastic free’ in these two months.



Picture (left to right): No Dustbin Policy to curb single-use plastics; Students using bamboo made mugs instead of plastic cups.

Gist of Other Activities [Awareness/ Training/ Outreach Activities] Conducted by Sikkim ENVIS Hub during 2019-20

S N	Date	Programme Title	Content and coverage	Impact and Outcomes/ No. of participants and Method of dissemination
1.	May 9-10	Green Teachers Training on Environment Auditing	Green Schools environment auditing for 200 schools of the State in partnership with Centre for Science and Environment, New Delhi	About 150 schools certified as green school by CSE, New Delhi till date.
				
2.	June 1-15	Swachhata Pakwada on single-use plastic free campaign #plasticfreedomchallenge	Plastic freedom challenge; Single-use plastic free campaign	About 2000 persons participated. 28 schools of the State eventually ships to ban single-use plastics during the fortnightly event.
  				

S N	Date	Programme Title	Content and coverage	Impact and Outcomes/ No. of participants and Method of dissemination
3.	June 5	World Environment Day celebration at the State level	Felicitations of 9 schools with Chief Minister's Green School Rolling Trophy; plantation and cleanup drives, street rallies, exhibition and eco-competitions at schools. Sikkim ENVIS hub served as the nodal agency for effective implementation of the programme.	About 3000 persons including students/teachers participated. 9 schools were awarded with cash incentives from State Government up to Rs 12 lakh as prize money. Sensitization on WED theme Beat Air Pollution achieved.
				
4.	July 7	A Day for Mother Earth , a new green environment friendly initiative of the State Government	7 minutes (11-11.07 am) of no vehicular emission, plantation and clean up drives across the State. Sikkim ENVIS hub prepared and disseminated vehicle stickers and encouraged public participation.	Action to reduce vehicular emission achieved. More than 5000 people participated.
		    		

S N	Date	Programme Title	Content and coverage	Impact and Outcomes/ No. of participants and Method of dissemination
5.	Aug 15	Release of special edition ENVIS publication “PANDA” Vol. 11 on the occasion of 73rd National Independence Day at Gangtok	The Hon'ble Chief Minister of Sikkim Shri P.S. Tamang pleasantly released the pride publication of ENVIS hub in presence of about 20,000 spectators.	About 1000 copies of ENVIS Publication was distributed to political dignitaries, senior officers and public attending the programme.
				
6.	Sep 2-3	Green Teacher's Orientation of WIPRO Earthian schools programme	Action projects on sustainability of water, biodiversity and waste management at schools. Sikkim ENVIS Hub has been partnering with WIPRO (IT giant) based at Bengaluru since 2015 to promote environment education amongst school children through action based projects. The programme is sponsored by WIPRO as a part of its CSR activity.	140 teachers participated. Based on the training conducted, WIPRO feted one of the Sikkim School namely Bojoghari Government Sr. Secondary School with National Earthian Schools Award 2019 carrying cash prize of rupees one lakh. Earlier in 2015, one Sikkim school had received similar award.
				

S N	Date	Programme Title	Content and coverage	Impact and Outcomes/ No. of participants and Method of dissemination
7.	Sep 16	World Ozone Day Celebration	World Ozone Day on the theme '32 Years and healing' observed with activities like quiz, seminar, painting competitions and demonstrations.	More than 500 students, teachers and public participated.
  				
8.	Sep 17	Swachhata Abhiyan	State-wide cleanliness drive was coordinated by ENVIS Hub to commemorate the birthday of the Hon'ble Prime Minister Shri Narendra Modi.	More than 2000 persons participated in an event coordinated by ENVIS Hub.
  				

S N	Date	Programme Title	Content and coverage	Impact and Outcomes/ No. of participants and Method of dissemination
9.	Oct 2	<p>Solar Ambassador Workshop as a part of Karyanjali to mark 150th birth anniversary of Mahatma Gandhi</p> <p>Contributed to achieving Two Guinness World Record</p> <p>‘Largest Environmental Sustainability Lesson’ and ‘Most People Assembling Solar-Powered Lamps simultaneously’</p>	<p>Students Solar Ambassador Workshop in 20 schools for 100 students was organized in collaboration with IIT Bombay. ENVIS conducted Master Trainer's Training of assembling Solar Study Lamps - Students Solar Ambassador Workshop as a part of 150th Birth Anniversary Celebration of Mahatma Gandhi.</p>	<p>100 students were provided hands-on training on solar study assembly kit. IIT Bombay felicitated ENVIS with Certificate of Appreciation for encouraging 100 students in a global event.</p> <p>IIT Bombay felicitated Sikkim ENVIS Hub with Certificate of Appreciation</p>
    				

S N	Date	Programme Title	Content and coverage	Impact and Outcomes/ No. of participants and Method of dissemination
10.	Oct 15	Inter-Center Visit and Interactive Meeting to share knowledge experiences	ENVIS team from Nagaland visited Sikkim ENVIS Hub on October 15, 2019 at Gangtok	A day long interaction was conducted to assist the newly setup ENVIS Hub of Nagaland State on implementing activities of ENVIS.
				
11.	Nov 15-17	Technical Support in coordinating National Workshop organised by Host Organization on 'Challenges for Biodiversity Conservation and Human Wildlife Conflict' at Gangtok	Sikkim ENVIS Hub was directed to provide technical support, publicity support during the national workshop attended by delegates and experts across the State along with delegates from Japan.	ENVIS knowledge products were distributed to around 350 delegates. A post workshop report was compiled by ENVIS.
				

S N	Date	Programme Title	Content and coverage	Impact and Outcomes/ No. of participants and Method of dissemination
12.	Nov 20	Pre-Training Sensitization on GSDP – Wild Beekeeping on potential site at South District.	Interaction with panchayat and public of Rong Ward, South Sikkim for Beekeeping GSDP course	53 farmers registered their application of intent for beekeeping.
				
13.	Jan 9- 28	GSDP course – “Wild Beekeeping and Processing” Detailed Report on GSDP Activities is at Annexure III	A month long (200 hrs) certificate course on value addition and marketing of NTFP products (Animal Origin) – Wild Beekeeping and Processing for 25 candidates. The Hon’ble Minister Forest Shri Karma Loday Bhutia inaugurated the training programme on Jan 9. The valediction was convened on Jan 28.	25 candidates were provided comprehensive training on beekeeping to uplift rural livelihood opportunities through sustainable means duly amalgamating traditional and scientific approaches.
				

S N	Date	Programme Title	Content and coverage	Impact and Outcomes/ No. of participants and Method of dissemination
14.	Feb 27, 29	Capacity Building Activities of Students and Teachers	Two day Capacity Building activities for 240 students and teachers were conducted on sustainability of water, biodiversity and waste at the school, household and neighbourhood. The programme was conducted in partnership with WIPRO Bengaluru at Gangtok for North and East Districts and at Namchi for West and South Districts.	240 students and teachers of 120 schools across the state were oriented on activities for contributing to SDG.
 				

S N	Date	Programme Title	Content and coverage	Impact and Outcomes/ No. of participants and Method of dissemination
15.	March 5 - 25	GSDP course on - Forest Management - Bamboo Crafts - Solar Energy Systems Detailed Report on GSDP Activities is at Annexure III	GSDP certificate courses as indicated were conducted for a total of 65 candidates simultaneously at different locations. The programme was jointly inaugurated on March 5 by the Hon'ble Minister Forest Shri Karma Loday Bhutia. The GSDP training on Bamboo Crafts was conducted at Bermiok, West Sikkim, GSDP on Forest Fire Management was conducted at Salghari and Sumbuk of South Sikkim and Solar Energy System was conducted at Gangtok, East Sikkim.	65 candidates were provided comprehensive training. Out of these candidates 45 candidates have potential to be entrepreneurs or self-employed. 10 candidates have been employed as temporary in government autonomous body.



Chapter-14

Different Boards under Forest & Environment Department:

(1) **STATE POLLUTION CONTROL BOARD (SPCB)-SIKKIM.**

The State Pollution Control Board- Sikkim (SPCB-Sikkim) was created under the provision of Sub-Section (1) of Section 4 of the Water (Prevention & Control of Pollution) Act, 1974 vide Government Notification No. 30/Home/2008 dated 19/03/2008 published in Extraordinary Gazette vide No. 119 dated 10/04/2008.

The main function of SPCB-Sikkim is to act as a regulatory as well as an advisory body. Under the advisory function, SPCB-Sikkim advises the state government in terms of measures to be taken for prevention, control and abatement of pollution and under the regulatory function, the SPCB- Sikkim is bestowed with the power of implementation of different Acts and Rules pertaining to Environment Pollution Control.

STRUCTURE OF SIKKIM STATE POLLUTION CONTROL BOARD (2019-2020)

1. Chairperson (full time)
2. PCCF-cum-Principal Secretary Forests and Environment
3. Secretary, Urban Development Department
4. Secretary, Public Health Engineering Department
5. Secretary, Transport Department
6. Principal Director, Health Department (Health Expert)
7. Deputy Mayor, Gangtok Municipal Corporation
8. Up Adhyakshas - North, South, East and West Districts
9. Shri. Tshering Tashi Bhutia- Expert Member (Technocrat)
10. Dr. M. P. Thapa- Expert Member (Academician)
11. Member Secretary

Manpower deployment under SPCB during 2019-2020

1. Joint Director-1
2. Senior Scientific Officer-2
3. Executive Environmental Engineer-1
4. Drawing and Disbursing Officer-1
5. Assistant Scientific Officer-1
6. Junior Scientific Assistant- 4
7. Laboratory Assistant- 5
8. Project Assistant- 5
9. Field Assistant-11
10. Accounts & Administrative Staff- 16

OVERVIEW OF MAJOR PROGRAMMES AND ACHIEVEMENTS

1. NATIONAL AIR MONITORING PROGRAMME (NAMP):

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

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

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

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

2. NATIONAL WATER MONITORING PROGRAMME (NWMP):

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

The major objectives of water quality monitoring are:

- To regulate pollution of the discharge or effluents, if any, reaching the water bodies.
- To identify any deficiency in water quality and to implement water pollution control strategies.
- To determine the effect of water quality on human health.
- To determine long term trends in water quality.

The details of the monitoring stations are as under:

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

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

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In order to maintain the quality of water the SPCB-Sikkim has been continuously monitoring the industrial activities and has been ensuring the running of Effluent Treatment Plant (ETP) 24 hours a day. SPCB-Sikkim has also made Zero Liquid Discharge (ZLD) mandatory so that the treated water meeting the prescribed standard is recycled and reused for gardening, flushing, cleaning and cooling purposes. Further, Online Continuous Effluent Monitoring Systems (OCEMS) are set up in all the pharmaceutical units for strict monitoring of the prescribed standards also.

3. WATER AND AIR LABORATORY:

The Pollution Control Laboratory located at 'C' Block, Forest Secretariat, Deorali has been specified as the State Water and Air Laboratory vide Gazette no.127 dated 09/09/1996 to carry out the functions entrusted to the State Water Laboratory and the State Air Laboratory under sub-section (1) of section 52 of the Water (Prevention and Control of Pollution) Act 1974 and sub-section (1) of section 28 of the Air (Prevention and Control of Pollution) Act 1981 respectively. It deals with day to day analytical work related to both water and air pollution. Samples of air are collected twice in a week and that of water are collected once a month for analysis. The reports are then compiled and submitted to CPCB through online portals respectively.

In conformity with the Hon'ble High Court of Sikkim's order in the matter of discharge of industrial effluent at Singtam by the Pharma Unit dated 06/08/2018 and 29/11/2018, the Board's Water Laboratory has been upgraded.

Further, as per the direction of Hon'ble High Court of Sikkim, the treated water samples from outlet of Effluent Treatment Plant (ETP) and water sample from storm water drains of Pharmaceutical industrial units were collected fortnightly and analysed in the SPCB Lab. The analysis reports were compiled and submitted to the court.

4. NOISE MONITORING:

Due to increase in developmental activities there has been a rise in noise pollution in the whole country and as regards Sikkim, SPCB-Sikkim has been measuring noise pollution during the festival of Deepawali. As per the study conducted by SPCB-Sikkim it has been observed that, the noise level during the festival has gone down extremely due to ban imposed by the State Government on use of firecrackers and other illuminating items in the state.

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

5. ESTABLISHMENT OF INDUSTRIAL UNITS:

Under the provision of Section 25 of Water (Prevention & Control of Pollution) Act, 1974 and Section 21 of Air (Prevention & Control of Pollution) Act, 1981 no units can be

established without the prior consent of the SPCB. Consent to Establish (CTE)/ Consent to Operate (CTO) should be obtained by industrial unit prior to establishment and operation of industrial units.

Industrial units which are of large and medium scale have been granted with Consent to Operate (CTO) under manufacturing sector. Under the service sector consents are being issued to Hotels, Resorts, Health Care Facilities, Garage, Hot mix plant, Wet mix plant, Stone crushers, Sewage Treatment Plant (STP), etc.

Establishment and operation of Diesel Generators (DG set) also require CTE/CTO.

Before the issuance of Consent to Establish (CTE)/ Consent to Operate (CTO) certificates, inspection of units are carried out by following standard operating procedure.

Renewal of CTO/CTE is done only after inspection of the unit. For strict compliance of standards prescribed in the CTO, the Board is engaged in regular monitoring of industrial activities. Third Party Monitoring by an accredited laboratory has also been made mandatory to all the industrial units as per the ease of doing business policy.

SPCB-Sikkim has made it mandatory to apply online for consent issuance and as per the data of 2019-20 available on Online Consent Management and Monitoring System, 315 units were granted CTE/ CTO.

SPCB-Sikkim has categorized various industries operating within the state into 04 categories viz., Red, Orange, Green and White as per their pollution potential. CTE and CTO are issued accordingly. This categorization was notified vide no. 112 dated 01/04/2017. The consent fee for each industry is calculated as per the gross fixed capital investment of each unit without depreciation.

6. PUBLIC HEARING:

Under the provision of Environment Impact Assessment notification, certain development projects are required to obtain Environment Clearance (EC) from the Central Government for category A Projects and from State Environment Impact Assessment Authority for category B projects. Before grant of EC, the projects are subjected to Public Hearings and SPCB-Sikkim has so far conducted 23 public hearings for different types of developmental projects:

7. AWARENESS PROGRAMMES/SENSITISATION/WORKSHOP:

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

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

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

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

SPCB has also taken initiative to organize exposure visits for the students to different types of industrial units to encourage them to opt for career in the industrial sector. The Board is also bringing out appeals to generate awareness through advertisement in print and electronic media.

Special visits to the nearby industrial units are being arranged for school students and local public through the management of the industry and insisting the industries to maintain transparency in control of pollution and in operating their Corporate Social Responsibility (CSR) to gain the goodwill of the public and maintain the environment.

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

A workshop was organized for the occupiers of all the Health Care Facilities both Govt. and Private sector for four days i.e. from 1st to 4th July 2019 at Sidkeong Tulku Conference Hall, Forest Environment & Wildlife Management Department.

8. Public can avail information on SPCB-Sikkim along with regular updates in the website of Forest and Environment Department, Government of Sikkim with link www.sikkimforest.gov.in/spcb.html.

The official email address for correspondence with the board is spcbsikkim@gmail.com

9. Way forward

To strengthen the capacity and functions of SPCB-Sikkim various measures are being taken up currently:

- i) Sensor based River monitoring system.
- ii) Setting up of common server platform to have real time online monitoring data on ambient air quality and river water quality.
- iii) Induction of required technical and scientific manpower under SPCB-Sikkim.
- iv) NABL (National Accreditation Board for Testing and Calibration Laboratories) accreditation of State Water and Air Laboratory under SPCB-Sikkim.

10. Performance Audit of SPCB-Sikkim was carried out by a central team from CPCB.

11. DIRECTIONS GIVEN FOR CLOSURE OF POLLUTING INDUSTRIES:

The State Pollution Control Board has been empowered by the Ministry of Environment, Forests & Climate Change, Govt. of India vide Notification No. S.O. 152 (E) of 10/02/1988 to issue directions. The Ministry of Environment, Forests & Climate Change has delegated its powers vested under Section 5 of the E (P) A, 1986 to the State Pollution Control Board – Sikkim to issue directions to any industry or any local body or any other authority for violations of the standards and rules notified under the EPA, 1986 and amendment thereof.

The State Pollution Control Board-Sikkim has been assigned with the task of granting Consent to Establish/Operate to industrial units under the under Section 25 of the Water (Prevention & Control of Pollution) Act, 1974 & Section 21 of the Air (Prevention & Control

Pollution) Act, 1981. The grant of consent entails that the industrial units are to be inspected prior to issue of consent.

In addition to the inspection for the above mentioned purpose, the SPCB is also to inspect industrial units in the frequency stated below:

Sl. No.	Industrial category	Frequency of Mandatory inspection
1.	17 Category	3 months
2.	Red	6 months
3.	Orange	1 year
4.	Green	2 years
5.	CBWTF/CHWTSDf/CMSWTDF/CETP/STP	3 months

The SPCB-Sikkim also conducts routine sampling of effluent and storm water from pharmaceutical industries.

Any violations of the provisions under the Act under which the consent has been granted or non compliance to the prescribed parameters for Air and Water pollution or gross violations of the consent conditions results in issue of show cause and directions to the violating industries. Non compliance to the directions issued results in closure of the unit.

The following industries were issued closure directions in the year 2019-20:

1. Alembic Pharmaceuticals, Samardung, South Sikkim;
2. Indchemie Health Specialties, Kumrek, East Sikkim;
3. Regal Healthcare, Bhasmey, East Sikkim;
4. Savi Health Science, Majhitar, East Sikkim;
5. SBL Pvt. Ltd, Majhitar, East Sikkim;
6. Ideal Cures, Pacheykhani, East Sikkim.

As per the Methodology for assessing environmental compensation prepared by Central Pollution Control Board the above non-compliant industrial units were imposed environmental compensation.

12. Notification of Sikkim Idol Immersion Rules, 2019.
13. Compliant filed through email in Hon'ble NGT regarding illegal operation of drug manufacturing units at Samardung, South Sikkim and final verdict.

Few photographs of various activities:

Training program on NABL accreditation of State laboratory provided by Dr. S.K Tyagi, Lead Assessor NABL. (3rd and 4th September 2019)



Training provided to scientific staff of SPCB-Sikkim for water analysis at Regional Office, Shillong
(8th January to 23rd January 2019)



Training program on implementation of Bio-medical waste management Rules, 2016 by resource person from CPCB Shillong and SPCB-Sikkim to Doctors and staff nurses. (1st to 4th July 2019)



Water analysis at state laboratory by scientific staff. (2019)



(2) **STATE MEDICINAL PLANTS BOARD (SMPB)/NON-TIMBER FOREST PRODUCE (NTFP)**

1. History of State Medicinal Plant Board

State Medicinal Plants Board of Sikkim was set up under NTFP Sector of Forests, Environment & Wild-Life Management Department, Government of Sikkim by the State Government as a State Level Body vide Notification No. 100/FEWMD dated 10th June 2002.

The objectives of board are:

- To strengthen coordination and activities relating to medicinal plants taken up by various Department and organization of State Government.
- To formulate policies related to Medicinal Plants.
- To ensure sustained availability of medicinal plants and co-ordinate all matters relating to their development and sustainable use.

2. Medicinal Plants Conservation and Development Areas (MPCDAs)

Sikkim has rich diversity of medicinal plants especially in Alpine and Sub-Alpine forest areas. The conservation, development and sustainable management of these rare and endangered species of medicinal plants is very necessary. It is well established that *In-situ* Conservation is the best, the quickest and the cheapest method of conserving the diverse genetic base of various plant species. Hence 400 Ha in North District at Lashar Valley, 100 Ha in East at Tamzey RF, 250 Ha in South District at Mamring RF, 50 Ha in West District at Sipsu RF were established as MPCAs.

Management and maintenance of these MPCAs are under progress along with revisiting the floristic survey of MPCAs.

(Rs.in lakhs)

Name of Project	Achievement of activities	Physical Achievement 2019-20	Financial Achievement 2019-20
Revisiting Medicinal Plants Conservation Areas (MPCAs) of Rare & Endangered species of Medicinal Plants	Upgradation and improvement of MPCDAs	800 Ha	Rs. 23.42

3. Resource Augmentation of Rare Endangered and Threatened (RET) Species:

As a complementary action to conserve the genetic diversity of Rare Endangered and Threatened (RET) Species, the Ex-situ conservation method is adopted by SMPB. The project is being implemented by NTFP Division of Forest, Environment and Wildlife Management Department, Government of Sikkim. Since 2009, around 3600 Ha. of plantation of medicinal plants have been carried out till date. The RET species like *Aconitum spp.*, *Nardostachys jatamansi*, *Podophyllum hexandrum*, *Picrorrhiza kurroa*, *Dactylorhiza hatagiera*, *Juniperus recurva*, *Taxus baccata*, *Berberis aristata*, *Hippophae salicifolia* in high altitude area and *Swertia chirata*, *Paris polyphylla*, *Terminalia bellerica*, *Terminalia chebula*, *Digitalis purpurea*, *Phyllanthus emblica* etc. are planted under different project schemes.

Sl. No	Name of Project	Achievement of activities	Physical Achievement	Financial Achievement (Rs.in lakh)
1	Resource augmentation of selected Rare, Endangered & Threatened (RET) species of High Altitude Medicinal Plants (Shrubs and Herbs) in Alpine and Temperate Forests of Sikkim ”	Plantation of Rare, Endangered & Threatened (RET) species of High Altitude Medicinal Plants (Shrubs and Herbs) in Alpine and Temperate Forests	78Ha	153.51
2	Resource augmentation of selected species of medicinal plants (Tree, shrub and herbs) in Alpine	Maintenance of Plantation work done in Alpine areas done in previous years	250 Ha	56.46
3	Conservation, Development and Sustainable Management of High Altitude selected Rare, Endangered & Threatened (RET) species of Medicinal Plants (Trees, shrubs and herbs) in different altitudinal zones of forest area	Maintenance of Plantation work done in different altitudinal zones of forest area done in previous years	300Ha	64.76

1. Resource augmentation of *Panax sokpayensis* in West Sikkim

Panax sokpayensis which is endemic to Uttarey area in West Sikkim requires conservation due to its diminishing population in the wild. In order to conserve this plant species and to ensure their regular supply of quality raw materials to local people and sustainable harvesting of medicinal plants from forest areas, a project for Resource augmentation of *Panax sokpayensis* is being implemented in West Sikkim since 2019-20.

Under this project, quality planting material is being raised at Tersay Nursery, Uttarey in West Sikkim by creation of a nursery. Trial propagation through seed sowing and rhizome cutting has been initiated in the first year of the project for around 15000 nos. of seeds/rhizomes, till date. The QPM so produced is planned to be planted in suitable forest/private lands through the local communities, subsequently.

Name of Project	Achievement of activities	Physical Achievement	Financial Achievement
“Resource augmentation of <i>Panax sokpayensis</i> in West Sikkim”	Raising of quality planting materials	15000 nos.	15.00 lakhs

(3) SIKKIM BIODIVERSITY BOARD (SBB):

For the financial year 2019-20, the Sikkim Biodiversity Board received funds from the following:

- 1) State Grant-in-aid
- 2) National Mission on Himalayan Studies
- 3) National Biodiversity Authority, Chennai
- 1) **State Grant-in-aid:** The details of fund provided under the State grant-in-aid to the Board and expenditure incurred for the FY 2019-20 is as follows:

Details of fund expenditure under State grant-in-aid for FY 2019-20 for Sikkim Biodiversity Board				
Sl no	Activities	Total amount for FY2019-2020(Spill over balance of last year	Expenditure as on 31st March`2020	Balance available as on 31st March`2020
1	Creation of BMCs @60000/-last year	3,32,500	3,32,500	nil
2	Creation of BMCs @70000/- BMCs	10,50,000	6,99,590	3,50,410
3	Documentation of PBRs@1,15,000/-to each BMCsx12nos	13,80,000	13,80,000	nil
4	Publication (booklets/brouchers)	2,00,000	1,99,900	100
5	Training & Awareness program	1,50,000	nil	1,50,000
6	Activities for declaration of Heritage site	1,80,000	14,500	1,65,500
7	Expenditure for meeting of Sikkim Biodiversity Board	70,600	nil	70,600
8	Office Expenditure/Operational Expenses	2,50,000	2,40,748	9,252
9	TA/DA/POL/Maintenance of Vehicle	2,99,000	2,44,662	54,338
10	Contingency	2,05,900	1,97,700	8,200
	Total amount	41,18,000	33,09,600	8,08,400

SBB received a fund of Rs 20 lakh under this component. With a carry forward of the previous balance of Rs. 21,18,000/- under the same component, the total fund available under the State grant-in-aid was Rs. 41,18,000/-.

Accordingly, 15 Biodiversity Management Committees were formed, documentation of 12 People's Biodiversity Registers were completed. The declaration of Biodiversity Heritage Site at Tungkyong lake at Hee Gyathang, North Sikkim was initiated. The board also conducted various training/awareness programs on Biological Diversity Act 2002, Biodiversity Management Committee and People's Biodiversity Register along-with 2 Board meetings.

National Mission on Himalayan Studies: The details of fund provided under the National Mission on Himalayan Studies to the Board and expenditure incurred for the FY 2019-20 is as follows:

Details of fund expenditure under National Mission for Himalayan Studies for FY 2019-20 for Sikkim Biodiversity Board					
Sl no	Activities/Head	Amount carried forwarded FY 2018-19	Amount received for FY2019-2020	Expenditure as on 31st March`2020	Balance available as on 31stMarch`2020
1	Salary of JPF Rs 16,000/- per month +HRA@10% for the past two years & Rs 18000/-per month +10% HRA for 3rd year	-	Fund not received	1,69,258.00	- 1,69,258.00
			For FY-2019-2020		
2	Travel(Domestic)	Rs.1,33,333.00	-	84,872.00	48,481.00
3	Contingency	Rs. 53,665.00	-	-	53,665.00
4	Activities & other projects cost	Rs.4,35,410.00	-	1,11,805.00	3,23,605.00
5	Institutional charges	-	-	-	-
	Total	Rs.6,22,408.00		3,65,935.00	4,25,731.00

3) National Biodiversity Authority, Chennai: The details of fund provided by the National Biodiversity Authority, Chennai to the Board and expenditure incurred for the FY 2019-20 is as follows:

Details of fund expenditure provided by National Biodiversity Authority, Chennai for FY 2019-20 for Sikkim Biodiversity Board				
Sl no	Activities	Total fund sanctioned	Expenditure as on 31st March`2020	Balance available as on 31stMarch`2020
1	Outsourcing of staffs under SBB	11,48,016.00	9,53,531.00	1,94,485.00
2	Celebration of IDBD`2019	4,80,000.00	4,80,000.00	Nil(fund yet to be received from NBA)

The National Biodiversity Authority, Chennai, provides fund to the Board for outsourcing of its office staff. Also, NBA also sanctioned fund for celebration of International Day for Biological Diversity on 22nd May 2019. However, the fund is yet to be received, although reports and bills have been submitted to NBA, Chennai.

Chapter- 15

Schemes / Projects:

I. Centrally sponsored schemes (CSS)

(A) GREEN INDIA MISSION- (GIM)

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

The Mission aims at addressing climate change by:

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

In Sikkim, State Forest Development Agency has proposed 25 L2 Landscapes (Milli Watershed) in 6 (six) L1 Landscapes (Watershed) for phase I implementation of the project on the basis of a combination of criteria & indicators including project vulnerability to climate change, forest cover and forest types (with status of degradation), wastelands, and presence of STs / SCs, dependence on forests, and poverty levels. The forests of this landscape display a great floristic diversity due to wide variation in topography, altitude, climate, rock & soil. There selected watersheds are unique in their eco-system. It is proposed to implement the 25 L-1 landscape perspective plans at a total cost of Rs.157.00 crore over a period of ten years from 2018-19 to 2028-29.

Objectives:

The objectives under GIM for Sikkim State are;

- a. To improve forest in terms for increasing or enhancing the forest stands and forest in terms carbon sequestration.
- b. To increase the forest/tree cover over of 154.60 sq.km of degraded forests lands and improve the quality of forest cover through JFMC/EDC and through convergence with other department in the selected landscapes of Sikkim State.
- c. To enhance the forest/tree cover by 12.38 sq.km in urban and peri-urban areas through promotion of Farm-forestry, Agro-forestry and Urban-forestry.

- d. To cover the roads with greenery by road side plantation by convergence with other department on State(State Highway & PMGSY Roads) & National High Way.
- e. To improve the ecosystem services including biodiversity, hydrological services, and carbon sequestration from the 166.98 sq.km of forest/non-forest lands mentioned above.
- f. To improve the rural energy security by energy efficiency measures and alternate energy sources.
- g. To enhance the annual CO₂ sequestration in Sikkim State through creating new carbon sinks and adopting cleaner technologies to reduce carbon emission.
- h. To create and improve optimum employment opportunities for tribal, scheduled castes as well as other economically marginalized class of population living in and around the forest areas for enhancing their livelihood opportunities and ensuring the socio-economic upliftment.

Targets & Achievements: 2019-20

Creation of plantation works for the 1475 ha.of advance works done in 2018-19 have been executed in 2019-20 with additional target for avenue plantation of 90 km in all districts.

Cross cutting interventions like generation of livelihood in GIM landscape villages, distribution of alternative fuel saving devices (Induction cook stoves and improved cook stoves), research activities, outreach programmes (greening activities in schools) etc have been taken up in all the landscapes under the mission.

The total outlay for the Annual Plan in GIM for 2019-20 was Rs.459.23 lakhs on a Central Share: State Share ration of 90:10.

(B)Sericulture:

Progress Status Report for the year 2019-2020 Intensive Bivoltine Sericulture Development Project in Sikkim in Sikkim

(Rs.in lskhs)

Sl. No.	Particulars	Head	Unit	Unit Cost (Rupees)	Expenditure during 2019-2020	Unspent Balance 2019-2020	Total Budget as per DPR
A	Organisation of Women Groups & Sensitization						
1	Social Mobilisation & Group formation including thrift fund through CBOs, Honorarium for Mahila Resham Karmis and Para Extension worker. (unit cost is worked out for a Cluster Level Association comprising 200 Women members for 3 years period)	R	No.of CLAS	35,42,000	110.22	42.31	177.10
2	Support for organizing Women Sericulture Co-operative Society	R	LS		5.00	0.00	5.00
	Sub-Total A				115.22	42.31	182.10
B	General awareness, gender sensitization and activation						
1	Women Education Programme at the group level	R	Nos	10,000		0.00	5.00
2	Organisation of Workshops @one workshop/50 women	R	Nos	30,000	6.00	0.00	6.00
3	Organisation of Group discussions/camp @one camp/50 women.(4 camps per year for 3 years)	R	Nos	5,000	6.00	0.00	6.00
4	Kits for Teaching Aids & Healthcare (1 kit per SHG of 20 members)	R	Nos	25,000	12.50	0.00	12.50
	Sub-Total B				24.50	0.00	29.50

Sl. No.	Particulars	Head	Unit	Unit Cost (Rupees)	Expenditure during 2019-2020	Unspent Balance 2019-2020	Total Budget as per DPR
C	Capacity Building & Skill Upgradation						
1	Training for Extension Staff	R	LS		0.00	2.64	3.30
2	Orientation training for 50 Mahila Resham Karmis	R	Nos.	10,000	0.00	3.00	5.00
3	Training for Women Sericulturists & Weavers	R	Nos.	5,000	39.65	12.06	52.50
4	Exposure visit for progressive women Sericulturists/Weavers	R	Nos.	5,000	1.00	4.25	5.25
	Sub-Total C				40.65	21.95	66.05
D	Support to Individual Sericulturists						
1	Support for development of Kisan Nursery	R	Acres	1,20,000	24.00	0.00	24.00
2	Support for Mulberry plantation Development	R	Acres	52,170	221.72	0.00	221.72
3	Maintenance/rejuvenation cost for existing Mulberry Plantation (SoR Rs.200/-per day)	R	Acres	40,610	30.46	0.00	30.46
4	Assistance towards fencing of Mulberry Gardens	R	Acres	10,000	39.60	5.22	50.00
5	Support for construction of vermicompost shed @5 units/group of 20 Women 90:10	R	Nos.	20,000	13.34	21.05	50.00
6	Assistance for irrigation and other Water Conservation and usage techniques @1 unit for 4 Women Sericulturists 90:10	C	Acres	25,000	60.55	0.98	62.50

Sl. No.	Particulars	Head	Unit	Unit Cost (Rupees)	Expenditure during 2019-2020	Unspent Balance 2019-2020	Total Budget as per DPR
D	Support to Individual Sericulturists						
7	Supply of Rearing Appliances (including improved mountages)/farm equipments to farmers) 100%	C	Acres	50,000	250.00	0.00	250.00
8	Assistance for construction of Rearing House 80:20 & Mounting hall 80:20	C	Nos.	1,20,000	838.63	312.90	1500.00
	Sub-Total D				1478.29	340.15	2188.68
E	Support for creating Linkages						
1	Assistance for raising & maintenance of Chawkie gardens, construction of Chawkie Rearing Centre(CRC) with equipments and Incubation Centres: (one centre/50 acres)	C	Nos.	13,00,000	61.24	46.18	130.00
2	Door to Door Service Agents for Disinfection and inputs supply & Assistance for Sericulture Poly-Clinics(one centre/50 acres)	C	Nos.	3,00,000	2.97	13.52	30.00
3	Establishment of Mulberry Industrial Seed Grainage	C	Nos.	8,00,00,000	0.00		0.00
4	Support for Cocoon Storage Centres	C	Nos.	20,00,000	0.00	40.00	40.00
5	Support for setting up of Hot-Air Drier(50 kg capacity electrical)	C	Nos.	1,37,000	0.00	2.74	2.74
6	Support for Multiend Reeling Unit-60 Basins 60 ends	C	Nos.	11,49,000	0.00	11.49	11.49
7	Support for Twisting Plant (480 spindles)	C	Nos.	10,00,000	0.00	10.00	10.00

Sl. No.	Particulars	Head	Unit	Unit Cost (Rupees)	Expenditure during 2019-2020	Unspent Balance 2019-2020	Total Budget as per DPR
E	Support for creating Linkages						
8	Support for construction of reeling shed	C	No.	8,00,000	0.00	8.00	8.00
9	Improved Certified looms 90:10	C	No.	35,000	1.75	15.75	17.5
	Sub-Total E				65.95	147.68	249.73
F	Manpower Support to RECs						
1	Engaging Technical Consultants for the Cluster @ Rs.45,000/-pm for 2 Consultants for 3 years	R	Nos.	5,40,000	21.41	5.49	32.40
2	Sub-Total F				21.41	5.49	32.40
G	Project Implementation & Monitoring						
1	Project implementation, Diagnostic study, Publicity, Monitoring and Evaluation	R			34.56	21.67	68.71
2	Information, Education and Communication (IEC)	R			137.42		137.42
3	Diagnostic study and preparation of Project report	R			13.74		13.74
	Sub-Total G				185.72	21.67	219.87
					1931.73	579.25	2968.33

Chapter – 16

II. Externally Aided Project (EAP):

Sikkim State Biodiversity and Forest Management Project (SBFP):

The Japan International Cooperation Agency (JICA) assisted Sikkim Biodiversity Conservation and Forest Management Project (SBFP) is an Externally Aided Project (EAP) being implemented by the Department of Forest and Environment (F&ED), Govt. of Sikkim since 2010. It is a ten-year (2010-20) project aimed at promoting forest & biodiversity conservation, assisting forest management and eco-tourism through strengthening of Joint Forest Management Committees (JFMCs), Eco Development Committees (EDCs) and Self Help Groups (SHGs), providing livelihood enhancement opportunities to local people and providing support for organizational strengthening of the Forest and Environment Department.

The Project was initiated through a tripartite agreement between Japan International Cooperation Agency (JICA), the Government of India and the Government of Sikkim. The loan agreement (ID-P211) was signed on 31st March 2010 by the Government of India and JICA. The project amounting to Rs.330.57 crores (280.42+50.15 i.e JICA: State) was approved and sanctioned by the Council of Ministers, Govt. of Sikkim on 29th July 2010. The loan amount of Rs 280.42 crores is to be shared by the Government of India and the State Government on a 90:10 ratio and loan repayment is to be made in 30 years period with a grace period of 10 years at an interest of 0.55% per annum.

The guidelines for implementing the Project are contained in the Minutes of Discussion (MoD) drawn up and signed by the three parties (JICA, GoI and GoS). A High Powered Steering Committee (HPSC) has been set up through notification of Home Department and as provided under the MoD which is empowered to approve the annual plan of work within the overall sanction accorded by the Honorable Council of Ministers. The project is executed mainly through four operational components and the progress so far is as follows:

C2 Component: Biodiversity Conservation

- Procurement of desktop monitor & other hardware items for Working Plan.
- Procurement of daily rainfall data & temperature from Meteorological Department, Govt. of India.
- Procurement of Arc GIS server to GIS lab, Working Plan Division.
- Procurement of HP Work Station server and accessories at Working Plan Division.
- Training of 2 nos GIS Engineer on “Application of Drone/DGPS in Forest Surveys and Demarcation at Forest Survey of India, Dehradun w.e.f 4.02.2019 to 6.02.2019.
- Development of E-Permit system for Research Evaluation & Monitoring Cell.
- Revisit of RBS studies in 8 sites of North, East, South & West District i.e. at i) Thangu Lashar area, North Sikkim ii) Kitam Bird Sanctuary, South Sikkim iii) Kyongnosla Alpine Sanctuary, East Sikkim iv) Tendong Reserved Forest, South Sikkim v) Sang-Tingure-Fambonglho WLS, East Sikkim vi) Shingba Rhododendron Sanctuary sampling path, North Sikkim vii) Yakchey-Lachung Range, North Sikkim and viii) Barsey Rhododendron Sanctuary sampling path, West Sikkim was undertaken.
- Seasonal inventORIZATION and assessment of biodiversity (Post monsoon) in 3 sites of North and West District i.e. at i) Shingba Rhododendron Sanctuary sampling path, North Sikkim ii) Yakchen area to Shingba Rhododendron Sanctuary sampling path, North Sikkim and iii) Barsey Rhododendron Sanctuary sampling path, West Sikkim was undertaken.
- Rapid Biodiversity Survey Report - V & VI was released.

- Rapid Biodiversity Survey for otters and prawns in Sikkim Himalaya was undertaken by Research & Extension Cell.
- Water analysis lab equipments procured for enhancement of Water analysis lab at State Pollution Control Board.
- Installation and retrieval of camera traps at Areylungchok Musk Deer Conservation Zone (KNP/KBR), Kyongnosla Alpine Sanctuary, Shingba Rhododendron Sanctuary and Churong Chu, West Sikkim was undertaken for the studies of Musk Deer as a Flagship species.
- Compartment Survey & Demarcation and Geo-referencing of 1952 cadastral records was carried out by Survey & Demarcation.
- Tree Enumeration, Preservation Plot Survey & Preparation of PWPR was carried out by Working Plan Division.
- Extension of wall at Bear Enclosure at Rescue Centre, Himalayan Zoological Park was carried out by HZP.
- Furniture and signages for new Administration Building at Himalayan Zoological Park, Bulbuley was procured.

C3 Component: Ecotourism:

The ecotourism component of SBFP has taken up following works as categorized hereunder:

A. Survey of Four Ecotourism Zone

1. Lachen Ecotourism Zone, North Sikkim.
2. Lachung Ecotourism Zone, North Sikkim.
3. Dzongu Ecotourism Zone, North Sikkim.
4. Lingee-Payong Ecotourism Zone, South Sikkim.

A.1. Lachen Ecotourism Zone, North Sikkim.

Lachen is located at an altitude of 8838 ft. Seasons unfold timelessly in this high altitude habitat: gaily painted with myriad flowers in the spring and monsoon, bathed in spectacular weather in autumn and snow clad fairy-tale winters. Lachen, which literally means (Big Pass), clings to grassy mountain slopes in a magnificent natural setting against a backdrop of imposing snow capped peaks, glaciers and rock cliffs. The village is in a picturesque valley amidst mixed conifer and Rhododendron forests. Lachen valley has almost everything a traveler could wish for: a land of fairs and festivals, snow-clad mountains, lakes, valley of flora, fauna and a vibrant local culture. Lachen has its unique form of local self-governance called the “Dzumsa”. Every household is a member of this traditional administrative system; this institution is in charge of governing and organizing activities within the village.

A.2. Lachung Ecotourism Zone, North Sikkim.

Lachung is a small town in Sikkim which has majestic mountains all around that tempt tourists to travel here every year. It is that beautiful town of Sikkim which has several snow covered mountains, sparkling streams, peaks, amazing waterfalls and much more. It is the perfect tourist spot which guarantees you pleasurable holidays amidst apple orchards, peaches and apricots. The market of this city is filled with handicrafts such as exquisitely woven rugs and blankets that make this town ideal for shopping sprees. Lachung means 'Small Mountain' and it gets this name as it is outlined by majestic mountains. There are a few interesting places that you must visit during your trip to Lachung. *Gumpa* is the famous sightseeing spot and Mount Katao is a good destination near Lachung that is sited at a distance of thirty kilometres.

A.3. Dzongu Ecotourism Zone, North Sikkim

Dzongu is a triangular region in North Sikkim, bounded by Teesta River in the south-east, Tholung Chu River in the northeast and by rising mountains in the west.

These mountains lead up to the mighty Khangchendzonga. Bordering the Khangchendzonga Biosphere Reserve and at an elevation ranging between 3000 ft and 20,000 feet above sea level.

Dzongu is an official reserve for the Lepcha community. Kilometers of stunning beauty of the wilderness greet you when you enter Dzongu. Numerous waterfalls cascade down every hill, visible here and there amongst the lush green trees. Mighty rivers flow in steep and narrow valleys nurturing all the life here and ultimately adding to the Teesta.

Snowy mountain ranges form the backdrop and bird calls add to the pretty painting that the landscape here is. Everything here exudes a deep sense of solitude and calm. The Lepcha villages only add to this. They seem to be a part of all this. The colourful Buddhist flags float in the mountain breeze, carrying the prayers of the Lepchas to their Gods. The contoured paddy fields add more colours to the picture perfect scenery. The beauty of Dzongu is complimented by the weight and depth of its heritage carried by the Lepcha people. A visit to Dzongu is incomplete without the Lepcha people to guide you with their enchanting narratives and their uncanny sense of the wilderness. Lepchas are so hospitable; their hospitality will make you feel more at home than ever. A Home Stay at a traditional Lepcha home is a unique experience and a gateway to understand and explore the beauty of Dzongu.

A.4. Lingee-Payong Ecotourism Zone, South Sikkim.

For those who want to tread off the beaten path to experience the true flavours of a rural Sikkimese village, would find the twin villages of Lingee and Payong a perfect hideout. Tucked away in a remote corner of Sikkim at the base of Maenam Wildlife Sanctuary, it is pretty much cut out from the hustle and bustle of the outside world. The twin villages consist of a heterogeneous mix of Nepali communities like Chettri, Rai & Gurung, peppered with a few Lepchas. This gives one an opportunity to absorb the different cultures of Sikkim. Agriculture being the mainstay of the village, gives you an opportunity to work in the fields with your hosts.

B. Participated in Travel and Tourism Fair, Ahmadabad and Surat for PR to Domestic Market

TTF Ahmadabad 30, 31 August, 01 September 2019

TTF Surat 06, 07, 08 September 2019

List of 9 Travel agent with whom MOU signed to promote 11 Ecotourism Zones.

Sl.No	Name	City	Phone no	Email
1	Arbii Tourism	Kolkata	9830538832/9836588832	arbitours@gmail.com
2	Neptune Holiday Pvt.Ltd	Kolkata	+91 3340229591	Tours4@neptuneholidays.com sanjay@neptuneholidays.com
3	Mydelighttrip pvt. ltd	Kolkata	+91 3323556050 +91 6292139179	sales@mydelighttrip.com contracting@mydelighttrip.com
4	Clara Tours	Shillong	+91 6009153963	Clara2ours@gmail.com
5	Travel Diaries	Ahmadabad	+919714368687	heerdesai@traveldiaries.global
6	Aashay Dedhia	Mumbai	+919773024818 +916300606353	Aashyadedhia01@gmail.com
7	Your Travel Sarathi	Ahmadabad	+919909915771 +919426010382	info@sarthitoursndtravel.com
8	AlifetimeTrip India Pvt.Ltd	Delhi	+919254330343	asha@alifetimetrip.com info@alifetimetrip.com
9	Udaan and Trip Anthem	Siliguri	+91 9933454545	ishan@udaanhotel.com

C. Ecotourism Festival at Dzongu

Chalum Dambro Ecotourism Festival at Dzongu on 21-22 January 2020

Ecotourism Marketing Cell, F&ED, Government of Sikkim in Coordination with local people of Dzongu Ecotourism Zone have worked together in organizing a two day long Chalum Dambro Ecotourism Festival in Dzongu Ecotourism Zone, North Sikkim.

The Festival was inaugurated by the CCF, Forest Department, Shri. Bhuwan Pradhan, who was also accompanied by the Joint Director, KNP and the other officers from Forest department and from other departments. Invitation of the festival was also send out to many officers from other department and the festival had a footfall of 450 visitors.

D. Documentary Video on 11 Ecotourism Zone

1. Sikkim Eco Tourism (<https://youtu.be/IPPy812NI5c>)
2. KNP (<https://youtu.be/ahYwDRcOyaQ>)

E. Forest Rest Houses and Interpretation Centres

1. The FRHs at Hee Gyathang, North Sikkim and Melli, South Sikkim were completed and handed over to respective Territorial sectors.
2. Work orders for the renovation of FRH at Thangu, North Sikkim and Yuksom, West Sikkim were issued and the constructions works are ongoing
3. Interpretation Centres at Hilley and Rabong that were stalled have been revived and construction works are under process
4. Work orders for the construction of Interpretation centre at Yuksom has been issued and constructions works are ongoing

F. Trekking Trails & Wildlife Watching Areas

1. The final tranche of trekking trails of 4 km in West Sikkim, 2 km in South Sikkim and 3km in East Sikkim were completed, and with this the component target of development of 260kms of such trails have been fully achieved.
2. The final tranche of Wildlife Watching areas of 5km in South Sikkim and 6km in East Sikkim were completed, and with this the component target of development of 80kms of such trails have been fully achieved.

C4 Component: Joint Forest Management:

- The C4 component aims at improving the management of forest and conservation of biodiversity through engagement of forest fringe communities. It also aims at providing opportunities of these communities to enhance their livelihood through forestry, ecotourism and other income generation activities.
- Some of the major activities undertaken during the FY 20-21 is conducting workshop based on bamboo handicrafts for the interested candidates from JFMC/EDC to build their capacity for alternative livelihood by M/S Echostream. Other training programmes conducted were Training of frontline staff and JFMC/EDC on administrative and financial management.

- A humongous task of ground truthing of the demarcation of 88 villages under JFMC/EDC and their working area was conducted by Survey and Demarcation Division under this component.
- Interaction and IGA activities monitoring were successfully conducted with various Self Help Groups by the representatives of JICA INDIA during their visit for National Workshop at Chintan Bhawan Sikkim from Nov 15-17, 2019.
- Funds amounting to Rs. One crore approximately was released for 3rd year maintenance of batch
- IV plantation activities.

C5 Competent: Organizational Strengthening

- National level JICA Workshop on "Challenges for Biodiversity Conservation and Human-Wildlife Conflict-Identifying the problems and possible solution" held at Chintan Bhawan, Gangtok w.e.f 16th to 17th of November, 2019.
- Study –cum- Exposure visit to Japan scheduled from 13th April to 20th April 2019.
- Procurement of Fire Tender Vehicle and equipment & Gadgets for the PMU Office.
- Construction of the first ever State Forest Training Institute at Bulbuley, which is still under progress.
- Training for all the frontline staff and Officers (IFS & SFS) on issues related to Biodiversity Conservation and Ecotourism.

	Components	Financial Target & Achievement as per APO(2019-20)	
		Target	Achievement
Sl.No.	ELIGIBLE - JICA SHARE	5254.27	1754.66
1	C1: Preparatory Works	0.00	0.00
2	C2: Biodiversity Conservation	1193.12	472.94
3	C3: Ecotourism	1225.71	294.33
4	C4: Joint Forest Management	787.05	442.36
5	C5: Organizational Strengthening	1068.39	483.33
6	Price escalation (for construction works, labour, purchase of equipment etc.)	800.00	0.00
7	Physical Contingency	150.00	35.37
8	Consulting Services	30.00	26.33
	NON ELIGIBLE - STATE SHARE	590	346.97
9	General Administration	400.00	151.86
10	Taxes and Duties	150.00	187.85
11	Commitment Charges	0.00	0.00
12	Interest during construction	0.00	0.00
13	Other Costs	40.00	7.26
	<i>Organizational Strengthening</i>	<i>40.00</i>	<i>7.26</i>
	<i>Price Escalation</i>	<i>0.00</i>	<i>0.00</i>
	<i>Physical Contingencies</i>	<i>0.00</i>	<i>0.00</i>
	TOTAL	5844.27	2101.63

