



# ANNUAL ADMINISTRATIVE REPORT

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ANNUAL ADMINISTRATIVE REPORT  
2019-2020





# ANNUAL ADMINISTRATIVE REPORT

2019 - 20







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### **Foreword**

As environmental issues begin to occupy centre stage, the role of the Department of Forests acquires increasing importance in the betterment of our quality of life.

The Annual Administrative Report, 2019-20 provides a bird's eye-view of the activities of the Department of Forests undertaken for the betterment and management of the State's forests resources.

The efforts and contribution of all the officials in bringing out this publication are sincerely acknowledged.

Vivek Kumar  
Additional Chief Secretary





**Ravi Kant Sinha, I.F.S.**



**PRINCIPAL CHIEF CONSERVATOR OF FORESTS &  
HEAD OF FOREST FORCE, WEST BENGAL  
DIRECTORATE OF FORESTS  
GOVERNMENT OF WEST BENGAL**

### **MESSAGE**

The state of West Bengal encompasses a variety of Floral and Faunal biodiversity scattered in diverse landscapes ranging from the sub alpine Himalayas to the Mangroves in the Sundarbans; most of which are harboured in its diverse forest ecosystems.

Despite the immense biotic pressure on the forest, the gradual trend in increase of forest and tree cover is a testimony to the meticulous planning and execution of works in the field. Officers and all ranks of Staff of the Directorate have diligently worked with the active involvement of various stake holders to achieve this feat. Emphasis has always been on conserving forests in such a way that ecosystem goods and services flow to forest dependent community and to society, without compromising on ecological integrity.

The Annual Administrative Report 2019-20 highlights the various initiatives undertaken by the Forest Department for the effective management, protection and conservation of rich biodiversity in the state. This updated data on forests and its allied sectors in this Report shall certainly be of immense use to the foresters, researchers, policy makers and general public.

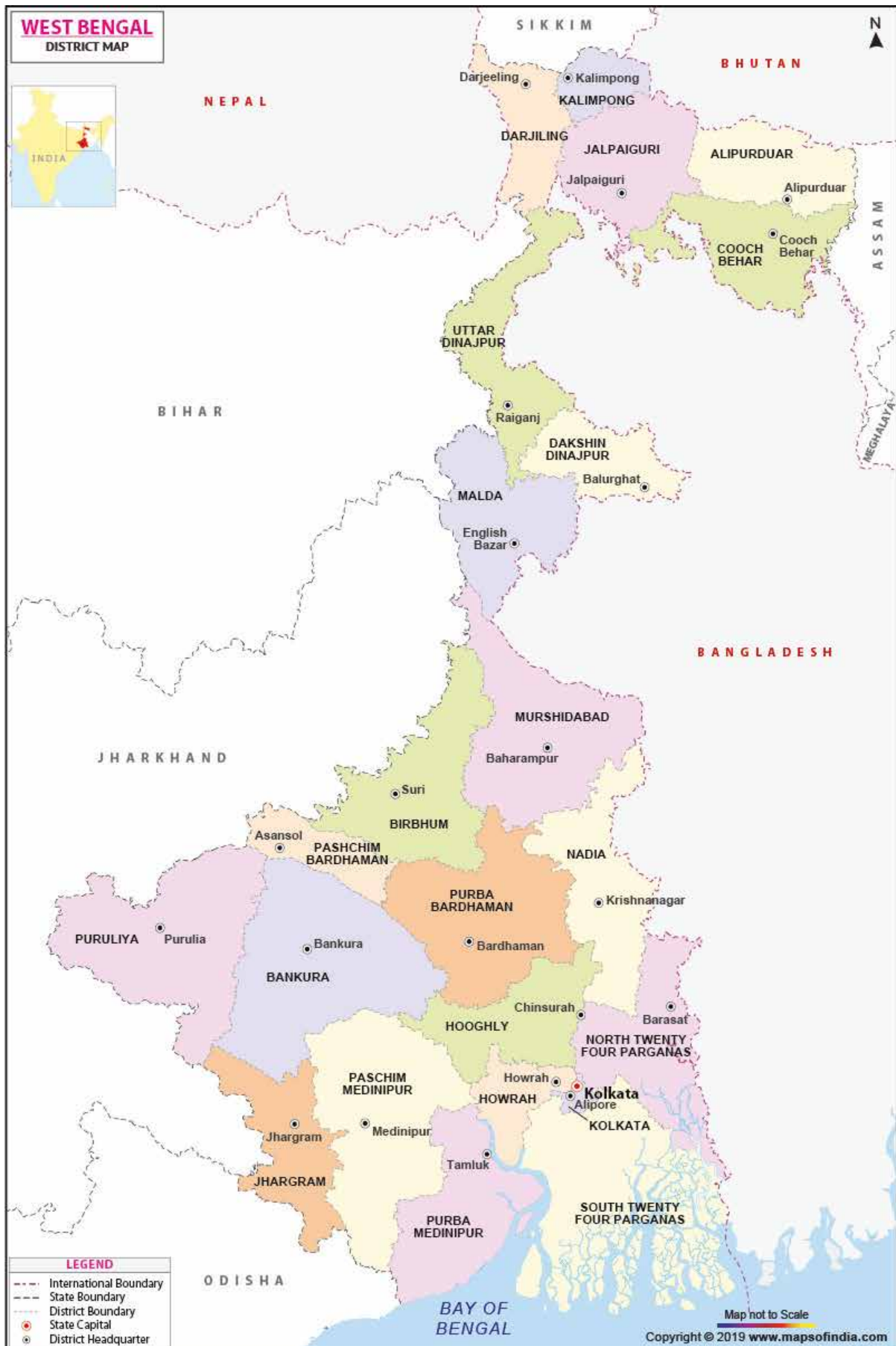


(Ravi Kant Sinha)

**Principal Chief Conservator of Forests  
& Head of Forest Force  
West Bengal**











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# SECTION A







# INTRODUCTION

## CHAPTER 1

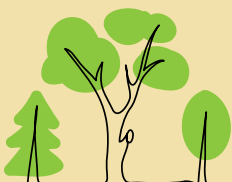
### 1.1 SUMMARY

The State of West Bengal spread over an area of 88,752 km<sup>2</sup> (34,267 sq. mi), comprising of 23 districts with over 91 million inhabitants (as of 2011), is India's fourth-most populous state. The State accounts for 2.69% of the country's geographical area but supports approximately 7.54 % of the population. The population density of 1029 persons per sq. km. is the highest in the country. Around 72 % of the population resides in rural areas of the state. The state has international borders with Bangladesh in the east, and Nepal & Bhutan to the north. It has also interstate borders with Odisha, Jharkhand, Bihar, Sikkim, and Assam. The state capital is Kolkata (*erstwhile Calcutta*) and is the seventh-largest city in India. Geographically, West Bengal includes the Darjeeling Himalayan Hill region, the Ganges Delta, the Arid Region, and the Coastal Sundarbans.

The state has notified forest area of 11,879 sq. km. which is about 13.38% of the geographical area. The demand of the huge population on limited natural resources ie., the land and forests exerts a tremendous negative impact on these resources. To deal with the situation, Forest Department have been taking up constant effort to increase the forest and tree cover through promotion of Social Forestry, Farm Forestry, Agro Forestry, Community Forestry and Afforestation on wasteland, panchayat land, private land, tea gardens, canal banks, roadside and other available areas outside the notified forest areas. There has also been a conscious effort to enhance the forest productivity by improvment of planting stock through Modern Nursery raised Hycopot seedlings and by using Clonal technology in plantation raised inside and outside the notified forest areas.

The Ganges is the major River in West Bengal which divides into two branches in the state with one branch entering Bangladesh as Padma while the other flows through West Bengal as the Bhagirathi River and Hooghly River. Teesta, Torsa, Jaldhaka, and Mahananda Rivers are the major rivers in the northern part of West Bengal which are tributaries to The Ganges (Padma) or The Bramhaputra. The western plateau region has rivers such as the Damodar, Ajay, and Kangsabati which are tributaries to The Bhagirathi/The Hooghly. The Gangetic Delta and the Sundarbans area have numerous rivers and creeks having unique Mangrove Forest.

West Bengal's climate varies from tropical savannah in the southern portions to humid subtropical in the north. The main seasons are summer, the rainy season, a short autumn, winter and spring. While the summer in the delta region is noted for excessive humidity, the western highlands experience a dry summer like northern India, with the highest daytime temperature ranging from 38° C (100° F) to 45° C (113° F). At night, a cool southernly breeze carries moisture from the Bay of Bengal. In early summer, brief squalls and thunderstorms known as *Kalbaisakhi* often occur. West Bengal receives the Bay of Bengal branch of the Indian Ocean monsoon that moves in a southeast to northwest direction. Monsoon brings rains to the whole state from June to September. Heavy rainfall of above 250 centimetres (98 in) is observed in the Darjeeling, Jalpaiguri, and Cooch Behar district. During the arrival of the monsoons, low pressure in the Bay of Bengal region often leads to the formation of storms in the coastal areas. Winter (December–January) is mild over the plains with average minimum temperatures of 15° C (59° F). A cold and dry northern wind blows in the winter, substantially lowering the humidity level. The Darjeeling Himalayan Hill region experiences a harsh winter, with occasional snowfall.



MAP - 1

# CIRCLE MAP OF WEST BENGAL

1:2,500,000

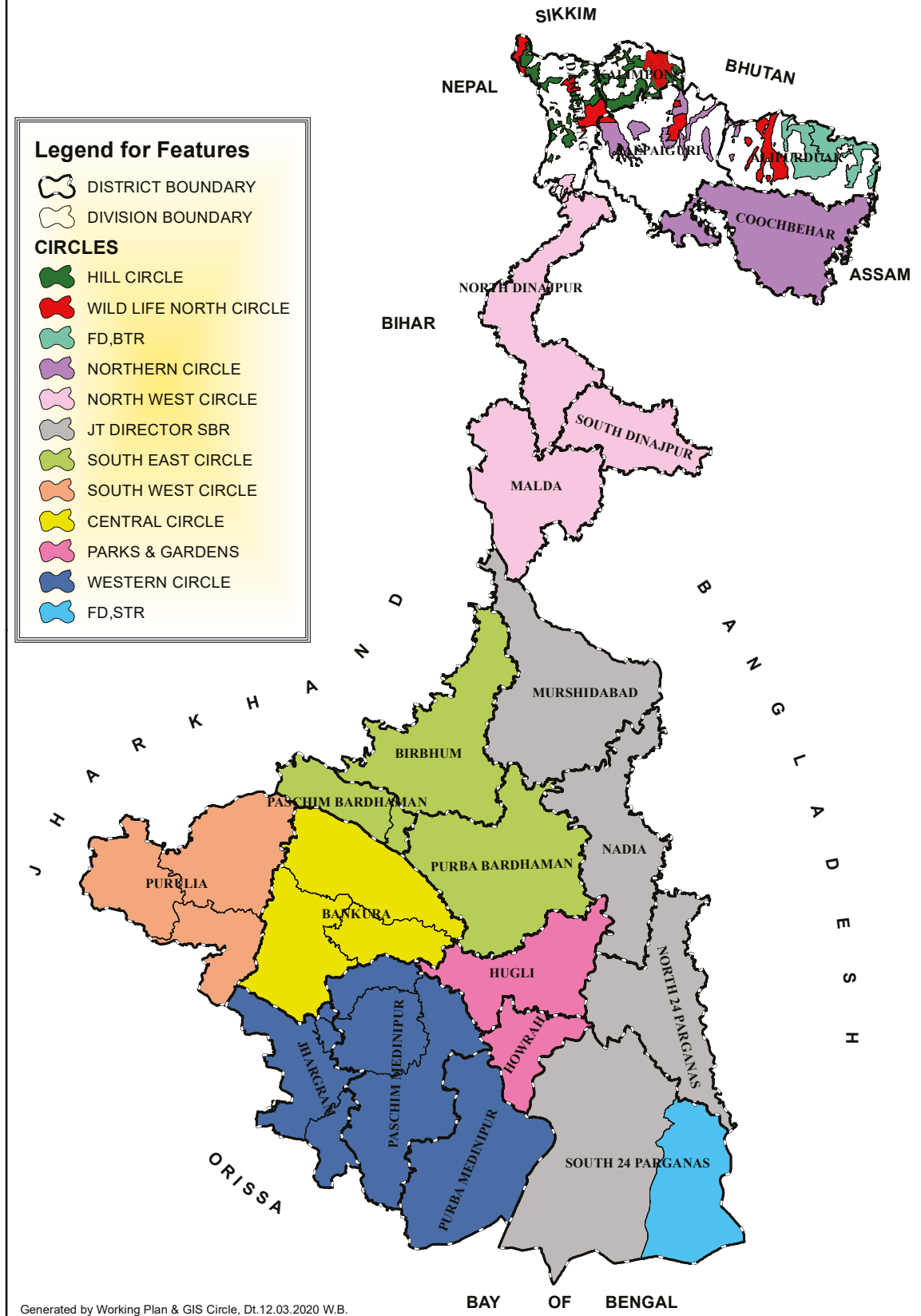


**Legend for Features**

- DISTRICT BOUNDARY
- DIVISION BOUNDARY

**CIRCLES**

- HILL CIRCLE
- WILD LIFE NORTH CIRCLE
- FD,BTR
- NORTHERN CIRCLE
- NORTH WEST CIRCLE
- JT DIRECTOR SBR
- SOUTH EAST CIRCLE
- SOUTH WEST CIRCLE
- CENTRAL CIRCLE
- PARKS & GARDENS
- WESTERN CIRCLE
- FD,STR



Generated by Working Plan & GIS Circle, Dt.12.03.2020 W.B.





## 1.2 ORGANIZATION OF FOREST DIRECTORATE

PCCF		APCCF	WING		CIRCLE	DIVISION	
P.C.C.F. & HoFF, W. B. Sri Ravi Kant Sinha, IFS	PCCF, General, Sri TVN.Rao	APCCF, HRD Dr. Kana Talukder	CCF, PMC CCF, GC CCF, PGLI	S.S. Dey S.Sasikumar Lipika Ray		DCF, Personnel  DCF, Legal	Jayanta Basu  Praseeda Variar V.V.
		APCCF, Finance A.V.Mishra	CCF, Finance CCF, Spl. Proj CCF, MIS & E.Gov.	N.Mallick Ujjal Ghosh Sumita Ghatak		DCF, Finance DCF, MIS	PMitra B.Haldar
		APCCF, Nodal Officer, FCA Rajesh Kumar	CCF, FCA K Balamurugan		CF, Land Affairs &FCA	OSD, CAMPA	Angshuman Mukherjee
			CCF, Hqrs. S. Sasikumar (AC)		CF, APM Bhaskar J V	DCF, Admin. DCF, Publicity DFO, Utilization	Rana Dutta Arunangshu Panda Utpal Nag
					CF, WP & GIS Bhaskar J V	DFO, W.Plan (North) DFO, W.Plan(South-I) DFO, W.Plan(South-II)	S.S.S.Sherpa Ayan Ghosh Swagata Das
					CF, South Ajay Dubey		
			CCF, Central Dr. S.Kulandaevel			DFO, Bankura (North) DFO, Bankura (South) DFO, Panchet	Kalyan Rai E. Vijaya Kumar Satyajit Roy
			CCF, Western A.P. Singh			DFO, Medinipur DFO, Purba Medinipur DFO, Kharagpur DFO, Jhargram DFO, Rupnarayan	S.K.Berwal Anupam Khan Shivanand Ram Dr. S.Holeyachi Manish Yadav
			CCF, South-East Kalyan Das			DFO, Birbhum DFO, Burdwan DFO, Durgapur	Parveen D.Sharma N.R.Panda
			CCF, South-West Saurabh Chaudhuri			DFO, Purulia DFO, Kangsabati(North) DFO, Kangsabati(South) DFO, Extension Forestry	R.P.Badana Amrita Dutta A.Sengupta Netai Saha
			CCF, Cons. & Extn. Raju Das		CF, Parks & Gardens A.Das	DFO, URF DFO, P &G (N) DFO, Howrah	R.N.Saha A.Guha Raju Sarkar
				CF, North-West S.Gajamer	DFO, Siliguri S.F. DFO, Jalpaiguri S.F. DFO, Malda DFO, Raigunj	A.P.Bhutia K.K.Banerjee Smt. A.Yadav Somnath Sarkar	
			APCCF, North Bengal Dr. V.K.Sood	CCF, Hill Circle Debanshu Mallick		DFO, Darjeeling DFO, Kurseong DFO, Kalimpong	Vikas V. Sheik Fareed J. Hari Krishnan
				CCF, Northern Cir. G.P.Chhetri		DFO, Jalpaiguri DFO, Baikunthapur DFO, Cooch Behar DFO, NTFP	Mridul Kumar Umarani N. Sanjit Saha K.Banerjee
	PCCF, Wildlife & CWLW Sri V.K.Yadav	APCCF, Wildlife x	CCF, Wildlife North Rajendra Jakher		DFO, Darjeeling Wildlife DFO, Gorumara Wildlife DFO, Jaldapara Wildlife	Jiju Jaesper J. Nisha Goswami Kumar Vimal	
			CCF & FD, BTR S.Sengupta		DFD, BTR (E) DFD, BTR (W)	Harish Umar Imam	
				CF, Wildlife (Hqr) S.S.K. Anand CF, WL(Plan&Res.) S.S.K.Anand(AC)	DCF, Wildlife	Om Prakash	
			APCCF & Director, SBR Piar Chand	CCF & FD, STR	Tapas Das	DFD, STR	Deepak M
				CF & Jt. Director, SBR Ajoy Kumar Das	DFO, 24-Pgs (South) DFO, 24-Pgs (North) DFO, Nadia-Murshidabad	M.K.Mandal Niranjita Mitra Dr. P. Bauri	
	PCCF, RM & D Dr. J.T.Mathew	APCCF, R & M Dr. Sangeeta Dubey	CCF, R &D x	CF, Research Bidyut Sarkar	DFO, Silviculture (Hill) DFO, Silviculture (North) DFO, Silviculture (South)	Arun Mukherjee T.T. Bhutia M.L.Sarkar	
				CF, Development S.Mukhopadhyay	Dir., WB Forest SchoolDir, SFTI, Hizli	PR.Pradhan Anasua Roy	
			CCF, Mon. & Eval. Kanailal Ghosh	CF, Monitoring M.C.Biswas	DFO, Mon (South) DFO, Mon (North)	D.M. Pradhan K.Sarkar	
CCF, Soil Cons. Sudhir Chandra Das			CF, Soil Cons.(N) S.K.Molley	DFO, Kurseong Soil Cons. DFO, Jalpaiguri Soil Cons.	Sheik Fareed J Sweata Rai		
PCCF & CEO, CAMPA Dr. Subrat Mukherjee			Joint CEO, CAMPA Apurba Sen	Deputy CEO, CAMPA Dr. S.B.Deb			

AC: Additional Charge









# FOREST LAND, FOREST COVER AND VEGETATION



## CHAPTER 2

### 2.1 FOREST LAND

The state of West Bengal has a recorded Forest area of 11,879 sq. Km. These Forest areas are classified into three categories with well-defined extent— (1) Reserved Forests having an area of 7,054 ha (2) Protected Forests with an extent of 3,772 sq km and (3) Unclassed State Forests with an area of 1053 sq. Km. As per the latest report Published by Forest Survey of India, the Forest Cover of the state is 21.39% of the geographical area, which includes both the notified forest areas and the afforestation created in areas outside forest.

#### 2.1.1 Land Use

The overall land use pattern in the state of West Bengal depends mostly on the physiographic condition of the area. Total geographical area of the state is divided into two major classes i.e. (a) arable land, that includes net sown area and fallow land (b) non-arable land, which includes forest, area not available for cultivation and other uncultivable land excluding current fallow. The percentage of arable land is about 63.48 % and about 34.36% land is under non-arable category (Economic Review, GoWB,) which includes notified forest area to the tune of 13.38% of total geographical area. Agricultural activities are mostly restricted to the Gangetic plains having fertile cultivable land. In North Bengal vast areas are under Tea Plantations.

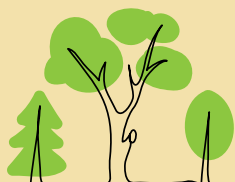
#### 2.1.2 Climate

In general, climate of West Bengal varies from sub-humid to per-humid with uniformity of temperature. The tropic of

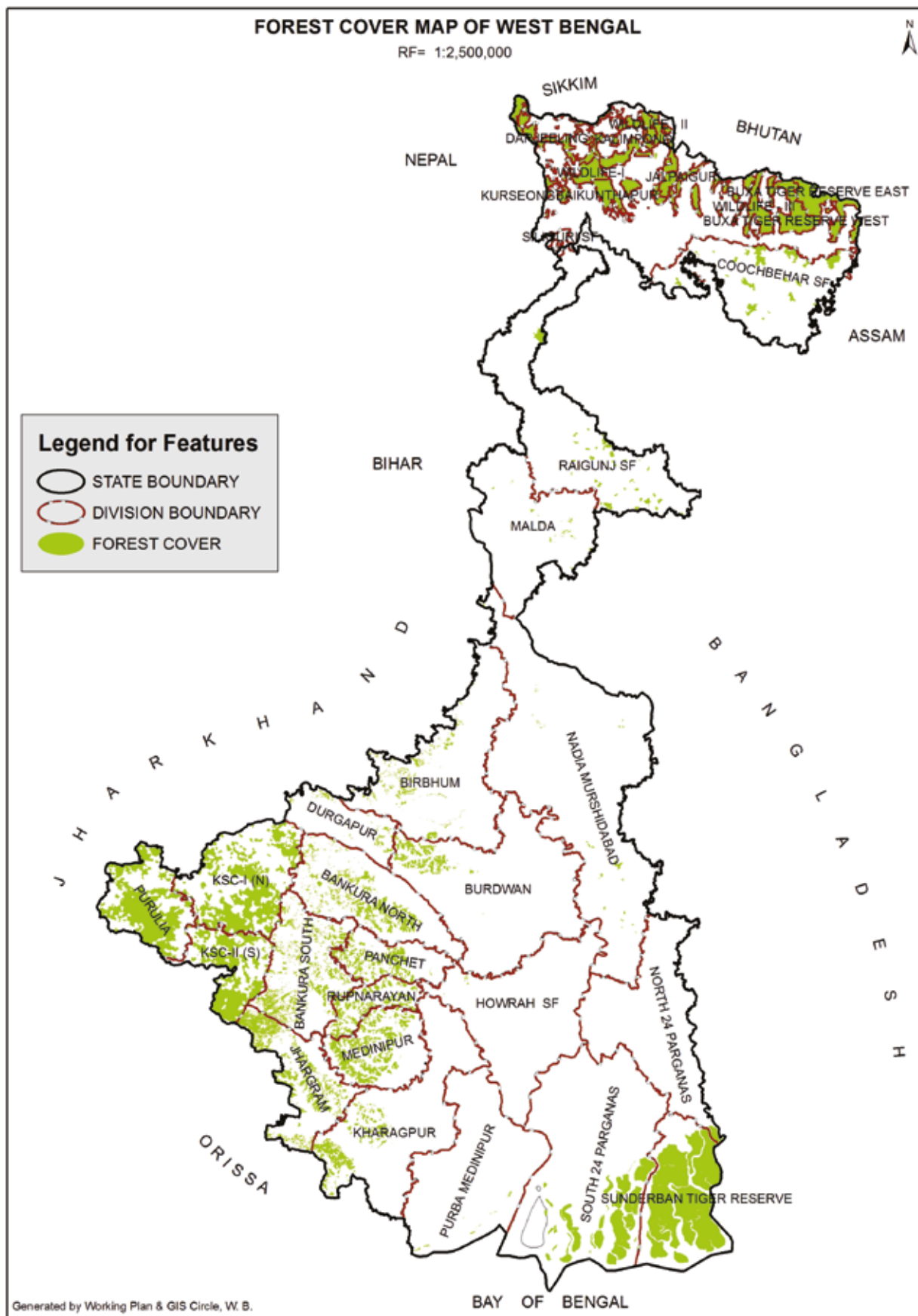
cancer runs across the middle of Nadia, Burdwan, northern parts of Bankura and Purulia districts. In spite of its position in equatorial zone, the Himalayan Mountains in the north, Bay of Bengal in the south and extensive network of river, canals, tanks etc. do not allow extreme climatic conditions to prevail in the state. Heavy rainfall occurs in the northern part of West Bengal and gradually decreases towards south forming an area of moderate rainfall zone around central part of West Bengal. In the Northern part of the state that includes the mountain region (Himalayas), temperature ranges from freezing point to 10°C in winter. It hovers around 12°C to 18°C in the plains. The summer season begins from the month of March and temperature starts rising upto June. May is the hottest month.

#### 2.1.3 Soil

In the Himalayan region soils are predominantly shallow to moderately shallow but also deep at places, well drained, coarse-loamy to gravelly loamy in texture. In the piedmont of Himalayas soils are deep to very deep, imperfectly drained and coarse-loamy to fine loamy in texture and are placed in Aquic Ustifluvents and Fluventic Eutrochrepts. Soils of the alluvial plain which includes Indogangetic alluvium (recent, active and old) are also very deep, imperfect to poorly drained, fine-loamy & also coarse-loamy in texture and with moderate flooding problem in some cases. These soils are classified as Aeris Haplaquepts, Typic Fluvaquepts, Typic Haplaquepts, and Typic Ustochrepts. Coastal plain is represented by soils of both sandy as well as fine in texture, very deep with salinity problems in some places. Soils are placed in Aquic Ustipsamments and Vertic Haplaquepts.



MAP - 2





### 2.1.1 Classification of Recorded Forest Land (Legal status)

**Reserved Forest (RF):** An area notified under the provisions of India Forest Act (IFA), 1927 having full degree of protection. In Reserved Forests all activities are prohibited unless specifically permitted (Sec. 20 of IFA, 1927).

**Protected Forest (PF):** An area notified under the provisions of the Indian Forest Act, 1927 or other State Forest

Acts, having limited degree of protection. In Protected Forest all activities are permitted unless prohibited (Sec. 29 of IFA, 1927).

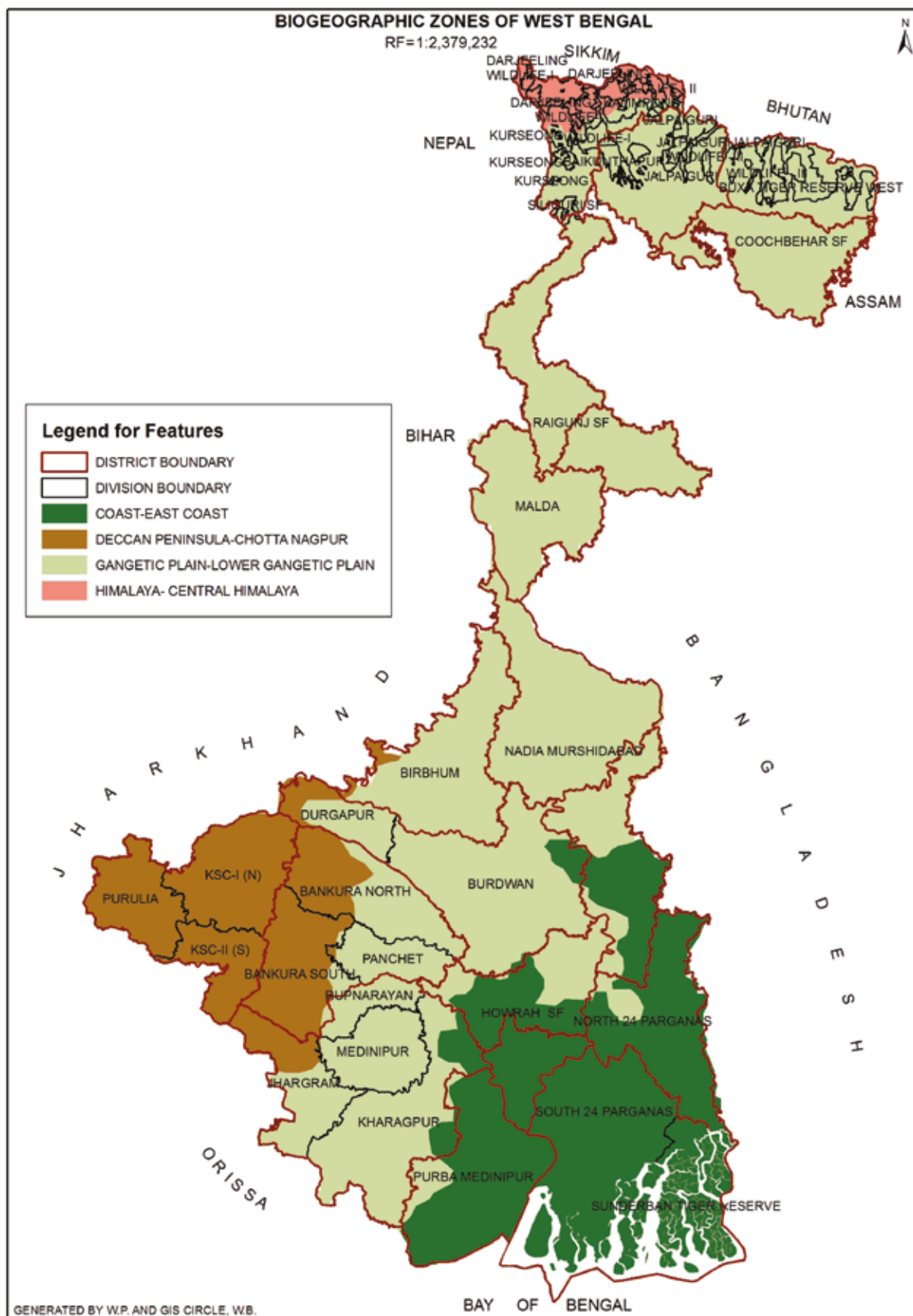
**Unclassed State Forest (USF):** An area recorded as forest but not included in reserved or protected forest category.

### 2.1.2 Distribution of Geographical Area and Recorded Forest Land in West Bengal

Sl No	District	Geographical Area (Sq Km)	Recorded Forest Area (Sq Km)	Percentage of Recorded Forest Area (%)
1	Alipurduar	3383	1067.00	31.54 %
2	Coochbehar	3387	36.01	1.06 %
3	Jalpaiguri	2844	723.00	25.42 %
4	Darjeeling	2092.5	834.30	39.87 %
5	Kalimpong	1044	369.70	35.41 %
6	Uttar Dinajpur	3140	6.02	0.19 %
7	Dakhin Dinajpur	2219	8.27	0.37 %
8	Malda	3733	16.87	0.45 %
9	Murshidabad	5324	7.70	0.14 %
10	Nadia	3927	12.33	0.31 %
11	Bhirkhum	4545	159.87	3.52 %
12	Purba Bardhaman	5432.69	124.53	2.29 %
13	Paschim Bardhaman	1603.17	135.38	8.44 %
14	Bankura	6882	1431.92	20.81 %
15	Purulia	6259	922.91	14.75 %
16	Jhargram	3037.64	870.19	28.65 %
17	Paschim Medinipur	6308	908.81	14.41 %
18	Purva Medinipur	4736	18.84	0.40 %
19	Hoogli	3149	3.37	0.11 %
20	Howrah	1467	0.00	0.00 %
21	Kolkata	185	0.00	0.00 %
22	24-Parganas (North)	4094	0.96	0.02 %
23	24-Parganas (South)	9960	4221.00	42.38 %
	<b>Total</b>	<b>88752</b>	<b>11879.00</b>	<b>13.38 %</b>



MAP - 3



### 2.1.3 Comparative statement of forest cover as enumerated through GIS & Remote sensing

Survey Period	% Recorded Forest Land	% Forest & Tree Cover
1988	13.38	14.32
1991	13.38	14.97
1994	13.38	15.06
1997	13.38	15.16
2000	13.38	15.30
2004	13.38	15.52
2006	13.38	15.68
2007	13.38	16.67
2008	13.38	16.67
2009	13.38	16.67
2011	13.38	17.27
2013	13.38	21.35
2015	13.38	21.31
2016	13.38	21.31
2017	13.38	21.39
2018	13.38	21.39
2019	13.38	21.30

(Source: Forest Survey of India, 2017)

## 2.2 FOREST COVER AND VEGETATION

### Group 1B: NORTHERN TROPICAL WET EVERGEREEN FORESTS

**Location:** Plains of North Bengal upto 150m. Altitude.

**Sites:** Bagdogra range of Kurseong division, Khutimari areas of Jalpaiguri division, Damanpur, Cheko, Gadadhar, Rajabhatkhawa, Rydak of Buxa Tiger Reserve.

**Area:** 167 sq. Km.

**Species:** Sal, Nageshwar, Jam, Kainjal, Lator, Malagiri, Lali & Canes.

### Group 2B: NORTHERN SUB-TROPICAL SEMI-EVERGEREEN FORESTS

**Location:** North Bengal

**Sites:** Sumbong, Peshok, Buxaduar

**Area:** 25 sq. Km.

**Species:** Champ, Panisaj, Gokul, Angare.

### Group 3C: NORTH INDIA MOIST DECIDUOUS FORESTS

**Location:** North Bengal

**Sites:** Almost entire duars and terai area

**Area:** 1757 sq. Km.



**Species:** The most important forests of the State are in this sub-montane belt consisting of Sal with Champ, Chilauni, Chikrassi, Gamar, Lali, Lasune, Panisaj, Paccasaj interspersed with riverian forests of Khair, Sissco, Simul, Toon etc. representing succession from riverian to climax sal. The changes of vegetation that changes with altitude in the Himalayas are similar to those that take place as one travels from tropics to the poles. The proportion of Sal gradually dwindles, stopping short of Damuda rocks (2500 ft.) which are remains of Gondwana sand stone and are unsuitable for Sal.

**Group 4B: LITTORAL & SWAMP FORESTS – THE MANGROVES**

**Sites:** The tidal mangrove forests of Ganga-Brahmaputra delta (Sundarbans).

**Area:** 4263 sq. Km.

**Species:** Goran (*Ceriops roxburghiana*) Gnewa (*Excoecaria agallocha*) Sundari (*Heritiera minor*) Baen (*Avicennia officinalis*) Dhundal(*Carpa obovata*)

**Group 4D: LITTORAL & SWAMP FORESTS – TROPICAL SEASONAL SWAMPS OF Barringtonia**

**Location:** Malda & Dinajpur (N & S)

**Area:** 20 sq. Km.

**Species:** Hijal (*Barringtonia acuteangula*)

**Group 5B: NORTHERN TROPICAL DRY DECIDUOUS FORESTS**

**Location:** Bankura, Purulia, Midnapur, Birbhum, Burdwan

**Area:** 4527 sq. Km.

**Species:** Sal (*Shorea robusta*), Peasal (*Pterocarpus marsupium*), Kend (*Diospyros melanoxylon*), Mahul (*Madhuka latifolia*), Kusum(*Schleichera trijuga*), Karam (*Adina cordifolia*), Asan (*Terminalia tomentosa*), Bahera (*T. belerica*), Rahara (*Soyamuga febrifuga*), Dhaw (*Anogeissus latifolia*).

**Group 8B: NORTHERN SUB-TROPICAL BROAD-LEAVED WET HILL FORESTS**

**Location:** North Bengal hills 300 m-1650 m altitude.

**Sites:** Sim, Upper Sumbong, Upper Reyong, forests block of Majua, Lower Babukhola, Phuguri, Bunklong, Khairbani, Mana, Sittong, Numbong, Setikhola, Shivakhola, Mirik, Paglajhora, Kuh, and Latpanchar.

**Area:** 800 sq. Km.

**Species:** Chilauni, Panisaj, Gokul, Sour, Utis, Mauwa, Tarsing.

The species commonly found are Mowa, Chilauni, Katus, Panisaj, Lampate, Phaleado, Saur, Tarsing, Angare, Melo, Kapasi, Utis, Toon and Malagiri along with Kutmero, Jhingni, Lek Chilauni, Malata, Thali, Kawala etc. Climbers and epiphytes are common here. Choyabans and tree Ferns occur locally.

**Group 11B: NORTHERN MONTANE WET TEMPERATURE FORESTS**

**Location:** North Bengal hills 1650 m-3000 m. altitude.

**Sites:** Selimbong, Kankibong, Little Rangit, Lopchu, Mahaldiram, Chattakpur, Dhobijhora, Upper Babukhola, Phuguri, Paglajhora, and Lower Babukhola forests blocks.

**Area:** 150 sq. Km.





**Species:** Kawla, Lkhar, Pipli, Oaks (buk & phalat), Rani Champ, *Abies densa*, *Tsuga brunoniana*, *Acer* spp., *Rhododendron* spp.

The principal species found here are Pipli (*Bucklandia populnea*), Utis, Saur, Katus, Kapasi, Arkula, Mowa, Khankpa, Sinkoli, Buk, Phalant, Champ, Kawla, Malta, Magnolia, Latasaea and *Machilus* spp. along with Jhigni, Chiwri, Araliaceous, spp. *Ilex* spp., Thali and Kharane, The ground flora includes Kimbu, Kagate, Asare, Thotne, Chuletro, Maling, *Lycopodium*, Basak and Chirata.

#### **Group 12C: EAST HIMALAYAN MOIST TEMPERATURE FORESTS**

**Location:** North Bengal hills 1500 m-1800 m altitude.

**Sites:** Rimbik

**Area:** 150 sq. Km.

**Species:** The species commonly found are Mowa, Chilauni, Katus, Panisaj, Lampate, Phaleado, Saur, Tarsing, Angare, Melo, Kapasi, Utis, Toon and Malagiri along with Kutmero, Jhingni, Lek Chilauni, Malata, Thali, Kawala etc. Climbers and epiphytes are common here. Choyabans and tree Ferns occur locally. This type of forests are met within the forest blocks of Majua, Lower Babukhola, Phuguri, Bunklog, Khairbani, Mana, Sittong Numbong, Setikhola. Shivakhola, Mirik, Pagaljhara, Kuhi and Latpanchar.

#### **Group 14C : SUB-ALPINE FORESTS**

**Location :** North Bengal hills 3000 m-3700 m

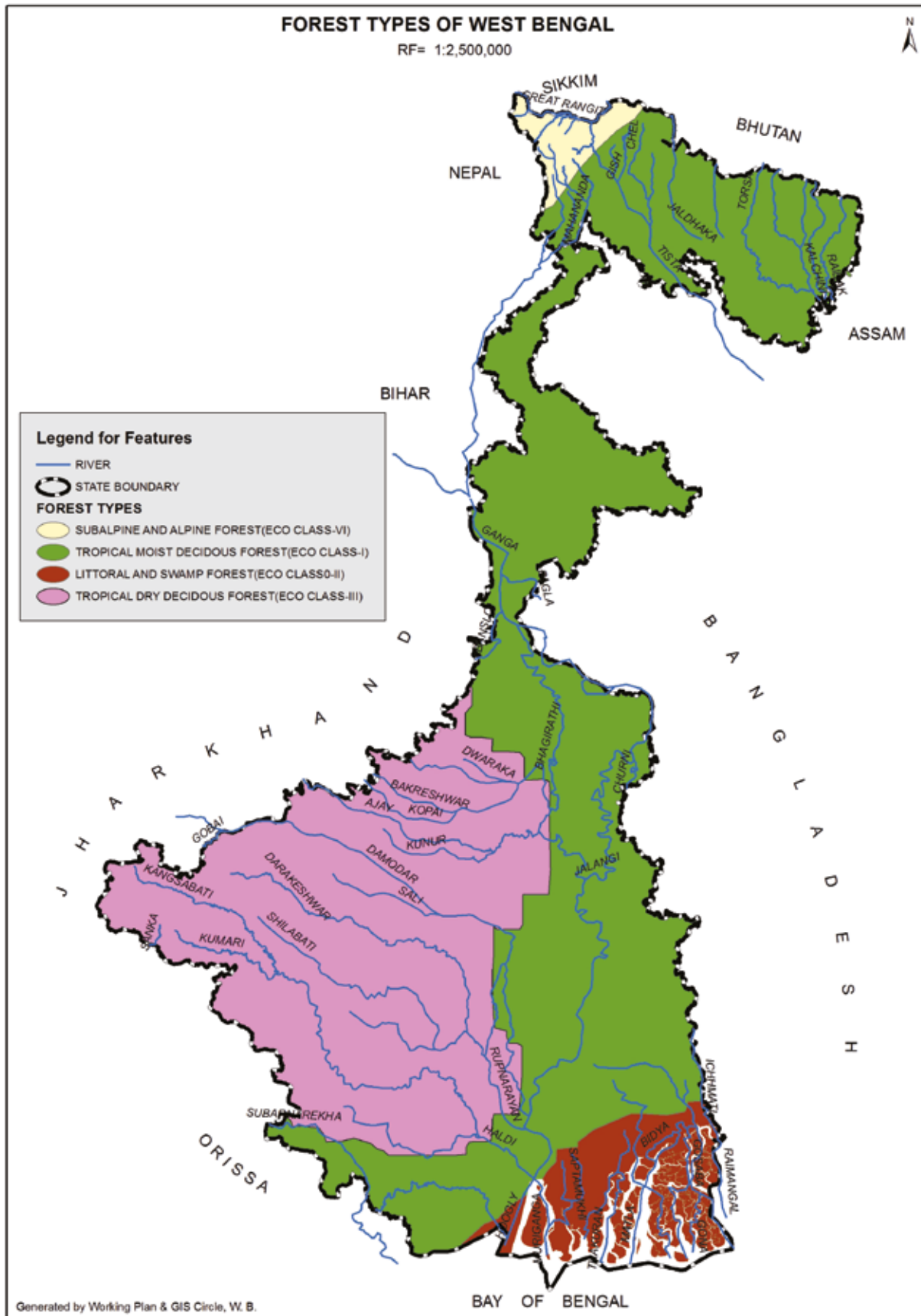
**Sites :** Sandakapu, Sabarkum, Phalut

**Area :** 20 sq. Km.

**Species :** Important spp. are Putli, Lekh Kapasi, Lekh Pipli, Kapasi, Arupate, Sindure Katus (*Castanopsis* spp.), Yew (*Taxus baccata*), *Tsuga brunoniana*, *Abies densa*, Junipers, Birch (*Betula utilis*), *Rhododendrons*, *Salix*, Berberies, Maling bamboo.



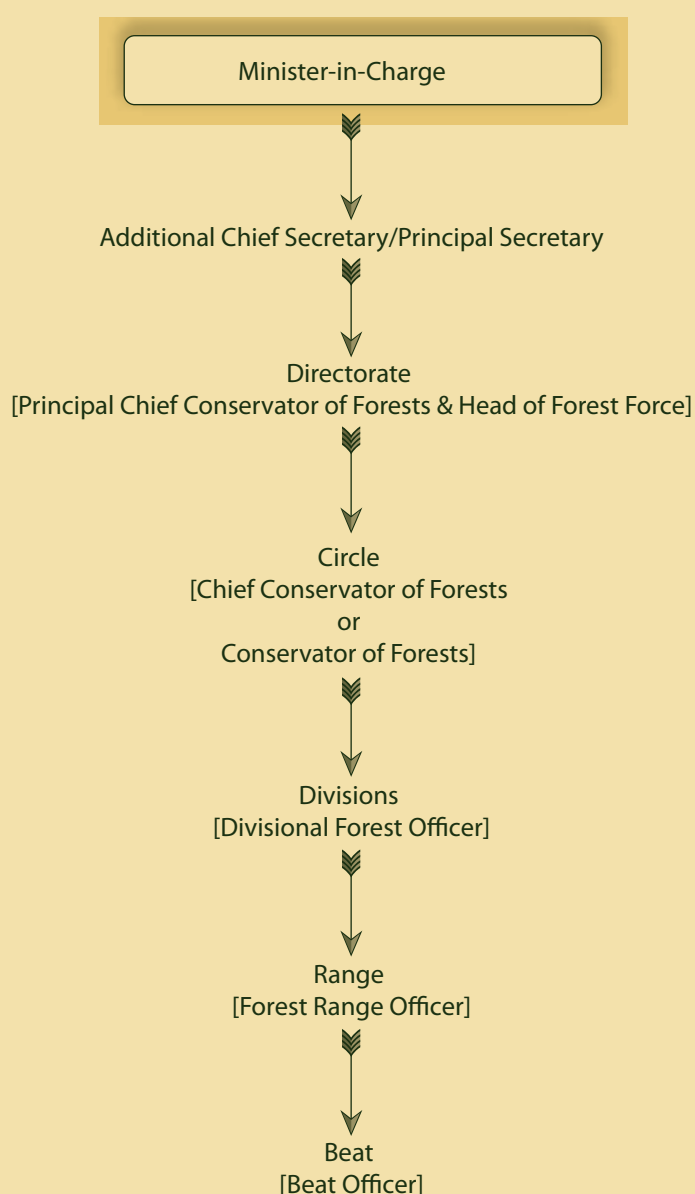
MAP - 4



# FOREST ADMINISTRATION

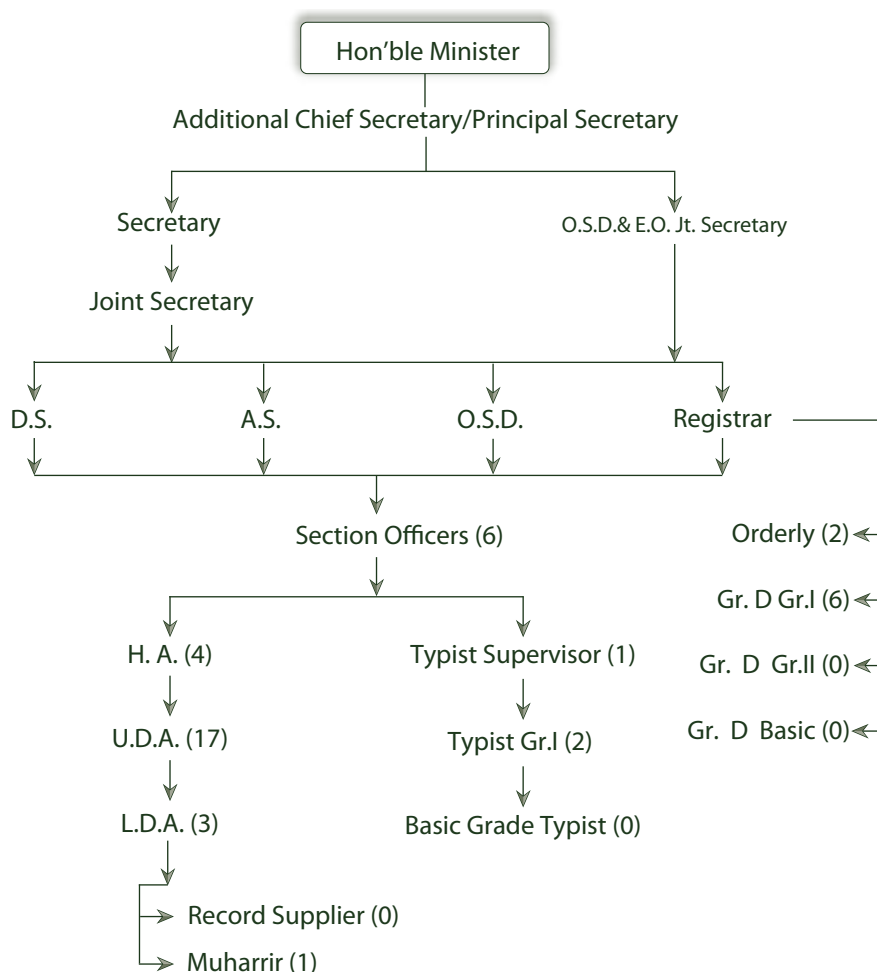
## CHAPTER 3

### 3.1 DEPARTMENT OF FORESTS, WEST BENGAL ADMINISTRATIVE SET UP OF THE DEPARTMENT OF FORESTS



### 3.1.1 Organizational Structure of Forest Department, Govt. of W.B.

The Department of Forests is Department with a structure that reflects the diverse range of tasks it is expected to undertake. The administration of this Department is vested with the Additional Chief Secretary/Principal Secretary. He/She is assisted by officers and employees working at the secretariat, Directorate, Districts, Sub-Divisions and Block levels.



### 3.1.2 Function of the Secretariat

Subject to the overall control of the Hon'ble MIC, Forests, the Secretariat functions under the administrative direction and guidance of the Principal Secretary. The Department monitors and evaluates various projects/ schemes implemented through the Directorate.

The Functions of the Secretariat are dealt with by different cells headed by Adll. Secretary and Joint Secretary.

**1. Departmental Establishment Cell:** Service matters of the Secretariat employees, enforcement of attendance, vigilance matter of Secretariat employees etc.

**2. Gazetted Establishment Cell:** All kinds of Service matters of IFS and WBFS officers.

**3. Non-Gazetted Establishment Cell:** All kinds of Services matters of non-gazetted employees of Forest Directorate.

**4. Vigilance Cell:** Vigilance matters of IFS, WBFS officers.

**5. Law Cell:** Law matters relating to Directorate & Department

**6. Wildlife Cell** Wildlife related matters and matters relating to framing of Acts/Rules/Notifications pertaining to different acts, matters related to forest produce, Establishment of State Zoo Authority, matters relating to WBFDC Ltd., WBPDC Ltd and WBWDC Ltd. (Excluding Establishment related to WBFDC and WBPCD Ltd).





- 7. Budget Cell:** Budgetary provisions of Department and Directorate through Fund flow. Release information system Portal of Finance Department, Budget Allotment to the Department and Directorate and Monitoring of fund flow through e-bantan Portal of Finance Department. Monitoring of RIDF scheme through Rural infrastructure Development Fund Portal of Finance Department, Create new Head of Services for implementation of new schemes, Fund allotment to the Schemes like Jalatirtha, Sabujshree etc., Create New DDO and DDO code, Payment of compensation to the victims family due to wild animal-human conflict like Human injury, crop damage, hut damage etc., payment of decretal money. Monitoring over WFTS portal of Finance Department, Credit Confirmation of Central allotment of fund through Online Credit Confirmation System, Re-appropriation and augmentation of fund through e-bantan and sending of file to the Finance Department.
- 8. Accounts Cell:** Registrar (presently the Assistant Secretary) acts as the drawing and disbursing officer of the Department for drawl of establishment bills after introduction of self DDO-system from December, 2011, Preparation of Establishment Bill, submission to Pay & Accounts office for drawal of cheques, encashment of cheques from the Reserve Bank of India, payment to the employees of the Department, issue of salary Accounts slip etc.

- 9. Billing Cell:** Matters relating to stationary, office budget allotment, Identity Card, Vehicle for Officers, reimbursement of telephone Bill, Newspaper Bill and Medical Bill of Officers, Tour of MIC and Officers.
- 10. Leave Cell:** Leave matters of Secretariat employees.
- 11. Medical Cell:** Matters relating to WBHS' 08, WBHS' 14 and other medical cases for Secretariat and Directorate employees.
- 12. RTI, Public Grievance & Protocol Duty Cell:** Matters Relating to RTI, Public Grievances and Protocol Duty for official guests and others matters.
- 13. Audit Cell:** Settlement of outstanding audit para and matters relating to Assembly/Lok Sabha/Rajya Sabha questions matters related to Assembly Committee, Audit, Plan and non-plan fund of Alipore Zoo & PNHZ Park.
- 14. CAMPA Cell:** Framing of Acts/Rules/Notifications pertaining to different acts, diversion of land under Forest Conservation Acts & Wetland, CAMPA, Saw-mills.
- 15. Miscellaneous Cell:** All kinds of miscellaneous matters concerned with this Department.
- 16. Issue & Compare Cell:** Provide issue numbers, despatch the government letters and documents and compare the draft letters.

## 3.2 FOREST DIRECTORATE ADMINISTRATION 2019–2020

### 3.2.1 IFS Cadre of West Bengal

As on 01.01.2020

Sl. No.	Authorised Structure of the Cadre vide G.O No. 16016/2(i)/2011-AIS-(II)(A) dt.13.03.2012	No of Post	Present Srength of Cadre as on 01.01.2020	No of Post
1	Senior Duty Post under the State Govt	78	Senior Duty Post	78*
2	Central Deputation Reserve @ 20% of (1) above	15	Central Deputation	5
3	State Deputation Reserve @ 25% of (1) above	19	State Deputation	19
4	Training Reserve @ 3.5% of (1) above	2	Training Reserve	6
5	Post to be filled by promotion in accordance with Rule 8 of India Forest Service (Recruitment) Rules,1966 not exceeding 33.33% of items (1),(2),(3) & (4) above	38	Posts Filled by promotion from WBFS	37
6	Leave Reserve & Junior Posts Reserve @ 16.5% if item (1) above	12	Leave Reserve & Junior Posts	4
	<b>Total Authorised Strength</b>	<b>126</b>	<b>Total Present Strength</b>	<b>107</b>

\*Includes 10 IFS officers of Junior Time Scale holding Senior Duty Posts



### 3.2.2 WBFS Cadre of West Bengal

**Authorised & existing cadre strength of the West Bengal Forest Service**  
(As per Govt Order No. 1499-For dated 15.05.2000 & 3887-For. dated 10.11.2006)  
As on 01.01.2020

Sl. No.	Description	Nos.	Actually Posted
1	Direct Recruit Officers	63	51
2	Promoted Officers	63	55
3	Officers in charge of Division/Sr. Duty Post (DFO/DCF)	23	23
4	Officers posted as ADFO/Jr. Duty Post	87	70
5	Officers on deputation @ 10% of (3+4)	11	13
6	Officers undergoing training & Leave Reserve @ 5% of (3+4)	5	0
	<b>Total Authorised Strength</b>	<b>126</b>	<b>106</b>

*\*\*Names in the list have been arranged as per provisional seniority*

### 3.2.2 Statement showing the sanctioned strengths of officers and staff of the Forest Directorate along with the existing strengths and vacancy positions as on 31.3.2020 given below

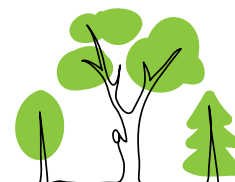
Si. No	Name of Posts	Sanction Strength	Existing Strength	Vacancies
1	IFS	126	107	19
2	WBFS	126	109	17
3	A.O.	1	1	0
4	FR	586	400	186
5	DR/Fr.	1284	733	551
6	FG	2458	1311	1147
7.	HFG	231	81	150
8.	Head Clerk (Regional)	65	60	5
9.	Head Clerk (Directorate)	8	7	1
10.	Accountant (Reg.)	8	1	7
11.	Accountant (Directorate)	2	2	0
12.	Asst. Statistician	1	0	1
13.	Computing Spr.	2	2	0
14.	Computer	7	0	7
15.	UDC (Regional)	327	152	175
16.	UDC (Directorate)	26	26	0
17.	Typist (Directorate)	15	6	9
18.	Typist (Regional)	28	1	27
19	LDC (Regional)	327	91	236
20	LDC (Directorate)	26	4	22
21	Statistician	1	0	1
22	Drivers	146	39	107
23.	Agriculture Extension Officer	2	0	2
24.	Asst. Foreman (Mech.)	4	0	4



Si. No	Name of Posts	Sanction Strength	Existing Strength	Vacancies
25.	Asst. Saw Doctor	2	1	1
26.	Attendant	1	0	1
27.	Asst. Soil Chemist	1	0	1
28.	Band Saw operator	10	1	9
29.	Bearer	3	1	2
30.	Boatman	102	25	77
31.	Boiler Driver	1	0	1
32.	Boiler Fireman	3	0	3
33.	Bungalow Chowkidar	94	66	28
34.	Bengali Translator	1	1	0
35.	Cashaub	1	0	1
36.	Chowkidar	2	1	1
37.	Cleaner/Truck Cleaner	27	16	11
38.	Cook	4	0	4
39.	Cook-cum-Bearer	2	1	1
40.	Crane Operator	3	2	1
41.	Cross-cut-Operator	6	1	5
42.	C.T.Mobile Medical Unit	1	0	1
43.	Compounder	1	1	0
44.	Dakwalla	104	50	54
45.	Darwan	34	25	9
46.	Draftsman/Head Draftsman	35	16	19
47.	Driver-cum-Mechanic	3	0	3
48.	Duftary	13	7	6
49.	Duplicating Operator	1	1	0
50.	Electrician	1	1	0
51.	Engine Driver	9	4	5
52.	Electric Workman	4	1	3
53.	ECG Technician	1	0	1
54.	Fitter	1	0	1
55.	Forest Watcher	13	1	12
56.	Forest Worker	17	6	11
57.	GDA (Medical Unit)	2	0	2
58.	Gate Operator/ H.G.O.	5	1	4
59.	Grass Cutter	22	2	20
60.	Game Watcher	2	1	1
61.	Game Guard	4	0	4
62.	Installation Guard	10	0	10
63.	Kiln Supervisor	1	0	1
64.	Laskar	17	6	11
65.	Lathe man	1	0	1
66.	Laboratory Assistant	3	0	3



Si. No	Name of Posts	Sanction Strength	Existing Strength	Vacancies
67	Laboratory Attendant	1	1	0
68	Mahut	23	3	20
69	Majhi	44	12	32
70	Mali	193	116	77
71	Medical Officer	2	0	2
72	Mosalchi	1	0	1
73	Muharrir Grade-I, Grade-II	2	1	1
74	Museum Darwan	1	0	1
75	Night Guard	11	6	5
76	Night Watchman	5	1	4
77	Nurse	2	0	2
78	Oil Man – greaser	9	3	6
79	Orderly	534	439	95
80	Peon	102	69	33
81	Office Supdt	1	1	0
82	Pharmacist	2	0	2
83	Power Saw Operator	5	0	5
84	Pump Driver	1	0	1
85	Road Roller Driver	3	0	3
86	Record Supplier	2	2	0
87	Renepont Operator	2	0	2
88	Road Roller Mate	3	0	3
89	Research Officer	1	0	1
90	Ropeway Motor Driver	7	0	7
91	Road Khalasi	3	0	3
92	Saw Doctor	1	0	1
93	Serang	7	3	4
94	Skilled Mazdoor	10	0	10
95	Station Helper	5	0	5
96	Personal Assistant	48	22	26
97	Sub-Station Operator	2	1	1
98	Karmabandhu (Sweeper)	52	22	30
99	Sukhani	5	1	4
100	Tractor Driver	1	0	1
101	Tractor Mate	5	0	5
102	Taxidermist	1	0	1
103	Ticket Seller	1	0	1
104	Technical Asstt	1	1	0
105	Tractor Mount Roller Driver	1	1	0
106	Unskilled Mazdoor	46	1	45
107	Veterinary Officer	1	0	1





Si. No	Name of Posts	Sanction Strength	Existing Strength	Vacancies
108	Watcher	1	1	0
109	Wildlife Guard	1	1	0
110	X-Ray Assistant	1	1	0
111	Karmasathi (Zamadar)	2	0	2

#### PARKS & GARDENS WING

Si. No.	Name of Posts	Sanction Strength	Existing Strength	Vacancies
1	Garden Supervisor	22	13	9
2	Head Uddyan Rakshi	31	11	20
3	Horticulture Officer	5	0	5
4	Senior Horticulture Officer	2	0	2
5	Senior Mali	70	37	33
6	Supdt. Horticulture officer	1	1	0
7	Uddyan Rakshi	126	92	34
8	Uddyan Shramik	284	160	124

#### LLOYD BOTANIC GARDEN

Si. No.	Name of Posts	Sanction Strength	Existing Strength	Vacancies
1	Black smith	1	0	1
2	Carpenter	1	1	0
3	CT	1	0	1
4	Darwan	6	2	4
5	Head Mali	1	0	1
6	Herbarium Cleaner	4	0	4
7	Horticulture Officer	1	0	1
8	Junior Mali	1	0	1
9	Lebel Writer	1	0	1
10	Man Mazdoor	11	3	8
11	Night Guard/Chowkidar	1	0	1
12	Orchid Supervisor	1	0	1
13	Orderly	1	1	0
14	Plant Collector	1	0	1
15	Peon	1	1	0
16	Sardar	1	0	1
17	Senior Mali	1	1	0
18	Store Keeper	1	0	1
19	Karmabandhu (Sweeper)	2	0	2
20	UDC	1	1	0
21	Women Mazdoor	25	0	25



### SUPERNUMERARY POSTS

Bana Majdoor	125
Bana Shramik	1657

### 3.2.3 Administrative Units under Forest Directorate

	Circle	Division	Range	Beat
Territorial	7	25	243	509
Wildlife	5	7	86	142
Social Forestry	1	2	52	72
Soil Conservation	1	2	22	39
Functional	4	17	72	–
<b>Total</b>	<b>18</b>	<b>53</b>	<b>475</b>	<b>762</b>



# SCHEMES/ PROGRAMMES

## CHAPTER 4

**N**ational Afforestation and Eco-Development Board (NAEB), Ministry of Environment, Forests and Climate Change, Government of India launched the National Afforestation Programme (NAP) to be implemented by Forest Development Agencies (FDA) of the States during 10<sup>th</sup> Plan period. As per its guidelines, a State Level Co-ordination Committee was formed vide Notification No.5890-For dated 10.12.2007 and No.3491-For dated 18.08.2010. Subsequently, in compliance with guidelines of the NAEB, 'West Bengal State Forest Development Agency' (WBSFDA) was registered as Society in the year 2010.

In addition to the NAP program, WBSFDA was made one of the signatories of the quadripartite agreement for implementation of the 'Capacity Development for Forest Management & Training of Personnel' funded by JICA in 2010.

Regulations for WBSFDA were notified vide Notification No.1130-FR/IIIM-19/2003 dated 10<sup>th</sup> June, 2014.

Some of the key schemes taken up by the WBSFDA and their performance in the year 2019–20 are given below:

### 4.1 SCHEMES

#### 4.1.1 Rashtriya Krishi Vikas Yojana [RKVY]

The most important sector of Indian as well as State Economy is Agriculture. Rashtriya Krishi Vikas Yojana (RKVY) was launched by the Department of Agriculture & Co-operation (DAC) Ministry of Agriculture, Govt. of India from 2007–08, as an umbrella scheme for ensuring holistic development of agriculture and allied sectors with 4% annual growth. The allied Sectors has an important role to play in the total Agricultural Development of the Country and the Natural Resource Management Component of

the Scheme is being implemented all over the State by the Forest Department of West Bengal. Forest plays a very important role in the agriculture of forest fringe areas inhabited by the economically weaker people, through the different soil moisture conservation works such as gully plugging, contour trenching, boulder sausage walls, river training works and earthen dam which not only safeguards the agricultural lands and crops but also help to replenish the water table of the area benefitting cultivation as a whole.

Based on the feedback from the States during implementation in the 12<sup>th</sup> plan the aim of the scheme was shifted towards making farming a remunerative through strengthening farmer's efforts, risk mitigation and promoting agri-business entrepreneurship. The erstwhile scheme of RKVY guidelines have been revamped as RKVY-RAFTAAR—Remunerative Approaches for Agriculture and Allied Sector Rejuvenation, to enhance efficiency, efficacy and inclusiveness of the programme for the remaining period of the Fourteenth Finance Commission. The main objectives of RKVY—RAFTAAR are as follows:

1. Creation of pre-and post-harvest infrastructures to strengthen the farmers efforts
2. Promoting value chain addition linked production model
3. Ensuring local/farmers' needs being better reflected in the agricultural plan of the State
4. Mitigating risk of farmers with focus on additional income
5. Empowering youth through skill development, innovation and agri-entrepreneurship
6. Attending national priorities through sub schemes.



RKVY—RAFTAAR is implemented as a Centrally Sponsored Scheme having the funding pattern in the ratio of 60:40 (GoI: State Share)

The State of West Bengal has nearly 3% of the nation's cultivable land and about 8% of the country's population. The state is characterized by the predominance of small and marginal farmers cultivating more than 68% of the cultivable area of the State. Since the scope of bringing more area under cultivation is limited emphasis is being laid mainly on increasing the productivity of different crops by using quality seeds, fertilizers, plant protection measures, introducing suitable mechanizations and emphasizing on soil amelioration and soil moisture conservation measures being IMPORTANT PRE-HARVEST STRATEGIES to ensure optimum crop production. Our objective is to undertake relevant soil moisture conservation works in the forestland to conserve natural resources and achieve consequent

improvement in agriculture crop productivity in fringe areas. In order to achieve the goal, relevant work programme have been identified in different sites of West Bengal, which will help in rain water harvesting, reduced erosion, and increase canopy cover, and minimized impacts of floods, increase humidity, increase regeneration and change in micro-climate and thereby ensuring increased farming opportunity and production to the forest fringe population. The major objectives of the RKVY-RAFTAAR 2019–20 are as follows:

1. To improve the productivity of the areas under treatment
2. To improve the ground water regime
3. To control soil erosion and arrest the sedimentation to the extent possible
4. To create water impounding structures in the forest fringes for making water available for the agricultural lands in the proximity of forest areas.

#### RKVY Projects approved during the last 4 years:

[₹ In Crore]

(₹ In Crore)	2016–17	2017–18	2018–19	2019–20
DPR Approved	14.30	14.08	7.29	15.00
Fund Received	10.99	13.41	6.9234	5.93

#### RKVY Projects Achievement during the last 3 years:

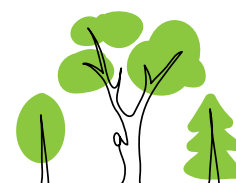
[₹ In Crore]

[₹ In Crore]	2017–18	2018–19	2019–20
Soil Conservation	4.6638	4.1401	5.93
Central Nursery	8.6852	3.0341	–
<b>Total</b>	<b>13.3490</b>	<b>7.1742</b>	–

### 4.1.2 Online Booking System

In March 2015, WBSFDA had started the Online Booking System for different eco-tourism centres in the State. The web site was [www.wbsfda.gov.in](http://www.wbsfda.gov.in). Recently WBSFDA has launched its new revamped website [www.wbsfda.org](http://www.wbsfda.org) for online booking of Eco-tourism Centres, Elephant Ride and Car Safari. The inventory of accommodation in the Eco-tourism Centres and receipts during 2019–20 is given below:

Sl. No.	Name	Location	Divisions	Cottages/Rooms	Receipts During 2019–20 (₹)
1	Mouchaki Camp	Samsing	Gorumara Wildlife	4 Rooms (DB)	3,53,200.00
2	Hornbill Nest	Bichabhanga	Gorumara Wildlife	4 Cottages (DB)	1,63,200.00
3	Murti Tents	Murti	Gorumara Wildlife	4 Cottages (DB)	3,22,700.00
4	Dhupjhora Elephant Camp	Dhupjhora	Gorumara Wildlife	3 Rooms (Non AC, DB)	14,08,020.00





Sl. No.	Name	Location	Divisions	Cottages/Rooms	Receipts During 2019-20 (₹)
5	Dhupjhora Elephant Ride	Dhupjhora	Gorumara Wildlife		80,800.00
6	Dhupjhora Tree House	Dhupjhora	Gorumara Wildlife	1 Room,(Non AC, DB)	5,80,800.00
7	Dhupjhora Tree House Elephant Ride	Dhupjhora	Gorumara Wildlife		29,600.00
8	Kalipur Eco Village	Ramsai	Gorumara Wildlife	3 Rooms Non AC, DB	14,64,500.00
9	Kalipur Elephant Ride (From medla)	Ramsai	Gorumara Wildlife		1,04,000.00
10	Panjhora Wilderness Camp	Panjhora	Gorumara Wildlife	4 Rooms Non AC, DB	11,98,800.00
11	Rhino Camp	Ramsai	Gorumara Wildlife	3 Rooms, Non AC, DB	8,91,300.00
12	Rhino Camp Elephant Ride	Ramsai	Gorumara Wildlife		64,800.00
13	Kunjanagar	Kunjanagar	Jaldapara Wildlife	4 rooms (DB)	52,800.00
14	South Khairbari	South Khairbari	Jaldapara Wildlife	3 cottages (DB)	1,26,000.00
15	Mendabari Jungle Camp	Mendabari	Jaldapara Wildlife	2 Rooms(DB), 1 Dorm. (4beds)	8,08,500.00
16	Neora Jungle Camp	Lataguri	Jalpaiguri	4 rooms (DB)	8,80,000.00
17	Bandapani	Bandapani	Jalpaiguri	1 Room (DB)	32,500.00
18	Rosomoti Twin Cottage	Patlakhawa	Coochbehar	2 Rooms (DB)	61,000.00
19	Gosanimari Twin Cottage	Gosanimari	Coochbehar	2 Rooms (DB)	21,000.00
20	Susunia ETC	Susunia	Bankura North	2 Rooms (DB), 1 Dorm. (8 Beds)	3,07,600.00
21	Beharinath ETC	Beharinath	Bankura North	6 Rooms (DB)	2,34,400.00
22	Matha Tree House	Matha	Purulia	1 Room (DB)	51,500.00
23	Menebhanjan Trekker's Hut	Manebhanjan	Darjeeling	2 Rooms (DB)	42,960.00
24	Gopegarh ETC	Gopegarh (Near Midnapore Town)	Medinipur	4 AC -Rooms (DB) 2 1 Dorm.(10 Beds) 2 NON AC-(DB)	6,69,800.00
25	Parimal Kanan	Chandrakona	URF	Paribahan Cottages 2 Rooms AC, (DB) 2 Rooms Non AC, DB Bakul Cottage 1 Room DB Balaka Cottage 2 Rooms DB	4,69,100.00
26	Kshudiram Bose Park	Chandrakona	URF	5 Rooms (DB)	29,050.00
27	Bolepur NIC	Bolepur	Birbhum	3 Rooms Non AC, DB 3 Rooms AC, DB 1 Dormitory (6 Beds).	7,98,300.00
28	Bethuadahari Cottages	Betuaduari	Nadia-Murshidabad	2 Rooms (DB)	1,83,000.00
<b>Total</b>					<b>1,14,29,230.00</b>



### 4.1.3 Green India Mission

WBSFDA is the implementing Agency of Green India Mission for the State. Till 2019–20 an allocation of ₹242.47 lakh was made to the Divisions for entry point activities.

Fund received from Gol	= ₹300.75 lakh
Fund allotted to Divisions	= ₹242.47 lakh
Expenditure till 31 <sup>st</sup> Mar, 2020 (Including H.O salary)	= ₹293.19 lakh

### 4.1.4 NMPB Scheme

Funds were received in different stages from Government of India, Department of Ayurveda, Yoga & Naturopathy, Unani, Siddha & Homeopathy (AYUSH) of the Ministry of Health & Family Welfare for emphasising the importance of medicinal plants, its cultivation, production and marketing and strengthening the natural product based system for health and welfare.

Project Name	Fund Received	Allotment	Expenditure
For "Socio-Economic Upliftment of JFMC through Conservation of Medicinal Plants, Value Addition & Marketing of Medicinal plants" – to be implemented in 225 FPCs of 9 Divisions in the State of West Bengal.	₹667.92 lakh	₹639.45 lakh	₹603.53 lakh
For Revisiting MPCAs in West Bengal.	₹54.54 lakh	₹41.14 lakh	₹41.14 lakh
7 new MPCAs	₹57.34 lakh	₹17.16 lakh	₹17.16 lakh

### 4.1.5 Wild Animal Depredation

During the year 2019–20 WBSFDA has received ₹928.30 lakh from PCCF Wildlife and Chief Wildlife Warden for this following item of works:

1. Death.
2. Injury.
3. Crop damage.
4. Hut damage.
5. Live stock damage.

#### Status of Expenditure of compensation for Wild Animal Depredation Status (As on March, 2020)

[₹ In Lakh]

Sl No.	Divisions	Fund Allotted	Expenditure
1	Rupnarayan	67.96	62.06
2	Kharagpur	105.00	104.81
3	Medinipur	207.86	193.08
4	Jhargram	98.81	78.30
5	Kangsabati(S)	1.47	1.47
6	Bankura (N)	38.42	31.79
7	Bankura (S)	12.00	11.63
8	Panchet	15.00	12.68
9	Baikunthapur	17.30	14.59
10	Jalpaiguri	35.00	32.15



SI No.	Divisions	Fund Allotted	Expenditure
11	Purulia	70.03	63.36
12	Darjeeling – WL	13.00	11.91
13	Gorumara – WL	55.15	52.89
14	Jaldapara – WL	78.18	67.80
15	Burdwan	0.57	0.04
16	BTR (E)	17.19	12.82
17	BTR (W)	21.32	16.98
18	Kurseong	50.51	50.12
19	24-Pargans(S)	4.00	4.00
20	Howrah	1.50	1.50
21	Birbhum	2.53	2.09
22	Durgapur	8.50	8.00
23	Coochbehar	2.00	1.85
24	Kalimpong	5.00	4.76
	<b>Total</b>	<b>928.30</b>	<b>840.68</b>

#### 4.1.6 Fund Received for felling, logging in connection with land diversion

During the year 2019–20 WBSFDA were received funds in different stages under CAMPA fund. The details fund received pertaining to 2019–20 are tabulated below:

Nature of Works	Fund Received (₹ in lakh)	Fund Allotment (₹ in Lakh)	Fund Released (₹ in lakh)
Diversion of Forest Land for establishment of Gangaramchak—Bhadulia Coal Mines in favour of WBPDCCL under Birbhum Forest Division	3.44	3.44	0.00
For extension of Paradip-Haldia of IOCL under Birbhum Forest Division	2.38482	2.38482	0.00
Construction of 1000 MW of WBSEDCL Ajodhya Hills under Purulia Forest Division	404.24513	404.24513	0.98
Diversion of Forest Land in favour of North Frontier Railway, Jalpaiguri for construction of Sevoke—Rongpo New Broad Gauge Railway Line	357.36793	357.36793	66.84

#### 4.1.7 Centrally Sponsored Scheme

During the year 2019–20 WBSFDA were received funds in different stages under Centrally Sponsored Scheme fund. The details fund received pertaining to 2019–20 are tabulated below:

Scheme	Fund Received (₹ in lakh)	Fund Allotment (₹ in Lakh)	Fund Released (₹ in lakh)
Conservation and Management of Sundarban Mangroves	127.00	127.00	127.00
Conservation and Management of Sundarban Mangroves for SC Sub-Plan in Sundarbans	249.00	249.00	249.00





#### 4.1.8 Parks & Gardens & Eco-tourism Activities

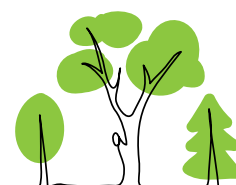
During the year 2018–19 and 2019–20, WBSFDA have received funds from different divisions under Parks & Gardens & Eco-tourism Activities. The details fund received pertaining to 2018–19 and 2019–20 are tabulated below:

Year	Fund Received		Total Fund Received
	Parks & Gardens	Eco-tourism Activities	
2018–19 (up to March'2019)	3,67,40,952.00	5,48,91,558.00	9,16,32,510.00
2019–20 (up to March,2020)	4,60,26,130.00	6,35,37,539.00	10,95,63,669.00

#### 4.1.9 Tree Felling

During the year 2018–19 and 2019–20 WBSFDA were received funds from different divisions under Tree Felling vide Forest Dept., Notification No. 3011-FR/O/FP/6M-10/99 (Part-II), dated 07.09.2017. The details fund received pertaining to 2017–18 and 2018–19 are tabulated below:

Year	Fund Received	Refund
2018–19	1,34,58,517.00	1,83,320.00
2019–20	1,27,08,892.00	27,900.00



# AFFORESTATION PROGRAMMES

## CHAPTER 5

### 5.1 AFFORESTATION

One of the objectives of National Forest Policy, 1988, is to increase the National Forest cover to 33% of the geographical area. The main area of activity is creation, maintenance and preservation of plantations on both degraded forest lands, non forest Government lands and private lands through the following schemes.

- a) Economic Plantation:** This Scheme is meant for the plains of Dooars in North Bengal and comprises of plantation of timber producing species.
- b) Plantation of Quick Growing Species:** Under this scheme mainly industrial plantations over laterite zone are created along with maintenance of older plantations.
- c) Coastal Shelterbelt Plantation:** Mainly plantations in Coastal areas are taken up under this program with the objective of mitigating the fury of cyclones along the coastal areas. This program is taken up mainly in Medinipur district and some areas of 24 Parganas South district.
- d) Mangrove Treatment:** The Scheme aims at rehabilitation of mangrove forests in Sundarban areas by taking afforestation in saline blank patches, newly accreted areas on account of deltaic accretion of lands, sandy blanks etc.
- e) Forestry Treatment:** In view of a very wide range of Agro-ecological conditions prevailing in this state, altogether 12 treatment models have been adopted, which are grouped in two broad categories, namely (a) Rehabilitation of degraded forest lands which constitutes the largest component of treatment models involving JFMCs including regeneration of degraded Sal forests in SW Bengal from viable root stocks and partly in North Bengal for similar areas. Enrichment planting is also undertaken in blank pockets within this areas and (b) Forestry development on Non Forest Lands the principal focus of which is on the Farm Forestry, which is directed towards small and marginal Farmers. This also includes promotion of Agro-Forestry systems.
- f) Strip Plantation/Farm Forestry:** This Scheme is meant for a part of the area that has been earmarked for strip plantation along national highways, canal embankments, roadside plantation and in such strips.





Table 5.1: Expenditure Details of Plantation Head for 2019-20

Sl. No.	Sl. Head	Budget Provision (₹ In Lakh)	Creation Including DPN		Maintenance		Advance Work Including DPN		Total Expenditure Against Plantation Work	
			Phy. (ha.)	Fin (₹)	Phy. (ha.)	Fin (₹)	Phy. (ha.)	Fin (₹)	Phy. (ha.)	Fin (₹)
1	4406-01-101-001-Forest Conservation and Regeneration-87-00-V	5300.00	7140.45	438433704.00	8501.64	72039114.00			15642.09	510472818
2	4406-01-789-002-Forest Conservation and Regeneration-87-00-V	700.00			5279.51	55742668.00	358.00	3447333	5637.51	59190001
3	4406-01-796-002-Forest Conservation and Regeneration-87-00-V	600.00			5077.50	46367750.00	4000.00	31912362	9077.50	78280112
4	4406-01-789-003-Decentralized People's Nursery-(DPN)-87-00-V	500.00	5871.00	22352501.00			3998.00	17391300	9869.00	39743801
	<b>Total</b>	<b>7100.00</b>	<b>13011.45</b>	<b>460786205.00</b>	<b>18858.65</b>	<b>174149532.00</b>	<b>8356.00</b>	<b>52750995</b>	<b>40226.10</b>	<b>687686732</b>



# STATUS OF REVENUE AND EXPENDITURE

## CHAPTER 6

**R**evenue of the Forest Directorate, Government of West Bengal is generated through sale of forest products, tariffs and royalties, rents, taxes, levies, fees and other charges. During 2019–2020 total Revenue

earned was ₹6104.65 lakh. Maximum revenue was generated by the Western Circle (₹1962.53 lakh). Details of Revenue and Expenditure during 2019–2020 were as follows:

**Table 6.1: Revenue From Major Heads 2019–2020**

Heads	₹ in Lakh
Timber & poles	4277.11
Fire wood & Charcoal	211.42
Grazing	1.63
Minor F.P	116.66
Bamboo	732.10
Others	765.73
<b>Total</b>	<b>6104.65</b>

**Table 6.2: Actual Expenditure 2019–2020**

Major Head	₹ in Lakh
State Development Scheme	<b>2410491605</b>
Administrative Expenditure	<b>3450931600</b>
<b>Total</b>	<b>5861423205</b>

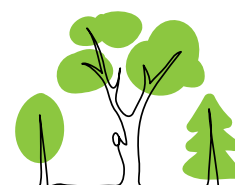
**Table 6.3: Statement Showing unit wise Revenue During 2019–20**

(₹ in Lakh.)

Units	Timber & Pole	Firewood & Charcoal	Grazing	Minor F.P	Bamboo	Others	Total
General Direction Division	0.00	0.00	0.00	0.00	0.00	2.18	2.18
Publicity Division	0.00	0.00	0.00	0.00	0.00	0.51	0.51
Forest Utilisation Division	0.00	0.00	0.00	0.00	0.00	256.00	256.00
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>258.69</b>	<b>258.69</b>
Monitoring (South) Division	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monitoring (North) Division	0.00	0.00	0.00	0.00	0.00	0.23	0.23
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.23</b>	<b>0.23</b>



Units	Timber & Pole	Firewood & Charcoal	Grazing	Minor F.P	Bamboo	Others	Total
Working Plan & GIS Circle	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Working Plan (South) Division - I	0.00	0.00	0.00	0.00	0.00	0.27	0.27
Working Plan (South) Division - II	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Working Plan (North) Division	0.00	0.00	0.00	0.00	0.00	0.07	0.07
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.34</b>	<b>0.34</b>
Research Circle	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silviculture (South) Division	0.00	0.00	0.00	0.00	0.00	0.82	0.82
Silviculture (North) Division	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Silviculture (Hill) Division	0.00	0.00	0.00	0.00	0.00	3.96	3.96
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.78</b>	<b>4.78</b>
Development Circle	0.00	0.00	0.00	0.00	0.00	0.00	0.00
West Bengal Forest School	0.00	0.00	0.00	0.00	0.00	0.00	0.00
State Forest Training Institute	0.00	0.00	0.00	0.00	0.00	0.12	0.12
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.12</b>	<b>0.12</b>
South-West Circle	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Purulia Division	0.54	0.00	0.00	0.05	0.00	8.01	8.60
Kangsabati (North) Division	2.25	0.82	0.00	0.00	0.00	3.74	6.81
Kangsabati (South) Division	4.11	0.00	0.00	0.00	0.00	14.14	18.25
Extension Forestry Division	0.00	0.00	0.00	0.00	0.00	0.62	0.62
<b>Total</b>	<b>6.90</b>	<b>0.82</b>	<b>0.00</b>	<b>0.05</b>	<b>0.00</b>	<b>26.51</b>	<b>34.28</b>
Urban & Recreational Forestry Division	0.00	0.00	0.00	0.00	0.00	3.77	3.77
Parks & Gardens (North) Division	0.00	0.00	0.00	0.00	0.00	2.35	2.35
Howrah Division	0.00	0.00	0.00	0.00	0.00	35.76	35.76
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>41.88</b>	<b>41.88</b>
Burdwan Division	92.32	0.04	0.00	0.17	0.00	11.62	104.15
Birbhum Division	0.00	0.00	0.00	0.00	0.00	8.85	8.85
Durgapur Division	0.00	0.00	0.00	0.00	0.00	67.65	67.65
<b>Total</b>	<b>92.32</b>	<b>0.04</b>	<b>0.00</b>	<b>0.17</b>	<b>0.00</b>	<b>88.12</b>	<b>180.65</b>
Jhargram Division	173.07	2.75	0.00	89.69	0.05	3.61	269.17
Medinipur Division	748.32	10.55	0.00	0.00	0.00	7.29	766.16
Kharagpur Division	156.40	0.02	0.00	0.00	35.81	8.36	200.59
Rupnarayan Division	529.82	4.87	0.00	0.00	144.31	8.37	687.37
Purba Medinipur Division	38.77	0.00	0.00	0.00	0.00	0.47	39.24
<b>Total</b>	<b>1646.38</b>	<b>18.19</b>	<b>0.00</b>	<b>89.69</b>	<b>180.17</b>	<b>28.10</b>	<b>1962.53</b>
Bankura (North) Division	617.91	112.86	0.00	0.00	0.00	5.44	736.21
Bankura (South) Division	2.78	6.22	0.00	0.00	0.00	39.53	48.53
Panchet Division	178.86	4.45	0.00	0.00	550.27	2.85	736.43
<b>Total</b>	<b>799.55</b>	<b>123.53</b>	<b>0.00</b>	<b>0.00</b>	<b>550.27</b>	<b>47.82</b>	<b>1521.17</b>
Sundarbans Tiger Reserve	0.00	0.00	0.00	0.40	0.00	22.84	23.24
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.40</b>	<b>0.00</b>	<b>22.84</b>	<b>23.24</b>



Units	Timber & Pole	Firewood & Charcoal	Grazing	Minor F.P	Bamboo	Others	Total
Sunderbans Biosphere Reserve	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24-Parganas (South) Division	0.00	54.54	0.00	0.00	0.00	24.06	78.60
24-Parganas (North) Division	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nadia-Murshidabad Division	3.39	0.74	1.59	3.26	0.00	11.28	20.26
<b>Total</b>	<b>3.39</b>	<b>55.28</b>	<b>1.59</b>	<b>3.26</b>	<b>0.00</b>	<b>35.34</b>	<b>98.86</b>
Wildlife (Headquarter)	0.00	0.00	0.00	0.00	0.00	0.17	0.17
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.17</b>	<b>0.17</b>
Wildlife (North) Circle	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Darjeeling Wildlife Division	1.77	2.15	0.04	0.00	0.00	6.61	10.57
Gorumara Wildlife Division	0.00	0.00	0.00	0.00	0.00	1.08	1.08
Jaldapara Wildlife Division	0.49	9.06	0.00	0.00	0.00	9.79	19.34
<b>Total</b>	<b>2.26</b>	<b>11.21</b>	<b>0.04</b>	<b>0.00</b>	<b>0.00</b>	<b>17.48</b>	<b>30.99</b>
Buxa Tiger Reserve	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Buxa Tiger Reserve (West)	109.33	0.02	0.00	0.57	0.00	9.65	119.57
Buxa Tiger Reserve (East)	112.69	0.24	0.00	0.00	0.00	18.85	131.78
<b>Total</b>	<b>222.02</b>	<b>0.26</b>	<b>0.00</b>	<b>0.57</b>	<b>0.00</b>	<b>28.50</b>	<b>251.35</b>
Hill Circle	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Darjeeling Division	24.62	1.72	0.00	0.00	1.66	2.59	30.59
Kurseong Division	59.55	0.25	0.00	0.00	0.00	9.53	69.33
Kalimpong Forest Division	0.32	0.05	0.00	0.00	0.00	1.84	2.21
<b>Total</b>	<b>84.49</b>	<b>2.02</b>	<b>0.00</b>	<b>0.00</b>	<b>1.66</b>	<b>13.96</b>	<b>102.13</b>
Northern Circle	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jalpaiguri Division	515.40	0.07	0.00	0.00	0.00	28.96	544.43
Baikunthapur Division	734.71	0.00	0.00	0.00	0.00	18.07	752.78
Coochbehar Division	169.69	0.00	0.00	0.00	0.00	53.18	222.87
Non-Timber Forest Produce Division	0.00	0.00	0.00	22.52	0.00	0.00	22.52
<b>Total</b>	<b>1419.80</b>	<b>0.07</b>	<b>0.00</b>	<b>22.52</b>	<b>0.00</b>	<b>100.21</b>	<b>1542.60</b>
North-West Circle	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Siliguri Social Forestry Division	0.00	0.00	0.00	0.00	0.00	32.67	32.67
Malda Division	0.00	0.00	0.00	0.00	0.00	11.26	11.26
Jalpaiguri Social Forestry Division	0.00	0.00	0.00	0.00	0.00	0.02	0.02
Raiganj Division	0.00	0.00	0.00	0.00	0.00	5.88	5.88
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>49.83</b>	<b>49.83</b>
Soil Conservation (N) Circle	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kurseong Soil Conservation Division	0.00	0.00	0.00	0.00	0.00	0.28	0.28
Jalpaiguri Soil Conservation Division	0.00	0.00	0.00	0.00	0.00	0.53	0.53
<b>Total: Soil Conservation (N) Circle</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.81</b>	<b>0.81</b>
<b>Grand Total</b>	<b>4277.11</b>	<b>211.42</b>	<b>1.63</b>	<b>116.66</b>	<b>732.10</b>	<b>765.73</b>	<b>6104.65</b>



**Table 6.4: Statement Showing Units- wise Actual Expenditure During 2019–2020****(Expenditure in ₹)**

Sl. No.	Circle	Administrative Expenditure	State Development Schemes	Total
1	General Direction Division	265678566	690176193	955854759
2	Publicity Division	5396369	5691621	11087990
3	Forest Utilisation Division	13538168	0	13538168
4	Monitoring (South) Division	39555706	1221804	40777510
5	Monitoring (North) Division	14928570	1530112	16458682
6	Working Plan & GIS Circle	8760705	0	8760705
7	Working Plan (South) Division - I	12596616	1690385	14287001
8	Working Plan (South) Division - II	11441158	2323244	13764402
9	Working Plan (North) Division	13677360	2935642	16613002
10	Research Circle	6308844	0	6308844
11	Silviculture (South) Division	33766787	3785920	37552707
12	Silviculture (North) Division	27520035	3625258	31145293
13	Silviculture (Hill) Division	38043067	8083846	46126913
14	Development Circle	6557521	0	6557521
15	West Bengal Forest School	18552971	1866348	20419319
16	State Forest Training Institute	9927526	1911426	11838952
17	South-West Circle	4468808	0	4468808
18	Purulia Division	75607221	103483925	179091146
19	Kangsabati (North) Division	53504630	55251714	108756344
20	Kangsabati (South) Division	48159805	41120321	89280126
21	Extension Forestry Division	27661607	10061446	37723053
22	Urban & Recreational Forestry Division	148644644	41073062	189717706
23	Parks & Gardens (North) Division	49704288	16801466	66505754
24	Howrah Division	41601122	16029380	57630502
25	Burdwan Division	84672457	43437700	128110157
26	Birbhum Division	85367274	36558106	121925380
27	Durgapur Division	66074598	15031303	81105901
28	Jhargram Division	112753718	77482440	190236158
29	Medinipur Division	84896524	53748820	138645344
30	Kharagpur Division	64713747	63074689	127788436
31	Rupnarayan Division	54984023	58363085	113347108
32	Purba Medinipur Division	43366257	20493848	63860105
33	Bankura (North) Division	106378590	103804919	210183509
34	Bankura (South) Division	99570191	110988843	210559034
35	Panchet Division	70788986	78739465	149528451
36	Sundarbans Tiger Reserve	95672462	94467551	190140013
37	Sunderbans Biosphere Reserve	18643777	10243330	28887107
38	24-Parganas (South) Division	78399890	77845690	156245580
39	24-Parganas (North) Division	24186128	10622099	34808227
40	Nadia-Murshidabad Division	55999410	21089121	77088531





Sl. No.	Circle	Administrative Expenditure	State Development Schemes	Total
41	Wildlife (Headquarter)	49154818	14865901	64020719
42	Wildlife (North) Circle	11654752	967011	12621763
43	Darjeeling Wildlife Division	85870228	50625695	136495923
44	Gorumara Wildlife Division	82576793	64710687	147287480
45	Jaldapara Wildlife Division	169814210	72909699	242723909
46	Buxa Tiger Reserve	10314652	34999920	45314572
47	Buxa Tiger Reserve (West)	107301837	40874334	148176171
48	Buxa Tiger Reserve (East)	86179472	44198170	130377642
49	Hill Circle	11898289	0	11898289
50	Darjeeling Division	70682326	13660977	84343303
51	Kurseong Division	88310248	11184064	99494312
52	Kalimpong Forest Division	45017806	13518373	58536179
53	Northern Circle	9045498	0	9045498
54	Jalpaiguri Division	105393140	20086343	125479483
55	Baikunthapur Division	105040120	17159762	122199882
56	Coochbehar Division	64214801	23372593	87587394
57	Non-Timber Forest Produce Division	14814105	3461756	18275861
58	North-West Circle	8281469	0	8281469
59	Siliguri Social Forestry Division	23464816	17979247	41444063
60	Malda Division	28876011	13026006	41902017
61	Jalpaiguri Social Forestry Division	20048814	7430319	27479133
62	Raiganj Division	51419324	43973757	95393081
63	Soil Conservation (N) Circle	9273701	0	9273701
64	Kurseong Soil Conservation Division	36069514	7027227	43096741
65	Jalpaiguri Soil Conservation Division	34144730	9805642	43950372
	<b>Grand Total</b>	<b>3450931600</b>	<b>2410491605</b>	<b>5861423205</b>

**Table 6.5:** Circle wise Total Expenditure during 2019–2020

(Expenditure in ₹)

Sl. No.	Circle	Administrative Expenditure	State Development Schemes	Total
1	Forest Directorate Hqr	284613103	695867814	980480917
2	Monitoring Circle	54484276	2751916	57236192
3	Working Plan & GIS Circle	46475839	6949271	53425110
4	Research Circle	105638733	15495024	121133757
5	Development Circle	35038018	3777774	38815792
6	South-West Circle	209402071	209917406	419319477
7	Parks & Gardens Circle	239950054	73903908	313853962
8	South-East Circle	236114329	95027109	331141438
9	Western Circle	360714269	273162882	633877151
10	Central Circle	276737767	293533227	570270994

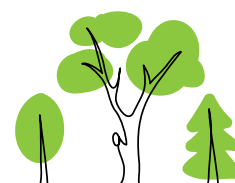


Sl. No.	Circle	Administrative Expenditure	State Development Schemes	Total
11	Sunderbans Tiger Reserve	95672462	94467551	190140013
12	Sunderbans Biosphere Reserve	177229205	119800240	297029445
13	Wildlife (Headquarter)	49154818	14865901	64020719
14	Wildlife (North) Circle	349915983	189213092	539129075
15	Buxa Tiger Reserve	203795961	120072424	323868385
16	Hill Circle	215908669	38363414	254272083
17	Northern Circle	298507664	64080454	362588118
18	North-West Circle	132090434	82409329	214499763
19	Soil Conservation (N) Circle	79487945	16832869	96320814
	<b>Grand Total</b>	<b>3450931600</b>	<b>2410491605</b>	<b>5861423205</b>

### 6.6.1 State Development Scheme

**Table 6.6:** Statement showing Scheme- wise Actual Expenditure with Fund Released

Sl. No.	Major Head	Category	Scheme	Total Budget	Fund Released by Admin Deptt	Actual Expenditure	Percentage Utilised
1	2401	SD	084.SCP for Schemes under RKVY (Cnt-Sh) [FR]	132.00	132.00	132.00	<b>100.00 %</b>
2	2401	SD	085.SCP for Schemes under RKVY (St-Sh.) [FR]	88.00	88.00	88.00	<b>100.00 %</b>
3	2401	SD	070.TSP for Schemes under RKVY (Cnt-Sh) [FR]	54.00	54.00	54.00	<b>100.00 %</b>
4	2401	SD	071.TSP for Schemes under RKVY (St-Sh) [FR]	37.00	37.00	37.00	<b>100.00 %</b>
5	2401	SD	014.Addl.Central Assist. RKVY (Cnt-Sh)[FR]	800.00	191.00	191.00	<b>100.00 %</b>
6	2401	SD	023.Addl.Central Assist. RKVY (St-Sh) [FR]	127.00	127.00	127.00	<b>100.00 %</b>
7	2406	SD	001.Forest Resources [FR]	30.00	0.00	29.34	–
8	2406	SD	001.Development of Forest Comm [FR]	180.00	128.37	104.15	<b>81.13 %</b>
9	2406	SD	004.Buildings [FR]	700.00	341.51	295.42	<b>86.50 %</b>
10	2406	SD	010.Forest Protection [FR]	400.00	0.00	272.73	–
11	2406	SD	012.Working Plan [FR]	50.00	37.50	37.49	<b>99.97 %</b>
12	2406	SD	015.Management Information System [FR]	50.00	26.88	2.87	<b>10.68 %</b>
13	2406	SD	004.Integrated Forest Prot Scheme [FR]	63.74	63.74	55.72	<b>87.42 %</b>
14	2406	SD	003.SCP for Coastal Shelter Belt Pltn [FR]	0.00	0.00	0.54	–
15	2406	SD	022.Research & Seed Propagation [FR]	80.00	56.85	94.58	<b>166.37 %</b>



Sl. No.	Major Head	Category	Scheme	Total Budget	Fund Released by Admin Deptt	Actual Expenditure	Percentage Utilised
16	2406	SD	007.SCP for Forestry Treatment [FR]	800.00	600.00	561.49	<b>93.58 %</b>
17	2406	SD	011.SCP for Community Development [FR]	50.00	37.50	37.49	<b>99.97 %</b>
18	2406	SD	027.Other Allied Works Component [FR]	200.00	143.65	118.13	<b>82.23 %</b>
19	2406	SD	028.Monitoring and Evaluation [FR]	80.00	48.31	27.52	<b>56.97 %</b>
20	2406	SD	031.Consv. of NR & Eco. (Cent- Sh) OCSPAS	600.00	524.71	394.05	<b>75.10 %</b>
21	2406	SD	030.Consv. of NR & Eco. (State-Sh) OCSPAS	300.00	296.00	220.07	<b>74.35 %</b>
22	2406	SD	023.Integrated For & B.D. Cons (JICA)	6233.50	6233.50	6233.50	<b>100.00 %</b>
23	2406	SD	001.Agro-Silviculture [FR]	0.00	0.00	2.70	–
24	2406	SD	003.Timber Opn by Mech Logging [FR]	50.00	33.76	32.60	<b>96.56 %</b>
25	2406	SD	022.Eco Rehab of fringe Population [FR]	150.00	100.51	60.70	<b>60.39 %</b>
26	2406	SD	003.Amenities to For Staff & Labourers [FR]	100.00	68.04	65.72	<b>96.59 %</b>
27	2406	SD	004.Publicity-cum-Extension [FR]	450.00	337.50	306.13	<b>90.71 %</b>
28	2406	SD	027.Protection & Improvement of WL [FR]	1000.00	568.34	544.73	<b>95.85 %</b>
29	2406	SD	002.Control of Poaching [FR]	293.84	213.59	213.15	<b>99.79 %</b>
30	2406	SD	017.Natural History Museum [FR]	20.00	15.00	0.00	–
31	2406	SD	011.Project Tiger (Sh-Share) OCASPS [FR]	775.84	545.05	543.67	<b>99.75 %</b>
32	2406	SD	010.Project Tiger (Cent-Sh) OCASPS [FR]	1439.56	689.20	675.77	<b>98.05 %</b>
33	2406	SD	013.I.Dev WL Habitats (St-Sh) OCASPS [FR]	838.92	634.60	617.26	<b>97.27 %</b>
34	2406	SD	012.I.Dev WL Habitats (Ch-Sh) OCASPS [FR]	1760.83	865.29	849.70	<b>98.20 %</b>
35	2406	SD	004.Dev of Medicinal & NTFP Plants [FR]	25.00	18.75	13.55	<b>72.27 %</b>
36	2406	SD	006.Conservation of Wetlands [FR]	50.00	37.50	37.50	<b>100.00 %</b>
37	2406	SD	007.Dev of Eco-Tourism & Nature Edn [FR]	280.00	131.25	130.76	<b>99.63 %</b>

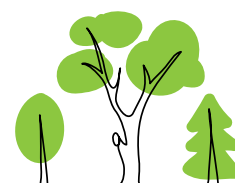


Sl. No.	Major Head	Category	Scheme	Total Budget	Fund Released by Admin Deptt	Actual Expenditure	Percentage Utilised
38	2406	SD	008.Elephant Conservation [FR]	1100.00	1097.56	885.26	<b>80.66 %</b>
39	2406	SD	005.Improvement of Zoological Garden [FR]	450.00	223.14	0.00	–
40	2406	SD	006.Extension of Zoological Garden [FR]	450.00	258.74	0.00	–
41	2406	SD	007.Creation & Improvement of P & G [FR]	500.00	372.05	372.05	<b>100.00 %</b>
42	2406	SD	002.Urban Forestry [FR]	0.00	0.00	0.69	–
43	2406	SD	004.Lloyd Botanic Garden,Darjeeling [FR]	50.00	37.30	37.46	100.43 %
44	2415	SD	001.Forestry Research [FR]	70.00	52.50	50.25	95.71 %
45	2415	SD	002.Training of Staff [FR]	150.00	112.50	36.17	32.15 %
46	2551	SD	028.Prot Afforstn & Erosion Control [FR]	40.00	21.60	21.41	99.12 %
47	2551	SD	039.Protn & Improvement of WL [FR]	10.00	7.50	7.50	100.00 %
48	2551	SD	045.Other Allied Works Component [FR]	10.00	0.00	7.50	–
49	4406	SD	001.Construction of Building [FR]	600.00	435.83	398.16	91.36 %
50	4406	SD	002.Forest Conservation and Regeneration [FR]	6911.58	6826.77	6479.20	94.91 %
51	4406	SD	003.Forest Cons and Regeneration - DPN [FR]	499.99	403.12	396.44	98.34 %
52	4702	SD	047.Scheme under Jalatritha [FR]	3144.49	2617.13	2076.17	79.33 %
53	5452	SD	001.Tourism Project	0.00	0.00	39.42	–
			<b>Total</b>	<b>32275.29</b>	<b>25891.63</b>	<b>24015.68</b>	<b>92.75 %</b>

\* Excluding: Natural History Museum, Improvement of Zoological Garden & Extension of Zoological Garden schemes& Others\*

### 6.6.2 Component-Wise: State Development Schemes Expenditure during: 2019–2020

Sl. No.	Major Head	Scheme	Normal	TSP	SCP	Total
1	2204	007.Land and Building [FR]	8923379	0	0	8923379
2	2401	084.SCP for Schemes under RKVY (Cnt-Sh) [FR]	0	0	13200000	13200000
3	2401	085.SCP for Schemes under RKVY (St-Sh.) [FR]	0	0	8800000	8800000
4	2401	070.TSP for Schemes under RKVY (Cnt-Sh) [FR]	0	5400000	0	5400000
5	2401	071.TSP for Schemes under RKVY (St-Sh) [FR]	0	3700000	0	3700000





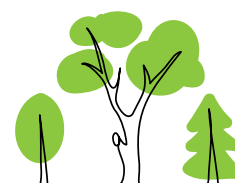
Sl. No.	Major Head	Scheme	Normal	TSP	SCP	Total
6	2401	014.Addl.Central Assist. RKVY (Cnt-Sh)[FR]	19100000	0	0	19100000
7	2401	023.Addl.Central Assist. RKVY (St-Sh) [FR]	12700000	0	0	12700000
8	2406	001.Forest Resources [FR]	2933811	0	0	2933811
9	2406	001.Development of Forest Comm [FR]	10415124	0	0	10415124
10	2406	004.Buildings [FR]	29541857	0	0	29541857
11	2406	010.Forest Protection [FR]	27272737	0	0	27272737
12	2406	012.Working Plan [FR]	3748682	0	0	3748682
13	2406	015.Management Information System [FR]	286876	0	0	286876
14	2406	004.Integrated Forest Prot Scheme [FR]	5572188	0	0	5572188
15	2406	003.SCP for Coastal Shelter Belt Pltn [FR]	0	0	53900	53900
16	2406	022.Research & Seed Propagation [FR]	5467854	3990189	0	9458043
17	2406	007.SCP for Forestry Treatment [FR]	0	0	56149155	56149155
18	2406	011.SCP for Community Development [FR]	2249908	0	1498840	3748748
19	2406	027.Other Allied Works Component [FR]	11812553	0	0	11812553
20	2406	028.Monitoring and Evaluation [FR]	2751916	0	0	2751916
21	2406	031.Consv. of NR & Eco.(Cent- Sh) OCSPAS	39404960	0	0	39404960
22	2406	030.Consv. of NR & Eco.(State-Sh) OCSPAS	22006768	0	0	22006768
23	2406	023.Integrated For & B.D. Cons (JICA)	267120000	133490000	222740000	623350000
24	2406	001.Agro-Silviculture [FR]	269844	0	0	269844
25	2406	019.Timber Opn by Mech Logging [FR]	2135196	1124491	0	3259687
26	2406	022.Eco Rehab of fringe Population [FR]	0	6069515	0	6069515
27	2406	003.Amenities to For Staff & Labourers [FR]	6571975	0	0	6571975
28	2406	004.Publicity-cum-Extension [FR]	30612941	0	0	30612941
29	2406	027.Protection & Improvement of WL [FR]	54473342	0	0	54473342
30	2406	002.Control of Poaching [FR]	21175295	139357	0	21314652
31	2406	011.Project Tiger (Sh-Share) OCASPS [FR]	46946839	3710137	3710280	54367256
32	2406	010.Project Tiger (Cent-Sh) OCASPS [FR]	58916148	4331219	4329319	67576686
33	2406	013.I.Dev WL Habitats (St-Sh) OCASPS [FR]	49701835	3971734	8052349	61725918
34	2406	012.I.Dev WL Habitats (Ch-Sh) OCASPS [FR]	69599132	5051081	10320137	84970350
35	2406	004.Dev of Medicinal & NTFP Plants [FR]	0	1355150	0	1355150
36	2406	006.Conservation of Wetlands [FR]	0	3749965	0	3749965
37	2406	007.Dev of Eco-Tourism & Nature Edn [FR]	0	13076204	0	13076204
38	2406	008.Elephant Conservation [FR]	0	88525745	0	88525745
39	2406	007.Creation & Improvement of P & G [FR]	37205001	0	0	37205001
40	2406	002.Urban Forestry [FR]	69042	0	0	69042
41	2406	004.Lloyd Botanic Garden,Darjeeling [FR]	3746332	0	0	3746332
42	2415	001.Forestry Research [FR]	5025300	0	0	5025300
43	2415	002.Training of Staff [FR]	3616874	0	0	3616874
44	2551	028.Prot Afforstn & Erosion Control [FR]	2140589	0	0	2140589
45	2551	039.Protn & Improvement of WL [FR]	750000	0	0	750000
46	2551	045.Other Allied Works Component [FR]	750000	0	0	750000



Sl. No.	Major Head	Scheme	Normal	TSP	SCP	Total
47	4406	001.Construction of Building [FR]	39815962	0	0	39815962
48	4406	002.Forest Conservation and Regeneration [FR]	510449720	78280112	59190001	647919833
49	4406	003.Forest Cons and Regeneration - DPN [FR]	0	0	39644435	39644435
50	4702	047.Scheme under Jalatritha [FR]	97066291	12610630	97939782	207616703
51	5452	001.Tourism Project	0	0	3941607	3941607
		<b>Total</b>	<b>1512346271</b>	<b>368575529</b>	<b>529569805</b>	<b>2410491605</b>

### 6.6.3 Scheme wise Fund Released Vs Administrative Expenditure 2019–2020 Forest Directorate

Sl. No.	Major Head	Category	Scheme	Total Budget	Fund Released by Admin Deptt	Actual Expenditure	Percentage Utilised
1	2402	AE	002.Strengthening Soil Con Orgn [FR]	48.14	46.58	57.74	123.96 %
2	2402	AE	002.Protective Affn Erosion Control [FR]	407.78	405.68	334.32	82.41 %
3	2402	AE	004.Soil Cons in RVP - Kangsabati [FR]	180.83	169.70	173.45	102.21 %
4	2402	AE	005.Soil Cons in RVP - Teesta [FR]	192.51	162.77	141.60	86.99 %
5	2402	AE	006.Soil Cons in Himalayan Region [FR]	81.66	67.68	52.78	77.98 %
6	2402	AE	008.Flood Cont in FPR - Ganga Basin [FR]	1.45	1.02	0.97	95.10 %
7	2402	AE	009.Pilot Project for Afforestation [FR]	0.00	0.00	0.01	–
8	2406	AE	001.Direction & Administration [FR]	28964.49	28728.80	23689.78	82.46 %
9	2406	AE	001.Training of IFS Probationers [FR]	227.65	227.65	151.52	66.56 %
10	2406	AE	002.Training of WBFS Probationers [FR]	128.92	128.52	50.52	39.31 %
11	2406	AE	003.Training of Forest Rangers [FR]	42.14	29.50	3.00	10.17 %
12	2406	AE	002.Forest Resources [FR]	7.00	4.90	4.87	99.39 %
13	2406	AE	003.Forest Consolidation [FR]	8.41	5.89	5.71	96.94 %
14	2406	AE	004.Surveys [FR]	3.42	2.40	2.39	99.58 %
15	2406	AE	002.Buildings [FR]	453.70	325.18	302.72	93.09 %
16	2406	AE	003.Communication [FR]	128.09	89.67	88.95	99.20 %



Sl. No.	Major Head	Category	Scheme	Total Budget	Fund Released by Admin Deptt	Actual Expenditure	Percentage Utilised
17	2406	AE	001.WL Wing (i) Conservancy & Regn [FR]	249.28	216.62	320.71	148.05 %
18	2406	AE	002.(ii).Working Plan [FR]	32.75	22.93	22.93	100.00 %
19	2406	AE	003.(iii).Forest Protection [FR]	592.86	462.38	650.50	140.69 %
20	2406	AE	016.Management Information System [FR]	5.91	4.14	1.62	39.13 %
21	2406	AE	002.Plantation of Quick Growing Spp [FR]	5.50	3.85	3.78	98.18 %
22	2406	AE	003.Farm Forestry-cum-Fuelwood Pltn [FR]	5.50	3.85	3.85	100.00 %
23	2406	AE	004.Mixed Pltn etc.- Rural FW Pltn [FR]	3.50	2.46	0.96	39.02 %
24	2406	AE	005.West Bengal Forestry Project [FR]	570.30	462.73	405.43	87.62 %
25	2406	AE	006.Area Oriented FW & Fodder Proj [FR]	7.08	4.96	4.95	99.80 %
26	2406	AE	007.Social Forestry Project [FR]	2165.36	2040.65	1883.73	92.31 %
27	2406	AE	001.Timber Operation by Govt Agency [FR]	616.04	533.49	574.75	107.73 %
28	2406	AE	002.Minor Forest Produce [FR]	31.63	22.15	20.24	91.38 %
29	2406	AE	004.MFP: Silvo-Pisciculture [FR]	27.64	26.67	15.04	56.39 %
30	2406	AE	005.Timber Operation by Mech Logging [FR]	90.11	63.10	61.22	97.02 %
31	2406	AE	013.MFP: Agro-Silviculture [FR]	14.19	9.95	7.46	74.97 %
32	2406	AE	001.General Direction & Administration [FR]	399.94	318.49	244.29	76.70 %
33	2406	AE	800.Other Expenditure [FR]	0.00	0.00	91.83	–
34	2406	AE	001.WL Unit - Prot & Improve of WL [FR]	1927.92	1851.15	1775.05	95.89 %
35	2406	AE	002.Nature Cons-Protn & Imp of WL [FR]	12.65	8.86	11.14	125.73 %
36	2406	AE	003.Sundarbans Tiger Reserve [FR]	285.64	281.62	203.26	72.18 %
37	2406	AE	004.Buxa Tiger Reserve [FR]	14.49	10.23	10.12	98.92 %
38	2406	AE	005.Jaldapara Wildlife Sanctuary [FR]	1.30	0.91	0.91	100.00 %
39	2406	AE	006.Control of Poaching [FR]	2.05	1.44	1.43	99.31 %
40	2406	AE	008.Neora Valley National Park [FR]	1.22	0.86	0.86	100.00 %
41	2406	AE	009.Mahananda Wildlife Sanctuary [FR]	1.37	0.96	0.96	100.00 %



Sl. No.	Major Head	Category	Scheme	Total Budget	Fund Released by Admin Deptt	Actual Expenditure	Percentage Utilised
42	2406	AE	010.Senchal Wildlife Sanctuary [FR]	1.39	0.98	0.98	100.00 %
43	2406	AE	011.Garumara Wildlife Sanctuary [FR]	1.39	0.98	0.98	100.00 %
44	2406	AE	038.Singhalila National Park [FR]	1.25	0.88	0.88	100.00 %
45	2406	AE	001.Parks & Gardens Wing [FR]	2346.32	2301.47	1825.86	79.33 %
46	2406	AE	002.Lloyd Botanic Garden, Darjeeling [FR]	93.81	85.74	66.42	77.47 %
47	2406	AE	003.Creation & Improvemt of P & G [FR]	22.27	15.60	15.56	99.74 %
48	2406	AE	010.Urban Forestry [FR]	10.83	7.59	7.59	100.00 %
49	2406	AE	011.Greening of Rural Areas [FR]	4.28	3.25	3.21	98.77 %
50	2406	AE	001.Wild Life Unit [FR]	0.00	0.00	0.11	–
51	2406	AE	002.Reward for Cont of Wild Animals [FR]	254.56	178.20	170.94	95.93 %
52	2406	AE	003.Compensation for WL Depredation [FR]	1326.13	928.30	928.30	100.00 %
53	2406	AE	001.West Bengal Eco-Tourism Board [FR]	64.39	45.08	45.08	100.00 %
54	2415	AE	003.General Direction Trg of Staff [FR]	8.34	5.84	0.61	10.45 %
55	2415	AE	004.Forestry Research [FR]	33.41	25.08	23.82	94.98 %
56	2551	AE	020.Econ Rehab of Fringe Population [FR]	0.59	0.42	0.42	100.00 %
57	2551	AE	021.Prot Afforstn & Erosion Control [FR]	1.26	0.89	0.89	100.00 %
58	2551	AE	022.West Bengal Forestry Project [FR]	10.19	7.14	7.13	99.86 %
59	2551	AE	068.Other Allied Work Component	2.65	1.87	1.82	97.33 %
60	2551	AE	066.Nature Cons-Protn & Imp of WL [FR]	0.12	0.09	0.09	100.00 %
61	2551	AE	068.Other Allied Work Component	2.65	1.87	1.82	97.33 %
62	4406	AE	002.WL Wing- Conservancy and Regeneration [FR]	0.00	0.00	31.28	–
			<b>Total</b>	<b>42126.25</b>	<b>40361.66</b>	<b>34511.14</b>	<b>85.50 %</b>





Table 6.6.4 Actual Expenditure under Major Heads for last 10 years (2010–2011 to 2019–2020)

[in ₹]

Major Head	Non Plan (LOC & TRG.)	State Plan (Annual Plan)	Centrally Sponsored (New Scheme)	Non Plan Development	State Plan (Committed)	Centrally Sponsored Scheme Committed	Total
<b>2010–11</b>							
(N.G.) →	221,46,47,000	100,94,63,500	16,68,76,554	1,10,30,000	–	–	340,20,17,054
2402	7,48,07,956	1,19,98,899	–	1,09,97,352	–	–	8,68,06,855
2406	224,75,11,025	47,18,68,301	13,33,21,961	–	–	–	286,36,98,639
2551	10,16,803	59,99,299	–	–	–	–	70,16,102
2415	19,64,984	51,74,442	–	–	–	–	71,39,426
4406	–	37,12,06,570	–	–	–	–	37,12,06,570
2401	–	*10,59,01,554	5,56,91,387	–	–	–	16,15,92,941
4216	–	*8,20,19,265	–	–	–	–	8,20,19,265
<b>TOTAL</b>	<b>2,32,53,00,768</b>	<b>105,41,68,330</b>	<b>18,90,13,348</b>	<b>10997352</b>	<b>–</b>	<b>–</b>	<b>3579479798</b>
<b>2011–12</b>							
(N.G.)→	2507417000	948857000	120341200	8967354	–	–	3585582554
2402	78567570	11999600	–	200000	–	–	90767170
2406	2295063398	473912210	127316283	–	–	–	2896291891
2551	1028884	4598300	–	–	–	–	5627184
2415	1987342	5398681	–	–	–	–	7386023
4406	–	158533080	–	–	–	–	158533080
2401	–	*59781433	*52569772	–	–	–	112351205
4216	–	*34758977	–	–	–	–	34758977
<b>TOTAL</b>	<b>2376647194</b>	<b>748982281</b>	<b>179886055</b>	<b>200000</b>	<b>–</b>	<b>–</b>	<b>3305715530</b>
<b>2012–13</b>							
2402	5,40,11,689	74,74,930	–	–	–	–	61486619
2406	2,46,64,07,958	66,00,24,683	9,15,67,742	–	–	–	3218000383
2551	9,42,719	48,91,496	–	–	–	–	5834215
2415	21,47,322	70,00,000	–	–	–	–	9147322
4406	–	2,83,15,455	–	–	–	–	28315455
2401	–	6,18,31,983	–	–	–	–	61831983
4216	–	–	–	–	–	–	–
<b>TOTAL</b>	<b>2,52,35,09,688</b>	<b>76,95,38,547</b>	<b>9,15,67,742</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>3384615977</b>



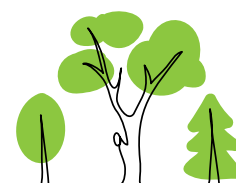
(₹ in Lakh)

Major Heads 2013-2014	Non- Plan (LOC & Treasury)	State Plan (AP) (LOC & Treasury)	C.S.S& C.S.	Total
2401	0.00	719.00	0.00	719.00
2402	709.95	114.80	0.00	824.75
2406	25637.15	12951.26	1221.30	39809.71
2415	49.02	70.02	0.00	119.04
2551	11.64	107.53	0.00	119.17
4406	0.00	965.26	0.00	965.26
<b>GRAND TOTAL</b>	<b>26407.76</b>	<b>13359.48</b>	<b>1221.30</b>	<b>42556.93</b>

Major Heads 2013-2016	Non- Plan (LOC & Treasury)	State Plan (AP) (LOC & Treasury)	C.S.S& C.S.	Total
2401	0.00	1507.73	0.00	1507.73
2402	728.21	66.58	0.00	794.79
2406	26,176.24	9,818.30	116.91	36,111.45
2415	37.88	50.00	0.00	87.88
2551	12.63	29.98	0.00	42.61
4216	0.00	1247.08	0.00	1247.08
2049	9.11	0.00	0.00	9.11
4406	0.00	1260.33	0.00	1260.33
<b>GRAND TOTAL</b>	<b>26,964.07</b>	<b>13,980.00</b>	<b>116.91</b>	<b>41,060.98</b>

(₹ In Lakh)

Major Head (2015-2016)	Non Plan	State Plan (Annual Plan)	Total
<b>(Total: Budget Estimate)</b>	<b>32836.27</b>	<b>25994.35</b>	<b>58830.62</b>
<b>2401</b>	0.00	1026.00	1026.00
<b>2402</b>	708.00	2.49	710.49
<b>2406</b>	26236.92	17607.73	43844.65
<b>2415</b>	28.82	55.52	84.34
<b>2505</b>	0.00	118.00	118.00
<b>2551</b>	13.63	97.85	111.48
<b>4216</b>	0.00	632.82	632.82
<b>4406</b>	0.00	1037.75	1037.75
<b>4702</b>	0.00	1000.96	1000.96
<b>GRAND TOTAL</b>	<b>26987.37</b>	<b>21579.12</b>	<b>48566.49</b>



(₹ In Lakh)

Major Head (2016–2017)	Non Plan	State Plan (Annual Plan)	Total
<b>(Total: Budget Estimate)</b>	<b>35466.62</b>	<b>32913.60</b>	<b>68380.22</b>
<b>2401</b>	0.00	846.00	846.00
<b>2402</b>	835.68	4.92	840.60
<b>2406</b>	30621.33	18034.57	48655.90
<b>2415</b>	93.91	96.76	190.67
<b>2505</b>	0.00	278.20	278.20
<b>2551</b>	16.29	92.79	109.08
<b>2851</b>	0.00	340.00	340.00
<b>4406</b>	0.00	946.02	946.02
<b>4702</b>	0.00	1420.68	1420.68
<b>GRAND TOTAL</b>	<b>31567.21</b>	<b>22059.94</b>	<b>53627.15</b>

(₹ In Lakh)

Major Head (2017–2018)	Non Plan	State Plan (Annual Plan)	Total
<b>(Total: Fund Released) →</b>	<b>377,06.25</b>	<b>326,34.04</b>	<b>70340.29</b>
<b>2401</b>	0.00	1395.00	1395.00
<b>2402</b>	801.71	0.00	801.71
<b>2406</b>	32395.77	18522.68	50918.45
<b>2415</b>	45.28	99.00	144.28
<b>4202</b>	0.00	464.54	464.54
<b>2551</b>	16.69	56.18	72.87
<b>5452</b>	0.00	219.05	219.05
<b>4406</b>	0.00	2500.00	2500.00
<b>4702</b>	0.00	1315.00	1315.00
<b>2204</b>	0.00	168.66	168.66
<b>GRAND TOTAL</b>	<b>33259.45</b>	<b>24740.11</b>	<b>57999.56</b>

(₹ In Lakh)

Major Head (2018–2019)	Administrative Expenditure	State Development Expenditure	Total: Expenditure Major Head
<b>(Total: Fund Released) →</b>	<b>32384.13</b>	<b>30072.02</b>	<b>62456.15</b>
<b>2401</b>	0.00	891.62	891.62
<b>2402</b>	684.57	0.00	684.57
<b>2406</b>	31786.97	24140.81	55927.78
<b>2415</b>	38.18	210.00	248.18



(₹ In Lakh)

Major Head (2018–2019)	Administrative Expenditure	State Development Expenditure	Total: Expenditure Major Head
<b>4202</b>	38.57	0.00	38.57
<b>2551</b>	12.47	81.00	93.47
<b>5452</b>	0.00	599.31	599.31
<b>4406</b>	81.86	396.43	478.29
<b>4702</b>	0.00	1520.24	1520.24
<b>GRAND TOTAL</b>	<b>32642.62</b>	<b>27839.41</b>	<b>60482.03</b>

(₹ In Lakh)

Major Head (2019–2020)	Administrative Expenditure	State Development Expenditure	Total: Expenditure Major Head
<b>Total: Fund Released: →</b>	<b>40361.66</b>	<b>25891.63</b>	<b>66253.29</b>
<b>2204</b>	0	89.23	89.23
<b>2401</b>	0	629.00	629.00
<b>2402</b>	760.87	0	760.87
<b>2406</b>	33682.39	13874.47	47556.86
<b>2415</b>	24.43	86.42	110.85
<b>2551</b>	10.36	36.41	46.77
<b>4406</b>	31.28	7273.80	7305.08
<b>4702</b>	0	2076.17	2076.17
<b>5452</b>	0	39.42	39.42
<b>GRAND TOTAL</b>	<b>34509.32</b>	<b>24104.92</b>	<b>58614.25</b>

“

“A nation that destroys its soils destroys itself.  
Forests are the lungs of our land, purifying the  
air and giving fresh strength to our people.”

— Franklin D. Roosevelt







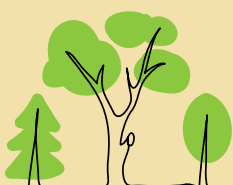
# FOREST PROTECTION

## CHAPTER 7

**W**est Bengal is one of the few states in country where per capita forest is the lowest (0.01 ha.) and population density around fragmented forest is the highest. Evidently there is tremendous pressure on forests. Coupled with socio-economic issues of poverty, underemployment and unemployment in forest fringe areas, major threats to forests come from illicit collection of firewood, fodder, and small timber from the forest by such villagers to sustain their livelihood. This issues has, however, been tackled by and large over a major part of forested tract in the state by formation of Joint Forest Management Committees and through the process of consolidation of Joint Forest Management. But in areas where there is a problem of timber and poaching of wildlife in field, protection is provided through intensive patrolling of the areas by the field personnel. Vigilance by departmental protective staff has been intensified

in such areas by forming mobile squads and assisted by specially constituted battalion of State Armed Police with 200 personnel. Action has been taken to stop illegal activities by wood-based industries operating in regions vulnerable to operation of gangsters. A post of Inspector General of police, Forest Protection has been created in the Department of Forests to have the required liaison with the Police Administration to ensure their support at district and state level to combat organized gangsters in illicit operation to timber, control of poaching, encroachment etc.

An extensive network of wireless system (R.T.) has been built up connecting Beats/Ranges with the Divisional Headquarters in order to ensure required reinforcement at times of emergency to combat organized plunder of timber and poaching of wildlife.



## 7.1 DATA ON FOREST OFFENCE FOR F.Y. 2019–20

During F.Y. 2019–20, total number of offence cases registered was 10961, out of which COR was 6987, UDOR was 3689 and POR was 285 and 13654 no. of trees were reported by the Divisions as illicitly felled.

### 7.1.1 No of POR Cases for F.Y. 2019–20

Division	Illicit Felling	Unauthorised Grazing	Wild Life Offence	Offence in Non-Forest Area	Forest Conservation Act	Total POR Cases Registered
Darjeeling	0	0	0	0	0	0
Kurseong	35	0	3	0	0	38
Kalimpong	11	0	0	0	0	11
Siliguri SF	29	0	0	0	0	29
Darjeeling WL	6	0	2	0	0	8
Baikunthapur	34	0	6	0	0	40
Jalpaiguri	18	0	2	0	0	20
BTR East	2	0	2	0	0	4
BTR West	19	0	6	0	0	25
Cooch Behar*	0	0	1	0	0	14*
Jaldapara WL	9	0	10	0	0	19
Gorumara WL	0	0	3	0	0	3
Raiganj	0	0	5	0	1	6
Malda	0	0	1	0	0	1
Bankura North	1	0	0	0	0	1
Bankura South	0	0	0	0	0	0
Panchet	0	0	0	0	0	0
Kangsabati North	0	0	1	2	0	3
Kangsabati South	0	0	0	0	0	0
Purulia	2	0	0	0	0	2
Burdwan	0	0	5	0	0	5
Durgapur	0	0	0	0	0	0
Midnapur	0	0	0	0	0	0
Jhargram	2	0	0	0	0	2
Rupnarayan	2	0	0	0	0	2
Kharagpur	0	0	1	0	0	1
Purba Midnapur	0	0	0	0	0	0
Birbhum	0	0	0	0	0	0
Nadia Msd	0	0	5	0	0	5
24 Parganas(S)	0	0	11	0	0	11
Howrah	0	0	4	0	0	4
STR	4	0	0	4	0	8
Wildlife HQ	0	0	10	0	0	10
24 Parganas (N)	0	0	13	0	0	13
<b>TOTAL</b>	<b>174</b>	<b>0</b>	<b>91</b>	<b>6</b>	<b>1</b>	<b>285*</b>

\* Cooch behar – No. of offence cases for Violation of T.P. Rule - 13



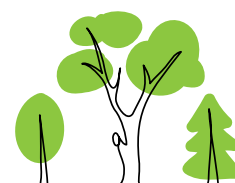
### 7.1.2 No of COR Cases for F.Y. 2019–20

Division	Illicit Felling	Unauthorised Grazing	Wild life Offence	Offence in Non-Forest Area	F.C.A	Total COR Cases Registered
Darjeeling	6	1	0	0	0	7
Kurseong	18	0	0	0	0	18
Kalimpong	7	1	0	0	0	8
Siliguri SF	0	2	0	171	0	173
Darjeeling WL	0	180	264	0	0	444
Baikunthapur	157	2	0	0	0	159
Jalpaiguri	394	4	0	0	0	398
BTR East	0	0	0	285	0	285
BTR West	0	12	0	11	20	43
Cooch Behar	0	5	0	136	0	141
Jaldapara WL	35	0	0	0	0	35
Gorumara WL	0	72	0	0	0	72
Raiganj	0	4	0	18	3	25
Malda	0	9	0	14	0	23
Bankura North	126	0	0	40	2	168
Bankura South	334	0	0	0	0	334
Panchet	40	0	0	13	0	53
Kangsabati North	69	32	0	0	0	101
Kangsabati South	160	0	0	0	0	160
Purulia	164	36	0	5	0	205
Burdwan	72	0	1	229	2	304
Durgapur	20	3	0	19	0	42
Midnapur	353	0	0	0	0	353
Jhargram	148	0	0	0	0	148
Rupnarayan	241	3	0	0	0	244
Kharagpur	115	0	0	0	0	115
Purba Midnapur	33	0	0	0	0	33
Birbhum	66	2	0	11	0	79
Nadia Msd	32	0	0	59	0	91
24 Parganas(S)	0	581	36	11	0	628
Howrah	0	0	0	7	0	7
STR	0	2090	0	0	0	2090
Wildlife HQ	0	0	0	0	0	0
24 Parganas (N)	0	0	0	1	0	1
<b>Total</b>	<b>2590</b>	<b>3039</b>	<b>301</b>	<b>1030</b>	<b>27</b>	<b>6987</b>



### 7.1.3 No of UDOR Cases for F.Y. 2019–20

Division	Illicit Felling	Unauthorised Grazing	Wild life Offence	Offence in Non-Forest Area	F.C.A	Total UDOR Cases Registered
Darjeeling	0	0	0	0	0	0
Kurseong	77	0	0	0	0	77
Kalimpong	139	0	0	0	0	139
Siliguri SF	1	0	0	3	0	4
Darjeeling WL	154	0	15	0	0	169
Baikunthapur	120	0	0	0	0	120
Jalpaiguri	942	0	0	0	0	942
BTR East	642	0	0	0	0	642
BTR West	616	0	0	0	0	616
Coochbehar	170	0	0	0	0	170
Jaldapara WL	280	0	0	0	0	280
Gorumara WL	16	0	0	0	0	16
Raiganj	3	0	0	0	0	3
Malda	2	0	4	5	0	11
Bankura North	15	0	1	0	0	16
Bankura South	70	0	0	0	0	70
Panchet	11	0	0	0	0	11
Kangsabati North	7	0	0	0	0	7
Kangsabati South	22	0	0	0	0	22
Purulia	23	0	0	0	0	23
Burdwan	10	10	0	0	0	20
Durgapur	1	0	0	0	0	1
Midnapur	98	0	0	0	0	98
Jhargram	17	0	0	0	0	17
Rupnarayan	31	0	0	1	0	32
Kharagpur	30	0	0	0	0	30
Purba Midnapur	0	0	0	0	0	0
Birbhum	30	0	0	0	0	30
Nadia Msd	33	0	6	4	0	43
24 Parganas(S)	8	0	6	0	0	14
Howrah	0	0	0	0	0	0
STR	0	11	0	0	0	11
Wildlife HQ.	0	0	52	0	0	52
24 Parganas (N)	0	0	3	0	0	3
<b>Total</b>	<b>3568</b>	<b>21</b>	<b>87</b>	<b>13</b>	<b>0</b>	<b>3689</b>





#### 7.1.4 Status of offence case registered and number of tree felled illicitly during F.Y. 2019–20

Division	Total POR Cases Registered	Total COR Cases Registered	Total UDOR Cases Registered	Total Number of Cases Registered	No of Trees Illicitly Felled
Darjeeling	0	7	0	7	0
Kurseong	38	18	77	133	77
Kalimpong	11	8	139	158	208
Siliguri SF	29	173	4	206	0
Darjeeling WL	8	444	169	621	105
Baikunthapur	40	159	120	319	134
Jalpaiguri	20	398	942	1360	1839
BTR East	4	285	642	931	918
BTR West	25	43	616	684	947
Coochbehar	14	141	170	325	35
Jaldapara WL	19	35	280	334	293
Gorumara WL	3	72	16	91	21
Raiganj	6	25	3	34	5
Malda	1	23	11	35	2
Bankura North	1	168	16	185	186
Bankura South	0	334	70	404	1016
Panchet	0	53	11	64	52
Kangsabati North	3	101	7	111	20
Kangsabati South	0	160	22	182	0
Purulia	2	205	23	230	91
Burdwan	5	304	20	329	20
Durgapur	0	42	1	43	9
Midnapur	0	353	98	451	85
Jhargram	2	148	17	167	297
Rupnarayan	2	244	32	278	4812
Kharagpur	1	115	30	146	68
Purba Midnapur	0	33	0	33	0
Birbhum	0	79	30	109	125
Nadia Msd	5	91	43	139	84
24 Parganas(S)	11	628	14	653	2182
Howrah	4	7	0	11	23
STR	8	2090	11	2109	0
Wildlife HQ.	10	0	52	62	0
24 Parganas (N)	13	1	3	17	0
<b>Total</b>	<b>285</b>	<b>6987</b>	<b>3689</b>	<b>10961</b>	<b>13654</b>



### 7.1.5 DETAILS OF TIMBER SEIZED AND STOLEN FROM FOREST AREA AND ITS VALUE DURING F.Y. 2019–20

The quantity of timber seized from forest area during F.Y. 2019–20 is 3568.032 m<sup>3</sup> valuing approximately ₹9,40,02,815.00 and quantity of timber stolen from forest area is 1153.524 m<sup>3</sup> valuing approximately ₹2,82,39,046.00.

Divisions	SEIZURE OF TIMBER		STOLEN TIMBER	
	Volume of Timber (in m <sup>3</sup> )	Value of Timber (in INR)	Volume of Timber (in m <sup>3</sup> )	Value of Timber (in INR)
Darjeeling	0	0.00	0	0.00
Kurseong	178.444	6780872.00	169.652	6446776.00
Kalimpong	69.366	2688504.00	35.01	0.00
Darjeeling WL	224.86	3943810.00	0	0.00
Baikunthapur	86.727	0.00	7.796	0.00
Jalpaiguri	676.927	16923175.00	721.748	18043700.00
BTR East	577.868	0.00	0	0.00
BTR West	560.06	28003050.00	182.91	3288570.00
Cooch Behar	20.722	0.00	0	0.00
Jaldapara WL	279.413	0.00	0	0.00
Gorumara WL	3.857	0.00	0	0.00
Raiganj	21.33	1306500.00	0	0.00
Malda	2.195	15573.00	0	0.00
Bankura North	46.5886	368000.00	0	0.00
Bankura South	123.4	407220.00	0	0.00
Panchet	27.64	379102.00	5.0	75000.00
Kangsabati North	11.819	0.00	0	0.00
Kangsabati South	52.253	520000.00	0	0.00
Purulia*	62.096	145446.00	13.333	165000.00
Burdwan	7.3077	44117.00	0	0
Durgapur	5.47	10940.00	0	0.00
Midnapur	31.845	21188.00	0	0.00
Jhargram	24.694	108655.00	0	0.00
Rupnarayan*	22.118	143109.00	0	0.00
Kharagpur	13.454	60554.00	0	0.00
Purba Midnapur	0	0.00	0	0.00
Birbhum	59.037	0.00	0	0.00
Nadia Msd	25.7102	310000.00	18.075	220000.00
24 Parganas(S)*	0.00	50000.00	0	0.00
Howrah	0	0	0	0
STR	5.6385	0	0	0
24 Parganas (N)	0	0	0	0
WL HQ	0	0	0	0
Siliguri SF	347.192	31773000.00	0	0.00
<b>Total</b>	<b>3568.032</b>	<b>9,40,02,815.00</b>	<b>1153.524</b>	<b>2,82,39,046.00</b>

\* 24 PGS (S) seized 12 pcs Goran Post & 2440 pcs Goran Pole valuing ₹50000.0

\* Purulia – Seized 22 no of Poles valuing ₹10300.0

\* Rupnarayan – Additionally seized 470 no of poles valuing ₹55064.0



### 7.1.6 DETAILS OF ENCOUNTERS WITH OFFENDERS/PUBLIC DURING PROTECTION WORK

As per data provided by Divisions, 25 staff have been assaulted and 381 persons have been arrested during encounters with offenders/public during protection work. 17 persons have been convicted by the Honourable Court.

DIVISIONS	No of Staff Assaulted	No of Staff Murdered	No of person Arrested	No of Person Convicted in Court
Darjeeling	0	0	0	0
Kurseong	2	0	18	0
Kalimpong	0	0	2	0
Darjeeling WL	0	0	8	0
Baikunthapur	0	0	72	0
Jalpaiguri	2	0	28	0
BTR East	0	0	6	5
BTR West	0	0	30	2
Coochbehar	0	0	0	0
Jaldapara WL	0	0	26	1
Gorumara WL	0	0	15	0
Raiganj	0	0	0	0
Malda	0	0	1	0
Bankura North	0	0	1	1
Bankura South	0	0	0	0
Panchet	0	0	18	0
Kangsabati North	0	0	3	0
Kangsabati South	0	0	0	0
Purulia	1	0	0	0
Burdwan	0	0	8	8
Durgapur	0	0	0	0
Midnapur	0	0	0	0
Jhargram	0	0	0	0
Rupnarayan	0	0	0	0
Kharagpur	0	0	0	0
Purba Midnapur	0	0	0	0
Birbhum	0	0	0	0
Nadia Msd	0	0	8	0
24 Parganas(S)	20	0	13	0
Howrah	0	0	6	0
STR	0	0	24	0
WL HQ	0	0	51	0
24 Parganas (N)	0	0	21	0
Siliguri SF	0	0	22	0
<b>Total</b>	<b>25</b>	<b>0</b>	<b>381</b>	<b>17</b>



### 7.1.7 Details of Vehicles Seized and Confiscated for Carrying Illegal Forest Produce

A total of 1043 number of vehicles including HMV, LMV, Boat and hand drawn vehicle was seized and 594 numbers of vehicles was confiscated for carrying illegal forest produce during the F.Y. 2019–20.

Name of Divisions	HMV		LMV		Hand van, Thela etc		BOAT		OTHER	
	Seized	Confiscated	Seized	Confiscated	Seized	Confiscated	Seized	Confiscated	Seized	Confiscated
Darjeeling	0	0	0	0	0	0	0	0	0	0
Kurseong	9	9	7	14	8	0	0	0	0	0
Kalimpong	3	0	9	0	1	1	0	0	0	0
Darjeeling WL	0	0	4	0	21	0	0	0	0	0
Siliguri SF	23	3	5	0	0	0	0	0	0	0
Baikunthapur	34	3	0	0	4	4	0	0	0	0
Jalpaiguri	4	0	21	0	103	0	0	0	2	0
BTR East	2	0	19	0	5	0	0	0	1	0
BTR West	11	1	12	3	499	499	0	0	36	36
Coochbehar	7	0	0	0	36	0	0	0	0	0
Jaldapara WL	17	3	2	0	3	0	0	0	3	0
Gorumara WL	1	0	0	0	0	0	0	0	1	0
Raiganj	1	0	1	0	0	0	0	0	1	0
Malda	0	0	0	0	0	0	0	0	0	0
Bankura North	0	0	13	0	17	17	0	0	0	0
Bankura South	5	0	16	0	0	0	0	0	0	0
Panchet	5	0	0	0	0	0	0	0	0	0
Kangsabati North	0	0	0	0	0	0	0	0	0	0
Kangsabati South	6	0	0	0	0	0	0	0	0	0
Purulia	0	0	0	0	0	0	0	0	4	1
Burdwan	0	0	0	0	0	0	0	0	0	0
Durgapur	0	0	0	0	0	0	0	0	0	0
Midnapur	1	0	0	0	0	0	0	0	0	0
Jhargram	5	0	0	0	0	0	0	0	0	0
Rupnarayan	2	0	0	0	0	0	0	0	0	0
Kharagpur	0	0	0	0	30	0	0	0	0	0
Purba Midnapur	0	0	0	0	0	0	0	0	0	0
Birbhum	0	0	0	0	0	0	0	0	3	0
Nadia Msd	0	0	0	0	2	0	0	0	3	0
24 Parganas(S)	1	0	2	0	2	0	3	0	0	0
Howrah	0	0	0	0	0	0	0	0	0	0
24 Parganas (N)	0	0	0	0	0	0	0	0	0	0



Name of Divisions	HMV		LMV		Hand van, Thela etc		BOAT		OTHER	
	Seized	Confiscated	Seized	Confiscated	Seized	Confiscated	Seized	Confiscated	Seized	Confiscated
STR	0	0	0	0	0	0	7	0	0	0
WL HQ	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>137</b>	<b>19</b>	<b>111</b>	<b>17</b>	<b>731</b>	<b>521</b>	<b>10</b>	<b>0</b>	<b>54</b>	<b>37</b>

### 7.1.8 Details of Timber & Fire Wood Seized and Confiscated From Vehicles and Value of Forest Produce

A total volume of 1198.4364m<sup>3</sup> timber valuing approximately ₹4,28,24,977.0 was seized from the vehicles and 339.7235 m<sup>3</sup> valued at ₹1,10,58,300.0 was confiscated. A total volume of 95.247 m<sup>3</sup> firewood valued approximately ₹1,82,726.0 was seized from vehicles and 4.86m<sup>3</sup> valued at ₹3,000.0 was confiscated.

Divisions	TIMBER				FIRE WOOD			
	Seized (in m <sup>3</sup> )	Confiscated (in m <sup>3</sup> )	Seized Value (in INR)	Confstd. Value (in INR)	Seized (in m <sup>3</sup> )	Confstd. (in m <sup>3</sup> )	Seized value (in INR)	Confstd. Value (in INR)
Darjeeling	0	0	0	0	0	0	0	0
Kurseong	31.888	31.888	942525.00	942525.00	3.36	3.36	0	0
Kalimpong	2.591	0.702	0	0	0	0	0	0
Darjeeling WL	18.832	0	355576.00	0	0	0	0	0
Siliguri SF	347.192	24.817	31678000.0	1695000.0	0	0	0	0
Baikunthapur	197.601	63.108	0	0	0	0	0	0
Jalpaiguri	28.068	0	0	0	0	0	0	0
BTR East	36.102	0	0	0	0	0	0	0
BTR West	159.769	159.769	7900000.00	7900000.0	0	0	0	0
Cooch Behar	0	0	0	0	0	0	0	0
Jaldapara WL	18.328	3.636	0	0	0	0	0	0
Gorumara WL	0.369	0	0	0	0	0	0	0
Raiganj	20.587	0	1300000.00	0	0	0	0	0
Malda	0	0	0	0	0	0	0	0
Bankura North	46.5865	46.5865	383000.0	383000.0	65.0	0	130000.0	0
Bankura South	6.44	5.6	54611.0	62775.0	23.863	1.5	47726.0	3000.0
Panchet	0	0	0	0	0	0	0	0
Kangsabati North	0	0	0	0	0	0	0	0
Kangsabati South	0	0	0	0	0	0	0	0
Purulia	3.617	3.617	75000.0	75000.0	3.024	0	5000.0	0
Burdwan	0	0	0	0	0	0	0	0
Durgapur	0	0	0	0	0	0	0	0
Midnapur	269.0	0	0	0	0	0	0	0
Jhargram	0	0	0	0	0	0	0	0





Divisions	TIMBER				FIRE WOOD			
	Seized (in m <sup>3</sup> )	Confiscated (in m <sup>3</sup> )	Seized Value (in INR)	Confiscated Value (in INR)	Seized (in m <sup>3</sup> )	Confiscated (in m <sup>3</sup> )	Seized value (in INR)	Confiscated Value (in INR)
Rupnarayan	3.502	0	17625.0	0	0	0	0	0
Kharagpur	5.76	0	8640.0	0	0	0	0	0
Purba Midnapur	0	0	0	0	0	0	0	0
Birbhum	0	0	0	0	0	0	0	0
Nadia Msd	2.2039	0	60000.00	0	0	0	0	0
24 Parganas(S)*	0	0	50000.00	0	0	0	0	0
Howrah	0	0	0	0	0	0	0	0
STR	0	0	0	0	0	0	0	0
24 Parganas (N)	0	0	0	0	0	0	0	0
WL Hq.	0	0	0	0	0	0	0	0
<b>Total</b>	<b>1198.4364</b>	<b>339.7235</b>	<b>42824977.0</b>	<b>11058300.0</b>	<b>95.247</b>	<b>4.86</b>	<b>182726.0</b>	<b>3000.0</b>

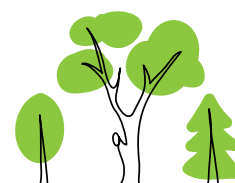
\* Kalimpong- Seized Charcoal (bags) – 39, Kawlo Bark (bags) – 14

\* 24 Parganas(S) - seized 12 pcs Goran Post & 2440 pcs Goran Pole valuing ₹50000/-

### 7.1.9 Status of Number of Cases Pending and Disposed by the Courts

Total Number of cases pending at various Courts as on 01/04/2019 was 4073, No. of new cases registered during 2019–20 was 301 and No. of cases disposed by the Honourable Courts during 2019–20 was 51. The Balance cases pending as on 31/03/2020 is 4323 out of which 4020 number of cases is pending in the Courts of CJM/ACJM, 230 number of cases is pending in the Court of District /Sessions Judge and 70 number of Cases is pending in the Honourable High Court and 3 number of cases was being tried before the Honourable Supreme Court.

Divisions	No of Cases Pending as on 01/04/2019	No of New Cases During 2019–20	Total no of Cases	No of Cases Disposed During 2019–20	Balance Cases Pending as on 31/03/2020
Darjeeling	52	0	52	0	52
Kurseong	247	38	285	0	285
Kalimpong	0	15	15	7	8
Darjeeling WL	101	8	109	0	109
Siliguri SF	17	22	39	3	36
Baikunthapur	574	56	630	0	630
Jalpaiguri	635	20	655	9	646
BTR East	230	4	234	7	227
BTR West	559	23	582	1	581
Cooch Behar	48	14	62	0	62



Divisions	No of Cases Pending as on 01/04/2019	No of New Cases During 2019-20	Total no of Cases	No of Cases Disposed During 2019-20	Balance Cases Pending as on 31/03/2020
Jaldapara WL	218	19	237	12	225
Gorumara WL	63	3	66	1	65
Raiganj	58	6	64	0	64
Malda	14	1	15	0	15
Bankura North	26	2	28	0	28
Bankura South	263	21	284	5	279
Panchet	28	0	28	0	28
Kangsabati North	22	3	25	4	21
Kangsabati South	13	0	13	0	13
Purulia	79	1	80	0	80
Burdwan	50	1	51	0	51
Durgapur	24	0	24	0	24
Midnapur	47	2	49	1	48
Jhargram	8	0	8	0	8
Rupnarayan	20	0	20	0	20
Kharagpur	62	0	62	0	62
Purba Midnapur	8	0	8	0	8
Birbhum	59	0	59	0	59
Nadia Msd	22	4	26	0	26
24 Parganas(S)	66	11	77	0	77
Howrah	15	4	19	0	19
STR	209	0	209	0	209
Wildlife HQ	199	10	209	1	208
24 Parganas(N)	37	13	50	0	50
<b>Total</b>	<b>4073</b>	<b>301</b>	<b>4374</b>	<b>51</b>	<b>4323</b>

#### 7.1.10 Status of Cases Pending at Various Honourable Courts as On 31/03/2020

Divisions	No of Cases	CJM Court/ ACJM	District/ Sessions Court	High Court	Supreme Court.
Darjeeling	52	52	0	0	0
Kurseong	285	285	0	0	0
Kalimpong	8	8	0	0	0
Darjeeling WL	109	109	0	0	0



Divisions	No of Cases	CJM Court/ ACJM	District/ Sessions Court	High Court	Supreme Court.
Siliguri SF	36	34	1	1	0
Baikunthapur	630	628	0	2	0
Jalpaiguri	646	646	0	0	0
BTR East	227	214	1	12	0
BTR West	581	580	0	1	0
Coochbehar	62	62	0	0	0
Jaldapara WL	225	225	0	0	0
Gorumara WL	65	65	0	0	0
Raiganj	64	60	2	2	0
Malda	15	15	0	0	0
Bankura North	28	18	1	9	0
Bankura South	279	65	203	11	0
Panchet	28	23	4	1	0
Kangsabati North	21	21	0	0	0
Kangsabati South	13	13	0	0	0
Purulia	80	80	0	0	0
Burdwan	51	45	2	3	1
Durgapur	24	13	6	5	0
Midnapur	48	39	0	9	0
Jhargram	8	6	2	0	0
Rupnarayan	20	18	2	0	0
Kharagpur	62	62	0	0	0
Purba Midnapur	8	1	0	7	0
Birbhum	59	57	2	0	0
Nadia Msd	26	26	0	0	0
24 Parganas(S)	77	77	0	0	0
Howrah	19	15	4	0	0
STR	209	209	0	0	0
Wildlife HQ	208	204	0	3	1
24 Parganas(N)	50	45	0	4	1
<b>Total</b>	<b>4323</b>	<b>4020</b>	<b>230</b>	<b>70</b>	<b>3</b>





### 7.1.11 Raids Conducted on Pvt.timber and Forest Based Industries During 2019-20

Division	No of Raid	Plywood and Veneer Industries				Saw Mill				Private Timber Depot & Other Wood Base Industry			
		Quantity of Wood (in m <sup>3</sup> )		Value of Wood (in ₹)		Quantity of Wood (in m <sup>3</sup> )		Value of Wood (in ₹)		Quantity of Wood (in m <sup>3</sup> )		Value of Wood (in ₹)	
		Seized	Confiscated	Seized	Confiscated	Seized	Confiscated	Seized	Confiscated	Seized	Confiscated	Seized	Confiscated
Darjeeling	0	0	0	0	0	0	0	0	0	0	0	0	0
Kurseong	5	0	0	0	0	1.105	0	28730.00	0	0	0	0	0
Kalimpong	0	0	0	0	0	0	0	0	0	0	0	0	0
Darjeeling WL	59	0	0	0	0	0	0	0	0	30.169	0	1979062.00	0
Baikunthapur	2	0	0	0	0	0	0	0	0	0	0	0	0
Jalpaiguri	2	0	0	0	0	0	0	0	0	0	0	0	0
BTR East	3	0	0	0	0	0	0	0	0	3.108	3.108	0	0
BTR West*	96	0	0	0	0	1.442	1.442	60000.0	60000.0	0	0	0	0
Cooch Behar	619	0	0	0	0	0	0	0	0	188.386	0	0	0
Jaldapara WL	4	0	0	0	0	1.220	3.636	0	0	0	0	0	0
Gorumara WL	0	0	0	0	0	0	0	0	0	0	0	0	0
Raiganj	0	0	0	0	0	0	0	0	0	0	0	0	0
Malda	51	0	0	0	0	21.182	0	171488.00	0	0	0	0	0
Bankura North	4	0	0	0	0	0.87	0.87	4000.0	4000.0	36.45	36.45	210000.0	210000.0
Bankura South*	1	0	0	0	0	0	0	0	0	0.072	0	0	0
Panchet	0	0	0	0	0	0	0	0	0	0	0	0	0
Kangsabati North	0	0	0	0	0	0	0	0	0	0	0	0	0
Kangsabati South	0	0	0	0	0	0	0	0	0	0	0	0	0
Purulia	0	0	0	0	0	0	0	0	0	0	0	0	0
Burdwan	0	0	0	0	0	0	0	0	0	0	0	0	0
Durgapur	30	0	0	0	0	6.207	6.207	40000.0	40000.00	0	0	0	0
Midnapur	0	0	0	0	0	0	0	0	0	0	0	0	0
Jhargram	0	0	0	0	0	0	0	0	0	0	0	0	0

Division	No of Raid	Plywood and Veener Industries				Saw Mill				Private Timber Depot & Other Wood Base Industry			
		Quantity of Wood (in m <sup>3</sup> )		Value of Wood (in ₹)		Quantity of Wood (in m <sup>3</sup> )		Value of Wood (in ₹)		Quantity of Wood (in m <sup>3</sup> )		Value of Wood (in ₹)	
		Seized	Confiscated	Seized	Confiscated	Seized	Confiscated	Seized	Confiscated	Seized	Confiscated	Seized	Confiscated
Rupnarayan	0	0	0	0	0	0	0	0	0	0	0	0	0
Kharagpur	0	0	0	0	0	0	0	0	0	0	0	0	0
Purba Midnapur	0	0	0	0	0	0	0	0	0	0	0	0	0
Birbhum	12	0	0	0	0	3.126	0	31000.0	0	0.512	0	5000.0	0
Nadia Msd	9	0	0	0	0	0	0	0	0	10.4672	0	142000.0	0
24 Parganas(S)	1	0	0	0	0	2.152	0	0	0	0	0	0	0
Howrah	0	0	0	0	0	0	0	0	0	0	0	0	0
STR	0	0	0	0	0	0	0	0	0	0	0	0	0
24 Parganas (N)	0	0	0	0	0	0	0	0	0	0	0	0	0
Siliguri SF	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>898</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>37.304</b>	<b>12.155</b>	<b>335218.0</b>	<b>104000.0</b>	<b>269.1642</b>	<b>39.558</b>	<b>2336062.0</b>	<b>210000.0</b>

\* BTR(W) – Timber seized from village raid – 285.964 m<sup>3</sup>, from train raid – 19.338 m<sup>3</sup>, from vehicle – 158.387 m<sup>3</sup>, recovered from forest- 105.205 m<sup>3</sup>.

\* Bankura (South) – Seized Sal Pole – 10 pcs, Sawn Timber - 17 pcs from the same raid.





### 7.1.12 Status of Forest & Wildlife Mobile Patrolling Party & Mobile Squads in West Bengal as on 31.03.2020

As reported by Divisions, for undertaking exclusively protection works in forest and protected areas, there are 70 numbers of forest and wildlife Mobile Patrolling Party and Mobile Squad existing in West Bengal.

Name of Division	Name of MPP/MS	Location	Contact Number
<b>Darjeeling</b>	NIL	–	–
<b>Kurseong</b>	Bagdogra Elephant Squad	Bagdogra	–
<b>Darjeeling WL</b>	Wild Life Squad I	Sukna	–
<b>Baikunthapur</b>	MPP—Range	Siliguri	–
	MPP-2 Range	Belacoba	–
	MPP-3 Range	Odlabari	–
	Belacoba Elephant Squad	Belacoba	–
<b>Jalpaiguri</b>	Jalpaiguri MPP Range	Hakimpara, Jalpaiguri	03561-230118, 9851001588
<b>BTR East</b>	Mobile (East) Range	Kamakshyaguri	–
<b>BTR West</b>	MPP Damanpur	Damanpur	–
	MPP Pana	Pana	–
<b>CoochBehar</b>	Talliguri	Talliguri	–
<b>Jaldapara WL</b>	Madarihat WL Squad	Madarihat	–
<b>Gorumara WL</b>	W L Squad II	Malbazar	–
	W L Squad III	Bannaguri	–
	Khunia W L Squad	Khunia	–
	Ramsi MPP Range	Ramshi	–
<b>Raiganj</b>	Raiganj Mobile Squad	Raiganj	8670912026
<b>Malda</b>	MPP Malda	Malda HQ Range	9749310762
<b>Bankura North</b>	MPP Sonamukhi	Sonamukhi	9083254717
	MPP Beliatore	Beliatore	9083254747
<b>Bankura South</b>	MPP Pirrorgari	Pirrorgari R.O.	–
<b>Panchet</b>	MPP- Bishnupur range	Bishnupur	–
	MPP- Bankadaha Range	Bankadaha	–
	Quick Response Team	Panchyet Division	–
<b>Kangsabati North</b>	NIL	–	–
<b>Kangsabati South</b>	NIL	–	–
<b>Purulia</b>	Jhalda MPP	Jhalda RO Complex	–
<b>Extension Foresty Div.</b>	NIL	–	–
<b>Burdwan</b>	Raghunathpur MPP	Ijjatganj PS. Kanksa	–
<b>Durgapur</b>	NIL	–	–
<b>Midnapur</b>	MPP Range	Midnapur	–
<b>Jhargram</b>	MPP Jhargram	Jhargram	8001846844
	MPP Belpahari	Belpahari	9732122179
<b>Rupnarayan</b>	Mahalisai- I	Mahalisai	9732729688



Name of Division	Name of MPP/MS	Location	Contact Number
<b>Kharagpur</b>	MPP Range-1	Panchkahania	–
<b>Purba Midnapur</b>	NIL	–	–
<b>Birbhum</b>	NIL	–	–
<b>Nadia Murshidabad</b>	NIL	–	–
<b>24 Parganas North</b>	NIL	–	–
<b>Howrah</b>	NIL	–	–
<b>Utilisation</b>	NIL	–	–
<b>24 Parganas(South)</b>	Dhanchi Beat,	Ramganga Range	–
	Patharpratima Camp,		–
	Chulkati Camp		–
	Mahestala Beat,	Diamond Harbor Range	–
	Nainan Beat		–
	Nalgora Beat	Raidhagi Range	–
	Kultali Beat		–
	Bonnie Camp		–
	Kankramari Camp	Namkhana Range	–
	Sagar Beat		–
	Saptamukhi Beat		–
	Patibunia Beat	Bakkhali Range	–
	Uttar Bakkhali Beat		–
	Dakshin Bakkhali Beat		–
	Jambudwip Camp		–
	Jharkhali Beat	Matla Range	–
	Lothian Old Camp	Bhagabatpur Range	–
	Lothian New Camp		–
	Chandanpiri Beat		–
	CKBS, Narendrapur	Baruipur Range	–
	Piali Beat		–
	Mathurapur Beat		–
	Head Quarter Beat		–
<b>STR</b>	Sandak Khali Floating Camp	–	–
	Pirkhali Floting Camp	–	–
	Tetultala Floting Camp	–	–
	Chilmari Floting Camp	–	–
	Kakmari Floting Camp	–	–
	Chayan MPP	–	–
	Rampura MPP	–	–
	Bonraj MPP	–	–



### 7.1.13 Incidents of Forest Fire During the Year 2019–20

The Divisions have reported a total of 418 forest fire incidents in the various forests of the State West Bengal, the maximum incidence being reported from Medinipur Division. About 1,793.392 ha. forest area has been affected by fire.

Division	No. of Occurrence	Area Affected (Ha)	Estimated Loss (₹)
BAIKUNTHAPUR	90	386.18	4,13,500
JALPAIGURI	53	67.3	6,87,996
GORUMARA WILDLIFE	NIL		
BANKURA(NORTH)	44	17.75	NIL
BANKURA(SOUTH)	51	294.5	461600
PANCHET	16	47	NIL
BIRBHUM	8	12.2	NIL
BTR EAST	2	1.65	NIL
BTR WEST	8	10.6	NIL
WILD LIFE-III	4	258.84	29,50,000
COOCHBEHAR	1	11.5	NIL
DARJEELING	1	5	NIL
DARJEELING WILDLIFE	NIL		
KURSEONG	NIL		
KALIMPONG	18	51	NIL
HOWRAH	NIL		
JHARGRAM	25	43.09	NIL
KHARAGPUR	NIL		
MEDINIPUR	32	328.029	7,000
RUPNARAYAN	9	81	1,62,000
PURULIA	12	49.526	3,58,500
KANGSABATI NORTH	6	61.5	1,80,000
KANGSABATI SOUTH	NIL		
NADIA-MURSHIDABAD	3	3.8	NIL
MALDA	NIL		
PURBA BURDWAN	30	53.327	NIL
PASCHIM BURDWAN	3	2.6	62,000
RAIGANJ	2	7	11,40,000
<b>TOTAL</b>	<b>418</b>	<b>1,793.392</b>	<b>64,22,596.00</b>

### 7.1.14 Status of Forest Land Under Encroachment as on 31.03.2020

As per report received from the Divisions, 28 ha. of new area encroached and 374.37 ha encroached forest area was evicted during F.Y. 2019–20. As on 31.03.2020, the total forest land encroached in West Bengal stands at 9705.0806 ha.

Forest Division	New Encroachment During F.Y. 2019–20 (in ha)	Encroachment Evicted During F.Y. 2019–20 (in ha)	Total Area Under Encroachment as on 31/03/2020 (in ha)
Darjeeling	0.00	4.963	31.477
Kurseong	0.00	0.00	2.86
Kalimpong	0.00	0.00	416.41



Forest Division	New Encroachment During F.Y. 2019–20 (in ha)	Encroachment Evicted During F.Y. 2019–20 (in ha)	Total Area Under Encroachment as on 31/03/2020 (in ha)
Darjeeling WL	0.00	0.00	63.95
Baikunthapur	0.00	0.00	198.384
Jalpaiguri	0.00	0.00	160.926
Gorumara WL	0.00	0.00	50.86
BTR East	0.00	0.00	0.00
BTR West	0.00	0.00	0.00
Coochbehar	0.00	0.00	681.12
Jaldapara WL	1.00	0.00	1.50
Raiganj	0.00	0.00	4.00
Malda	0.00	0.00	262.00
Bankura North	0.00	81.60	706.937
Bankura South	0.00	120.0	1116.0556
Panchet	0.00	8.5	730.7
Kangsabati North	0.00	50.0	444.37
Kangsabati South	0.00	23.17	141.38
Purulia	27.00	69.5	431.469
Burdwan	0.00	0.00	239.35
Durgapur	0.00	0.00	534.0
Midnapur	0.00	0.00	456.803
Jhargram	0.00	0.00	1502.92
Rupnarayan	0.00	13.00	960.25
Kharagpur	0.00	0.00	399.099
Purba Midnapur	0.00	0.00	2.10
Birbhum	0.00	0.00	31.31
Nadia Msd	0.00	0.00	4.00
24 Parganas(S)	0.00	0.00	100.0
24 Parganas (N)	0.00	0.00	0.00
Howrah	0.00	3.64	30.85
<b>Total</b>	<b>28.0</b>	<b>374.373</b>	<b>9705.0806</b>



## 8.1 INTRODUCTION

Prior to the enactment of the Forest (Conservation) Act, 1980 recorded forest lands were vulnerable to diversion for different non-forestry activities viz. creation of human settlements, agriculture, construction of dams, bridges, roads and other developmental activities. In order to check further depletion of the forest cover and to protect the forests, the Government of India enacted the Forests (Conservation) Act, 1980 and amended it from time to time with insertions of stringent stipulations. As per the

Act a majority of such diversions requires prior approval of the Ministry of Environment, Forests and Climate Change, Government of India except for very small areas to be diverted for basic public utilities in rural areas and also in Left Wing Extremist Areas where the powers are vested with the State Government. As a result quantum of diversion of forest land for non-forestry purposes has reduced appreciably.

In West Bengal, an area of 2961.2893 ha. of forest land, has been diverted for different non-forestry purpose till March 2020 (Table 1).

**Table 8.1:** Diversion of Forest Land for Non-Forest use in West Bengal since the enforcement of Forest (Conservation) Act, 1980

(Area in Hectares)

Year	Area Approved for Diversion	Diversion not Executed	Temporary Diversion	Net Diversion
1981–1982	29.7720	0.2000	0.0000	29.5720
1982–1983	87.1900	0.0000	0.0000	87.1900
1983–1984	15.3250	2.44	0.0000	12.8850
1984–1985	13.3091	0.0000	0.0000	13.3091
1985–1986	306.0000	0.0000	0.0000	306.0000
1986–1987	23.7657	0.0178	0.0000	23.7479
1987–1988	16.7020	0.0000	0.0000	16.7020
1988–1989	18.9250	0.0000	0.0000	18.9250
1989–1990	94.4800	0.0300	0.0000	94.4500
1990–1991	19.3572	0.6270	0.0000	18.7302
1991–1992	47.5003	0.0823	0.0000	47.4180
1992–1993	78.1065	67.0665	0.0000	11.0400
1993–1994	232.0000	0.0000	0.0000	232.0000
1994–1995	45.0000	0.0000	0.0000	45.0000
1995–1996	93.9600	0.0000	0.0000	93.9600
1996–1997	1.6459	0.0000	0.0000	1.6459





Year	Area Approved for Diversion	Diversion not Executed	Temporary Diversion	Net Diversion
1997-1998	6.7978	0.0000	0.0000	6.7978
1998-1999	21.6900	1.8200	0.0000	19.8700
1999-2000	3.0200	0.0000	0.0000	3.0200
2000-2001	0.9970	0.0000	0.0700	0.9270
2001-2002	285.9000	0.0000	0.0000	285.9000
2002-2003	10.0700	0.0000	0.0000	10.0700
2003-2004	0.0000	0.0000	0.0000	0.0000
2004-2005	320.6220	18.1320	119.0000	183.4900
2005-2006	357.7672	0.1172	0.0000	357.6500
2006-2007	115.3580	0.0000	0.0000	115.3580
2007-2008	37.9535	0.0000	0.6000	37.3535
2008-2009	0.0750	0.0000	0.0000	0.0750
2009-2010	70.4841	0.0000	0.0000	70.4841
2010-2011	174.6918	0.1730	0.0000	174.5188
2011-2012	46.5794	14.5300	0.0000	32.0494
2012-2013	0.0000	0.0000	0.0000	0.0000
2013-2014	58.7828	51.9022	0.0000	6.8806
2014-2015	11.0310	2.7000	0.0000	8.3310
2015-2016	10.5900	0.0000	0.0000	10.5900
2016-2017	49.8800	0.0000	0.0000	49.8800
2017-2018	79.2268	0.0000	0.0000	79.2268
2018-2019	74.4022	0.0000	0.0000	74.4022
2019-2020	102.3320	0.0000	0.0000	102.3320
<b>Total</b>	<b>2961.2893</b>	<b>159.8380</b>	<b>119.6700</b>	<b>2681.7813</b>

## 8.2 COMPENSATORY AFFORESTATION PLANTATION

During 2019-20, 519.37 ha. of Compensatory Afforestation plantations was created. Over 451.55 ha. of old Compensatory Afforestation Plantations was maintained and advance work of over 231.92 ha. was carried out in various divisions. During 2019-20 an amount of ₹12.3668 Crore was released to various forest divisions.

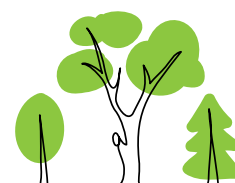
## 8.3 FINAL APPROVAL OF FOREST DIVERSION PROPOSALS

During 2019-20, the following diversion proposals were accorded final approval by Govt. of India/State Government.

- Diversion of 101.77 ha Forest Land to WBPDCCL on reallocation of open caste coal mine in Birbhum district from prior allottee M/s. Bengal Emta Coal Mines Ltd.
- Diversion of 0.562 ha. of Forest Land for extension of Paradip-Haldia-Durgapur pipeline to Muzaffarpur and Patna from Durgapur Terminal in favour of Indian Oil Corporation Limited (IOCL)(Pipeline Division) under Birbhum Forest Division.

## 8.4 NO OF APPROVED FOREST DIVERSION CASES

Since 1980, over 129 diversion proposals has been approved by the State and Central Governments and over 2961.2893 ha. of forest land has been diverted under ten categories.



**Table 8.2:** Statement showing the position of cases approved for diversion of Forest Land under Forest (Conservation) Act, 1980 till March, 2020

Sl. No.	Purpose of Diversion	Nos.
1	Irrigation Project	5
2	Hydel Project	5
3	Mining Project	8
4	Construction of Road	17
5	Laying of Railway Line	2
6	Laying of Transmission Line/Pipe Line	40
7	Thermal Project	2
8	Drinking Water Project	4
9	Defence Project	3
10	Others	43
	<b>Total (Nos)</b>	<b>129</b>









# WORKING PLAN AND GIS

## CHAPTER 9

### 9.1 GIS IN FOREST MANAGEMENT

The GIS cell was created in July 1999 in the office of the Conservator of Forests, Working Plan and GIS Circle at Kolkata.

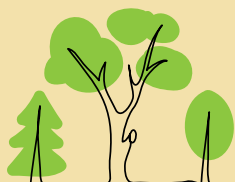
Initially the cell had started functioning with one license of ARC Info and ERDAS software. At present there are three (04) licensed workstations with ARC Pro and ERDAS. GIS Lab works on preparation of digital maps, interpretation of satellite imageries and organizes training for field level staffs regarding GIS application. There are 01 GIS trained DR/Fr and 4 Software Support Personnel working in the GIS Lab. Another Beat Officer who is in charge of Head Quarter Range also supervises the activities of GIS Lab.

#### 9.1.1 Works undertaken and executed by Working Plan and GIS cell

- 1) **Digitization of District and P.S. maps** of the state and updating the same.
- 2) **Satellite imageries** (Rapid Eye) from NRSA, Hyderabad for the state pertaining to 2013 and 2018 has been procured by West Bengal Forest and Biodiversity Conservation Project and handed over to GIS Lab. These satellite imageries will be utilized in change detection monitoring, up gradation of forest maps and preparation of stock maps of the forest divisions.
- 3) **Daily monitoring of forest fire** from SNPP and MODIS data received through FSI forest fire portal (FAST Ver-3) is done from GIS lab. Besides this fire occurrence mapping and vulnerability analysis is also done. Conservator of Forests, Working Plan and GIS being the Nodal Officer for forest fire management of West Bengal has registered 1 CCF, 1 CF, 41 numbers of DFO, 5 ACF, 122 numbers of Range Officer and 288 numbers of Beat Officer, and 60 number of forest guards totaling

to 518 numbers official/employees who daily receives the forest fire alerts and acts upon it. Most of them have started submitting online feedback to the Nodal Officer.

- 4) Volume – III (**Stock Map**) of Jalpaiguri Forest Division for 10<sup>th</sup> Working Plan (2016–17 to 2026–27) has been completed within March 2019. Stock map preparation of Purulia Working Plan is undergoing.
- 5) The 2<sup>nd</sup> Working Plan of Purulia District (Three Territorial Divisions) had expired on 2014–15 to 2023–24) and CFC operation of this districts could not be done since 2016–17 and 2017–18. In 2018–19 the objections of Regional Empowered Committee, Bhubaneswar was complied and permission for CFC was given on the basis of proposed felling series. 2<sup>nd</sup> draft has been submitted in March 2019 and same has been approved, preparation of volume – III of Purulia District has been started and scheduled to be completed within a year.
- 6) The work of updating digital boundary up to JFMC level has been completed for 31 JFMCs of Burdwan Division, 73 JFMCs of Mednipur Division, 52 JFMCs of Rupnarayan Division, 26 JFMC of Kharagpur Division which has done by West Bengal Fisheries Department and a total of 418 JFMC boundary was demarcated by using GPS under WBFBCP Project.
- 7) Resource survey enumeration and compilation of growing stock has also been taken up in the State for Scientific Management of the forest resources with the help of GIS and GPS technologies. The inner detail survey of Kalimpong, Kurseong and Darjeeling Divisions are complete the digitization of stock map of is Kalimpong and Kurseong is also complete. At present the inner detail survey of Purba and Paschim Bardhaman, Baikunthapur and Jaldapara Wildlife divisions are under process.



### 9.1.2 Report on Felling during 2019–20 in West Bengal

The felling and other actions are accomplished as per the Working Plan prescriptions for respective units after due approval of the Ministry of Environment & Forests and Climate Change (MoEF&CC), Government of India. Accordingly, the following report is compiled and submitted for the year under consideration:

#### Timber production Working Circle in West Bengal, felling operations undertaken during 2018–19 and proposed felling 2020–2021 are as detailed below:

The Report on main Production Working Circles in West Bengal is as follows:

##### A) South Bengal:

1. **Sal Coppice Working Circle:** The area under Sal Coppice Working Circle is approximately 2,48,614.62 ha. This Working Circle covers a large tract of Forest areas in Midnapur, Bankura, Purulia, Burdwan, Birbhum and Nadia Murshidabad districts of West Bengal.

During the year 2017–18 as against a target of 3771 ha (and backlog area of 517 ha), 3236 ha was felled.

The target for felling in 2018–19 was 3669 ha. out of which 3074 ha could be achieved in 2019–2020.

Proposed felling in 2020–2021 is 3257.5 ha in this working circle.

2. **Development Working Circle:** The area under Development Working Circle is approximately 1,84,565.253 ha. This Working Circle is in operation in Midnapur, Bankura, Purulia, Burdwan and Birbhum districts of West Bengal.

During the year 2017–18 as against a target of 2326 ha, 2142.06 ha was felled.

The target for felling in 2018–19 was 3093.2 ha out of which 2594.7 ha could be achieved.

Proposed felling target in 2020–2021 in this working Circle is 3657.5 ha

For Purba and Paschim Burdwan district the working plan has expired, revision is under process and Working scheme and felling series has been proposed as recommended by territorial CCF.

##### 2.a Total yield of South Bengal of 2018–19

The total production of sal pole in South Bengal was 12,91,650, Cogging Sleeper 9,77,321, fire Wood was 1,09,336.4 m<sup>3</sup>

The total production of Akashmoni and Eucalyptus pole in South Bengal was 8,93,858 no. Sal timber 1447.39 m<sup>3</sup>, Misc timber 13672.434 m<sup>3</sup>, post 6482 and pulpwood was 17,271 m<sup>3</sup> from the South Bengal Forests.

##### B) North Bengal:

1. **Sal Working Circle:** The area under Sal Working Circle is approximately 20,485.2 ha. This Working Circle is in operation in Baikunthapur, Coochbehar and Jaldapara divisions.

During the year 2017–18 out of a target of 49.31 ha, 27.15 ha was felled and 2843.1 m<sup>3</sup> of timber was produced. The target for felling in 2018–19 was 20.51 ha and the achievement was 20.51 ha.

The target of 2019–20 is only 22 ha at Jaldapara WL division. For Baikunthapur division, their approved harvesting of CD produces of 2015 is 4390.741 m<sup>3</sup> from which they could only extract 450 m<sup>3</sup> in 2018–19. Remaining 3940.741 m<sup>3</sup> is to be extracted in 2019–20 which still exceed the total CFC outturn of 3361.853 m<sup>3</sup>. Hence for Baikunthapur division, there is no target for CFC in 2019–20. For Jalpaiguri Division, draft 10<sup>th</sup> Working Plan has been submitted and is pending with MOEF&CC which is yet to be approved. Thus no felling target is there for Jalpaiguri Division for 2019–20.

2. **Miscellaneous Species Working Circle:** The area under Miscellaneous Species Working Circle is approximately 15,547.97 ha. This Working Circle is in operation in Jalpaiguri, Coochbehar and Alipurduar Districts in West Bengal. The annual felling target as per Working Plans was 56.89 ha. However, during the year 2017–18 there was a target of 54.99 ha was there to be felled of which 49.13 ha could be achieved. Total yield of teak timber was 4332.761 m<sup>3</sup> and misc timber was 818.466 m<sup>3</sup>.

The target for felling in 2018–19 was 53.97 ha. As against this 23.51 ha could be achieved.

The target for 2019–20 55.74 ha and for Jalpaiguri target could not be set as draft 10<sup>th</sup> Working Plan is yet to be approved.

For 2020–2021, only 9.9 ha is proposed as target.

3. **Broad Leaved Endemic Species Development Working Circle:** The area under Broad Leaved Endemic Species Development Working Circle is approximately 16,560.52 ha. This Working Circle is in operation in Darjeeling and Kalimpong Districts in West Bengal. The annual felling target as per





Working Plans was 55.41 ha. However, during the year 2017–18 target was 53.39 ha in which 12.41 ha was felled in Kurseong division. Yield was Sal timber 180.459 m<sup>3</sup>, teak timber 578.051 m<sup>3</sup> and misc. 5.4 m<sup>3</sup>.

The target for felling in 2018–19 could not be set as the proposal has been sent to REC Bhubaneswar as working plan period for Kurseong, Kalimpong and Darjeeling has expired.

Revised draft working plan of Kurseong and Kalimpong was placed before the REC for discussion and DDGF, MOEF&CC Eastern Regional Office, Bhubaneswar advised some rectifications and to place again before the REC. Though the material was ready but due to COVID Pandemic situation, the meeting could not be held.

#### 4. Eco tourism and eco development Working Circle

No area for harvesting was proposed in this circle.

#### Total yield of North Bengal in 2018–19

Total out turn of timber in North Bengal from the harvesting operations in 2018–19 was Sal 892.95 m<sup>3</sup>, Teak 1263.619 m<sup>3</sup>, misc timber 2654.987 m<sup>3</sup>, thus totaling 4811.556 m<sup>3</sup>

### 9.1.3 Regeneration Operations During 2019–20

During 2019–20 as against 3074 ha of felling area in Sal Coppice Working Circle, 3074 ha has been regenerated by Sal and associated plantation. This Sal being Sal coppice area, regeneration of the area could be achieved by protection of the area from fire and protection of new coppice shoots.

During the year 2019–2020 as against 2594.7 ha of felling area in Development Working Circle, 2594.7 ha has been regenerated.

In Miscellaneous Species Working Circle, out of 23.51 ha of harvested area, 23.51 ha has been regenerated in 2019–2020.

### 9.1.4 Thinning Operations during 2018–2019

In South Bengal, in Sal coppice working circle, out of a total target of mechanical thinning of 2353.25 ha, only 592 ha could be achieved. This backlog is due to adverse field situation.

In North Bengal thinning operations could not be taken up due to adverse field conditions faced by the field staff.

**Table 9.1 Status of Working Plans in West Bengal -2019–2020**

Sl. No	District	Forest Division	Working Plan in Progress	Working Plan Period	Actions Planned/Work in Progress
1	Darjeeling	Darjeeling Sub Division	12 <sup>th</sup>	1997–98 to 2017–18	PWPR has been submitted by CCF, Hill Circle on 25.08.18. Field survey is complete. Writing Vol I and II complete. Vol III is under preparation.
		Kalimpong Sub Division	9 <sup>th</sup>	1997–98 to 2017–18	VOL I, II and III submitted to RCC, MOEF, BBSR shall be discussed in 3 rd SCC MEETING ON 12.03.2020 Placed before REC needs further discussion as advised by DDGF. Meeting could not be held due to COVID situation.
		Kurseong Sub Division	6 <sup>th</sup>	1997–98 to 2017–18	VOL I, II and III submitted to RCC, MOEF, BBSR shall be discussed in 3 rd SCC MEETING ON 12.03.2020 Placed before REC needs further discussion as advised by DDGF. Meeting could not be held due to COVID situation



Sl. No	District	Forest Division	Working Plan in Progress	Working Plan Period	Actions Planned/Work in Progress
2	Jalpaiguri	Jalpaiguri	9 <sup>th</sup>	2007–08 to 2016–17	Vol I, Vol II and VOL III to MOEF, BBSR, lying pending with MOEF&CC, New Delhi
		Baikunthapur	4 <sup>th</sup>	2010–11 to 2019–20	PWPR submitted. Inner detail survey is going on.
3	24 Parganas South	24-Parganas, South	3 <sup>rd</sup>	2014–15 to 2023–24	Approved vide 9 (31)10/2013-FCE, dt. 09.03.2018
4	Purba Medinipur	Purba Medinipur	1 <sup>st</sup>	2014–15 to 2023–24	Working Plan approved vide 9(31)11/2014-FCE dtd 26.07.2019
5	Paschim Medinipur	Midnapore Kharagpur Rupnarayan Jhargram Bankura (N)	3 <sup>rd</sup>	2014–2015 to 2023–24	Approved vide 13-FCWP/WB-MDPR (W), dt. 14.08.2014
6	Bankura	Bankura (S) Panchet Soil Conservation	2 <sup>nd</sup>	2013–14 to 2022–23	Approved vide 13-FCWP/WB-BANK, dt. 12.07.2013
7	Purulia	Purulia Kangsabati SC-I Kangsabati SC-II	2 <sup>nd</sup>	2014–15 to 2023–24	Vol I and Vol II approved. Vol III Part I has been published. Land reconciliation is going on. Final volume of Volume III is yet to be published. Forest Boundary survey and digitization is going on.
8	Birbhum	Birbhum	2 <sup>nd</sup>	2013–14 to 2022–23	Approved. vide 13-FCWP/WB-BVM dtd 12.07.2013
9	Burdwan	Burdwan Durgapur	2 <sup>nd</sup>	2010–11 to 2019–20	PWPR for both the districts have been submitted Inner detail survey is going on.
10	Howrah (Included in WP of Burdwan)	Arambagh Range of Howrah SF	2 <sup>nd</sup>	2010–11 to 2019–20	This portion has been included in PWPR of Purba Bardhaman
11	Nadia & Murshidabad	Nadia Murshidabad	2 <sup>nd</sup>	2013–14 to 2022–23	Approved.
12	Malda	Malda	1 <sup>st</sup>	2010–11 to 2019–20	Working Plan expired. PWPR is yet to be submitted by CCF
13	Uttar and Dakshin Dinajpur	Raiganj	1 <sup>st</sup>	2012–13 to 2021–22	Approved 9(31)8/2011-FCE dtd 22.07.2013
14	Coochbehar	Coochbehar SF	1 <sup>st</sup>	2014–15 to 2023–24	Approved Vide 9(31)12/2014-FCE dtd 28.10.2016
15	Alipurduar	Wildlife-III	5 <sup>th</sup>	2010–2019–20	PWPR submitted, Inner detail survey is going on





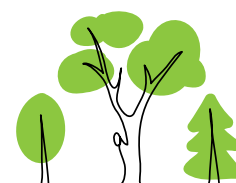
(A) Summary of ATR of 2019-20

Table 9.2 Summary of Last Year Felling (2018-19)

Operations Prescribed in the Working Plan/Working Scheme		Timber Operation 2018-19			Regeneration (in Ha)		
		Physical Target (in Ha)	Achievement (in Ha)	Shortfall if Any (in Ha)	Target (Felled Coupes in 2018-19) in Ha	Regeneration Achieved 2019-20	
Sal Working Circle	North Bengal	48.10	20.51	27.59	20.51	20.51	
Sal Coppice Working Circle	North Bengal	0.00	0.00	0.00	0.00	0.00	
	S Bengal - I	1923.00	1556.00	367.00	1556.00	1556.00	
	S Bengal - II	1746.50	1518.00	228.50	1518.00	1518.00	
	<b>Total</b>	<b>3669.50</b>	<b>3074.00</b>	<b>595.50</b>	<b>3074.00</b>	<b>3074.00</b>	
Development Working Circle	North Bengal	0.00	0.00	0.00	0.00	0.00	
	S Bengal - I	939.50	725.00	214.00	725.00	725.00	
	S Bengal - II	2153.70	1869.70	284.00	1869.70	1869.70	
	<b>Total</b>	<b>3093.20</b>	<b>2594.70</b>	<b>498.00</b>	<b>2594.70</b>	<b>2594.70</b>	
Miscellaneous Species Working Circle	North Bengal	53.97	23.51	30.46	23.51	23.51	
Conifer & Miscellaneous Species Development Working Circle	North Bengal	0.00	0.00	0.00	0.00	0.00	
Board Leaved Endemic Species Development Working Circle	North Bengal	0.00	0.00	0.00	0.00	0.00	
Eco Tourism & Eco Development Working Circle	North Bengal	0.00	0.00	0.00	0.00	0.00	
<b>GRAND TOTAL</b>		<b>6864.77</b>	<b>5712.72</b>	<b>1151.55</b>	<b>5712.72</b>	<b>5712.72</b>	

**Table 9.2.1** Summary of Thinning (2018–19 ATR) North Bengal Thinning Operation 2018–19

Operations perscribed in the Working Plan/Working Scheme	Thinning Type	Physical Target (in Ha)	Achievement (in Ha)	Shortfall if Any (Ha)	Remarks
Sal Working Circle	5 <sup>th</sup>	0.00	0.00	0.00	
	10 <sup>th</sup>	40.00	0.00	40.00	
	15 <sup>th</sup>	0.00	0.00	0.00	
	25 <sup>th</sup>	34.00	0.00	34.00	
	35 <sup>th</sup>	32.45	0.00	32.45	
Sal Coppice Working Circle	7 <sup>th</sup>	24.82	0.00	24.82	
Miscellaneous Species Working Circle	5 <sup>th</sup>	0.00	0.00	0.00	
	10 <sup>th</sup>	111.00	0.00	111.00	
	15 <sup>th</sup>	0.00	0.00	0.00	
	25 <sup>th</sup>	66.00	0.00	66.00	
	35 <sup>th</sup>	81.72	0.00	81.72	
Conifer & Miscellaneous Species Development Working Circle	20 <sup>th</sup>	0.00	0.00	0.00	
	30 <sup>th</sup>	0.00	0.00	0.00	
	40 <sup>th</sup>	0.00	0.00	0.00	
Board Leaved Endemic Species Development Working Circle	20 <sup>th</sup>	0.00	0.00	0.00	
	30 <sup>th</sup>	0.00	0.00	0.00	
	50 <sup>th</sup>	0.00	0.00	0.00	
Eco Tourism & Eco Development Working Circle	20 <sup>th</sup>	0.00	0.00	0.00	
	30 <sup>th</sup>	0.00	0.00	0.00	
	50 <sup>th</sup>	0.00	0.00	0.00	
Riverain working circle	5 <sup>th</sup>	0.00	0.00	0.00	
	7 <sup>th</sup>	0.00	0.00	0.00	
	10 <sup>th</sup>	197.03	0.00	197.03	
	15 <sup>th</sup>	129.50	0.00	129.50	
	25 <sup>th</sup>	8.50	0.00	8.50	
	35 <sup>th</sup>	0.00	0.00	0.00	
Grand Total	5 <sup>th</sup>	0.00	0.00	0.00	
	7 <sup>th</sup>	24.82	0.00	24.82	
	10 <sup>th</sup>	348.03	0.00	348.03	
	15 <sup>th</sup>	0.00	0.00	0.00	
	20 <sup>th</sup>	0.00	0.00	0.00	
	25 <sup>th</sup>	229.50	0.00	229.50	
	30 <sup>th</sup>	0.00	0.00	0.00	
	35 <sup>th</sup>	122.67	0.00	122.67	
	40 <sup>th</sup>	0.00	0.00	0.00	
	50 <sup>th</sup>	0.00	0.00	0.00	
<b>Total for North Bengal</b>		<b>725.02</b>			



**Table 9.2.2** Summary of Last Year Thinning (2018–19 ATR) SOUTH BENGAL

Operations Perscribed in the Working Plan/Working Scheme	Division	Thinning Operation 2018–19				Remarks
		Thinning Type	Physical Target (in Ha)	Achievement (in Ha)	Shortfall if Any (Ha)	
Sal Coppice Working Circle	WP South-I	7/4 <sup>th</sup> yr/RDF	2143.25	382.00	1761.25	
Sal Coppice Working Circle	WP South-II	7 <sup>th</sup> year	210.00	210.00	0.00	
<b>TOTAL FOR SOUTH BENGAL</b>			<b>2353.25</b>	<b>592.00</b>	<b>1761.25</b>	

**Table 9.2.3** Summary of Last Year Thinning (2018–19 ATR) STATE TOTAL

Operations Perscribed in the Working Plan/Working Scheme	Thinning Operation 2018–19				Remarks
	Thinning Type	Physical Target (in Ha)	Achievement (in Ha)	Shortfall if Any (Ha)	
<b>Total For State</b>	4 <sup>th</sup> yr/RDF	2353.25	592.00	1761.25	
	5 <sup>th</sup>	0.00	0.00	0.00	
	7 <sup>th</sup>	0.00	0.00	0.00	
	10 <sup>th</sup>	0.00	0.00	0.00	
	15 <sup>th</sup>	0.00	0.00	0.00	
	20 <sup>th</sup>	0.00	0.00	0.00	
	25 <sup>th</sup>	0.00	0.00	0.00	
	30 <sup>th</sup>	0.00	0.00	0.00	
	35 <sup>th</sup>	0.00	0.00	0.00	
	40 <sup>th</sup>	0.00	0.00	0.00	
	50 <sup>th</sup>	0.00	0.00	0.00	
<b>GRAND TOTAL FOR STATE</b>		<b>2353.25</b>	<b>592.00</b>	<b>1761.25</b>	

**Table 9.2.4** Summary of Proposed Felling & Regeneration for the year (2020–21) STATE TOTAL

Operations Perscribed in the Working Plan/Working Scheme		Felling Target (2020–21) in Ha	Regeneration (in Ha)			Remarks
			Target (Felled Coupes in 2019–20) in Ha	Cost Per Hectare for Regeneration ₹/Ha	Funds Required in ₹	
Sal Working Circle	North Bengal	0	22	98.22	0	Coppice regeneration only
Sal Coppice Working Circle	North Bengal	0	0	0	0	
	S Bengal - I	1598.5	1676.5	0	0	
	S Bengal - II	1659	1853.999	0	0	
	<b>Total</b>	<b>3257.5</b>	<b>3530.499</b>	<b>0</b>	<b>0</b>	

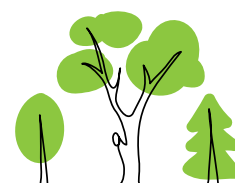




Operations Prescribed in the Working Plan/ Working Scheme		Felling Target (2020–21) in Ha	Regeneration (in Ha)			Remarks
			Target (Felled Coupes in 2019–20) in Ha	Cost Per Hectare for Regeneration ₹/Ha	Funds Required in ₹	
Development Working Circle	North Bengal	0	0	0	0	
	S Bengal - I	653.5	740.645	70,224	458,91,384	
	S Bengal - II	3004	2871.5	70,224	2109,52,896	
	<b>Total</b>	<b>3657.5</b>	<b>3612.145</b>	<b>70,224</b>	<b>256844280</b>	
Miscellaneous Species Working Circle	North Bengal	9.9	55.74	89,673	8,87,763	
Conifer & Miscellaneous Species Development Working Circle	North Bengal	0	0	0	0	
Board Leaved Endemic Species Development Working Circle	North Bengal	0	0	0	0	
Eco Tourism & Eco Development Working Circle	North Bengal	0	0	0	0	
<b>GRAND TOTAL</b>		<b>6915.00</b>	<b>7164.64</b>	<b>–</b>	<b>2577,32,043</b>	

**Table 9.3** Summary of Proposed Thinning (2020–21) ATR STATE TOTAL

Operations Prescribed in the Working Plan/Working Scheme	Thinning Operation 2020–21	
	Thinning Type	Physical Target (in Ha)
Sal Working Circle	5 <sup>th</sup>	–
	10 <sup>th</sup>	–
	15 <sup>th</sup>	–
	25 <sup>th</sup>	–
	35 <sup>th</sup>	–
Sal Coppice Working Circle	7 <sup>th</sup>	–
Miscellaneous Species Working Circle	5 <sup>th</sup>	–
	10 <sup>th</sup>	5.00
	15 <sup>th</sup>	–
	25 <sup>th</sup>	5.00
	35 <sup>th</sup>	–



Operations Prescribed in the Working Plan/Working Scheme	Thinning Operation 2020–21	
	Thinning Type	Physical Target (in Ha)
Conifer & Miscellaneous Species Development Working Circle	20 <sup>th</sup>	–
	30 <sup>th</sup>	–
	40 <sup>th</sup>	–
Board Leaved Endemic Species Development Working Circle	20 <sup>th</sup>	–
	30 <sup>th</sup>	–
	50 <sup>th</sup>	–
Eco Tourism & Eco Development Working Circle	20 <sup>th</sup>	–
	30 <sup>th</sup>	–
	50 <sup>th</sup>	–
Riverain	5 <sup>th</sup>	–
	10 <sup>th</sup>	–
	25 <sup>th</sup>	92.19
	35 <sup>th</sup>	9.22
Grand Total	5 <sup>th</sup>	–
	7 <sup>th</sup>	–
	10 <sup>th</sup>	10.00
	15 <sup>th</sup>	–
	20 <sup>th</sup>	–
	25 <sup>th</sup>	92.19
	30 <sup>th</sup>	–
	35 <sup>th</sup>	9.22
	40 <sup>th</sup>	–
	50 <sup>th</sup>	–
<b>Total for North Bengal</b>		<b>111.41</b>
<b>Thinning for South Bengal</b>		
<b>WB South-I</b>	2 <sup>nd</sup> /7 <sup>th</sup>	<b>2452.00</b>
<b>WB South-II</b>	4 <sup>th</sup> /7 <sup>th</sup>	<b>669.30</b>
<b>Total for South Bengal</b>		<b>3121.30</b>
<b>TOTAL FOR STATE or STATE ABSTRACT</b>		<b>3232.71</b>





Table 9.4 Felling Report From Working Plan (North) Division

Division	Felling Report of 2018-19 of North Bengal									
	Sal Working Circle				Miscellaneous Species Working Circle				C & MSD working Circle	
	Physical Target (2018-19)	Achievement (2018-19)	Short Fall (2018-19)	Regeneration in Ha. Target (Felled Coupes 2018-19)	Physical Target (2018-19)	Achievement (2018-19)	Short Fall (2018-19)	Regeneration in Ha. Target (Felled Coupes 2018-19)	Physical Target (2018-19)	Regeneration in Ha. Target (Felled Coupes 2018-19)
Baikunthapur	27.59	-	27.59	-	28.96	-	28.96	28.96	-	-
Cooch Bihar	-	-	-	-	8.87	7.37	1.5	8.87	7.37	-
Jaldapara WLS	20.51	20.51	-	20.51	16.14	16.14	-	16.14	-	-
* Jalpaiguri	-	-	-	-	-	-	-	-	-	-
** Kalimpong	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>48.10</b>	<b>20.51</b>	<b>27.59</b>	<b>20.51</b>	<b>53.97</b>	<b>23.51</b>	<b>30.46</b>	<b>53.97</b>	<b>23.51</b>	<b>-</b>

Division	BLES Working Circle				ECO Tourism & Eco Dev Working Circle			
	Regeneration in Ha. Target (Felled Coupes 2018-19)		Physical Target (2018-19)		Regeneration in Ha. Target (Felled Coupes 2018-19)		Physical Target (2018-19)	
	Physical Target (2018-19)	Achievement (2018-19)	Short Fall (2018-19)	Achievement (2019-20)	Achievement (2018-19)	Short Fall (2018-19)	Achievement (2018-19)	Achievement (2019-20)
** Darjeeling	-	-	-	-	-	-	-	-
** Kurseong	-	-	-	-	-	-	-	-
** Kalimpong	-	-	-	-	-	-	-	-
<b>Total</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

\* Working Plan not approved

\*\* Working Plan expired



**Table 9.5** Felling Report From Working Plan (South I & II) Divisions

Felling Report of 2018–19 south Bengal of South- I Division											
District	Division	Sal Coppice Working Circle				Development Working Circle					
		Physical Target (2018–19)	Achievement (2018–19)	Short Fall (2018–19)	Regeneration in Ha.		Physical Target (2018–19)	Achievement (2018–19)	Short Fall (2018–19)	Regeneration in Ha.	
					Target (Felled Coupes (2018–	Achievement (2019–20)				Target (Felled Coupes (2018–19)	Achievement (2019–20)
Jhargram	Jhargram	425	299.00	126.00	299.00	299.00	112.5	80.00	32.50	80.00	80.00
Paschim Medinipur	Rupmarayan	520	437.00	83.00	437.00	437.00	362	258.00	104.00	258.00	258.00
	Medinipur	802	644.00	158.00	644.00	644.00	398	351.00	47.00	351.00	351.00
	Kharagpur	176	176	0	176	176	67	36.00	31	36.00	36.00
Total for South-I		1923	1556.00	367.00	1556.00	1556.00	939.5	725.00	214.50	725	725.00

Felling Report of 2018-19 South Bengal of South- I Division											
District	Division	Sal Coppice Working Circle				Development Working Circle					
		Physical Target (2018-19)	Achievement (2018-19)	Short Fall (2018-19)	Regeneration in Ha. Target (Felled Coupes (2018-19)	Achievement (2019-20)	Physical Target (2018-19)	Achievement (2018-19)	Short Fall (2018-19)	Regeneration in Ha. Target (Felled Coupes (2018-19)	Achievement (2019-20)
Bankura	Bankura(North)	545	489.50	55.50	489.50	489.50	263.7	255.70	8	255.70	255.70
	Bankura(South)	423	355.00	68	355.00	355.00	501	471.00	30	471.00	471.00
	Panchet	485.5	450.50	35.00	450.50	450.50	495	387.00	108.00	387.00	387.00
Purulia	Purulia	28	14.00	14	14.00	14.00	0	0.00	0	0.00	0.00
	Kangsabati(North)	55	55.00	0	55.00	55.00	357	259.00	98	259.00	259.00
	Kangsabati(South)	160	104.00	56	104.00	104.00	140	110.00	30	110.00	110.00
Burdwan	Burdwan	20	20.00	0	20.00	20.00	186	176.00	10	176.00	176.00
	Durgapur	10	10.00	0	10.00	10.00	75	75.00	0	75.00	75.00
	Birbhum	20	20.00	0	20.00	20.00	136	136.00	0	136.00	136.00
Total for South-II		1746.5	1518.00	228.50	1518.00	1518.00	2153.70	1869.70	284	1869.70	1869.70
Grand Total for South- I & II		3669.5	3074.00	595.50	3074.00	3074.00	3093.20	2594.70	498.50	2594.70	2594.70



মদ্য যোথ বন পরিচালন কমিটি  
(শালপাতা তৈরী)

পশ্চিমবঙ্গ বন উন্নয়ন নিগম  
মোদিনীপুর বন উন্নয়ন বিভাগ

স্বাস্থ্য দপ্তর

মৎস্য দপ্তর

সমষ্টি উন্নয়ন আঞ্চলিক  
স্বত্বপত্র

সমষ্টি প্রদীপক  
উন্নয়ন বিভাগ

কৃষি দপ্তর

সমষ্টি উন্নয়ন  
আঞ্চলিক





# JOINT FOREST MANAGEMENT

## CHAPTER 10

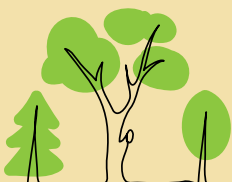
**J**oint Forest Management (JFM) was born out of a socio-economic movement in the 1980s. The first Government Resolution— specific to Arabari socio-economic project – was issued in 1987, just over 32 years back. The subsequent years saw not only the spread of JFM but also the evolution of its core characteristics. What was once a struggling sapling – to borrow metaphor from forestry – in 1980s and 90s, is now a fully grown tree. It has weathered the political upheavals, globalization of economy and an upwardly mobile society and still managed to stay relevant.

A series of Government Resolutions were passed in 1990s to institutionalize the new form of forest management, formalize the role of stake holders associated with it and spell out benefits that would accrue out of it. The initial resolution was issued for the forest areas in lateritic forest belt of Bengal where JFM really started; but as it spread geographically, new resolutions were issued specific to that geographical area. Thus we had resolutions specific for north

Bengal forests, hill forests and Sundarban forests. A separate resolution was also came out for Protected Areas (for Eco-Development Committee) in 1992.

This cafeteria of Government Resolutions served the purpose very well at the initial stage. But as we progressed with their implementation, fissures started showing up. It was also felt that there should be one overarching piece of government resolution that covers the JFM all over the state.

The forest department, government of West Bengal was mulling with the idea of replacing the old resolutions with a new one for quite some time. A series of consultations were held, expert opinions were taken; and the ideas generated were examined by a committee for incorporation in the new resolution. The result of this exercise is the new JFM resolution incorporating all the Forest Protection Committees and Eco-Development Committees vide Forest Dept's No- 40-FOR dated 31.01.2017.



## 10.1 JFMCS IN WEST BENGAL AS ON 31/03/2020

### 10.1.1 JFMCS in outside of Protected Area

West Bengal has a total of 4319 numbers of JFMCS (erstwhile FPCs) with total membership of 495235 with approximate ratio of male: female membership (first member) at 10:1 which have been reported to be registered in West Bengal covering 562475.027 ha forest area being protected by them. The SC & ST constitute 54.90 % of members in the JFMCS (erstwhile FPCs).

Division	No of JMFC	Area Protected (in Ha)	Members					
			Male	Female	Total	SC	ST	Others
Darjeeling	80	15239.108	4513	532	5045	220	2217	2608
Kurseong	46	13094.61	1084	1624	2708	440	1052	1216
Kalimpong	64	27104.86	3698	205	3903	205	1038	2660
Darjeeling WL	0	0	0	0	0	0	0	0
Baikunthapur	66	14023.78	6192	131	6323	4529	790	1004
Jalpaiguri	61	20722	10207	863	11070	4760	3336	2974
BTR East	17	9331.09	3340	103	3443	1591	1392	460
BTR West	27	14786	4320	665	4985	825	2876	1284
Coochbehar	25	3903.67	2932	209	3141	1497	517	1127
Jaldapara WL	31	6499.338	8255	1144	9399	1692	5004	2703
Gorumara WL	0	0	0	0	0	0	0	0
Raiganj	21	1162.6	1727	74	1801	864	412	525
Malda	6	456.219	479	114	593	319	200	74
Bankura North	543	43567.94	50584	2094	52678	19947	7917	24814
Bankura South	646	45367.96	56551	4822	61373	14892	18868	27613
Panchet	232	27905.09	27811	1594	29405	11160	4758	13487
Kangsabati North	246	17501.96	24019	885	24904	5748	8100	11056
Kangsabati South	305	25446	29561	569	30130	4293	10889	14948
Purulia	225	30845.22	20812	898	21710	7035	5913	8762
Burdwan	70	17641.5	17747	2645	20392	8813	4954	6625
Durgapur	22	2698.748	3782	3787	7569	2524	1329	3716
Midnapur	364	48637.378	48038	2801	50839	10131	9186	31522
Jhargram	474	62109.444	38254	2449	40703	9135	14906	16662
Rupnarayan	222	27066.24	27392	1019	28411	7391	7875	13145
Kharagpur	254	31401.04	29025	1586	30611	7028	8925	14658
Purba Midnapur	19	1887.48	4760	1097	5857	1256	50	4551
Birbhum	198	10391.1	14550	352	14902	4826	5028	5048
Nadia Msd	11	916.332	989	44	1033	253	243	537
24 Parganas (S)	40	42534	10801	10718	21519	11830	514	9175
STR	0	0	0	0	0	0	0	0
24 Parganas (N)	0	0	0	0	0	0	0	0
Howrah	4	234.32	788	0	788	332	108	348
<b>TOTAL</b>	<b>4319</b>	<b>562475.027</b>	<b>452211</b>	<b>43024</b>	<b>495235</b>	<b>143536</b>	<b>128397</b>	<b>223302</b>



### 10.1.2 JFMCs in the Protected Areas in West Bengal

A total of 146 numbers of EDCs (now re-designated as JFMC) having total membership of 40477 with approximate ratio of male: female membership at 3:2 have been reported to be registered in West Bengal covering 76112.691 ha forest within Protected Areas being protected by them. The SC & ST constitute 64.38% of members in the EDCs. With the promulgation of the latest JFMC resolutions, the erstwhile EDCs are called JFMCs vide no. 40-FOR dated 31.01.2017.

(As on 31.03.2020)

Name of Forest Division	Name of Protected Area	No. of EDC	Area Protected (in Ha)	No. of Members			SC	ST	Others
				Male	Female	Total			
Darjeeling Wildlife	Mahananda WLS	15	12406.55	2693	2218	4911	1305	1022	2584
	Senchal WLS	15	4114.81	1587	1211	2798	102	1496	1200
	Singalila N.P.	1	350	63	72	135	0	59	76
Gorumara Wildlife	Neora Valley N.P.	6	5020.01	1391	1198	2589	64	952	1573
	Gorumara N.P.	6	3695.62	1293	149	1442	482	457	503
	Chapramari Beat Forest Area	1	960.31	47	2	49	4	8	37
	Khunia Beat Forest area	2	1443.9	341	5	346	7	154	185
	Murti Beat Forest area	3	1613.04	460	90	550	115	189	246
Buxa Tiger Reserve (E)	Buxa Tiger Reserve	14	23534.97	1454	173	1627	238	612	777
Buxa Tiger Reserve (W)		7	10809.17	263	181	444	126	318	0
Jaldapara Wildlife	Jaldapara WLS	40	9079.251	9757	1398	11155	5173	3306	2676
Raiganj	Kulik WLS	3	130	193	21	214	172	30	12
Birbhum	Ballavpur WLS	4	200.80	276	34	310	9	196	105
Nadia – Murshidabad	Bethuadahari WLS	1	66.67	96	6	102	55	29	18
Sunderban Tiger Reserve	Sundarban Tiger Reserve	26	2584.89	4400	9048	13448	8736	326	4386
24 Parganas North	Bibhuti Bhushan WLS	1	93.70	35	2	37	24	5	8
Purba Midnapur	Arakbari EDC	1	9.0	192	128	320	290	0	30
<b>TOTAL</b>		<b>146</b>	<b>76112.691</b>	<b>24541</b>	<b>15936</b>	<b>40477</b>	<b>16902</b>	<b>9159</b>	<b>14416</b>



## 10.2 STATUS OF SELF HELP GROUP AS ON 31/03/2020 (EXCLUDING WOMEN SHG)

It is reported that there are 2902 SHGs in various districts in West Bengal of which 1803 are exclusively women SHGs.

District	Division	No of SHG	Members			No of JFMC/ EDC in SHG	Corpus Fund Generated (in INR)
			Male	Female	Total		
Darjeeling	Darjeeling	1	5	5	10	1	5000.00
Darjeeling	Kurseong	0	0	0	0	0	0.00
Kalimpong	Kalimpong	0	0	0	0	0	0.00
Darjeeling	Darjeeling WL	0	0	0	0	0	0.00
Jalpaiguri	Baikunthapur	63	79	604	683	49	721000.00
Jalpaiguri	Jalpaiguri	0	0	0	0	0	0.00
Jalpaiguri	Gorumara WL	5	0	63	63	2	0.00
Alipurduar	BTR East	0	0	0	0	0	0.00
Alipurduar	BTR West	229	0	0	0	0	0.00
Coochbehar	Cooch Behar	79	135	138	273	25	0.00
Coochbehar	Jaldapara WL	0	0	0	0	0	0.00
Uttar & Dakshin Dinajpur	Raiganj	0	0	0	0	0	0.00
Malda	Malda	0	0	0	0	0	0.00
Bankura	Bankura North	27	177	122	299	09	0.00
Bankura	Bankura South	0	0	0	0	0	0.00
Bankura	Panchet	2	39	0	39	2	97600.00
Purulia	Kangsabati North	0	0	0	0	0	0.00
Purulia	Kangsabati South	0	0	0	0	0	0.00
Purulia	Purulia	43	232	0	232	21	2476249.00
Burdwan	Burdwan	0	0	0	0	0	0.00
Burdwan	Durgapur	1	10	0	10	1	0.00
Paschim Medinipur	Midnapur	168	1741	0	1741	41	1049337.00
Paschim Medinipur	Jhargram	172	1637	204	1841	0	0.00
Paschim Medinipur	Rupnarayan	83	10	834	844	41	1842000.00
Paschim Medinipur	Kharagpur	0	0	0	0	0	0.00
Purba Medinipur	Purba Midnapur	0	0	0	0	0	0.00
Birbhum	Birbhum	91	574	510	1084	0	0.00
Nadia & MSD	Nadia Msd	0	0	0	0	0	0.00
24 Parganas (S)	24 Parganas(S)	135	888	1332	2220	185	0.00
Howrah	Howrah	0	0	0	0	0	0.00
24 Parganas (S)	STR	0	0	0	0	0	0.00
24 Parganas (N)	24 Parganas (N)	0	0	0	0	0	0.00
<b>TOTAL</b>		<b>1099</b>	<b>5527</b>	<b>3812</b>	<b>9339</b>	<b>377</b>	<b>61,91,186.00</b>



### 10.3 STATUS OF SELF HELP GROUP AS ON 31/03/2020 (EXCLUSIVE WOMEN SHG)

District	Division	No of SHG	Members Female	No of JFMC/ EDC in SHG	Corpus Fund Generated (in INR)
Darjeeling	Darjeeling	34	345	17	1090166.00
Darjeeling	Kurseong	21	255	16	0.00
Kalimpong	Kalimpong	0	0	0	0.00
Darjeeling	Darjeeling WL	25	275	16	0.00
Jalpaiguri	Baikunthapur	56	604	49	0.00
Jalpaiguri	Jalpaiguri	256	2560	61	0.00
Jalpaiguri	Gorumara WL	12	158	8	0.00
Alipurduar	BTR East	97	1085	0	0.00
Alipurduar	BTR West	0	0	0	0.00
Coochbehar	Coochbehar	0	0	0	0.00
Coochbehar	Jaldapara WL	39	326	23	1219500.00
Uttar & Dakshin Dinajpur	Raiganj	0	0	0	0.00
Malda	Malda	0	0	0	0.00
Bankura	Bankura North	174	1796	53	0.00
Bankura	Bankura South	102	1110	51	6019710.00
Bankura	Panchet	100	1109	50	2346760.00
Purulia	Kangsabati North	64	673	30	3744542.00
Purulia	Kangsabati South	66	660	33	2246084.00
Purulia	Purulia	258	2606	139	999996.00
Burdwan	Burdwan	0	0	0	0.00
Burdwan	Durgapur	123	1252	21	1236954.00
Paschim Medinipur	Midnapur	29	291	03	5532227.00
Paschim Medinipur	Jhargram	0	0	0	0.00
Paschim Medinipur	Rupnarayan	43	430	21	0.00
Paschim Medinipur	Kharagpur	45	460	31	2630889.00
Purba Medinipur	Purba Midnapur	0	0	0	0.00
Birbhum	Birbhum	5	1456	288	0.00
Nadia & MSD	Nadia Msd	0	0	0	0.00
24 Parganas (S)	24 Parganas(S)	111	1332	0	0.00
24 Parganas (S)	STR	143	1430	26	3146000.00
24 Parganas (N)	24 Parganas (N)	0	0	0	0.00
Howrah	Howrah	0	0	0	0.00
<b>TOTAL</b>		<b>1803</b>	<b>20213</b>	<b>936</b>	<b>3,02,12,828.00</b>





## 10.4 STATUS OF FDA AS ON 31/03/2020

A total of 1095 numbers of JFMCs in the state are part of FDA with total membership of 136633 with approximate ratio of male: female membership at 9:1 have been reported to be registered in West Bengal. The SC & ST constitute 56.59% of members in the FDA. The status of FDAs as on 31.03.2020 has been tabulated below:

Name of FDA	No of JFMC/EDC in FDA	No of JFMC/EDC Members in FDA						Fund Utilisation in NAP/other Schemes (in ₹ Lakh)
		Male	Female	Total	SC	ST	Others	
Darjeeling	80	4513	532	5045	220	2217	2608	0.00
Kurseong	46	1084	1624	2708	440	1052	1216	0.00
Kalimpong	64	3698	205	3903	205	1032	2666	0.00
Darjeeling WL	31	4343	3501	7844	1406	2648	3790	0.00
Baikunthapur	66	6192	131	6323	4529	790	1004	0.00
Jalpaiguri	61	0	0	0	0	0	0	0.00
Gorumara WL	18	3524	1452	4976	672	1758	2546	0.00
BTR East	0	0	0	0	0	0	0	0.00
BTR West	34	2013	206	2219	147	1611	461	0.00
Cooch Behar	0	0	0	0	0	0	0	0.00
Jaldapara WL	0	0	0	0	0	0	0	0.00
Raiganj	0	0	0	0	0	0	0	0.00
Malda	0	0	0	0	0	0	0	0.00
Bankura North	29	810	19	829	266	38	525	0.00
Bankura South	85	8606	330	8936	3178	2103	3655	0.00
Panchet	0	0	0	0	0	0	0	0.00
Kangsabati North	57	5940	160	6100	789	2563	2748	0.00
Kangsabati South	46	19211	396	19607	3203	7562	8842	0.00
Purulia	49	5961	356	6317	2107	1554	2656	0.00
Burdwan	57	13937	2312	16249	6764	4329	5156	0.00
Durgapur	0	0	0	0	0	0	0	0.00
Midnapur	0	0	0	0	0	0	0	0.00
Jhargram	0	0	0	0	0	0	0	0.00
Rupnarayan	85	11246	712	11958	3025	3417	5516	0.00
Kharagpur	254	29025	1586	30611	7028	8925	14658	0.00
Purba Midnapur	0	0	0	0	0	0	0	0.00
Birbhum	33	2787	221	3008	805	935	1268	0.00
Nadia Msd	0	0	0	0	0	0	0	0.00
24 Parganas (S)	0	0	0	0	0	0	0	0.00



Name of FDA	No of JFMC/EDC in FDA	No of JFMC/EDC Members in FDA						Fund Utilisation in NAP/other Schemes (in ₹ Lakh)
		Male	Female	Total	SC	ST	Others	
STR	0	0	0	0	0	0	0	0.00
24 Parganas (N)	0	0	0	0	0	0	0	0.00
Howrah	0	0	0	0	0	0	0	0.00
<b>TOTAL</b>	<b>1095</b>	<b>122890</b>	<b>13743</b>	<b>136633</b>	<b>34784</b>	<b>42534</b>	<b>59315</b>	<b>0.0</b>

## 10.5 STATEMENT OF JFMC SHARE IN SOUTH BENGAL FOR THE FINANCIAL YEAR 2019–20

Sl. No.	WBFDC Division	Directorate Division	No. of JFMCs	No of Beneficiaries	Amount (in ₹)	Share Per Capita (₹)
1	Medinipur FCD	Medinipur	109	17363	76685367.00	4,416.60
2		Rupnarayan	134	8405	27472833.00	3,268.63
3		Jhargram	77	7840	32123295.00	4,097.36
4		Kharagpur	22	2123	3760948.00	1,771.53
5	Purulia FCD	Purulia	8	415	1498011.00	3,609.67
6		Kangsabati North	21	1996	3399276.00	1,703.04
7		Kangsabati South	10	1012	2911955.00	2,877.43
8		Durgapur	5	386	1414215.00	3,663.77
9		Burdwan	10	3567	4814650.00	1,349.78
10		Birbhum	21	2489	5922757.00	2,379.57
11	Bankura FCD	Bankura North	88	8492	54688387.00	6,439.99
12		Bankura South	29	3085	15975222.00	5,178.35
13		Panchet	120	17167	93375486.00	5,439.24
	<b>Total-South Bengal</b>		<b>654</b>	<b>74340</b>	<b>32,40,42,402.00</b>	<b>4,358.92</b>

## 10.6 JFMC Share Distribution Status in South Bengal

YEAR	No. of JFMCs Involved	No. of Beneficiaries	Amount (₹ in Lakh)	JFMC Share Per Capita (in ₹)
1995–1996	163	20311	123.37	607.40
1996–1997	354	42361	243.45	574.70
1997–1998	248	32156	251.24	781.32
1998–1999	339	35530	287.00	807.76
1999–2000	445	50989	402.00	788.00
2000–2001	424	56479	455.50	806.00
2001–2002	520	45662	580.00	1270.00
2002–2003	1454	45662	430.01	942.00



YEAR	No. of JFMCs Involved	No. of Beneficiaries	Amount (₹ in Lakh)	JFMC Share Per Capita (in ₹)
2003–2004	1454	51047	548.75	1075.00
2004–2005	1510	60150	509.25	846.00
2005–2006	1944	56979	592.00	1039.00
2006–2007	1967	57864	634.57	1097.00
2007–2008	743	90103	1511.23	1677.00
2008–2009	583	64344	1487.96	2312.00
2009–2010	233	24407	922.36	3779.00
2010–2011	327	33585	959.70	2857.00
2011–2012	625	114398	1713.28	1497.65
2012–2013	598	59344	2039.14	3436.00
2013–2014	557	41950	1180.14	2813.00
2014–2015	500	51730	2147.48	4151.00
2015–2016	543	63140	2545.25	4031.12
2016–2017	686	71259	2615.10	3669.85
2017–2018	877	82330	3042.75	3643.42
2018–2019	617	73792	2909.87	3943.35
2019–2020	654	74340	3240.42	4358.92



# NON TIMBER FOREST PRODUCE (NTFP)

## CHAPTER 11

### 11.1 NEW PRODUCT LAUNCHED

Herbal Abir (both Red & Green colour) in collaboration with the Parks & Gardens (North) Division was launched in 2016–17 prior to the Holy Festival. The main ingredient for Red Abir was Marigold Flower and that of Green Abir was Bael Leaves.

### 11.2 ACTIVITIES

- Extraction of Citronella Oil is done from Citronella Java variety grass (*Cymbopogon winterianus*). Plantation of Citronella is done every year as intercrop in the plantation areas of territorial Divisions of Jalpaiguri, Jaldapara and Baikunthapur. All plantations are raised, harvested and extraction of oil is done with the help of JFMC members. Funding is done by West Bengal Forest Development Corporation Ltd.
- NTFP Division started bamboo nursery at Taipu during the year 2007–08 by Nodal cutting followed by micro proliferation. At present 80,000 Nos. seedlings are available.
- Besides Bamboo nursery, Medicinal Plant nursery is also maintained at Taipu, Khuntimari, Nilpara, Targhera and Sukna.
- A Non-Timber Forest Produce museum is maintained at Sukna.
- The manufacturing and packaging unit of NTFPs lies at Taipu, where Ayurvedic drugs and cosmetic products are prepared in the form of dust (churna), semisolid (avaleha) and tablet (batika).
- Overall now this Division manufactures the following products.

(i) **Oil:** Citronella.

Year	Citronella Plantation (Ha)	Oil Production (Ltr.)
2019–20	50	756.0

(ii) **Ayurvedic drug:**

(a) Churna- Trifala, Amlaki, Kalmegh, Chirata, Bel, Basak, Aswagandha, Gurmar, Trikatu, Thankuni, Tulsi, Gadai, Gulancha, Gokhur, Ulatkambal, Ashoka Bark, Satamul, Alkushi, Latakasturi, Nisinda, Haritaki, Sajina, Ginger, Di-nil, Neem, Manjista.

(b) Tablet- Banaliv, Hazmolate, Cough Heal

(iii) **Cosmetics & Ointment:** Garden fresh, Hair fresh, Banosubhra, Banokomol, Banoshree and Banoneel.

At present total 74 Nos. of NTFP Products are manufactured.

- **From Sale of NTFP Products:**

In the last FY 2019–20 ₹ 14.974 lakh of NTFP Products were sold by this division.

(Total value of NTFP collected from various division of West Bengal is ₹ 89.496 lakh.)

- **Selling of NTFP Items:**

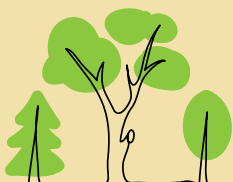
We have three (3) Govt. Sale Centre (outlets) managed by this Division:

i) Siliguri

ii) Jalpaiguri &

iii) Coochbehar

Apart from this we have 45 Authorised Dealers and also the NTFP items are made available through the Sale Centres managed by Divisional Managers, WBFDC and the DFOs of West Bengal.







**P**ublicity division was created during 1996 by Forest Department, Government of West Bengal with an aim to create general awareness about forest of this State.

The main aim of this Division is to Design and Publish different Books, Publicity Materials like Posters, Banners, Leaflets etc. specially on Forestry & Wildlife. This Division also organises different Awareness and Sensitization Programs among JFMC members, School students and General Public as a whole, specially on Conservation awareness and on different other issues. This Division also takes part in the Walk past on Red Road on the occasion of the Independence Day of India. This Division also plays an important role on celebration of Banamahotsav in the month of July and Banya Pran Dibas during November.

### 12.1 TARGET AND ACHIEVEMENTS OF PUBLICITY DIVISION DURING 2019–20

**Designing, Composing & Printing:** This Division prints books and other publicity materials time to time to generate awareness on various issues and to provide updated information for a functional office system. Like this, this year Publicity Division had also published different books Viz., (i) "Banabithi" Banamahotsav, July Issue-2019, (ii) '50 Year of Forestry in West Bengal, (iii), (iv) Civil list of Indian Forest Service, (v) Civil List of West Bengal Forest Service.

**Other Publicity Materials:** Printing & Supplying is an integral part of this Division. Various publicity items are

published by this Division, viz., (i) Leaflets, (ii) Posters, (iii) Banners, (iv) Flex Banners, (v) Jute bags, (vi) Designing, Composing, Layout & Printing Departmental Diary & Calendar. etc. to create awareness and to encourage people to participate in conservation activities.

**Awareness Programme through Electronic and Print Media:** To generate awareness among the people of the State, various messages on conservation had been broadcasted through electronic media like Doordarshan, All India Radio, FM channels and also published awareness messages in different Print Medias like newspapers, magazines etc.

**Celebration of Banamahotsav 2019:** This Division plays a vital role in observation of Banmahotsav. The State Level Programme on BanMahotsav – 2019 was organised at Herobhanga Vidyasagar High School ground, Jharkhali, Sundarban, South 24 Parganas on 14<sup>th</sup> July-2019. State Level Banmahotsav programme was celebrated through mass planting of seedlings. Displaying hoarding on celebration of Banmahotsav through I & C.A. Department was also done. All India Radio campaigns were organised. On this occasion Banabithi-2019, Banmahotsav Issue was published. Different other materials like Posters, Leaflets, etc., were also designed, printed and distributed on this occasion to cultivate Conservation Literacy. This Division also designed the Trophy/ Memento & Citation for the awardees for Best Plantation of West Bengal & Best JFMC in West Bengal.





**Bon Bandhob Utsav 2019:** In 2019 during the month of January & February "Bon Bandhob Utsav" was organized in the Forested Districts of West Bengal. This division supplied publicity material for the same as instructed time to time.

#### Banamahotsav-2019

1. Leaflet
2. Flex Banner
3. Poster
4. Bulk SMS Campaign
5. Leaflet Containing Message of Hon'ble MOS
6. Printing & Supply of Paper Sun Guard
7. Memento & Citation

**Sabujshree:** Publicity Division interested with the duty of making wide Publicity of the 'Sabujshree' project. The same was done through both audio-visual media campaign and publishing books, leaflet, certificate etc. All such publicity materials were supplied to different division in the field.

1. Sabujshree book
2. Leaflet (folder)
3. Certificate
4. JFMC Poster
5. Register
6. Sabujshree Poster



**Forest Martyrs' Day-2019:** Forest Martyrs' Day -2019 was celebrated on 11<sup>th</sup> September 2019 at Banabitan Park.

**Phool Mela at Eden Garden:** This Division also organised a stall at Eden Garden's Phool Mela-2019 for awareness generation.









### 13.1 WILDLIFE MANAGEMENT & CONSERVATION

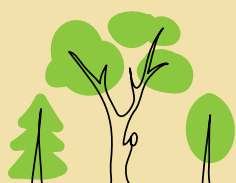
West Bengal has 4706 sq.km. of forests under protected area network which is 39.50% of the State's total forest area and 5.28% of the total geographical area. After the declaration of West Sundarban Wildlife Sanctuary as a new WLS and increase in area of Neora Valley National Park, now the PA network includes 1502.8146 sq.km. in sixteen Sanctuaries, 1981.4817 sq.km. in six National Parks and the balance areas are being represented by buffer areas of the two Tiger Reserves, viz. Sundarban Tiger Reserve and Buxa Tiger Reserve. There are two Elephant Reserves viz., Mayurjharna Elephant Reserve with an area of 414.00 Sq.km. and Eastern Dooars Elephant Reserve with an area of 977.51 Sq.km.

In addition, one Biosphere Reserve viz. Sundarban Biosphere Reserve with an area of 9630 Sq.km. This includes the Sundarban Tiger Reserve, the Lothian Island Wildlife Sanctuary, West Sundarban Wildlife Sanctuary and the Haliday Island Wildlife Sanctuary.

In West Bengal emphasis has been given to conservation and management of sustainable resources in order to achieve the goal of long-term biodiversity conservation. The over all strategy involves protection of critical habitats of endangered species. The strategies also focus on improved PA management, development of infrastructure, habitat improvement programme, reduction of man animal conflict, capacity building and involvement of local people in management of PA areas.

### 13.2 STATUS OF MANAGEMENT PLAN/TIGER CONSERVATION PLAN (TCP) AS ON 31.03.2020

Sl. No.	Name of Protected Area/ Tiger Reserve	Period	Present Status
1	Sundarban Tiger Reserve (incl. Sundarban NP & Sajnekhali WLS)	2017-18 to 2021-22	Approved Tiger Conservation Plan
2	Buxa Tiger Reserve (incl. Buxa NP & Buxa WLS)	2016-17 to 2026-27	Approved Tiger Conservation Plan
3	Gorumara National Park	2018-19 to 2027-28	Draft Management Plan returned to DFO, GWLD for rectification
4	Singhalila National Park	2013-14 to 2022-23	Management Plan Operational
5	Neora Valley National Park	2018-19 to 2028-29	Draft Management Plan including newly added area returned to DFO, GWLD for rectification
6	Jaldapara National Park	2018-19 to 2027-28	Management Plan Operational
7	Mahananda Wildlife Sanctuary	2011-12 to 2021-22	Management Plan Operational
8	Senchal Wildlife Sanctuary	2012-13 to 2021-22	Management Plan Operational
9	Chapramari Wildlife Sanctuary	2011-12 to 2021-22	Management Plan Operational





Sl. No.	Name of Protected Area/ Tiger Reserve	Period	Present Status
10	Bethuadahari Wildlife Sanctuary	2013–14 to 2022–23	Management Plan Operational
11	Bibhutibhusan Wildlife Sanctuary	2011–12 to 2020–21	Management Plan Operational
12	Ballavpur Wildlife Sanctuary	2009–10 to 2019–20	Management Plan Operational
13	Ramnabagan Wildlife Sanctuary (Bardhaman Zoological Park)	2012–13 to 2022–23	As it is managed by WBZA as per approved Plan of CZA, there is no need of Management Plan
14	Raiganj Wildlife Sanctuary	2011–12 to 2020–21	Management Plan Operational
15	Halliday Island Wildlife Sanctuary	2017–18 to 2026–27	Draft Management Plan returned to DFO, 24-Pgns(S) for rectification
16	Lothian Island Wildlife Sanctuary	2017–18 to 2026–27	Draft Management Plan returned to DFO, 24-Pgns(S) for rectification
17	Chintamoni Kar Wildlife Sanctuary	2015–16 to 2024–25	Draft Management Plan returned to DFO, 24-Pgns(S) for rectification
18	West Sundarban Wildlife Sanctuary	2016–17 to 2025–26	Management Plan Operational
19	Pakhi Bitan Wildlife Sanctuary	—	Instruction issued to prepare the MP

# Management Plan of Mayurjharna Elephant Reserve approved for the period 2014–15 to 2023–24.

## 13.3 PROTECTED AREAS OF WEST BENGAL

### 13.3.1 National Parks & Sanctuaries in West Bengal

Sl No.	Protected Area/Tiger Reserve/Elephant Reserve	Area in Sq. Km.	Notification No. & Date	Bio-geographic Zone	District
<b>National Parks</b>					
1.	Singalila N.P.	78.60	9057-For dt. 2.12.92	2C	Darjeeling
2.	Neora Valley N.P.	159.8917	103-FR/O/11M-91/12 dt. 11.01.13	2C	Kalimpong
3.	Buxa N.P.	117.10	3403-For dt. 5.12.97	7B	Alipurduar
4.	Gorumara N.P.	79.45	1-For dt. 1.1.98	7B	Jalpaiguri
5.	Sundarban N.P.	1330.10	2867-For dt. 4.5.84	8B	South-24 Parganas
6.	Jaldapara N.P.	216.34	975-For dt. 27.4.12	7B	Alipurduar
	<b>Total</b>	<b>1981.4817</b>			
<b>Sanctuaries</b>					
1.	Jorepokhri Salamander W.L.S.	0.04	1107-For dt. 11.03.85	2C	Darjeeling
2.	Senchal W.L.S.	38.88	2773-For dt. 19.8.98	2C	Darjeeling
3.	Chapramari W.L.S.	9.60	2774-For dt. 19.8.98	7B	Jalpaiguri
4.	Mahananda W.L.S.	158.04	2775-For dt. 19.8.98	7B	Darjeeling & partly at Jalpaiguri
5.	Raiganj W.L.S.	1.30	1901-For dt. 11.4.85	7B	North Dinajpur
6.	Bethuadahari W.L.S.	0.6686	2772-For dt. 19.8.98	7B	Nadia
7.	Ballavpur W.L.S.	2.021	4655-For dt. 11.7.77	7B	Birbhum
8.	Ramnabagan W.L.S.	0.145	4345-For dt. 30.9.81	7B	Bardhaman
9.	Bibhutibhusan W.L.S.	0.64	2776-For dt. 19.8.98	8B	North-24 Parganas
10.	Chintamoni Kar Bird Sanctuary (old Narendrapur W.L.S.)	0.07	4300-For dt. 21.10.05	8B	South-24 Parganas



Sl No.	Protected Area/Tiger Reserve/Elephant Reserve	Area in Sq. Km.	Notification No. & Date	Bio-geographic Zone	District
11.	Sajnakhali W.L.S.	362.40	5396-For dt. 24.6.76	8B	South-24 Parganas
12.	Haliday Island W.L.S.	5.95	5388-For dt. 24.6.76	8B	South-24 Parganas
13.	Lothian Island W.L.S.	38.00	2771-For dt. 19.8.98	8B	South-24 Parganas
14.	Buxa W.L.S.	314.52	316-For dt. 24.1.86; 7588-For dt. 6.10.90 and 12-For dt. 1.1.91	7B	Alipurduar
15.	West Sundarban W.L.S.	556.45	1828-For dt. 11.9.13	8B	South-24 Parganas
16.	Pakhi Bitan (Bird Sanctuary)	14.09	2157-FR/O/L/6M-04/2015 dated 11.08.2016	7B	Jalpaiguri
	<b>Total</b>	<b>1502.8146</b>			

### 13.3.2 Tiger Reserves in West Bengal

Tiger Reserves				
<b>1. Buxa Tiger Reserve</b>				
Core Area	390.5813	3051-For dt. 06.08.09	7B	Alipurduar
Buffer Area	370.2886	3050-For dt. 06.08.09		
<b>Total</b>	<b>760.8699</b>			
<b>2. Sundarban Tiger Reserve</b>				
Core Area	1699.62	6028-For dt. 18.12.07	8B	South-24 Parganas &
Buffer Area	885.27	615-For dt. 17.02.09		North-24 Parganas
<b>Total</b>	<b>2584.89</b>			
<b>Total</b>	<b>3345.7599</b>			

\* The total area includes NP and Sanctuary areas already mentioned.

### 13.3.3 Biosphere Reserve in West Bengal

Biosphere Reserve	Area in Sq. Km.	Notification No. & Date	Bio-geographic Zone	District	Ecologically Important Species
Sundarban Biosphere (including STR, Sajnakhali, West Sundarban, Lothian and Haliday WLSs)	9630	Govt. of India vide No. 16/6/84-CSC dt. 19.03.1989		South-24 Pgns. North-24 Pgns.	Tiger ( <i>Panthera tigris tigris</i> ), Estuarine Crocodile ( <i>Crocodylus porosus</i> ), Water Monitor Lizard ( <i>Varanus salvator</i> ), Mangrove plants like <i>Nipa fruticans</i> , <i>Avicennia spp.</i> , <i>Ceriops spp.</i> , <i>Excoecaria agallocha</i> , etc.
<b>Total</b>	<b>9630</b>				

### 13.3.4 Elephant Reserves in West Bengal

Elephant Reserves:				
<b>Eastern Duars ER</b>				
Core	484.00	3293-For dt. 28.8.2002		
Buffer	493.51		7B	Jalpaiguri & Alipurduar
<b>Total</b>	<b>977.51</b>			
<b>Mayurjharna ER</b>				
	414.00	3040-For. dt. 24.10.2002	6B	Paschim Medinipur, Bankura and Purulia
<b>Total</b>	<b>1391.51</b>			



### 13.3.5 Conservation Reserves in West Bengal

Conservation Reserves	Area in Sq. Km.	Notification No. & Date	Bio-geographic Zone	District
Deul	10.50	1555-For.dt.19.05.2017	7B	Burdwan
Hijli	15.50	1555-For.dt.19.05.2017	6B	Paschim Medinipur
Tekonia	5.87	1555-For.dt.19.05.2017	7B	Coochbehar
Mukutmonipur	43.70	1555-For.dt.19.05.2017	6B	Bankura
Garpanchkot	1340.34	1555-For.dt.19.05.2017	6B	Purulia
<b>Total</b>	<b>1415.91</b>			

## 13.4 WILDLIFE CENSUS

### 13.4.1 Tiger

Demography of Tiger individuals captured in Sundarban Tiger Reserve (2016–17 to 2019–20)

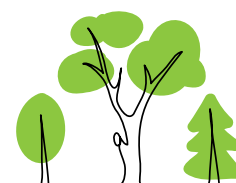
Sl. No.	Range/Unit	No. of Individuals By Year		
		2016–17	2018–19 (Aite)	2019–20
1	Sajnekhali Wildlife Sanctuary	14	15	10
2	Basirhat Range	14	13	19
3	National Park (West) Range	19	18	20
4	National Park (East) Range	16	20	24
5	24-Parganas (South) Division	24	22	23
	<b>Total</b>	<b>87</b>	<b>88</b>	<b>96</b>

### 13.4.2 Rhinoceros

Year	Jaldapara WL Divn	Gorumara WL Divn	Total
2006	108	27	135
2008		31	–
2009	125		–
2011	149	35*	184
2012		43*	–
2013	186		–
2014		50*	–
2015	204	49 + 2 (Darjeeling WL Division)	255
2019	237	52	289

\*(Gorumara, Chapramari & adjoining areas of Gorumara N.P. & Chapramari WLS)

Rhino Population (as per 2019 Census)				
Protected Area	Male	Female	Sex Unidentified	Total
Jaldapara NP	98	94	45	237
Gorumara NP (including Chapramari WLS & adjoining areas of Gorumara & Chapramari)	25	17	10	52
<b>Grand Total</b>	<b>123</b>	<b>111</b>	<b>55</b>	<b>289</b>



### 13.4.3 Leopard

Year	Gorumara WLD	Buxa TR	Jaldapara WLD	Mahananda WLS	Other Areas	Total
2004	43	Not done	28	26	67	<b>164</b>
2012	Not done	105 (BTR-West)	Not done	Not done	Not done	<b>105+</b>

### 13.4.4 Gaur

Year	Total Number
2009–10	Not less than 901 (Gorumara NP & Chapramari WLS only)
2012–13	414 BTR(W)
2013–14	782 BTR(W)

### 13.4.5 Elephant

Year	Total Number
1989	175
1993	186
1997	230–250
1998	230–250
2000	327
2002	328*
2005	North Bengal 300–350 & South Bengal 96
2007	North Bengal 300–350 & South Bengal 25 (excluding migratory population)
2010	North Bengal 529 & South Bengal 118 (including migratory population)
2014	North Bengal 590+, Census not done in South Bengal.
2017	All India Synchronized Elephant Population Estimation North Bengal – 488 nos. and South Bengal 194 nos.

### 13.4.6 Crocodile (Salt Water Crocodile)

Exercised in STR & 24-Parganas (South) Division

Year	Indirect Sighting	Direct Sighting			Total
		Adult	Juvenile	Hatchling	
2012	99	69	61	10	140

## 13.5 MAN-ANIMAL CONFLICT ISSUES

### 13.5.1 Persons Killed /Injured by Wild Animals during 2019–20

Sl. No. (1)	Name of Animals (2)	No. of Persons Killed (3)	No. of Persons Injured (4)
1	Elephant	116	80
2	Tiger	14	0
3	Leopard	2	53
4	Gaur		30
5	Crocodile	1	
6	Wild Boar		1
7	Monkey/Langur		65
8	Himalayan Black Bear	1	
	<b>Total</b>	<b>134</b>	<b>229</b>





### 13.5.2 Ex-Gratia Payment for Compensation

Division	Person Killed (No.)	Person Injured (No.)	Comp Paid for Human Life & Injury	Livestock Killed/ Injury (No.)	Comp paid for Livestock Killed	Hut Damage (No.)	Comp Paid for Hut Damage	Crop Damage (Ha.)	Comp Paid for Crop Damage	Total Comp
Darjeeling WL Division	2	1	412350.00	119	238000.00	66	277000.00	34.740	522650.00	1450000.00
Gorumara WL Division	20	108	5982732.00	4	11000.00	8	43000.00	29.790	447000.00	6483732.00
Jaldapara WL Division	17	18	3395463.00	89	138300.00	424	1602000.00	216.150	2963118.00	8098881.00
Buxa Tiger Reserve (W)	6	5	1920000.00	64	82000.00	211	577300.00	71.000	633000.00	3212300.00
Buxa Tiger Reserve (E)	3	5	457000.00	31	88500.00	210	600500.00	104.080	1288660.00	2434660.00
Jalpaiguri Division	10	2	1348600.00	0	42400.00	479	1563000.00	192.762	466100.00	3420100.00
Kurseong Division	10	5	2412700.00	2	5000.00	67	168000.00	173.000	2609300.00	5195000.00
Baikunthapur Division	3	0	800000.00	0	0.00	163	235900.00	52.340	785100.00	1821000.00
Coochbehar Division	0	0	0.00	69	122000.00	5	18000.00	4.988	74813.00	214813.00
Rupnarayan Division	1	7	408795.00	18	23500.00	54	233130.00	463.755	6929008.00	7594433.00
Kharagpur Division	3	1	1195704.00	0	0.00	144	671000.00	646.840	9117835.00	10984539.00
Jhargram Division	13	7	4130520.00	0	0.00	79	498695.00	310.210	4551785.00	9181000.00
Bankura (North) Division	5	7	1430293.00	0	0.00	516	1886105.00	230.910	3463600.00	6779998.00
Bankura (South) Division	2	0	600000.00	5	10000.00	11	52000.00	61.634	955091.00	1617091.00
Burdwan Division	0	0	0.00	0	0.00	0	0.00	25.000	0.00	0.00
Purulia Division	3	7	1200000.00	0	0.00	89	411000.00	328.000	4928850.00	6539850.00
Panchet Division	2	1	703421.00	0	0.00	9	45000.00	69.340	1040200.00	1788621.00
Birbhum Division	0	0	0.00	0	0.00	0	0.00	0.000	0.00	0.00
24-Parganas (South)	0	0	0.00	0	0.00	0	0.00	0.000	0.00	0.00
Sundarban Tiger Reserve	0	0	0.00	0	0.00	0	0.00	0.000	0.00	0.00
Medinipur Division	14	54	4909000.00	0	0.00	382	1687600.00	884.116	13557335.00	20153935.00
Purba Medinipur Division	2	0	400000.00	0	0.00	0	0.00	0.000	0.00	400000.00
Durgapur Division	15	0	800000.00	0	0.00	0	0.00	0.000	0.00	800000.00
Darjeeling Division	0	0	0.00	1	6000.00	0	0.00	0.000	0.00	6000.00
Kangsabati (South) Division	0	0	0.00	0	0.00	0	0.00	4.440	147000.00	147000.00
Kalimpong Division	3	1	408427.00	0	0.00	11	38000.00	1.896	29500.00	475927.00
<b>Total</b>	<b>134</b>	<b>229</b>	<b>32915005.00</b>	<b>430</b>	<b>766700.00</b>	<b>2928</b>	<b>10607230.00</b>	<b>3904.991</b>	<b>54509945.00</b>	<b>98798880.00</b>



## 13.6 DEATH OF WILD ANIMALS DURING 2019–20 IN WEST BENGAL

Name of Animals	Natural Death	Accident	Poaching	Retaliatory Killing	Total
Wild Elephant	14	11	0	0	25
Tiger	0	0	1	0	1
Leopard	15	3	0	0	18
Rhino	7	0	1	0	8
Gaur	44	3	0	0	47
Barking Deer	5	1	1	0	7
Sambar	4	1	0	0	5
Spotted Deer	6	2	0	0	8
Wild Boar	1	0	1	0	2
Leopard Cat	1	0	0	0	1
Jungle Cat	2	0	0	0	2
Dolphin	1	0	0	0	1
Fishing Cat	1	1	0	0	2
Hog Deer	1	0	0	0	1
<b>Total</b>	<b>102</b>	<b>22</b>	<b>4</b>	<b>0</b>	<b>128</b>

### 13.6.1 Seizure of Wildlife & Wildlife Articles reported during the year 2019–20

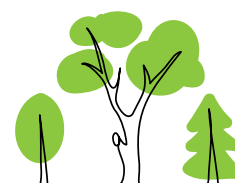
Sl. No.	Seized Items	Qty.
1.	Elephant tusk	4 Nos.
2.	Rhino horn	2 Nos.
3.	Rhino hooves	4 Nos.
4.	Leopard skin	3 Nos.
5.	Leopard jaw	1 No.
6.	Leopard skull	1 No.
7.	Tiger (carcass)	1 No.
8.	Tiger skin	1 No.
9.	Tiger skin with head	1 No.
10.	Hyena (carcass)	1 No.
11.	Rhino bone	1 No.
12.	Lion cub	1 No.
13.	Elephant finger ring containing ivory	30–35 Nos.
14.	Indian Birds	1471 Nos.
15.	Snake	15 Nos.
16.	Langur	7 Nos.
17.	Gecko	46 Nos.
18.	Turtle	1456 Nos.
19.	Squirrel	11 Nos.
20.	Pangolin scale	510 Nos.
21.	Deer Meat	9.5 Kg.
22.	Pangolin	8 Nos.



Sl. No.	Seized Items	Qty.
23.	Pangolin skin & scale	1 No.
24.	Monkey	7 Nos.
25.	Civet	4 Nos.
26.	Mongoose	4 Nos.
27.	Monitor Lizard	2 Nos.
28.	Deer skin	2 Nos.
29.	Tortoise	16 Nos.
30.	Sambar	1 No.
31.	Wild Boar	2 Nos.
32.	Barking Deer	1 No.
33.	Tortoise shell	5.5 Kg.

### 13.7 WILDLIFE OFFENCE UNDER WILDLIFE (PROTECTION) ACT, 1972 DURING 2019-20

Division	POR	COR	UDOR	Person Arrested
Darjeeling Wildlife Division	2	444	169	5
Gorumara Wildlife Division	3	71	26	15
Jaldapara Wildlife Division	10	0	0	18
Buxa Tiger Reserve (East)	2	0	0	4
Buxa Tiger Reserve (West)	5	0	0	12
Baikunthapur Division	4	0	0	6
Jalpaiguri Division	2	0	0	3
Kurseong Division	4	0	0	5
Coochbehar Division	2	0	0	5
Malda Division	1	0	4	1
Raiganj Division	5	0	0	10
Nadia-Murshidabad Division	4	0	2	8
Burdwan Division	5	1	8	8
Purba Medinipur Division	1	0	0	5
Kangsabati (North) Division	1	0	0	0
Bankura (North) Division	0	0	1	0
Bankura (South) Division	0	0	0	0
Panchet Division	0	40	11	0
Howrah Division	2	0	0	0
24-Parganas (North) Division	13	1	4	21
24-Parganas (South) Division	14	15	4	36
Sundarban Tiger Reserve	4	2090	11	24
Wildlife (Headquarters)	10	0	52	51
<b>Total</b>	<b>94</b>	<b>2662</b>	<b>292</b>	<b>237</b>



### 13.8 ANIMAL RESCUED IN WEST BENGAL DURING THE YEAR 2019–20

Sl. No.	Species	Number	Sl. No.	Species	Number
1	Bird	2483 Nos.	18	Bear	1 No.
2	Snake	4752 Nos.	19	Elephant	15 Nos.
3	Turtle	2646 Nos.	20	Leopard	26 Nos.
4	Tortoise	146 Nos.	21	Wild Boar	17 Nos.
5	Monitor Lizard	83 Nos.	22	Gaur	22 Nos.
6	Jackal	41 Nos.	23	Dolphin	6 Nos.
7	Monkey	205 Nos.	24	Goral	1 No.
8	Langur	865 Nos.	25	Barking Deer	30 Nos.
9	Jungle Cat	43 Nos.	26	Spotted Deer	4 Nos.
10	Fishing Cat	27 Nos.	27	Hog Deer	5 Nos.
11	Leopard Cat	1 No.	28	Crocodile	11 Nos.
12	Civet	425 Nos.	29	Chameleon	10 Nos.
13	Porcupine	7 Nos.	30	Mongoose	23 Nos.
14	Pangolin	9 Nos.	31	Sambar	5 Nos.
15	Gecko	55 Nos.	32	Bengal Fox	8 Nos.
16	Hyena	1 No.		–	–
17	Nilgai	2 Nos.		<b>Total</b>	<b>11975 Nos.</b>

### 13.9 RECOGNITION STATUS OF RESCUE CENTRES /DEER PARK/ ZOOS IN WEST BENGAL

Sl. No.	Name	Division/ District	Status	CZA's Letter No.
1.	Padmaja Naidu Himalayan Zoological Park	Darjeeling Division	Recognized as a 'Medium Zoo' upto 20.01.2019	F. No. 19-20/92-CZA(325) (Vol. IX)/367/2016, dt. 03.03.2016
2.	North Bengal Wild Animal Park, Siliguri	Jalpaiguri	Relocation of Kunjanagar Eco-Park, Jalpaiguri to North Bengal Wild Animal Park, Siliguri approved by the CZA vide F.No.22-64/2004-CZA(461) (AK)/7287, dt. 10.06.2015	For.Deptt., Govt. of WB's Letter No. 2372-For/ O/N/11-M-71/2013 dt. 21.11.14
3.	South Khairbari Leopard Safari & Rehabilitation Centre, Coochbehar	Jaldapara Wildlife Division	Recognized as 'Mini Zoo' upto 30.09.2015. This has been ordered to be physically closed vide letter F.No. 22-64/2004-CZA(461)(M)/4625 dt. 09.04.14. of CZA. This to be maintained as South Khairbari Rescue Centre only.	F.No. 22-63/2004-CZA(462)(M)/3635 dt.26.09.2013



Sl. No.	Name	Division/ District	Status	CZA's Letter No.
4.	Bochamari Gharial Rescue Centre and Deer Park/ Rasik Beel	Coochbehar Division	Recognized as 'Mini Category Zoo', upto 22.03.2020. (The Satellite Facility at Kholta of Rasik Beel Mini Zoo has been ordered to be physically closed vide letter F.No. 22-64/2004-CZA(461)(M)/4625 dt. 09.04.14.)	F.No.22-88/2004-CZA(499)(Vol.II)/(PKR)/2900/2018 dt.10.04.2018
5.	Animal Rescue Centre, Surulia	Kangsabati (North) Division	Recognized as 'Mini Zoo' upto 28.09.2019	F.No.22-71/2004-CZA(457)(Vol.I)/NS/156/2019 dt.29.01.2019.
6.	Adina Deer Park, Adina, Malda	Malda Division	Recognized as 'Mini Zoo' upto 05.05.2018.	F.No.22-49/2004-CZA(489)(NS)/911/2016, dt.20.06.2016.
7.	Bardhaman Zoological Park, Bardhaman (formerly known as Ramnabagan Deer Park)	Burdwan Division	Recognized as 'Small Category Zoo' upto 27.09.2020.	F.No. 22-67/2004-CZA(473)(Vol.II) (PKR)/4960/2018 dt.30.10.2018.
8.	Garchumuk Deer Park	Howrah Division	Recognized as 'Mini Zoo' upto 05.05.2017	F.No. 23-3/97-CZA (382)(NS)/978/20/8, dt.22.06.2016
9.	Alipore Zoological Garden, Kolkata	Kolkata	Recognized as 'Large Category Zoo' upto 30.11.2018.	F.No.19-45/92-CZA (328) (Vol.III) (Pt.)(NS)/8024, dt.18.11.2015.
10.	Marble Palace Zoo (Private)	Kolkata	Recognized as 'Mini Zoo' upto 22.03.2019.	19-81/93-CZA(316) (M)/4622, dt. 09.04.2014.
11.	Junglemahal Zoological Park, Jhargram (Formerly known as Jhargram Deer Park & Mini Zoo)	Jhargram Division	Recognized upto 21.03.2019 (Name changed to Junglemahal Zoological Park vide W.B. Govt. Notification No. 1153-For/O/11M-11/2015 dt. 03.06.15)	F.No.19-204/93-CZA(321) (Vol.II)(AK)/700/2017 dt. 30.03.2017
12.	Sundarban Wild Animals Park, Jharkhali (Jharkhali Satellite Zoo)	24-Parganas (South) Division	Relocation of Kumari Kangsabati Deer Park, Bankura to Sundarban Wild Animals Park, Jharkhali approved by the CZA	F.No.19-224/93-CZA(322)(NS)/7298 dt. 17.06.2015 & F.No.19-224/93-CZA(322) (Vol-I)(AK) /2048/2016 dt. 15.07.2016 & No. 7-10/2020-CZA (Part-I) dt. 25.08.2020
13.	Harinalaya, New Town, Kolkata	24-Parganas (North) Division	Deer Park	F.No. 22-81/2004-CZA(498)(Vol.II)(NS)/7547 dt. 06.08.2015



## 13.10 WILDLIFE CONSERVATION AWARD 2019

The Wildlife Wing, West Bengal has been recognizing the Staff, Officers, Individuals /NGOs for quite some past years by giving the Wildlife Conservation Awards for outstanding performance in the field of protection and conservation of Wildlife throughout the year and State. During the year, 2016–17, Department of Forests, Govt. of West Bengal issued a Notification for awarding of Wildlife Conservation Award to the Forest Officers (upto the rank of DFO), individuals, groups, NGOs etc., who have shown exemplary courage and valour or have done exemplary work for the protection of wildlife.

There are three categories of Award given:

1. Award for Protection and Rescue of Wildlife
2. Award for Wildlife Conflict Management

### 3. Award for Conservation Awareness

A Committee for scrutiny of nominations was formed under this Order.

#### 13.10.1 Awards and Presentation

Cash rewards were declared in Wildlife Conservation Award by the Department of Forests, Govt. of West Bengal. The award recipients receive a commemorative plaque, a certificate of appreciation and award of ₹25,000/- (Rupees Twenty-Five Thousand) only, in cash. The award recipients are also provided with admissible travel expenses to attend the award presentation ceremony.

The recipients of Wildlife Conservation Award, 2019 were:

#### 13.10.2 CATEGORY OF AWARD - Award for Protection and Rescue of Wildlife

Sl. No.	Name of Division	Name of the Person/Association	Rank
1	Buxa Tiger Reserve (West)	1. Shri Durgakant Jha, WBFS, ADFO, BTR(W)	<b>Selected</b>
		2. Shri Prasenjit Pal, DR/Fr.	
		3. Shri Sankar Kumar Chhetri, DR/Fr.	
		4. Shri Ratan Kumar Chhetri, HFG	
2	Wildlife (Headquarters), West Bengal	<b>Team - Wildlife (HQs)</b>	<b>Selected</b>
		1. Shri Debasis Chatterjee, FR	
		2. Shri Suvendu Sinha, FR	
		3. Shri Satyendu Chakraborty, FR	
		4. Shri Dilip Prasad, DR/Fr.	
		5. Shri Kunal Kumar Singh, DR/Fr.	
		6. Shri Mantu Kumar Deb, DR/Fr.	
		7. Shri Sujoy Sarkar, DR/Fr.	
		8. Shri Sarathi kumar Roy, HFG (Retd.)	
		9. Shri Baren Mondal, FG	
		10. Shri Pares Nath Chowdhury, FG	
		11. Shri Subhash Chandra Ghosal, FG	
		12. Smt Bharati Das, FG	
		13. Shri Biswajit Pal, CDL	
		14. Shri Santo Guli Majhi, CDL	
		15. Shri Abhay Kumar, CDL	
		16. Shri Amal Mahato, CDL	
		17. Shri Susanta Guli, CDL	





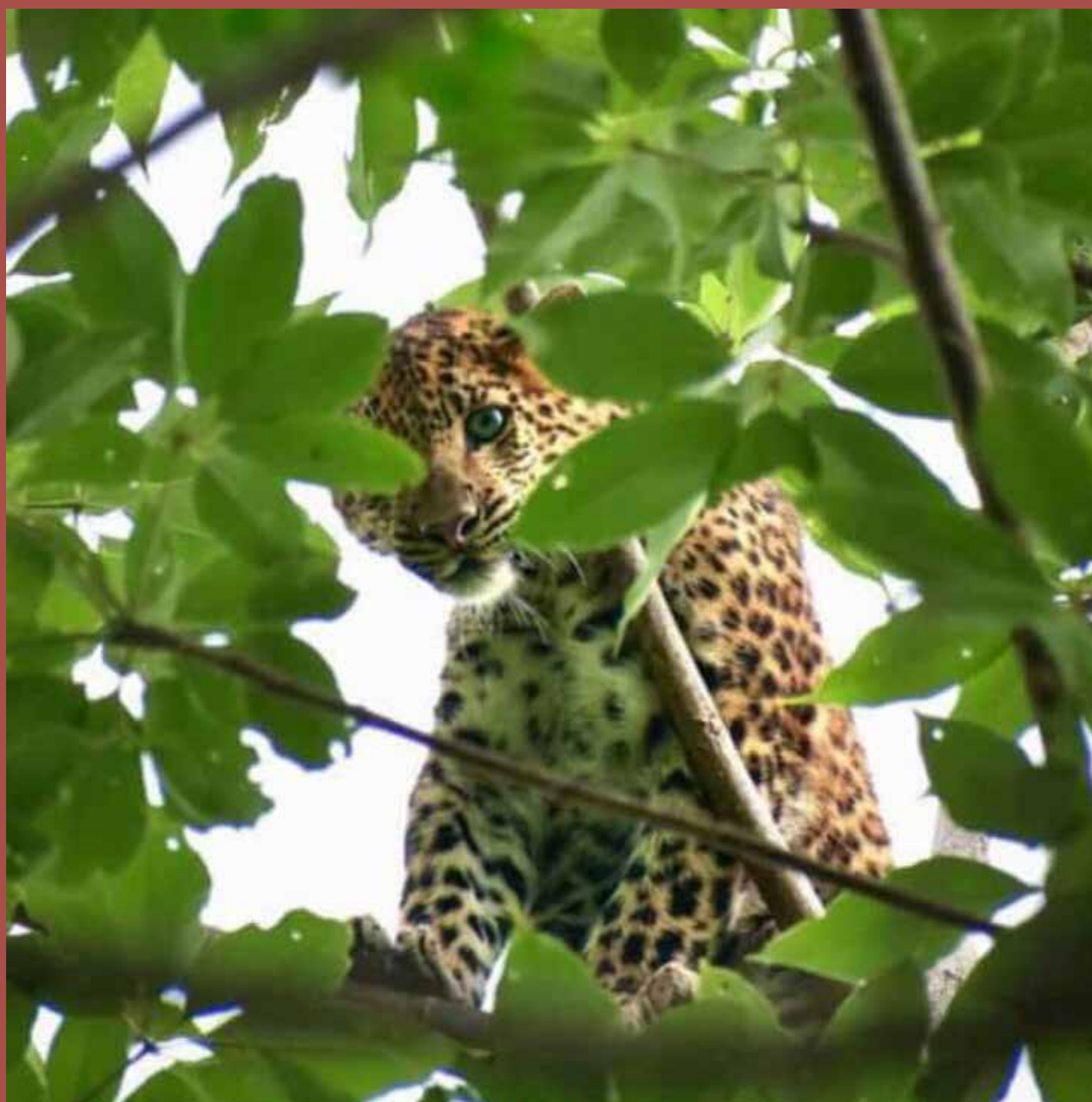
### 13.10.3 CATEGORY OF AWARD - Award for Wildlife Conflict Management

Name of Division	Name of the Person/Association	Rank
Jaldapara Wildlife Division.	<b>Shri Biswajit Bisoi, FR</b> Forest Range Officer, Lankapara Range, Bollalguri, P.O. Totopara, P.S. Madarihat, Dist Alipurduar, PIN 735220	<b>Selected</b>

### 13.10.4 CATEGORY OF AWARD - Award for Conservation Awareness

Name of the Person/Association	Rank
<b>Shri Dinabandhu Biswas</b> Suri, Seharapara, P.O.& P.S. – Suri, Dist. Birbhum, PIN 731101, West Bengal.	<b>Selected</b>
<b>Late Anup Ghosh (Posthumous)</b> Napitpara, P.O. Nonachandanpur, P.S. Titagarh, Dist. 24-Parganas (North) PIN – 700122, West Bengal	<b>Selected</b>













# FORESTRY RESEARCH

## CHAPTER 14

### 14.1 INTRODUCTION

Forestry Research in West Bengal has been initiated since long and has resulted in the standardisation of different silvicultural practices, identification of suitable species, sources of regeneration material, introduction of clonal material, inventorisation of plant resources and medicinal plants etc.

The State represents a wide range of agro-climatic zones, soil profiles and accordingly a wide range of forest types, as in hilly terrain of North Bengal hills, terai and dooars, Gangetic plains, lateritic tract of south Bengal with mangrove forest in Sunarbans. Research Circle of the Directorate organises and implement research activities of the State Forest through three Divisions located at Darjeeling, Siliguri and Midnapore to cover these wide range of vegetation type and agro-climatic zones.

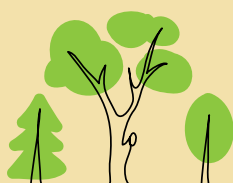
### 14.2 MAJOR MANDATE OF THE RESEARCH WING

1. Tree improvement for enhancing plantation productivity.
2. Supply of quality planting material (QPM).
3. Biodiversity studies on changes in natural forests and plantations.
4. Ex situ conservation.
5. In situ conservation.
6. Medicinal plants conservation.
7. Identification of Rare Endangered Threatened (RET) species.
8. Updating of nursery and plantation protocols.
9. Soil testing program prior to the raising of plantations.
10. Growing stock assessment of forests for working plans and marking for Silvicultural thinning of plantations.

### 14.3 PHYSICAL INFRASTRUCTURE WITH THE WING

#### 14.3.1 Permanent Research Plots – 255 ha.

Division	Location	Area	Major Activities
Silviculture South	Arabari, Midnapore	40 ha	1. Setting up of Clonal seed Orchards. 2. Herbal Garden. 3. Clonal hedges for large scale production of vegetative cuttings. 4. Mist Chamber and hardening chamber. 5. Progeny and provenance trials. 6. Comparative growth studies. 7. Performance trial for the clones.
	Maitybandh, Khatra	50 ha	
	Nunnungeria, Jhargram	20 ha	
	Hura, Purulia	10 ha	
Silviculture North	Salugara	35 ha	
	Lataguri	30 ha	
	Atiamochar	5 ha	
Silviculture Hills	Khoklong, Sukna	30 ha	
	Sonada	20 ha	
	Sukhiapokhri	10 ha	
	Lebong	5 ha	



### 14.3.2. Seed stands, Seedling seed orchards and Clonal seed Orchards

#### Seed stands

No of Species	No of Plots	Area
70	239	573.43 ha

#### SSO

No of Species	No of Plots	Area
15	25	117.5 ha

#### Clonal seed Orchard

Name of Species	No of Plots	Area
Gamar, Benteak, Jarul and Chikrashi etc	12	9 ha

### 14.3.3 Plus trees and Candidate plus trees

No of Species	No of Plus Trees	No of Species	No of Candidate Plus Trees
68	1094	73	1554

### 14.3.4 Permanent Preservation Plots

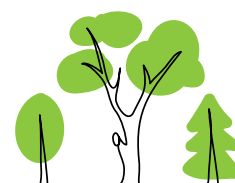
Name of Division	Nature of Plots	No of Plot	Area
Silviculture Hills	Permanent plot	20	250 ha
	LSP	1	4.5 ha
	Sample plot	76	41 ha
Silviculture North	Permanent plot	2	16 ha
	LSP	2	4.4 ha
	Sample Plot	3	0.6 ha
Silviculture South	Permanent plot	10	39 ha
	LSP	-	-
	Sample plot	6	4.25 ha

### 14.3.5 Soil testing Laboratory

At Salugara and Midnapore under Silviculture North and South Division respectively and presently Salugara Soil Laboratory are functional.

### 14.3.6 Nurseries

Silviculture North Division			
Sl. No.	Name	Location	Capacity
1	Rajabhatkhawa Research Nursery	Rajabhatkhawa	0.60
2	Lataguri Research Nursery	Lataguri	2.00
3	Salugara Research Nursery	Salugara	0.60
Silviculture South Division			
4	Amlachoti Research Nursery	Amalachati	2.00
5	Arabari Research Nursery	Arabari	2.00





Silviculture North Division			
Sl. No.	Name	Location	Capacity
6	Beliatore Research Nursery	Beliatore	2.00
7	Hura Research Nursery	Hura	0.50
8	Hatirampur Research Nursery	Hatirampur	2.00
Silviculture Hills Division			
9	Sonada Research Nursery	Sonada	0.30
10	Takdah Research Nursery	Takdah	0.20
11	Sukna Research Nursery	Sukna	2.00
13	Bhuttabari Research Nursery	Bhuttabari	0.40
14	Lava Research Nursery	Lava	0.50
15	Kalimpong Research Nursery	Kalimpong	0.20

## 14.4 TREE IMPROVEMENT PROGRAM

### 14.4.1 Maintenance of Plus trees

Name of Divisions	Creation of new Plus Tree	Plus Tree Maintained During 2019–20
Silviculture North Division	–	105
Silviculture South Division	–	55
Silviculture Hills Division	11	Nil

### 14.4.2 Supply of Quality Planting materials

Seeds are collected from the seed stands/Plus trees are supplied to the user Divisions for raising plantations after certification. During 2019–20 following seeds and seedlings are supplied to the user Divisions.

Name of Divisions	Quality Seedling Supplied (No)	Certified seeds Supplied (Kg)
Silviculture North Division	Nil	458.00
Silviculture South Division	Nil	1536.90
Silviculture Hills Division	Nil	320.65

### 14.4.3 Creation and maintenance of seed stands

Name of Divisions	Seed Stands Created	Seed Stands Maintained During 2019–20
Silviculture North Division	16 ha	85 ha
Silviculture South Division	25 ha	35 ha
Silviculture Hills Division	12 ha	Nil

### 14.4.4 Clonal Multiplication Area

Region	Area	Creation	Species
Silviculture Hills Div	0	2019–20	–
Silviculture North Div	2 ha	2019–20	Chikrashi and Jarul 1.00 ha each
Silviculture South Div	0	2019–20	–

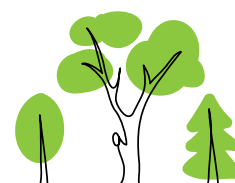


#### 14.5 (a) Experimental trials taken up and maintained during 2019–20

Sl. No.	Name of the trial	Objective	Location	Area	Division	Remarks
1.	Study of growth of seedling grown in different size of hypocot in experimental plantation.	To study the impact of the size of the root trainer in growth of seedling of 10 diff sp in plantation	Chandmura, Arabari	1 ha	Silvi South	Analysis of data continues.
2.	Germination trial after pre-treatment of seeds with chemical agents. 22 species tried.	To study the effect of pre-treatment to break seed dormancy	Arabari Salugara Sonada	Nurseries	All three Divisions	Results awaited.
3.	Vegetative propagation – Standardisation of hormone concentration for rooting of hard cutting for different species	To develop standard protocol for large production of vegetative cuttings.	Arabari Salugara Sukna Sonada	Nurseries	All three Divisions	Result will be published after completion.
4.	Vegetative propagation – Development of protocol for raising soft cutting for tree species. Species tried – Gamar, Chikrashi, Panisaj and Champ.	To develop standard technique using tender epicormic branch	Salugara	Nursery	Silvi North	Experiments to be repeated.
5.	Development of protocol for raising tall seedling using different media, irrigation and pot size.	To develop the media content and irrigation schedule.	Arabari	Nursery	Silvi South	Will be concluded next year.
6.	Study of eradication of Lantana camara after mechanical removal followed by tree sapling planting.	To develop effective weed eradication method from forest.	Lataguri	1 ha	Silvi North	It will be studied for next two years.
7.	Long term study on the growth characteristics and timber production pattern of the large transplanted saplings	Study on transplantation of large sapling and their growth.	Lataguri	1 ha	Silvi North	
8.	Standardization of hypocot size for raising seedling.	To find the best hypocot size for different hill species.	Lava	Nursery	Silvi Hill	

#### 14.5 (b) Maintenance of Experiment/Trial Plantation during 2019-20

Name of Divisions	Trial Plantation Maintained	No of Experiment Continued
Silviculture North Division	21.3 ha	6
Silviculture South Division	20.5 ha	9
Silviculture Hills Division	12 ha	6



## 14.6 MAINTENANCE OF PRESERVATION PLOT, SAMPLE PLOT AND LINEAR SAMPLE PLOT

Name of Division	Nature of Plots	No of Plot	Area	Study During 2019–20
Silviculture Hills	Permanent plot	20	250 ha	Not done during 2019–20
	LSP	1	4.5 ha	
	Sample plot	76	41 ha	
Silviculture North	Permanent plot	2	16 ha	Not done during 2019–20
	LSP	2	4.4 ha	
	Sample Plot	3	0.6 ha	
Silviculture South	Permanent plot	10	39 ha	Surveyed and documented.
	LSP		–	
	Sample plot		4 ha	

## 14.7 ARBORETUM AND BIO-DIVERSITY PARK MAINTAINED DURING 2019–20

Sl. No.	Name of Park	District	Year of creation	Area	Division	No of Species Present
1.	Ghum-Bhanjang	Darjeeling	1994	7.00	Silvi Hills	Trees –96 spp Shrubs 80 spp Orchids – 67 spp Med Plants –98 spp
2.	Delo	Kalimpong	1994	2.17	Silvi Hills	Trees – 98 spp Shrubs 42 spp Bamboo – 8 spp
3.	Sukna	Darjeeling	1942	6.00	Silvi Hills	Trees – 75 sp.
4.	Khunia	Jalpaiguri	1995	1.25	Silvi North	Trees – 167 sp.
5.	Rasik Bill/ Atiamochar	Coochbehar	2006	1.00	Silvi North	Trees – 78 sp.
6	Midnapore	Jhargram		1.30	Silvi South	Trees – 68 sp.

## 14.8 LLOYD BOTANICAL GARDEN

The Lloyd Botanical Garden, Darjeeling was established in 1878. The garden is located at an elevation of 6000 ft and covers an area of 40 acres. It has 161 tree species, 40 species of climbers and 114 species of orchids. The garden has a Herbarium with about 14000 sheets representing 175 families, 1145 genera and 3584 species. Besides this garden has a very good collection of books on plant kingdom. Digitisation of both the herbarium and library is in progress to make these unique resources available to visitors.

**Visitors during 2019–20 – 45447.**

## 14.9 CONSERVATION OF MEDICINAL PLANTS

### 14.9.1 MPCAs

Fourteen numbers Medicinal Plants Conservation Area (MPCA) are maintained of which 7 were established during 2013–14 and seven were a decade before. Effective measures are taken for protection of the rare and endangered medicinal plants as per the management plan of the MPCAs. Details of old and New MPCAs are given below,



### 14.9.2 Old MPCA

Sl. No.	Name of MPCA	Location	Area	Remarks
1	Tonglu	Darjeeling	230 ha	Survey is going on for the project of Revisit of Old MPCA under NMPB.
2	Dhotrey	Darjeeling	180 ha	
3	North Sevok	Darjeeling Wildlife	100 ha	
4	Surshuti	Jalpaiguri	100 ha	
5	North Rajabhatkhawa	BTR East	400 ha	
6	Garpanchkote	Purulia	250 ha	
7	Bonnie Camp	24 Parganas South	300 ha	

### 14.9.3 New MPCA

Sl. No.	Name of MPCA	Location	Area	Remarks
1	Panchnai	Darjeeling Wildlife	200 ha	Floral inventerisation completed and management plans were prepared. They are now monitored as per the prescription of management plan.
2	Phalut	Darjeeling Wildlife	200 ha	
3	Rachela	Gorumara Wildlife	200 ha	
4	Bichabhanga	Jalpaiguri	200 ha	
5	Jhalda	Purulia	200 ha	
6	Kankrajhore	Jhargram	300 ha	
7	Susunia	Bankura	300 ha	

### 14.9.4 Medicinal Plants Conservation Projects under NMPB, Govt of India

The National Medicinal Plant Board has sanctioned three projects during 2015 which is still going on.

- JFMC Project:** Augmentation of medicinal plants through plantations in forests as well as creation of infra structure to facilitate marketing of medicinal plants with the involvement of JFMC members -Under this project 225 JFMCs are involved 480 ha of plantation and inter crop were raised under 9 Divisions viz. Medinipur,

Jhargram, Kharagpur, Rupnarayan, Bankura(S), Bankura (N), Bishnupur, Kangsabati(N), Kangsabati(S), Purulia. The infrastructure for processing and storage has been constructed at all the Divisions.

- Establishment of seven new MPCA:** The work has been completed with the technical help of North Bengal University, Jadavpur University and other experts. They are maintained as per the management plans.
- Revisit of the seven old MPCA:** The study is being undertaken through FRLHT, Bengaluru. It will be concluded next year.

### 14.9.5 Ex situ Conservation of Medicinal Plants –Ex situ conservation works includes creation and maintenance of Herbal Garden and demonstration plots

#### Herbal Gardens

Name of Herbal Garden	Location	Area	No of Bed	No of Species Planted	Remarks
Amlachati	Amlachati, Jhargram	2 ha	468	704	One of the largest ex situ conservation plot for medicinal plant.
Digha	Digha, Purba Medinipore	0.095 ha	70	146	
Rajabhatkhawa	Rajabhatkhawa, Alipurduar.	0.5 ha	122	156	
Takdah	Takdah, Darjeeing	0.3 ha	55	85	
Salugara	Salugara	1.0 ha	–	–	Under construction.
Amkhoi	Ilambazar, Birbhum	0.53 ha	–	–	



## 14.10 SACRED GROVES IN THE DISTRICT OF PURULIA, BANKURA, MEDINIPUR AND JHARGRAM

The relic patches of forests are spread over South West Bengal and are mainly maintained and worshiped by the local community including tribal community generations after generations. Survey of these Groves was started during 2016–17 and completed during this year. 184 Sacred Groves were surveyed and documented in various places. A publication was also brought out giving details of these sacred Groves, photographs and believes of the local community during 2019–20.

## 14.11 PUBLICATION

Book on Sacred Groves of South West Bengal and Leaflets on herbal gardens under this Circle.

### 14.12.1 Soil Testing Program

Soil Lab	Sample Tested for Plantation Soil	Sample Tested for Soil Map
Midnapore Soil Lab	–	–
Salugara Soil Lab	168	391

### 14.12.2 Seed Testing Laboratory

A seed testing Laboratory, Seed godown and seed drying platform is under construction at Salugara under Silviculture North Division. It will be completed shortly and constructed to process and supply certified seed to the Divisions raising plantations and to the social forestry wing.

## 14.13 CAMPA

53 ha plantation were raised for formation of future Seed Stand.

## 14.14 RESEARCH PROJECTS UNDER WBFBCP

### 14.14.1 Mapping of forest soil nutrient status of North Bengal Plains

To estimate Organic Carbon, available Nitrogen, Phosphorus, Potassium, Calcium, Magnesium and Sulphur over 2000 sample to prepare deficiency/sufficiency map with an objective to assess nutritional status before raising plantations. The forest compartment covered the Baikunthapur, Jalpaiguri, Coochbehar, part of Buxa TR, Jaldapara and Kurseong Division.

The study is executing by Silviculture North Division with assistance from SLUSI, Ministry of Agriculture, GOI. This is two

years project started during 2018–19 and is expected to be completed by 2020–2021. 75% of the work has been completed and preparation of Soil nutrient Map is under process.

### 14.14.2 Tree improvement program in *Acacia auriculiformis*

Six promising clones of *Acacia* hybrid, six provenances from Karnataka and four from West Bengal is planted in three location in West Bengal for trial during 2018–19. The growth of some clones and provenances are promising. The analysis of growth will be completed during 2021–22 and the promising clones and provenances will be selected for use in plantations.

### 14.14.3 Seed Stands – evaluation of existing seed stands

**Objective:** To assess the condition of the existing seed stands over – ha. Asses the quality and quantity of seed production potential of the seed stand and to eliminate the bad seed stands.

IFP, Ranchi is conducting this study from 2019–20 and will be completed soon.

### 14.14.4 Evaluation and identification of new plus trees

**Objective:** to evaluate the performance of individual plus trees. To identify new plus trees, candidate plus trees for – no of species throughout the state of West Bengal. IFP, Ranchi is conducting the study and they have completed the field work and submitted draft report of the study.

### 14.14.5. Tree improvement program in Teak

**Objective:** To select better clone for raising planting material for Plantations.

The provenances from Kerala was planted for trial at Arabari, Beliatore, Ranibandh, Atiamochar and Sukna during 2019–20. The growth study will continue for next five years to achieve the result of the experiment. Five different clones brought from KFRI and one provenance from West Bengal are tried.

Three Divisions under Research Circle are conducting the study.

### 14.14.6 Development of protocol for raising tall seedling

**Objective:** To find the best and economic method on suitable potting mixture, pot size, irrigation schedule and spacing.

Executing Division – Silviculture South.

Works going on. It will be concluded during next year.









# MONITORING OF PLANTATIONS

## CHAPTER 15

### 15.1 OBJECTIVES

Monitoring and Evaluation of Forest Plantations created by Forest Directorate, Government of West Bengal are being conducted by the Monitoring Circle since last three decades. It is the regular conservations and recording of status of Survival, Height and other parameters in 1<sup>st</sup> year, 3<sup>rd</sup> year and 5<sup>th</sup> year plantations. Deviations from the Working Plan Prescription if any are also monitored. Monitoring involves giving feedback regarding the progress of the plantations to the fund lenders, implementing and beneficiaries so that the gathered information can be used in decision making for improving the plantation performance in future.

Survey, Monitoring and Evaluation of Forest Plantations is done by Monitoring Circle with two divisions, namely, Monitoring (North) and Monitoring (South) Division under its jurisdiction. Monitoring (N) division with headquarter at Siliguri covers the hilly areas of Darjeeling, Kalimpong, Kurseong and plains of Dooars and Terai region while Monitoring (South) Division with headquarters at Kolkata covers the area of South Bengal. Monitoring Circle is headed by CF, Monitoring and works under the guidance of CCF, Monitoring & Evaluation; APCCF, Research & Monitoring and PCCF, Research, Monitoring & Development, West Bengal.

### 15.2 MONITORING METHODOLOGIES

The analysis has been carried out and result achieved on the basis of data recorded in the prescribed Survey Monitoring data sheets.

The individual plantation data in a Composite Form was circulated to the concerned Divisional Forest Officer and their respective Conservator of Forests/Chief Conservator of Forests in advance for checking of data & comments. This helped them to replace the casualties & take other remedial measures targeted towards improvement of quality of plantations. The feedback received has been considered in the compilation of draft monitoring report.

Three major parameters viz. survival percentage, height and girth at breast height (only for 5<sup>th</sup> year plantation), inspection intensity by the DFOs, status of JFMC participation, etc. are taken into consideration in the process.

The other parameters viz. maintenance of plantation journal, sources of seed for raising nursery, time schedule of activity of creation stage, etc. are also considered in **Performance Scoring** of the plantation, the detail of which is given in the new monitoring methodology.

The above parameters are measured in the field in individual patch of the plantation by random sampling method. The procedure is given below. For the purpose of execution of survey & monitoring works the Statistical random sampling method is in practice.



The sampling intensity and size of sample plot for different ages of plantation is given below:

Sl. No.	Age of Plantation	Sampling Intensity	Size of Sample Plot	Data Recording
1.	1 <sup>st</sup> year	7.5% of the area	50mt. × 50mt.	No of seedling species wise, height class wise, plus other parameters
2.	3 <sup>rd</sup> year	5% of the area	50mt. × 50mt.	No of seedling species wise, height class wise, plus other parameters
3.	5 <sup>th</sup> year	5% of the area	50mt. × 50mt.	No of seedling species wise, height class wise, plus other parameters

#### a) Pre-survey Works

1. Copies of regeneration maps along with plantation journals are collected from the respective Divisions.
2. Location, area, spacing, planting scheme etc. are also recorded as check list.
3. A grid line as per scale is laid over the map with quadrates of 50 m × 50 m & each grid is serially numbered.
4. Numbers of Sample plots (grids) are chosen randomly using the statistical random number table.

#### b) Field works

1. The selected sample plots are identified in the field.
2. Boundary corners are clearly marked with raised earthen mound topped with painted peg and geo-location is recorded.
3. Total enumeration is carried out species wise and in respect of height class intervals and also girth at breast height for the 5<sup>th</sup> year plantation. Related other parameters are also collected from field as well as record books of the concerned Beat.
4. The area of plantation is checked in the field by traversing with GPS.
5. At the time of Survey & Monitoring, the staff of respective DFO remains present & put their initials on the data sheets as the sign of authentication.

### 15.3 NEW MONITORING METHODOLOGY

In the earlier method of plantation monitoring emphasis was given only on the weighted survival percentage for assessment of plantation quality. Although the data on height and girth at breast height were recorded but little use were made of those data in analysis of the quality of the plantation. The present adopted method of plantation

monitoring emphasizes on the different parameters which are prerequisites for raising a good quality plantation. Ten such parameters have been identified. These parameters have been broadly classified into following three categories.

1. **Conformity** to the existing rules, provisions and guidelines.
2. **Execution** of Plantation works in the field.
3. **Performance** of the plantation.

Each category has been assigned a score which varies with the age of the plantation, but the total score is kept 100 for all age category of the plantation. The total score of each category is sub divided among the parameters grouped under each category. The detail of parameter in each group is given below:

- **Conformity** to the existing rules, provisions and guidelines consists of four parameters-
  1. Legal status of land.
  2. Source of seed & status of nursery.
  3. Maintenance of plantation journal, regeneration plan.
  4. Planting pattern.
- **Execution** of Plantation works in the field consists of four parameters-
  1. Site quality & choice of species.
  2. Mechanism to protect plantation.
  3. Timely completion of prescribed plantation activities.
  4. Inspection intensity by supervising officers.
- **Performance** of the plantation consists of two parameters-
  1. Average survival percentage of seedling under different schemes during 1<sup>st</sup>, 3<sup>rd</sup>, 5<sup>th</sup> year.



2. Reflection of general health of plantation by average height of seedlings under different scheme of 1<sup>st</sup>, 3<sup>rd</sup> & 5<sup>th</sup> year of plantation. For the 5<sup>th</sup> year old plantation another growth parameter which is girth at breast height (GBH) is recorded as a measure of performance.

Each parameter is assigned a maximum score which diminishes with the gradual non achievement of the definite parameters and reflected in score. The category and parameters have been standardized separately for 1<sup>st</sup>, 3<sup>rd</sup> & 5<sup>th</sup> year old plantation with year (age) specific assigned score.

The detail of score for each category is given below:

**Table 15.1** Scoring index for 1<sup>st</sup> year old plantation

Broad Category	Detail of Parameters	Score
<b>Conformity to the existing rules, provisions and guidelines.</b>	Legal status of the land.	3
	Source of seed and status of nursery.	3
	Maintenance of plantation journal along with regeneration map.	3
	Planting pattern.	3
<b>Execution of Plantation works in the field.</b>	Site quality & choice of species.	5
	Mechanism to protect plantation.	5
	Timely completion of prescribed plantation activities.	5
	Inspection intensity by supervising officers.	5
<b>Performance of the plantation.</b>	Average survival percentage	51
	General health of plantation	17
<b>Total</b>		<b>100</b>

**Table 15.2** Scoring index for 3<sup>rd</sup> year old plantation

Sl. No.	Detail of Parameters.	Score
1	Maintenance of plantation journal along with regeneration map	5
2	Mechanism to protect plantation	5
3	Infilling with big size seedling	10
4	Timely completion of prescribed plantation activity	5
5	Inspection intensity by supervising officers	5
6	Average Survival Percentage	51
7	General health of the seedling (Height)	19
	<b>Total</b>	<b>100</b>

**Table 15.3** Scoring index for 5<sup>th</sup> year old plantation

Sl. No.	Detail of Parameters.	Score
1	Maintenance of plantation journal along with regeneration map	3
2	Mechanism to protect plantation	5
3	Inspection intensity by supervising officers	5
4	Average Survival Percentage	56
5	General health of the seedling (Height)	21
6	Average GBH of seedling	10
	<b>Total</b>	<b>100</b>



**Table 15.4** Table for colour code

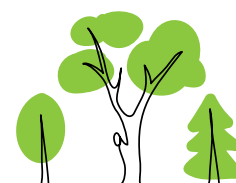
Grade	Score (1 <sup>st</sup> )	Score (3 <sup>rd</sup> )	Score (5 <sup>th</sup> )	Colour code
Excellent	> 85	> 75	> 60	Green
Very Good	> 70 – 85	> 60 – 75	> 44 – 60	
Good	> 45 – 70	> 45 – 60	> 29 – 44	Yellow
Average	> 30 – 45	> 30 – 45	> 15 – 29	Red
Poor	< = 30	< = 30	< = 15	

**Table 15.5** Area Statement for Monitoring South Division Schemes & Year wise Plantations created and Monitored

Sl. No.	Scheme of Plantation	1 <sup>st</sup> Year (2018)		3 <sup>rd</sup> Year (2016)		5 <sup>th</sup> Year (2014)		Grand Total of the Three Years	
		Total Area	Monitored	Total Area	Monitored	Total Area	Monitored	Total Area	Monitored
1	Bamboo	55	55	285	285	555	555	895	895
2	CMM	447	447	541.72	541.72	430	430	1418.72	1418.72
3	CSB	50	50	60	60	117	117	227	227
4	FT-Sal	520	520	241.5	241.5	555	555	1316.5	1316.5
5	QGS	2379	2379	3222.52	3222.52	5994	5994	11595.52	11595.52
6	Strip Pltn.	325	325	425	425	508	508	1258	1258
	<b>Total</b>	<b>3776</b>	<b>3776</b>	<b>4775.74</b>	<b>4775.74</b>	<b>8159</b>	<b>8159</b>	<b>16710.74</b>	<b>16710.74</b>

**Table 15.5.1** Division wise Weighted Survival Percentage (1<sup>st</sup> year Plantation, Year-2018) by Monitoring (South) Division

Division	Bamboo		CMM		CSB		FT-Sal		QGS		Strip Pltn.		Total Area (Ha)	Division wise WSP	Division Wise Category on WSP
	Area	WSP	Area	WSP	Area	WSP	Area	WSP	Area	WSP	Area	WSP			
24-Pgs. (N)	–	–	–	–	–	–	–	–	–	–	50	59	50	59	C
24-Pgs. (S)	–	–	386	100	–	–	–	–	–	–	100	74	486	95	A
Bankura (N)	25	92	–	–	–	–	–	–	382	99	10	98	417	99	A
Bankura (S)	–	–	–	–	–	–	30	99	615	99	–	–	645	99	A
Birbhum	–	–	–	–	–	–	30	98	135	99	–	–	165	98	A
Burdwan	–	–	–	–	–	–	20	97	160	99	50	97	230	98	A
Durgapur	–	–	–	–	–	–	–	–	25	99	20	96	45	98	A
Howrah	–	–	–	–	–	–	–	–	–	–	60	88	60	88	B
Jhargram	–	–	–	–	–	–	40	84	173	97	–	–	213	95	A
Kharagpur	–	–	–	–	–	–	40	100	70	99	–	–	110	99	A
KNG(N)	–	–	–	–	–	–	20	100	86	100	–	–	106	100	A





Division	Bamboo		CMM		CSB		FT-Sal		QGS		Strip Pltn.		Total Area (Ha)	Division wise WSP	Division Wise Category on WSP
	Area	WSP	Area	WSP	Area	WSP	Area	WSP	Area	WSP	Area	WSP			
KNG(S)	30	80	–	–	–	–	30	100	115	100			175	97	A
Midnapur	–	–	–	–	–	–	155	99	160	99	–	–	315	99	A
N & M	–	–	–	–	–	–	–	–	25	98	15	99	40	99	A
Panchet	–	–	–	–	–	–	–	–	272	99	–	–	272	99	A
PMID	–	–	61	95	50	97	–	–	–	–	20	99	131	97	A
Purulia	–	–	–	–	–	–	20	96	30	99	–	–	50	98	A
RPN	–	–	–	–	–	–	135	99	131	98	–	–	266	98	A
Total	55	85	447	99	50	97	520	98	2379	99	325	82	3776	97	A

#### Division wise Weighted Performance Score (1<sup>st</sup> Year Plantation, year-2018) by Monitoring (South) Division

Division	Bamboo		CMM		CSB		FT-Sal		QGS		Strip Pltn.		Total Area (Ha)	Division Wise WPS
	Area	WPS	Area	WPS	Area	WPS	Area	WPS	Area	WPS	Area	WPS		
24-Pgs. (N)	–	–	–	–	–	–	–	–	–	–	50	36	50	36
24-Pgs. (S)	–	–	386	83	–	–	–	–	–	–	100	54	486	77
Bankura (N)	25	79	–	–	–	–	–	–	382	90	10	95	417	90
Bankura (S)	–	–	–	–	–	–	30	99	615	92	–	–	645	92
Birbhum	–	–	–	–	–	–	30	78	135	82	–	–	165	81
Burdwan	–	–	–	–	–	–	20	82	160	84	50	84	230	84
Durgapur	–	–	–	–	–	–	–	–	25	85	20	79	45	82
Howrah	–	–	–	–	–	–	–	–	–	–	60	66	60	66
Jhargram	–	–	–	–	–	–	40	56	173	78	–	–	213	74
Kharagpur	–	–	–	–	–	–	40	88	70	87	–	–	110	87
KNG(N)	–	–	–	–	–	–	20	92	86	89	–	–	106	90
KNG(S)	30	96	–	–	–	–	30	91	115	86	–	–	175	89
Midnapur	–	–	–	–	–	–	155	84	160	84	–	–	315	84
N & M	–	–	–	–	–	–	–	–	25	79	15	97	40	85
Panchet	–	–	–	–	–	–			272	96			272	96
PMID			61	75	50	85	–	–	–	–	20	96	131	82
Purulia	–	–	–	–	–	–	20	84	30	85			50	85
RPN	–	–	–	–	–	–	135	83	131	82	–	–	266	82
Total	55	88	447	82	50	85	520	83	2379	88	325	65	3776	85

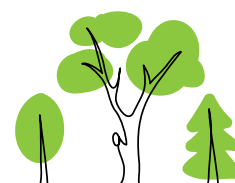


**Table 15.5.2** Division wise Weighted Survival Percentage (3<sup>rd</sup> year Plantation, Year-2016) by Monitoring (South) Division

Division	Bamboo		CMM		CSB		FT-Sal		QGS		Strip Pltn.		Total Area (Ha)	Division wise WSP	Division Wise Category on WSP
	Area	WSP	Area	WSP	Area	WSP	Area	WSP	Area	WSP	Area	WSP			
24-Pgs. (N)	–	–	–	–	–	–	–	–	–	–	50	39	50	39	D
24-Pgs. (S)	–	–	440	99	–	–	–	–	–	–	100	76	540	95	A
Bankura (N)	50	60	–	–	–	–	–	–	180	96	–	–	230	88	A
Bankura (S)	120	39	–	–	–	–	50	71	763	93	–	–	933	85	A
Birbhum	–	–	–	–	–	–	10	87	170	86	–	–	180	86	A
Burdwan	–	–	–	–	–	–	–	–	45.02	95	80	84	125.02	88	A
Durgapur	–	–	–	–	–	–	–	–	50	91	–	–	50	91	A
EFD	–	–	–	–	–	–	–	–	–	–	60	72	60	72	B
Howrah	–	–	–	–	–	–	–	–	–	–	20	87	20	87	A
Jhargram	–	–	–	–	–	–	35	51	284.5	73	–	–	319.5	70	B
Kharagpur	–	–	–	–	–	–	20	93	200	93	75	70	295	87	A
KNG(N)	10	49	–	–	–	–	–	–	100	86	–	–	110	83	A
KNG(S)	40	51	–	–	–	–	–	–	160	89	–	–	200	82	A
Midnapur	–	–	–	–	–	–	50	82	300	88	–	–	350	87	A
N & M	–	–	–	–	–	–	–	–	25	87	–	–	25	87	A
Panchet	–	–	–	–	–	–	–	–	335	95	–	–	335	95	A
PMID	–	–	101.72	89	60	92	–	–	–	–	40	88	201.72	89	A
Purulia	25	55	–	–	–	–	5	99	230	88	–	–	260	85	A
RPN	40	21	–	–	–	–	71.5	90	380	92	–	–	491.5	86	A
<b>Total</b>	<b>285</b>	<b>44</b>	<b>541.72</b>	<b>97</b>	<b>60</b>	<b>92</b>	<b>241.5</b>	<b>79</b>	<b>3222.52</b>	<b>90</b>	<b>425</b>	<b>73</b>	<b>4775.74</b>	<b>86</b>	<b>A</b>

**Division wise Weighted Performance Score (3<sup>rd</sup> year plantation, year-2016) by Monitoring (South) Division**

Division	Bamboo		CMM		CSB		FT-Sal		QGS		Strip Pltn.		Total Area (Ha)	Division Wise WPS
	Area	WPS	Area	WPS	Area	WPS	Area	WPS	Area	WPS	Area	WPS		
24-Pgs. (N)	–	–	–	–	–	–	–	–	–	–	50	42	50	42
24-Pgs. (S)	–	–	440	87	–	–	–	–	–	–	100	68	540	83
Bankura (N)	50	37	–	–	–	–	–	–	180	72	–	–	230	64
Bankura (S)	120	35	–	–	–	–	50	57	763	67	–	–	933	62
Birbhum	–	–	–	–	–	–	10	73	170	63	–	–	180	63
Burdwan	–	–	–	–	–	–	–	–	45.02	78	80	81	125.02	80
Durgapur	–	–	–	–	–	–	–	–	50	76	–	–	50	76
EFD	–	–	–	–	–	–	–	–	–	–	60	57	60	57
Howrah	–	–	–	–	–	–	–	–	–	–	20	82	20	82
Jhargram	–	–	–	–	–	–	35	28	284.5	55	–	–	319.5	52



Division	Bamboo		CMM		CSB		FT-Sal		QGS		Strip Pltn.		Total Area (Ha)	Division Wise WPS
	Area	WPS	Area	WPS	Area	WPS	Area	WPS	Area	WPS	Area	WPS		
Kharagpur	–	–	–	–	–	–	20	72	200	65	75	53	295	62
KNG(N)	10	43	–	–	–	–	–	–	100	63	–	–	110	61
KNG(S)	40	56	–	–	–	–	–	–	160	77	–	–	200	73
Midnapur	–	–	–	–	–	–	50	59	300	61	–	–	350	60
N & M	–	–	–	–	–	–	–	–	25	66	–	–	25	66
Panchet	–	–	–	–	–	–	–	–	335	68	–	–	335	68
PMID	–	–	101.72	71	60	89	–	–	–	–	40	85	201.72	79
Purulia	25	81	–	–	–	–	5	88	230	69	–	–	260	70
RPN	40	17	–	–	–	–	71.5	68	380	69	–	–	491.5	64
<b>Total</b>	<b>285</b>	<b>40</b>	<b>541.72</b>	<b>84</b>	<b>60</b>	<b>89</b>	<b>241.5</b>	<b>59</b>	<b>3222.52</b>	<b>66</b>	<b>425</b>	<b>65</b>	<b>4775.74</b>	<b>67</b>

Table 15.5.3 Division wise Weighted Survival Percentage (5<sup>th</sup> year plantation, year-2014) by Monitoring (South) Division

Division	Bamboo		CMM		CSB		FT-Sal		QGS		Strip Pltn.		Total Area (Ha)	Division Wise WSP	Division Wise Category on WSP
	Area	WSP	Area	WSP	Area	WSP	Area	WSP	Area	WSP	Area	WSP			
24-Pgs. (S)	–	–	320	92	–	–	–	–	–	–	100	66	420	86	A
Bankura (N)	20	31	–	–	–	–	80	73	850	80	–	–	950	78	A
Bankura (S)	125	23	–	–	–	–	70	87	811	84	–	–	1006	77	A
Birbhum	–	–	–	–	–	–	–	–	220	82	–	–	220	82	A
Burdwan	–	–	–	–	–	–	30	51	295	60	72	56	397	59	A
Durgapur	–	–	–	–	–	–	35	59	120	61	–	–	155	60	A
EFD	–	–	–	–	–	–	–	–	–	–	44	47	44	47	B
Howrah	–	–	–	–	–	–	–	–	–	–	160	54	160	54	A
Jhargram	100	6	–	–	–	–	50	48	650	68	–	–	800	59	A
Kharagpur	–	–	–	–	–	–	55	50	403	64	50	64	508	63	A
KNG(N)	–	–	–	–	–	–	20	69	445	81	–	–	465	81	A
KNG(S)	75	34	–	–	–	–	–	–	225	78	–	–	300	67	A
Midnapur	50	32	–	–	–	–	100	21	600	66	–	–	750	58	A
N & M	–	–	–	–	–	–	–	–	5	83	10	89	15	87	A
Panchet	150	35	–	–	–	–	40	77	640	87	–	–	830	78	A
PMID	–	–	110	63	117	69	–	–	–	–	72	69	299	67	A
Purulia	–	–	–	–	–	–	–	–	270	69	–	–	270	69	A
RPN	35	26	–	–	–	–	75	50	460	80	–	–	570	72	A
<b>Total</b>	<b>555</b>	<b>26</b>	<b>430</b>	<b>85</b>	<b>117</b>	<b>69</b>	<b>555</b>	<b>56</b>	<b>5994</b>	<b>76</b>	<b>508</b>	<b>60</b>	<b>8159</b>	<b>70</b>	<b>A</b>



Division wise Weighted Performance Score (5<sup>th</sup> year plantation, year-2014) by Monitoring (South) Division

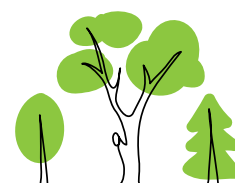
Division	Bamboo		CMM		CSB		FT-Sal		QGS		Strip Pltn.		Total Area (Ha)	Division wise WPS
	Area	WPS	Area	WPS	Area	WPS	Area	WPS	Area	WPS	Area	WPS		
24-Pgs. (S)	–	–	320	98	–	–	–	–	–	–	100	60	420	89
Bankura (N)	20	19	–	–	–	–	80	50	850	66	–	–	950	64
Bankura (S)	125	24	–	–	–	–	70	68	811	73	–	–	1006	66
Birbhum	–	–	–	–	–	–	–	–	220	60	–	–	220	60
Burdwan	–	–	–	–	–	–	30	42	295	45	72	53	397	46
Durgapur	–	–	–	–	–	–	35	51	120	50	–	–	155	51
EFD	–	–	–	–	–	–	–	–	–	–	44	34	44	34
Howrah	–	–	–	–	–	–	–	–	–	–	160	63	160	63
Jhargram	100	8	–	–	–	–	50	37	650	54	–	–	800	47
Kharagpur	–	–	–	–	–	–	55	31	403	50	50	50	508	48
KNG(N)	–	–	–	–	–	–	20	41	445	63	–	–	465	62
KNG(S)	75	24	–	–	–	–	–	–	225	58	–	–	300	50
Midnapur	50	32	–	–	–	–	100	14	600	50	–	–	750	44
N & M	–	–	–	–	–	–	–	–	5	62	10	87	15	79
Panchet	150	28	–	–	–	–	40	61	640	82	–	–	830	71
PMID	–	–	110	44	117	74	–	–	–	–	72	75	299	63
Purulia	–	–	–	–	–	–	–	–	270	53	–	–	270	53
RPN	35	39	–	–	–	–	75	39	460	66	–	–	570	61
<b>Total</b>	<b>555</b>	<b>23</b>	<b>430</b>	<b>84</b>	<b>117</b>	<b>74</b>	<b>555</b>	<b>41</b>	<b>5994</b>	<b>62</b>	<b>508</b>	<b>59</b>	<b>8159</b>	<b>59</b>



Division-- Bankura (S), Range- Pirorgari, Beat- Pirorgari-1, Location- Sarenga-50& Peruabaid-26, Scheme - QGS, Area -5 ha. Year- 2018



Division- 24 Pgs (S), Range-Bakkhali & Beat – Patibunia, Location-Jamboodwip R.F area, Scheme-CMM, Area- 40 ha. Year- 2016





Division- Burdwan, Range-Panagarh & Beat – Aduria,  
Location- Goalara, Scheme- Sal, Area- 10 ha, Year- 2018



Division-Purulia, Range & Beat—Jhalda, Location-  
Tarhad- 121, Scheme-Bamboo, Area-10 ha. Year-2018

**Table 15.6** Area Statement for Monitoring North Division Schemes & Year wise Plantations created and Monitored

Scheme of Plantation	1 <sup>st</sup> Year (2018)		3 <sup>rd</sup> Year (2016)		5 <sup>th</sup> Year (2014)		Grand Total of Three Years	
	Total Area (Ha)	Monitored Area (Ha)	Total Area (Ha)	Monitored Area (Ha)	Total Area (Ha)	Monitored Area (Ha)	Total Area (Ha)	Monitored Area (Ha)
Eco Misc	592.23	592.23	471.51	451.51	1047.70	869.70	<b>2111.44</b>	<b>1913.44</b>
Eco Sal	61.83	61.83	87.40	87.4	230.15	195.15	<b>379.38</b>	<b>344.38</b>
Grass Fodder	395.00	395.00	201.00	201.00	–	–	<b>596.00</b>	<b>596.00</b>
Tree Fodder	30.00	30.00	–	–	78.41	58.41	<b>108.41</b>	<b>88.41</b>
STRIP	475.00	475.00	270.00	270.00	168.00	168.00	<b>913.00</b>	<b>913.00</b>
Bamboo	–	–	5.00	5.00	20.00	20.00	<b>25.00</b>	<b>25.00</b>
RKVY	–	–	–	–	139.94	139.94	<b>139.94</b>	<b>139.94</b>
CSS	–	–	–	–	44.00	25.00	<b>44.00</b>	<b>25.00</b>
PA	–	–	–	–	25.00	10.00	<b>25.00</b>	<b>10.00</b>
<b>G. Total</b>	<b>1554.06</b>	<b>1554.06</b>	<b>1034.91</b>	<b>1014.91</b>	<b>1753.20</b>	<b>1486.20</b>	<b>4342.17</b>	<b>4055.17</b>

**Table 15.6.1** Division Wise Weighted Survival Percentage (1st Year Plantation, Year-2018) By Monitoring (North) Division

Division/ Scheme	Eco Misc.		Eco Sal.		STRIP		Total Area (Ha)	Division Wise WSP
	Area	WSP	Area	WSP	Area	WSP		
BTR (East)	70.00	93	0	0	0	0	70.00	93
BTR (West)	75.00	88	0	0	0	0	75.00	88
Darjeeling	5.00	83	0	0	0	0	5.00	83
Kurseong	0	0	15.00	50	0	0	15.00	50
Jalpaiguri Social Forestry	0	0	0	0	80.00	98	80.00	98
Siliguri Social Forestry	20.00	93	0	0	80.00	91	100.00	91





Division/ Scheme	Eco Misc.		Eco Sal.		STRIP		Total Area (Ha)	Division Wise WSP
	Area	WSP	Area	WSP	Area	WSP		
Raiganj	20.00	98	0	0	250.00	96	270.00	96
Malda	20.00	95	0	0	50.00	98	70.00	97
Baikunthapur	25.61	83	26.83	59	0	0	52.44	71
Coochbehar	100.00	97	0	0	15.00	97	115.00	97
Jalpaiguri	25.00	87	20.00	49	0	0	45.00	75
Jalpaiguri Soil Conservation	50.00	95	0	0	0	0	50.00	95
Kurseong Soil Conservation	50.00	91	0	0	0	0	50.00	91
Kalimpong Soil Conservation	45.20	85	0	0	0	0	45.20	85
Jaldapara Wild Life	86.42	95	0	0	0	0	86.42	95
<b>Total</b>	<b>592.23</b>	<b>92</b>	<b>61.83</b>	<b>54</b>	<b>475.00</b>	<b>96</b>	<b>1129.06</b>	<b>92</b>

**Table 15.6.1 (a)** Division Weighted Survival Percentage of Grass Fodder Plantations (1st Year Plantation, Year-2018)

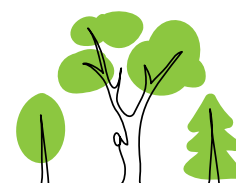
Division/Scheme	Grass Fodder		Total Area(Ha)	Division Wise WSP
	Area	WSP		
BTR (East)	40.00	93	40.00	93
BTR (West)	40.00	89	40.00	89
Jaldapara Wild Life	200.00	87	200.00	87
Gorumara Wild Life	115.00	81	115.00	81
<b>Total</b>	<b>395.00</b>	<b>86</b>	<b>395.00</b>	<b>86</b>

**Table 15.6.1 (b)** Division Weighted Survival Percentage of Tree Fodder Plantations (1st Year Plantation, Year-2018)

Division/Scheme	Tree Fodder		Total Area (Ha)	Division Wise WSP
	Area	WSP		
Jaldapara Wild Life	10.00	96	10.00	96
Gorumara Wild Life	20.00	66	20.00	66
<b>Total</b>	<b>30.00</b>	<b>76</b>	<b>30.00</b>	<b>76</b>

**Table 15.6.2** Division Wise Weighted Performance Score (1st Year Plantation, Year-2018) By Mon (North) Division

Division/Scheme	Eco Misc.		Eco Sal.		STRIP		Total Area (Ha)	Division Wise WPS
	Area	WPS	Area	WPS	Area	WPS		
BTR (East)	70.00	86	0	0	0	0	70.00	86
BTR (West)	75.00	70	0	0	0	0	75.00	70
Darjeeling	5.00	56	0	0	0	0	5.00	56
Kurseong	0	0	15.00	48	0	0	15.00	48
Jalpaiguri Social Forestry	0	0	0	0	80.00	79	80.00	79
Siliguri Social Forestry	20.00	88	0	0	80.00	89	100.00	89
Raiganj	20.00	94	0	0	250.00	90	270.00	91
Malda	20.00	91	0	0	50.00	94	70.00	93
Baikunthapur	25.61	74	26.83	59	0	0	52.44	66



Division/Scheme	Eco Misc.		Eco Sal.		STRIP		Total Area (Ha)	Division Wise WPS
	Area	WPS	Area	WPS	Area	WPS		
Coochbehar	100.00	81	0	0	15.00	76	115.00	80
Jalpaiguri	25.00	67	20.00	58	0	0	45.00	63
Jalpaiguri Soil Conservation	50.00	78	0	0	0	0	50.00	78
Kurseong Soil Conservation	50.00	87	0	0	0	0	50.00	87
Kalimpong Soil Conservation	45.20	67	0	0	0	0	45.20	67
Jaldapara Wild Life	86.42	78	0	0	0	0	86.42	78
<b>Total</b>	<b>592.23</b>	<b>79</b>	<b>61.83</b>	<b>56</b>	<b>475.00</b>	<b>88</b>	<b>1129.06</b>	<b>81</b>

**Table 15.6.2(a)** Division Wise Weighted Performance Score of Grass Fodder Plantations (1st Year Plantation, Year-2018)

Division/Scheme	Grass Fodder		Total Area(Ha)	Division Wise WPS
	Area	WPS		
BTR (East)	40.00	87	40.00	87
BTR (West)	40.00	74	40.00	74
Jaldapara Wild Life	200.00	61	200.00	61
Gorumara Wild Life	115.00	73	115.00	73
<b>Total</b>	<b>395.00</b>	<b>68</b>	<b>395.00</b>	<b>68</b>

**Table 15.6.2(b)** Division Wise Weighted Performance Score of Tree Fodder Plantations (1st Year Plantation, Year-2018)

Division/Scheme	Tree Fodder		Total Area(Ha)	Division Wise WPS
	Area	WPS		
Jaldapara Wild Life	10.00	81	10.00	81
Gorumara Wild Life	20.00	58	20.00	58
<b>Total</b>	<b>30.00</b>	<b>66</b>	<b>30.00</b>	<b>66</b>

**Table 15.6.3** Division Wise Weighted Survival Percentage (3<sup>rd</sup> Year Plantation, Year-2016) by Monitoring (North) Division

Division/Scheme	Eco Misc.		Eco Sal.		STRIP		Bamboo		Total Area (Ha)	Division Wise WSP
	Area	WSP	Area	WSP	Area	WSP	Area	WSP		
BTR (East)	50.00	67	0	0	0	0	0	0	50.00	67
BTR (West)	50.00	72	0	0	0	0	0	0	50.00	72
Darjeeling	10.00	87	0	0	0	0	0	0	10.00	87
Kurseong	0	0	13.80	54	0	0	0	0	13.80	54
Jalpaiguri Social Forestry	0	0	0	0	100.00	64	0	0	100.00	64
Siliguri Social Forestry	35.00	77	0	0	80.00	72	0	0	115.00	73
Raiganj	30.00	83	0	0	50.00	83	5.00	87	85.00	83
Malda	10.00	75	0	0	25.00	76	0	0	35.00	76
Baikunthapur	28.07	46	27.00	46	0	0	0	0	55.07	46
Coochbehar	20.00	84	0	0	15.00	32	0	0	35.00	62
Jalpaiguri	43.44	41	1.60	21	0	0	0	0	45.04	40
Jalpaiguri Soil Conservation	75.00	70	20.00	42	0	0	0	0	95.00	64
Kurseong Soil Conservation	15.00	82	0	0	0	0	0	0	15.00	82
Kalimpong Soil Conservation	10.00	79	0	0	0	0	0	0	10.00	79



Division/Scheme	Eco Misc.		Eco Sal.		STRIP		Bamboo		Total Area (Ha)	Division Wise WSP
	Area	WSP	Area	WSP	Area	WSP	Area	WSP		
Darjeeling Wild Life	25.00	84	0	0	0	0	0	0	25.00	84
Jaldapara Wild Life	50.00	73	25.00	32	0	0	0	0	75.00	63
<b>Total</b>	<b>451.51</b>	<b>70</b>	<b>87.40</b>	<b>42</b>	<b>270.00</b>	<b>69</b>	<b>5.00</b>	<b>87</b>	<b>813.91</b>	<b>67</b>

**Table 15.6.3(a)** Division Wise Weighted Survival Percentage of Grass Fodder Plantation (3<sup>rd</sup> Year Plantation, Year-2016)

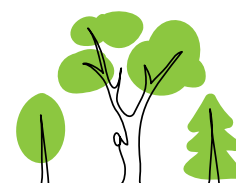
Division/Scheme	Grass Fodder		Total Area(Ha)	Division Wise WSP
	Area	WSP		
Jaldapara Wild Life	81.00	67	81.00	67
Gorumara Wild Life	120.00	69	120.00	69
<b>Total</b>	<b>201.00</b>	<b>68</b>	<b>201.00</b>	<b>68</b>

**Table 15.6.4** Division Wise Weighted Performance Score (3<sup>rd</sup> Year Plantation, Year-2016)

Division/Scheme	Eco Misc.		Eco Sal.		STRIP		Bamboo		Total Area (Ha)	Division Wise WPS
	Area	WPS	Area	WPS	Area	WPS	Area	WPS		
BTR (East)	50.00	59	0	0	0	0	0	0	50	59
BTR (West)	50.00	73	0	0	0	0	0	0	50	73
Darjeeling	10.00	61	0	0	0	0	0	0	10	61
Kurseong	0	0	13.80	69	0	0	0	0	13.8	69
Jalpaiguri Social Forestry	0	0	0	0	100.00	54	0	0	100	54
Siliguri Social Forestry	35.00	77	0	0	80.00	77	0	0	115	77
Raiganj	30.00	86	0	0	50.00	87	5.00	89	85	87
Malda	10.00	84	0	0	25.00	77	0	0	35	79
Baikunthapur	28.07	48	27.00	59	0	0	0	0	55.07	53
Coochbehar	20.00	76	0	0	15.00	30	0	0	35	56
Jalpaiguri	43.44	33	1.60	30	0	0	0	0	45.04	33
Jalpaiguri Soil Conservation	75.00	70	20.00	25	0	0	0	0	95	61
Kurseong Soil Conservation	15.00	74	0	0	0	0	0	0	15	74
Kalimpong Soil Conservation	10.00	66	0	0	0	0	0	0	10	66
Darjeeling Wild Life	25.00	69	0	0	0	0	0	0	25	69
Jaldapara Wild Life	50.00	60	25.00	23	0	0	0	0	75	48
<b>Total</b>	<b>451.51</b>	<b>65</b>	<b>87.40</b>	<b>42</b>	<b>270.00</b>	<b>68</b>	<b>5.00</b>	<b>89</b>	<b>813.91</b>	<b>64</b>

**Table 15.6.4(a)** Division Wise Weighted Performance Score of Grass Fodder Plantation (3<sup>rd</sup> Year Plantation, Year-2016)

Division/Scheme	Grass Fodder		Total Area(Ha)	Division Wise WPS
	Area	WPS		
Jaldapara Wild Life	81.00	45	81.00	45
Gorumara Wild Life	120.00	53	120.00	53
<b>Total</b>	<b>201.00</b>	<b>50</b>	<b>201.00</b>	<b>50</b>





**Table 15.6.5** Division Wise Weighted Survival Percentage (5<sup>th</sup> Year Plantation, Year-2014) By Monitoring (North) Division

Division/Scheme	Eco Misc.		Eco Sal.		Bamboo		RKVY		STRIP		PA		CSS		Total		Division
	Area	WSP	Area	WSP	Area	WSP	Area	WSP	Area	WSP	Area	WSP	Area	WSP	Area (Ha)	Wise WSP	
BTR (East)	50.00	58	0	0	0	0	0	0	0	0	0	0	0	0	50.00	58	
BTR (West)	50.00	73	0	0	0	0	0	0	0	0	0	0	0	0	50.00	73	
Darjeeling	90.00	77	0	0	0	0	0	0	0	0	0	0	0	0	90.00	77	
Kurseong	85.00	41	37.50	47	20.00	15	0	0	0	0	0	0	0	0	142.50	39	
Siliguri Social Forestry	0	0	0	0	0	0	0	0	44.00	50	0	0	0	0	44.00	50	
Raiganj	20.00	65	0	0	0	0	0	0	97.00	66	0	0	0	0	117.00	65	
Malda	1.00	40	0	0	0	0	0	0	21.00	50	0	0	0	0	22.00	50	
Baikunthapur	28.70	60	55.65	25	0	0	59.94	23	0	0	0	0	0	0	144.29	31	
Coochbehar	15.00	47	0	0	0	0	10.00	58	6.00	46	0	0	0	0	31.00	50	
Jalpaiguri	70.00	39	60.00	36	0	0	0	0	0	0	0	0	0	0	130.00	38	
Jalpaiguri Soil Conservation	190.00	58	20.00	83	0	0	0	0	0	0	0	0	0	0	210.00	60	
Kurseong Soil Conservation	75.00	69	0	0	0	0	70.00	66	0	0	10.00	75	0	0	155.00	68	
Kalimpong Soil Conservation	145.00	71	0	0	0	0	0	0	0	0	0	0	0	0	145.00	71	
Darjeeling Wild Life	50.00	78	0	0	0	0	0	0	0	0	0	0	10.00	50	55.00	77	
Jaldapara Wild Life	0	0	22.00	76	0	0	0	0	0	0	0	0	0	0	22.00	76	
Gorumara Wild Life	0	0	0	0	0	0	0	0	0	0	0	0	15.00	45	15.00	45	
<b>Total</b>	<b>869.70</b>	<b>62</b>	<b>195.15</b>	<b>44</b>	<b>20.00</b>	<b>15</b>	<b>139.94</b>	<b>47</b>	<b>168.00</b>	<b>59</b>	<b>10.00</b>	<b>75</b>	<b>25.00</b>	<b>47</b>	<b>1427.79</b>	<b>57</b>	

**Table 15.6.5(a)** Division Wise Weighted Survival Percentage of Tree Fodder (5<sup>th</sup> Year Plantation, Year-2014)

Division/Scheme	Tree Fodder		Total Area(Ha)		Division Wise	
	Area	WSP	Area	WSP	Area	WSP
Jaldapara Wild Life	8.41	6	8.41	6	8.41	6
Gorumara Wild Life	50.00	45	50.00	45	50.00	45
<b>Total</b>	<b>58.41</b>	<b>39</b>	<b>58.41</b>	<b>39</b>	<b>58.41</b>	<b>39</b>

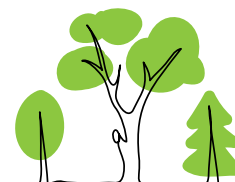


Table 15.6.6 Division Wise Weighted Performance Score (5<sup>th</sup> Year Plantation, Year-2014)

Division/Scheme	Eco Misc.		Eco Sal.		Bamboo		RKVY		STRIP		PA		CSS		Total		Division
	Area	WPS	Area	WPS	Area	WPS	Area	WPS	Area	WPS	Area	WPS	Area	WPS	Area (Ha)	Wise WPS	
BTR (East)	50.00	63	0	0	0	0	0	0	0	0	0	0	0	0	50.00	63	
BTR (West)	50.00	66	0	0	0	0	0	0	0	0	0	0	0	0	50.00	66	
Darjeeling	90.00	78	0	0	0	0	0	0	0	0	0	0	0	0	90.00	78	
Kurseong	85.00	27	37.50	49	20.00	13	0	0	0	0	0	0	0	0	142.50	31	
Siliguri Social Forestry	0	0	0	0	0	0	0	0	44.00	49	0	0	0	0	44.00	49	
Raiganj	20.00	70	0	0	0	0	0	0	97.00	76	0	0	0	0	117.00	75	
Malda	1.00	48	0	0	0	0	0	0	21.00	54	0	0	0	0	22.00	53	
Baikunthapur	28.70	48	55.65	33	0	0	59.94	37	0	0	0	0	0	0	144.29	38	
Coochbehar	15.00	41	0	0	0	0	10.00	59	6.00	40	0	0	0	0	31.00	47	
Jalpaiguri	70.00	27	60.00	41	0	0	0	0	0	0	0	0	0	0	130.00	33	
Jalpaiguri Soil Conservation	190.00	58	20.00	73	0	0	0	0	0	0	0	0	0	0	210.0	60	
Kurseong Soil Conservation	75.00	52	0	0	0	0	70.00	52	0	0	10.00	53	0	0	155.00	52	
Kalimpong Soil Conservation	145.00	72	0	0	0	0	0	0	0	0	0	0	0	0	145.00	72	
Darjeeling Wild Life	50.00	84	0	0	0	0	0	0	0	0	0	0	10.00	51	60.00	79	
Jaldapara Wild Life	0	0	22.00	85	0	0	0	0	0	0	0	0	0	0	22.00	85	
Gorumara Wild Life	0	0	0	0	0	0	0	0	0	0	0	0	15.00	23	15.00	23	
<b>Total</b>	<b>869.70</b>	<b>58</b>	<b>195.15</b>	<b>48</b>	<b>20.00</b>	<b>13</b>	<b>139.94</b>	<b>45.00</b>	<b>168.00</b>	<b>65</b>	<b>10.00</b>	<b>53</b>	<b>25.00</b>	<b>34</b>	<b>1427.79</b>	<b>55</b>	

Table 15.6.6(a) Division Wise Weighted Performance Score Tree Fodder (5<sup>th</sup> Year Plantation, Year-2014)

Division/ Scheme	Tree Fodder		Total Area(Ha)		Division Wise WPS	
	Area	WPS	Area	WPS	Area	WPS
Jaldapara Wild Life	8.41	13	8.41	13	13	13
Gorumara Wild Life	50.00	23	50.00	23	23	23
<b>Total</b>	<b>58.41</b>	<b>22</b>	<b>58.41</b>	<b>22</b>	<b>22</b>	<b>22</b>





Division – Darjeeling, Range - Ghoomsima, Beat – Pugriabong, Location – Pugriabong-5, Area - 2ha, Year – 2016



Division- Coochbehar, Range- Coochbehar-I, Beat- Atiamochor, Location-Madhlibhasa Area 6.81 ha, Year- 2018



Division–BTR (East), Range –South Rydak, Beat -SRD, Location - USF/25RI/11 Turtarisamuktala, Area – 7.5ha, Year- 2018



Division- Darjeeling WL, Range-Singalila Beat- Garibas, Location- S Rimbick, Area-7.5 ha, Year- 2016

“

“Look deep into nature, and then you will understand everything better.”

—Albert Einstein









# TRAINING & CAPACITY BUILDING

## CHAPTER 16

### 16.1 INTRODUCTION

Education and training systems throughout the world are a dynamic system. One should keep always himself/herself updated along with the tune of changing scenario of every sphere of life. Education and training are the key resources available to us to meet the challenges in every sphere of life in present as well of the future. This also applies to education and training in the forestry segment including conventional forestry, new techniques in forestry and wildlife. Forestry courses and the training environment have undergone significant changes since last decade. Training in the forestry sector, are viewed as specialised qualifications and the direction in which foresters should be developed, in circumstances of forestry works. The Development Circle aims to contribute significantly to the development of human resources in the forestry sector with a visionary training curriculum within the area of forestry and wildlife.

### 16.2 OBJECTIVE

Training programmes for the various categories of Forest Staff for capacity building is organised by the Development Circle for better management of forests and wildlife Protected Areas. To face the unique problems in Forestry Sector and to fight against the new challenges, training in the form of refreshers' course or short courses on soft skill development are formulated as per the calendar of works published by the Government of West Bengal. In accordance with these view numerous one day workshops were organised for front line field staffs to upgrade their soft skills on management to mitigate their day to day stress and managerial problems. The main aim is to rejuvenate forest staff for better management of forests, afforestation, soil conservation, wildlife management, control of man-animal conflict, social forestry, and protection of forests through Joint Forest Management (JFM) and application of modern technology in forestry.





## 16.3 TRAINING CENTRES

Presently there are three training centres functioning

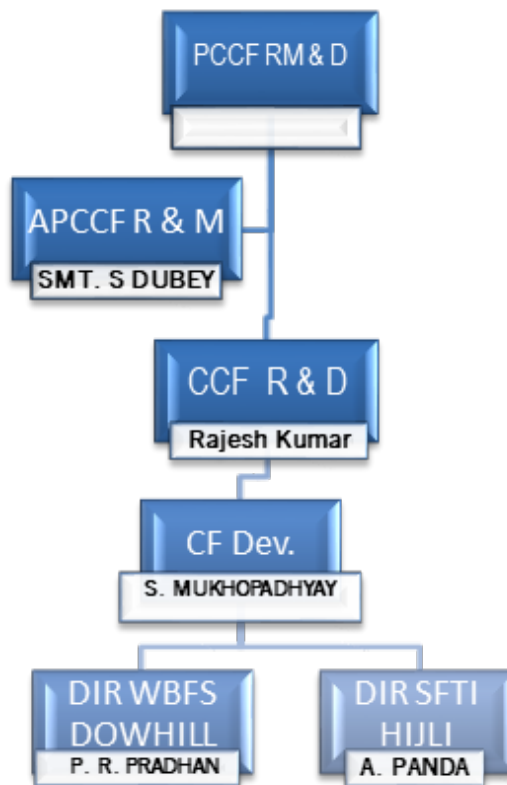
1. The West Bengal Forest School at Dow Hill, Kurseong (established in 1907) and the Forestry Training Centre at Rajabhatkhawa (established in 1983). Dowhill have the capacity of 40 Nos of trainees and Rajabhatkhawa have 30 Nos of accommodation for trainees.
2. The State Forest Training Institute, at Hijli, Kharagpur, commissioned in 2016 and have a capacity of 120 trainees. To pertain training to the forester of this state

this new campus has been constructed at Mouza-Paschim Pathri, JL-186 with an extent on forest land of 11.74ha funded by Japan International Cooperation Agency (JICA).The new site is just beside the IIT, Kharagpur campus and adjacent to Hijli College. It was inaugurated by Mamata Banerjee, Honourable Chief Minister Government of West Bengal in February 2016.

3. Field accommodation for the use of trainees during their educational tours are located in different places. They are at Sukna, Bamanpokhri, Muhammad Bazar of Birbhum, Hijli (Kharagpur) and Bishnupur (Bankura).



## 16.4 ADMINISTRATIVE STRUCTURE OF DEVELOPMENT CIRCLE.









## 16.5 CONTACTS

Sl. No.	Office	Phone	Extn.	Fax	e-mail	Address
1	Principal Chief Conservator of Forest, Research, Monitoring & Development	03322250053	208	03322341856	pccfres-wb@nic.in	Office of the Principal Chief Conservator of Forests, Research, Monitoring & Development, New CIT Building, 3 <sup>rd</sup> Floor, P-16 India Exchange Place Extn. Kolkata 700073
2	Additional Principal Chief Conservator of Forest, Research, & Monitoring	03322250053	209	03322341854	apccfrm-wb@nic.in	Office of the Principal Chief Conservator of Forests, Research, Monitoring & Development, New CIT Building, 3 <sup>rd</sup> Floor, P-16 India Exchange Place Extn. Kolkata 700073
3	Chief Conservator of Forest, Research, & Development	03322250053	230	03322341856	ccfres.fd-wb@gov.in	Office of the Principal Chief Conservator of Forests, Research, Monitoring & Development, New CIT Building, 3 <sup>rd</sup> Floor, P-16 India Exchange Place Extn. Kolkata 700073
4	Conservator of Forest, Development	03323353261	208	03323353261	cfdc-wb@nic.in	Office of the Conservator of Forests Development Circle, LA-10A, Salt Lake City, Sector III, Aranya Bhavan, 2 <sup>nd</sup> Floor, Kolkata 7000106
5	Director, State Forest Training Institute, HIJLI	03222220077		03222220077	dirsfti.frd-wb@bangla.gov.in	Office of the Director, State Forest Training Institute, Hijli, P.O.-Hijli Co-operative, Kharagpur, 721306 Dist. Paschim Medinipur
6	Director, West Bengal Forest School, DOWHILL	03542332198		03542332198	cfdir-wb@nic.in	Office of the Director, West Bengal Forest School, P.O.-Dowhill, Kurseong, Dist. Darjeeling, 734204





## 16.6 TRAININGS HELD DURING THE YEAR 2018 -19

Sl. No.	Name of Training	Venue	Duration of Training	Date of Training	No. of Participants
1	60 <sup>th</sup> Batch Regular Training Course for Forest Guard	West Bengal Forest School Dowhill	6 months	04-06-2018 to 04-12-2018	35 nos.
2	61 <sup>th</sup> Batch Regular Training Course for Forest Guard	State Forest Training Institute, Hijli	6 months	11-06-2018 to 19-12-2018	54 nos.
3	62 <sup>th</sup> Batch Regular Training Course for Forest Guard	State Forest Training Institute, Hijli	6 months	23-07-2018 to 18-01-2019	61 nos.
4	110 <sup>th</sup> Batch Regular Course of DR/Fr training	State Forest Training Institute, Hijli	6 months	01-02-2018 to 19-07-2018	31 nos.
5	63 <sup>th</sup> Batch Regular Training Course for Forest Guard	West Bengal Forest School Dowhill	6 months	17-12-2018 to 21-06-19	27 nos.
6	64 <sup>th</sup> Batch Regular Training Course for Forest Guard	State Forest Training Institute, Hijli	6 months	27-12-2018 to 24-06-2019	36 nos.
7	Capsule Course for Forest Guard	Rajabhatkhawa	1 month	04-09-2018 to 05-10-2018	28 nos.
	<b>TOTAL</b>				<b>272 nos.</b>

## 16.7 TRAININGS HELD DURING THE YEAR 2019-20

Sl. No.	Name of Training	Venue	Duration of Training	Date of Training	No. of Participants
1	63 <sup>th</sup> Batch Regular Training Course for Forest Guard	West Bengal Forest School Dowhill	6 months	17-12-2018 to 21-06-2019	27 nos.
2	64 <sup>th</sup> Batch Regular Training Course for Forest Guard	State Forest Training Institute, Hijli	6 months	27-12-2018 to 24-06-2019	36 nos.
3	65 <sup>th</sup> Batch Regular Training Course for Forest Guard	West Bengal Forest School Dowhill	6 months	01-07-2019 to 07-01-2020	32 nos.
4	66 <sup>th</sup> Batch Regular Training Course for Forest Guard	State Forest Training Institute, Hijli	6 months	01-07-2019 to 27-12-2019	30 nos.
5	67 <sup>th</sup> Batch Regular Training Course for Forest Guard	State Forest Training Institute, Hijli	6 months	01-07-2019 to 27-12-2019	34 nos.
6	Special Training Course for Deputy Ranger/ Forester	Rajabhatkhawa	1 month	22-07-2019 to 20-08-2019	06 nos.



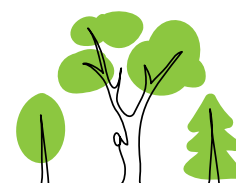
## 16.8 TRAINING CALENDAR OF 2018-19 UNDER DEVELOPMENT CIRCLE AS ON 01.10.19

SL No	Activities	Venue/Institute	April,18	May,18	June,18	July,18	Aug,18	Sept,18	Oct,18	Nov,18	Dec,18	Jan,19	Feb,19	Mar,19
1	Regular Training(6 months) for Forest Guard 59 <sup>th</sup> batch	SFTI, Hijli	●	●	●	●	●	●	●	-	-	-	-	-
2	Regular Training(6 months) for Deputy Ranger/Forester 108 <sup>th</sup> batch	SFTI, Hijli	-	-	●	●	●	●	●	●	-	-	-	-
3	Regular Training(6 months) for Deputy Ranger/Forester 109 <sup>th</sup> batch	SFTI, Hijli							●	●	●	●	●	●
4	Regular Training(6 months) for Deputy Ranger/Forester 107 <sup>th</sup> batch	WBFS Dowhill	-	●	●	●	●	●	●	-	-	-	-	-
5	Special Refresher Course (1 month) for Forest Guard (Promoted).	Rajabhatkhawa	-	●	-	-	-	-	-	-	-	-	-	-
6	Special Refresher Course (1 month) for Deputy Ranger/Forester (Promoted).	Rajabhatkhawa	-	-	-	●	-	-	-	-	-	-	-	-
7	Special Refresher Course (1 month) for Forest Guard (Promoted).	Rajabhatkhawa	-	-	-	-	●	-	-	-	-	-	-	-
8	Two days' workshop on Yoga and spiritualism for frontline staff (4 Nos)	WBFS Dowhill	-	-	-	-	-	-	-	-	-	-	-	-
9	Two days' workshop on Forest and Wildlife Laws for frontline staff (4 Nos)	WBFS Dowhill	-	-	-	-	-	-	-	●	-	-	-	-
10	One week refresher course on Forest Protection for grass root level staff.	Rajabhatkhawa	-	-	-	-	-	-	-	-	-	●	-	-
11	One week refresher course on Forest Protection for grass root level staff.	SFTI, Hijli	-	-	-	-	-	-	-	-	-	-	-	-
12	One week refresher course on Wildlife Management and Bird Watching for Frontline staff.	Rajabhatkhawa	-	-	-	-	-	-	-	-	-	-	-	-
13	One week Arms Training for frontline staff. (4 Nos)	Rajabhatkhawa	-	-	-	-	-	-	-	-	-	-	-	-
14	Three days' workshop on FRA for frontline staff and other Target Group	Sukna	-	-	-	-	-	-	-	-	-	-	●	-
15	Three days' workshop on FRA for frontline staff and other Target Group	SFTI, Hijli	-	-	-	-	-	-	-	-	-	-	●	-



# Training Calendar of 2019–20 under Development Circle as on 01.10.19

Sl. No.	Activities	Venue/Institute	Apr,19	May,19	June,19	July,19	Aug,19	Sept,19	Oct,19	Nov,19	Dec,19	Jan,20	Feb,20	Mar,20
1	Regular Training(6 months) for Forest Guard 63 <sup>rd</sup> batch	WBFS Dowhill	●	●	●	–	–	–	–	–	–	–	–	–
2	Regular Training(6 months) for Forest Guard 64 <sup>th</sup> batch	SFTI, Hijli	●	●	●	–	–	–	–	–	–	–	–	–
3	Regular Training(6 months) for Forest Guard 65 <sup>th</sup> batch (on going)	WBFS Dowhill	–	–	–	●	●	●	●	●	●	–	–	–
4	Regular Training(6 months) for Forest Guard 66 <sup>th</sup> batch (on going)	SFTI, Hijli	–	–	–	●	●	●	●	●	●	–	–	–
5	Regular Training(6 months) for Forest Guard 67 <sup>th</sup> batch (on going)	SFTI, Hijli	–	–	–	●	●	●	●	●	●	–	–	–
6	Special Refresher Course (1 month) for Deputy Ranger/Forester.	Rajabhatkhawa	–	–	–	–	●	–	–	–	–	–	–	–
7	2 nos.Special Refresher Course (1 month) for Forest Guard. (2 nos and proposed)	Rajabhatkhawa	–	–	–	–	–	–	–	●	–	–	●	–
8	Regular Training(6 months) for Deputy Ranger /Forester 11 <sup>th</sup> batch (proposed)	WBFS Dowhill	–	–	–	–	–	–	–	–	–	●	●	●
9	Regular Training(6 months) for Forest Guard 68 <sup>th</sup> batch (proposed)	SFTI, Hijli	–	–	–	–	–	–	–	–	–	●	●	●
10	Regular Training(6 months) for Forest Guard 69 <sup>th</sup> batch (proposed)	SFTI, Hijli	–	–	–	–	–	–	–	–	–	●	●	●



### 17.1 INTRODUCTION

The five districts of North Bengal namely Darjeeling, Kalimpong Jalpaiguri, Alipurduar and Cooch Behar are drained by almost 20 rivers and other enumerable rivulets. The catchment area spreads over around 12,726 Km<sup>2</sup> of which only 3,068 Km<sup>2</sup> is under forest cover. These rivers flow through three geographical zones, namely the Hilly Region, the Piedmont Zone and the Active Plains. Except for river Tista, all the other main rivers originating from the hilly region have steep to very steep fall and consequently high power of erosivity.

The area being a part of new fold mountain is geologically unstable. The annual rainfall in the region is one of the highest and varies from 3,500 mm to 5,000 mm annually. The geological instability and high intensity of rainfall, porous sandy loam soil and steep slopes associated with different anthropogenic activities, are factors that accelerate erosion and land degradation affecting the

lives of people and property, both public and private almost every year. Soil and moisture conservation by regular treatment through different kind of intervention both structural and vegetative, therefore, is of utmost importance for restoration.

### 17.2 HISTORY, LOCATION & JURISDICTION OF CIRCLE

The Soil Conservation (North) Circle, West Bengal was created vide Department of Forests, West Bengal Memo no 8561/ For – G/4E-14/91 dated the 15<sup>th</sup> November 1991 with Head Qr. at Siliguri by carving out from the erstwhile Soil Conservation Circle, West Bengal, Kolkata to exclusively supervise the soil conservation work undertaken by the underlying soil conservation divisions of North Bengal. The Divisions under the circle with their geographical jurisdiction, headquarters, overlapping of jurisdiction over territorial forest area are summarized as in Table-A below:

**Table 17.1:**

Division	Geographical Jurisdiction	Overlapping Forest Jurisdiction	Headquarter
Kurseong Soil Conservation	Darjeeling & Kurseong Sub- Division,	Darjeeling, Wildlife-I, Kurseong	Kurseong
Kalimpong Soil Conservation	Kalimpong Sub- division	Kalimpong Division	Kalimpong
Jalpaiguri Soil Conservation	Dist: Jalpaiguri, Cooch Behar, Alipurduar	Northern Circle, Cooch Behar Division, Buxa Tiger Reserve	Jalpaiguri

*Note: By virtue of Department of Forests, GoWB memo no. 1682/FR/O/6M-2/2018 dated 19.09.2018 a new Forest territorial Division was created w.e.f. 1.11.2018 by renaming of Kalimpong Soil Conservation Division under Hill Circle.*





## 17.3 MAJOR MANDATES OF THE CIRCLE ARE

1. Soil & Moisture Conservation through creation and Maintenance of Plantation.
2. Treatment of Landslide & landslide prone areas by way of construction of Engineering & Bio- Engineering Structures.
3. Implementation of Integrated Watershed Management Programme funded by Central and State Government in the ratio of 90: 10.
4. Conservation & Management of Bio-Diversity Parks.

### 17.3.1 Biological Measures

a. **Plantation Afforestation:** Afforestation is more effective for stabilizing shallow sheet slides with deep lying slide surfaces. It is generally accepted that forest growth helps to dry out the surface layers, and that the ramification of root system assists the consolidation process. Since tree draws water from the surface beds, the most suitable species for planting on sliding slopes are those that have the highest consumption of water and the highest transpiration rates. Planting pits of size 45 cm x 45 cm x 45 cm and spacing of 2.5 mt x 2.5 mt is adopted while taking up plantation works.

i) **Bamboo Rhizome Plantation:** Bamboo Rhizome of local variety are collected with ball of earth and transplanted at a spacing of 5 m x 5 m.

ii) **Screw Pine (Tarika) Pltn:** The plantable sized seedlings of *Pandanus fructaceans* (Screw Pine/ Tarika) are transplanted in between bamboo rhizomes in alternate spacing.

iii) **Terrace Planting:** Terrace planting is done by potted seedlings of soil binding species over palisade at a spacing of 2.5 mtr. including digging pits, etc. the major species being *Alnus nepalensis* (Utis), *Salix babylonica* (Weeping Willow), *Erythrina arborescens* (Phaledo), *Arundo donax* (Narkat), etc.

### 17.3.2 Engineering Measures

Landslide and landslide prone areas are managed through:

1. Modification of slope Geometry
2. Proper drainage
3. Retaining Structures
4. Bio-engineering structures

a. **Sausage Walls:** Sausage Walls are used as restraining structures. Sausage walls are made by forming sausages of steel wire netting of 8 Standard

Wire Gauge with 10 cm square or hexagonal holes. The sausages are filled with hard local boulders/ stones, and the wire net is wrapped at the top. This process is carried out on the site where the sausage walls are to be installed. It has been found that Sausage wall can withstand a greater amount of deformation than stone masonry, without cracking. This also allows free passage of water.

b. **CRM Walls:** Coarse Rubble masonry is constructed by joining local hard dressed stones with cement sand mortar (1:6) as per P.W.D. Specification and purpose.

c. **Catch Water Drain:** The control of surface runoff is the most important factor in stabilizing slopes. Surface runoff causes erosion and its percolation through ground increases pore water pressure within the slope material, both contributing to instability of hill slide slopes. Surface drainage is controlled by maximizing the runoff from unstable areas and constructing drains. There are several type of drains for collecting and diverting surface runoff e.g. a) Catchwater Drains b) Roadside Drains and c) Cross drains.

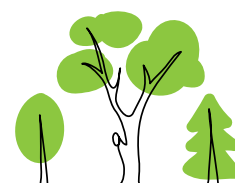
d. **Hand Packed Wall:** Hand packed walls are constructed by local hard stones after making necessary foundation and filling backside of the wall with stones to prevent the gully formation on the course of jhoras.

e. **Jhora Training Works:** In hilly tracts jhora & rivulets looking dead in summer become torrential during moonsoon. Water flowing at high velocity in steeply descending channels causes lot of damage of banks through scouring and erosion. To prevent this, Jhora Training structures are made that involve making permeable gabion Drop & Guide Structures. Guide Walls are provided along the bank in descending steps. Slope in the bed of the Jhora is broken by providing gabion drops across it. Top of the following drop is levelled with the bottom of the preceding one. Proper hydraulic assessment is necessary for correct design and is done before work.

### 17.3.3 Bio-Engineering Measures

Landslide areas can be managed using Bio- Engineering measures:

1. Bio- engineering measures live plant or plant parts to control soil erosion and mass movement of land in order to fulfill engineering functions.
2. It is undoubtedly the most important factor in ameliorating effect of severe ecological disturbance such as landslide.
3. It establishes soil stability and reduce erosion through increasing shear strength.



Species selection for Bio-engineering Measures

1. Good foliage and root system.
2. Ability to grow on harsh conditions.
3. Common on locality.
4. Easy to Propagate.
5. Social & Economic Use.

**Belly benching (Palisade):** The palisades are made by piling bamboo posts 2 mtr. Long (1 mtr. below and 1 mtr. above ground level) at 1 Mtr. apart, fixing horizontal bamboo bars with the posts by wire and nails, filling the backside with available earth and boulders to make bench/terrace.

#### 17.4.1 Creation of Plantations undertaken during the year 2019–20

Scheme	Kurseong SC Divn.	Jalpaiguri SC Divn.	Total
4406-01-101-001-V-87 Regn.	15.5 ha	70 ha	85.5 ha.
<b>Total</b>	<b>15.5 ha</b>	<b>70 ha.</b>	<b>85.5 ha.</b>

#### 17.4.2 Advance Work of 2019 plantation done during 2019-20

Scheme	Kurseong S.C. Divn	Jalpaiguri SC Divn.	Total
4406-01-796-002-V-87 Regn.	15 ha.	70 ha.	85 ha.
<b>Total</b>	<b>15 ha.</b>	<b>70 ha.</b>	<b>85 ha.</b>

#### 17.4.3 DPN Work done during 2019–20

Scheme	Kurseong S.C. Divn	Jalpaiguri SC Divn.	Total
4406-01-789-00-003-87-00-V	5 ha.	15 ha.	20 ha.
<b>Total</b>	<b>5 ha.</b>	<b>15 ha.</b>	<b>20 ha.</b>

#### 17.4.4 Advance Work for DPN done during 2019–20

Scheme	Kurseong S.C. Divn	Jalpaiguri SC Divn.	Total
4406-01-789-00-003-87-00-V	7 ha.	10 ha.	17 ha.
<b>Total</b>	<b>7 ha.</b>	<b>10 ha.</b>	<b>17 ha.</b>

#### 17.4.5 Maintenance of Plantation undertaken during 2019–20

Scheme	Divn.	Y-1 (2017–18) (in Ha.)	Y-2(2016–17) (in Ha.)	Y-3(2015–16) (in Ha.)	Y-4(2014–15) (in Ha.)
4406-01-101-001-V-87 Regn.	Kurseong S.C.	50	0.00	15	55
	Jalpaiguri S.C.	50	50	95	190.6
<b>Total</b>		<b>100 Ha.</b>	<b>50 Ha.</b>	<b>110 Ha.</b>	<b>245.6 Ha.</b>

### 17.5 PHYSICAL PERFORMANCE

#### 17.5.1 Abstract achievement details of Structural works raised by Circle during 2019–20 under State Plan

Sl. No.	Nature of Works	Kurseong S.C.		Jalpaiguri S.C.	
		Phy	Fin	Phy	Fin
<b>(A)</b>	<b>RKVY</b>				
i)	Boulder Sausages Wall (18–19)	1143.87 m <sup>3</sup>	3236528	–	–
ii)	Hand Packed Stone Wall	860 m <sup>3</sup>	1980397	–	–
iii)	Gully Plugging	–	–	285.36 m <sup>3</sup>	998200



Sl. No.	Nature of Works	Kurseong S.C.		Jalpaiguri S.C.	
		Phy	Fin	Phy	Fin
<b>(B)</b>	<b>RKVY RAFTAAR (19–20)</b>				
i)	Boulder Sausages Wall	950 m <sup>3</sup>	2688882	953 m <sup>3</sup>	2698700
ii)	Hand Packed Stone Wall	1000 m <sup>3</sup>	2787885	–	–
iii)	Gully Plugging	300 m <sup>3</sup>	675487	400 m <sup>3</sup>	900903
iv)	Catch Water Drain	250 rmt.	587000	50 rmt.	117297
v)	River/Jhora Training Works	100 m <sup>3</sup>	283100	100 m <sup>3</sup>	283100
<b>(C)</b>	<b>State Development Scheme</b>				
i)	Boulder Sausages Wall	150 m <sup>3</sup>	424650	–	–
ii)	Catch Water Drain	100 rmt.	247600	–	–
iii)	Bamboo Pallisade	91.471 rmt.	77750	–	–
iv)	River Training Works (Sausages/ Gully Plugging)	–	–	276 m <sup>3</sup>	730589
<b>(D)</b>	<b>RVP Project</b>				
i)	Hand Packed Wall Work	50 m <sup>3</sup>	140850	–	–
ii)	Bamboo Pallisade Work	167.53 m <sup>3</sup>	159150	–	–
iii)	Vetiver Works	–	–	1 no.	251000

## 17.6 CATCHMENT AREA TREATMENT AT TLDP III & IV

Reduction of erosion and sediment yield from catchments is of utmost importance as the deposition of sediment in reservoir reduces its capacity, and thus affecting the water availability for the designated use. The eroded sediment from catchment when deposited on streambeds and banks causes braiding of river reach. The removal of top fertile soil from catchment adversely affects the growth of forest crop. To ameliorate the above-mentioned adverse process of soil erosion the Kurseong Soil Conservation Division has worked following the Catchment Area Treatment (CAT) Plan at Teesta Low Dam Project III & IV sites.

The SYI values for classification of various categories of erosion intensity rates are given in

Priority categories	SYI Values
Very high	> 1300
High	1200–1299
Medium	1100–1199

Priority categories	SYI Values
Low	1000–1099
Very Low	< 1000

Following Engineering, Biological and Bioengineering measure has been taken up in the catchment area during 2019–20:

### 1. Engineering measures

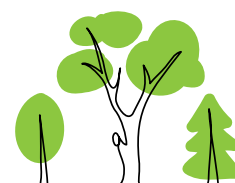
- Sausages Walls
- Crete Walls
- C.C.M. Walls
- Catch water drain
- Stepped drain

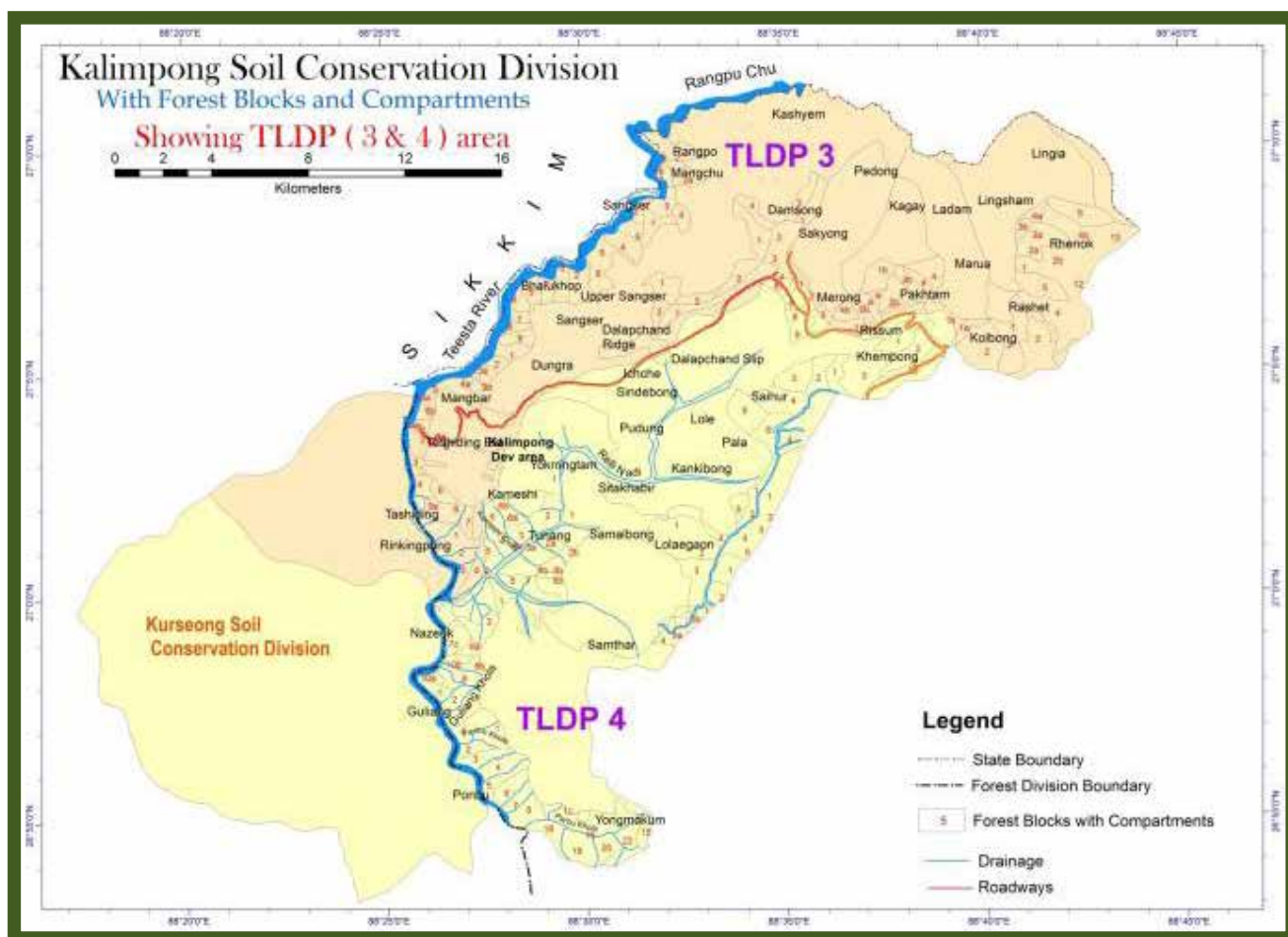
### 2. Biological measure

- Development of Nurseries
- Plantation/ afforestation
- Soil binding species

### 3. Bioengineering measures

- Belly benching (Palisade)





## 17.7 RELEASED AND EXPENDITURE MADE THEREOF UNDER SCHEME CAMPA DURING 2019-20

Division	Catchment Area	Item	Rate	Target 18–19		Achievement for the Year 2019–20	
				Phy.	Fin.	Phy.	Fin.
Kurseong S.C.	TLDP-III	Creation of Bamboo Plantation	35500	0.5	17750	0.5	17750
		DRM Wall with cement concrete	3325	25	83125	25	83125
		TLDP-III Sub Total			100875		100875
	TLDP-IV	Creation of Slip Plantation	22500	2	45000	2	45000
		Boulder Sausages Wall	2831/m³	618	1749558	618	1749558
		Bamboo Pallisade with Terrace Plantting	950/rmt.	170 m³	161500	170 m³	161500
	TLDP-IV Sub Total				1956058		1956058
Grand Total CAMPA				2056933		2056933	

## 17.8 PROJECT FUNDED BY EXTERNAL AGENCIES

The participatory watershed management for conserving rain water and other valuable natural resources is quite

promising for potential use of these untapped & under tapped resources to bring about changes in agricultural production and to improve rural livelihood in the rainfed ecosystem. To bring all the watershed in to a single umbrella, the National Rainfed Area authority (**NRAA**) under the aegis





of Planning Commission of India developed “Common Guidelines for Watershed Development Projects” in the year 2008 (which has been revised during 2011) and various schemes related to watersheds have been in operation at different points of time which have now been brought under the single umbrella of **Integrated Watershed Management Programme (IWMP)**, which comes under **Prandha Mantri Kisi Sinchayee Yojna (PMKSY) at present.**

**Main objective of watershed development programme:**

- (i) Conservation, development and sustainable management of natural resources (arable & nonarable lands, water, animals, vegetation and social) including their use.
- (ii) Enhancement of agricultural productivity and production in a sustainable manner.

- (iii) Restoration of ecological balance in the degraded and fragile rainfed ecosystem.
- (iv) High water use efficiency.
- (v) Livestock, Pisciculture, other household production/development.
- (vi) Development/conversion of waste land.
- (vii) Reduction in regional disparity between irrigated and rainfed areas.
- (vii) Creation of sustained employment opportunities for the rural community including the landless.

The Department of Land Resources, **MORD, GOI** is the funding agency for implementation of **IWMP** in India and the funding patterns involves cost sharing between the Central and State Governments on a 90: 10 ratio.

## 17.9 ONGOING PROJECTS UNDER THE CIRCLE (FINANCIAL ACHIEVEMENT FROM 2014–15 TO 2019–20)

Sl. No.	Division	Watershed Name	Total Fund Received	Expenditure till March 2020					
				2014–15	2015–16	2016–17	2017–18	2019–20	Total
1	Kurseong S.C.	Ghoom Pahar [IWMP-10]	62.885	0.24	11.69657	19.60943	26.13	47.17	104.84



Central Nursery Sonapur, Mansai Catchment Range under Jalpaiguri Soil Conservation Division





Murti- SMC Works-Lower Teesta Catchment Range under Jalpaiguri Soil Conservation Division



Mogolkata-SMC Works, Diana Catchment Range under Jalpaiguri Soil Conservation Division



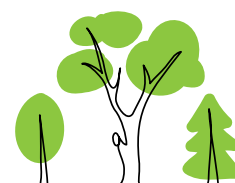




Central Nursery Bodaganj, Mahananda Catchment Range under Jalpaiguri Soil Conservation Division



Santalabari-SMC Works, Rydak Catchment Range under Jalpaiguri Soil Conservation Division







Boulder Sausage wall of 150 m<sup>3</sup> at Mahaldiram block-II constructed under CAMPA FUND (TLDP-IV) during 2019–20 under East Balason Catchment Range of Kurseong Soil Conservation Division



Boulder Sausage wall of 150 m<sup>3</sup> at Mahaldiram block-II constructed under CAMPA FUND (TLDP-IV) during 2019–20 under East Balason Catchment Range of Kurseong Soil Conservation Division



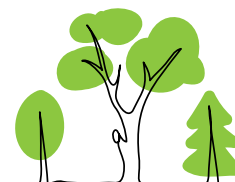




Creation of 2019 plantation of 5.0 ha. at Suhkiapokhri Block under West Balason Catchment Range of Kurseong Soil Conservation Division



Hand packed wall of 150 m<sup>3</sup> at Phuguri block constructed under RKVY during 2019–20 under West Balason Catchment Range of Kurseong Soil Conservation Division







Hand packed wall of 250 m<sup>3</sup> at Khairbani block constructed under RKVY during 2019–20 under Lower Mahanadi Catchment Range of Kurseong Soil Conservation Division



Hand packed wall of 100 m<sup>3</sup> at Khairbani block constructed under RKVY during 2019–20 under Lower Mahandi Catchment Range of Kurseong Soil Conservation Division







W.B.F.D.C.  
LTD.

W.B.F.D.C. LTD.

অরুণা বিকাশ  
কম্পাউন্ড

ARANYA BIKASH  
KB-10  
SALT LAKE



# WEST BENGAL FOREST DEVELOPMENT CORPORATION LTD

## CHAPTER 18

### 18.1 OBJECTIVES

West Bengal Forest Development Corporation Limited (WBFDCCL) came into existence in 1974. The Corporation was constituted on 19<sup>th</sup> July, 1974 under the Companies Act, 1956.

Broad Objectives of the Corporation are as follow:

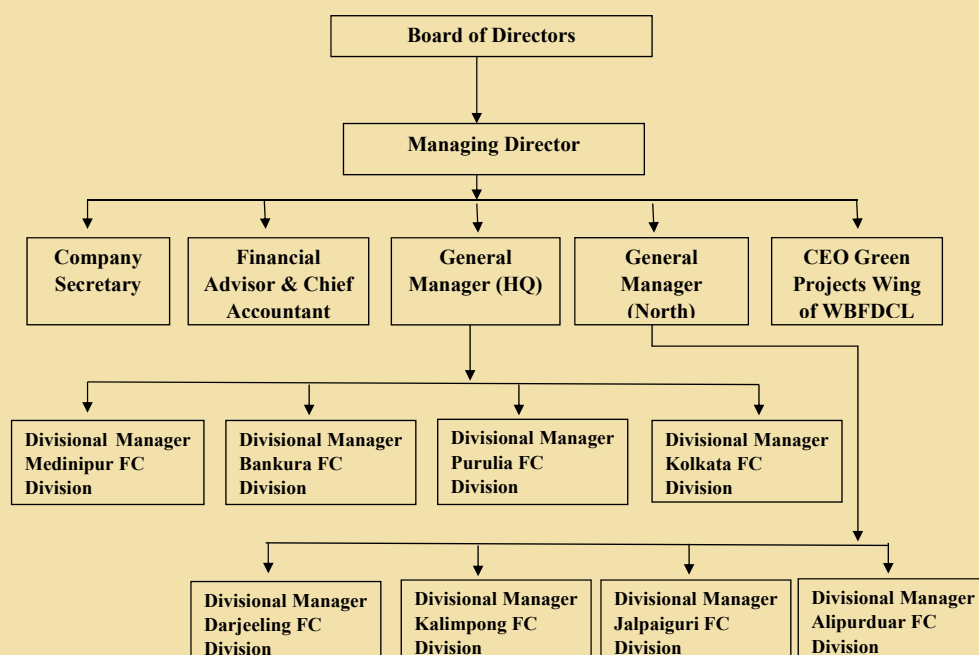
- To help conserve fragile ecosystem of the areas in Darjeeling Himalayas.
- To promote Joint Forest Management (JFM) with people's participation in South Bengal and North Bengal.

- To provide forest produce, such as timber, firewood, poles, small timber and other forest produces to the market.
- To develop awareness for conservation of nature through eco-tourism.
- To generate rural employment through forestry, eco-tourism and related activities.

### 18.1.2 Organization Structure

The WBFDCCL is managed under the supervision and Control of the Board of Directors appointed by the Governor of West Bengal. A detail organization structure is given below:

### 18.2 ORGANIZATION CHART





## 18.3 BOARD OF DIRECTORS

During the Year 2019–20 the Board of Directors of WBFDCCL was re-constituted with the following directors:

1. Shri Udayan Guha, Chairman & Hon'ble MLA, West Bengal Legislative assembly.
2. Shri Indever Pandey, IAS, Additional Chief Secretary, Department of Forest, Govt. of West Bengal upto 13-06-2019)
3. Shri B. P. Gopalika, IAS, Additional Chief Secretary, Department of Forest, Govt. of West Bengal (from 13-06-2019 up to the end of F.Y 2019–20).
4. Shri Srikanata Mahata - Hon'ble MLA, West Bengal Legislative assembly
5. Smt. Mitali Roy - Hon'ble MLA, West Bengal Legislative assembly
6. Shri Dulal Murmu - Hon'ble MLA, West Bengal Legislative assembly
7. Shri Mohan Sharma- Mentor, Alipurduar Zila Parisad.
8. Smt. Maloti Baxla
9. Shri N. K. Pandey, IFS, PCCF (HoFF), UPTO 19-07-2019
10. Shri Siddhartha Barari, IFS, PCCF (HoFF), From-19-07-2019 to 02-01-2020.
11. Shri Ravi Kant Sinha, IFS, PCCF (HoFF) from 02-01-2020 till date.
12. Shri R. K. Dey, IFS, Addl. PCCF (Central), upto 31-10-2019.
13. Shri R. K. Samal, IFS, Deputy Director General of Forest (Central), Regional Office, M.O.EF& Climate Change, Bhubneswar from 31-10-2019 to upto the end of the Financial Year 2019–20.
14. Shri Sandip Banerjee, WBA&AS, Financial Advisor, Deptt. of Forests & Director, WBFDC Ltd upto 08-08-2019.
15. Shri Tamal Krishna Saha, WBA&AS From 08-08-2019 upto end of the financial year 2019–20.
16. Dr. R. P. Saini, IFS, Managing Director, WBFDC Ltd. upto 31-10-2019.
17. Shri Sandeep Sundriyal, IFS from 31-10-2019 to till date.

## 18.4 MAJOR ACTIVITIES

- i) **Harvesting & Sale of Timber in North Bengal:** The North Bengal project was initiated as joint venture between WBFDCCL and Forest Directorate during 2003–04 for a period of 10 years. After the expiry of the said ten years the project was extended on year

to year basis by the Department of Forest, the Govt of West Bengal. The WBFDCCL arranges for harvesting of timber and firewood operation in North Bengal forests and its disposals through auctions and tenders and the revenue is deposited with the Forest Directorate after deducting the share of this Corporation towards recovery of Administrative and Financial Charges and share of the Joint Forest Management Committees. WBFDCCL gets 17% of the net sale proceeds as the Recovery of Administration and Financial Charge. Alipurduar Forest Corporation Division, Siliguri Forest Corporation Division and Jalpaiguri Forest Corporation Divisions are working for this project.

ii) **Harvesting & Sale of Timber in South Bengal:**

At present WBFDCCL is undertaking harvesting and Marketing of Timber on behalf of the Forest Directorate. The revenue is deposited with the Forest Directorate after deducting the share of this Corporation towards recovery of Administrative and Financial Charges and the share of the JFMCs. West Bengal Forest Development Corporation Limited gets 20% of the net sale produce as the said Administrative and Financial Charges. The Medinipur Forest Corporation Division, Bankura Forest Corporation Division and Purulia Forest Corporation Division are working for harvesting of matured Sal crop & plantations in South West Bengal.

The sale value earned through e- auction amounting to ₹25000.00 lakh as per Revised Budget (R.E) during 2019–20.

- iii) **Eco- tourism:** WBFDCCL is maintaining Eco-Resorts at the different places of West Bengal. At present the Eco-Resorts at Barodabari, Bodaganj, Garchumuk, Garhpanchokot, Gorubathan, Kalimpong, Jhargram, Lava, Lepchajagat, Loleygaon, Mongpong, Mukutmonipur, Parens Mufti, Rashikbeel, Buxa — Jungle Lodge, Suntaleykhola are functioning. The online booking facility for the aforesaid Eco-resorts is also extended to tourists through the Epayment Gateway system of this Corporation. This Corporation is also undertaking the internet booking of the Ecoresorts owned by the different private parties in order to augment its income. The gross revenue earned from the Eco-resorts for the year 2019–20 stood at ₹444.10 lakh (as per R.E).

- iv) **Joinery & Carpentry Products:** WBFDCCL runs four Joinery and Carpentry Units at Siliguri, Rajgang, Salt Lake and Durgapur. It also supplies its products to various prestigious organizations including Aliah



University, Airport authority of India, Agriculture Marketing deptt, Govt of West Bengal, Jt. Secy to the Govt of West Bengal, Raj Bhawan. DFO/Monitoring cell (s) Division, Chief Conservator of Forests, South East Circle, Lal baba College at Howrah, Circuit House South 24 Parganas, Bengal Brick Field Owners Association and many such organizations/offices. Total revenue from these units was ₹525.83 Lakh for the year 2019–20 (R.E).

- v) **Saw Mills & sale of Sawn Timber:** WBFDCL runs 4 Saw mills at Siliguri (Govt Saw Mills), Salugara, Bhuttabari, and Madarihata, Sawn timber is sold to public through sale centres located at Siliguri, Raiganj, Salt Lake, Durgapur, Midnapur, Purulia, Darjeeling, Kalimpong, Kurseong and Bhuttabari.
- vi) **Honey Operation:** WBFDCL procures honey through the members of Joint Forest Management Committees (JFMCs) under Sunderbans Tiger Reserve & 24 Parganas (S) Division and sells after refinement under the brand name MOUBAN. The total revenue during 2019–20 was ₹78.98 Lakh (R.E).
- vii) **Disposal of trees from Non Forest Land:** West Bengal Forest Development Corporation Ltd. is also engaged in disposal of trees from other Govt. agencies like NHAI, PWD, Metro Railway etc.
- viii) **Greening of Waste Lands in South West Bengal:** West Bengal Forest Development Corporation Ltd. (WBFDCL) has initiated a programme for plantation of *Eucalyptus* clones on private waste lands in rural areas of Medinipur, Purulia and Bankura districts in

South Bengal with a view to improve socio economic condition of weaker section of the Society. This activity aims to help the poor land owners who are presently unable to get any benefit from their unused land and simultaneously improve the earnings of the Corporation. Entire investment for plantation and harvesting will be borne by the Corporation and the revenue of the produce or Crop will be shared by the Corporation and the Individual land owners in the ratio of 3:1. Area of 175.00 ha was planted during the year in the scheme.

- ix) **Darjeeling-Rangit Valley Ropeway:** Ropeway at Darjeeling is operated in collaboration with a private partner viz, M/s. Conveyor & Ropeway Services Private Ltd. and continuing its public service as a source of pleasure & amusement.

The revenue earned during 2019–20 has been ₹53.43 lakh (as per R.E).

## 18.5 SCHEDULE OF MEETINGS HELD

During the F.Y 2019–20, 4 (Four) Board Meetings were duly held on 13.06.2019, 26-09-2020, 28-11-2019, 30.12.2019.

## 18.6 FINANCIAL RESULTS

The summary of working result of WBFDCL for the financial year 2019–20 (provisional) as compared to the earlier year is as follows.

### PROVISIONAL PROFIT AND LOSS FOR THE YEAR ENDED 31<sup>st</sup> MARCH, 2020

REVENUE FROM OPERATION	Current Year 2019–20 Amount (₹)	Previous Year 2018–19 Amount (₹)
SALE OF GOODS	1519,26,452	1914,03,157
OTHER OPERATING INCOME	5073,77,474	5109,16,577
	<b>6593,03,926</b>	<b>7023,19,734</b>
OTHER INCOME	77,83,826	1155,79,196
<b>TOTAL REVENUE</b>	<b>6670,87,752</b>	<b>8178,98,930</b>
<b>TOTAL EXPENSES</b>	<b>5592,81,963</b>	<b>5900,32,437</b>
PROFIT BEFORE EXTRAORDINARY ITEMS AND TAX	1078,05,789	2278,66,493
EXTRAORDINARY ITEM	–	–
PROFIT BEFORE TAX	1078,05,789	2278,66,493
TAX EXPENSES		(781,95,709)
PROFIT(LOSS) FOR THE YEAR	458,05,789	1496,70,784









# WEST BENGAL PULPWOOD DEVELOPMENT CORPORATION LTD

## CHAPTER 19

The West Bengal Pulpwood Development Corporation Ltd., a joint Sector Company was established as a Limited Company with share holding pattern of 50:50 partnership between Titagarh Paper Mills Ltd. in the year 1982 with an authorised share capital as per Memorandum of Article of Association amounting to rupees 3 (Three) crores.

Till date the paid-up Share Capital is ₹82,00,700 (Eighty Two Lakhs and Seven Hundred) only.

### 19.1 DETAILS OF DIRECTORS/KEY MANAGERIAL PERSONNEL

The Company has six Directors:

1. Sri Hiten Barman.
2. Sri Debasish Goswami
3. Sri T.V.N. Rao, IFS
4. Sri Debal Ray, IFS
5. Sri Niraj Singhal, IFS

### 19.2 ACTIVITY OF THE COMPANY

To raise Pulpwood plantation in non-forest land for creation of resource for supply of pulpwood to Paper Industries.

### 19.3 FINANCIAL RESULT DURING 2019-20

(i) By sale of Pulpwood Plantation over 57.11 ha.	₹60,70,700/-
(ii) Income from Bank interest	₹24,27,278/-

**Expenditure:** Maintenance cost of older plantation over 20 ha. – ₹1,39,880/-

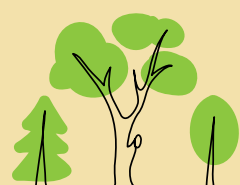
#### Account Details

Credit	Opening Balance:	₹25,71,893.00
	Earning:	₹85,03,678.00
	Total	₹1,10,75,571.00
Debit	Expenditure:	₹72,62,915.00
	Closing Balance:	₹38,12,656.00
	Total	₹1,10,75,571.00

### 19.4 STAFF STRENGTH

Total permanent staff at present is 5 nos.

1. Ministerial Staff	2 nos.
2. Peon	2 nos.
3. Rakha	1 no.









# WEST BENGAL FOREST & BIODIVERSITY CONSERVATION PROJECT

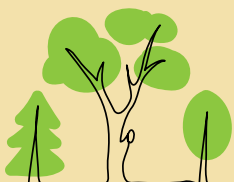
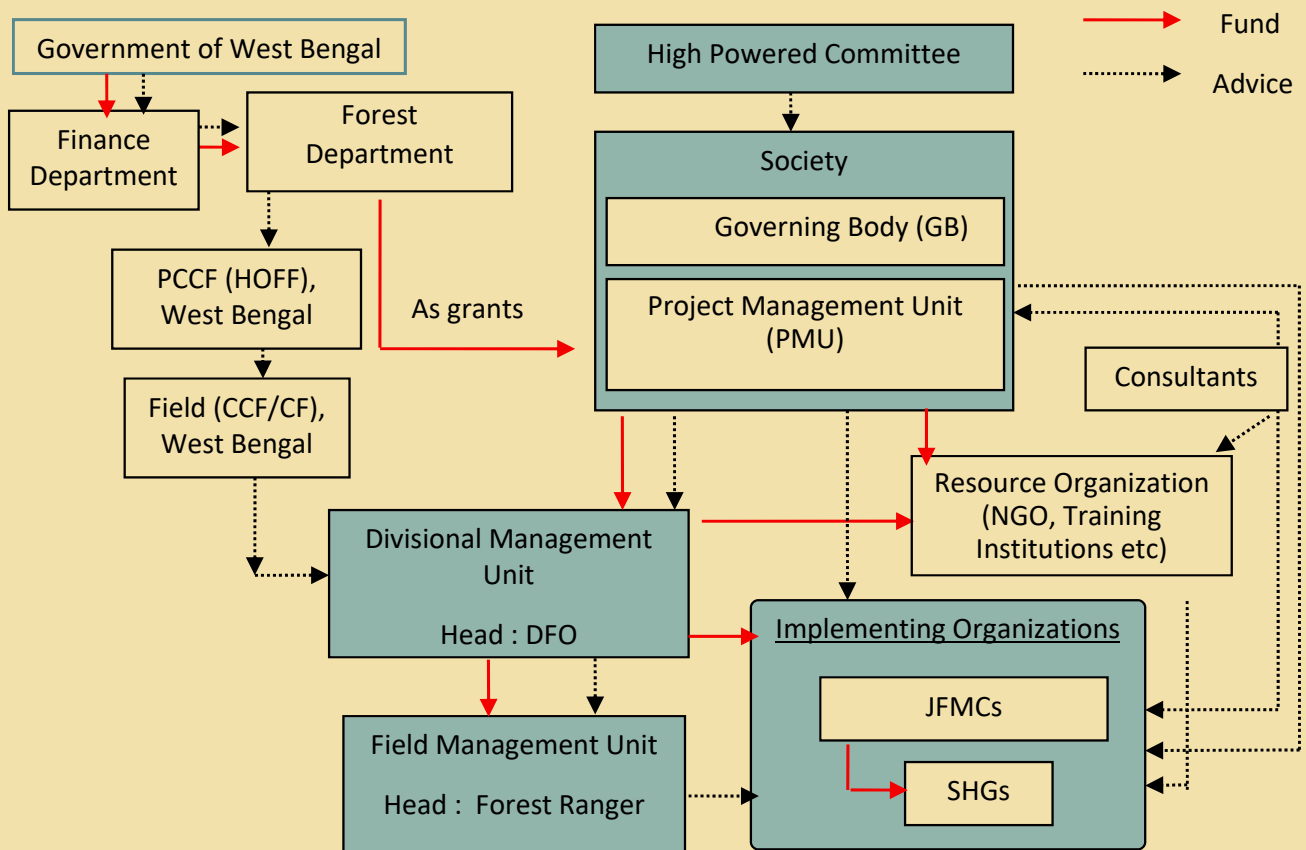
## CHAPTER 20

### 20.1 OBJECTIVE

To improve forest ecosystem and conserve biodiversity by undertaking afforestation, regeneration and wild life management activities through Joint Forest Management

Approach, including institutional capacity development, thereby contributing to environmental conservation and harmonized socio-economic development of West Bengal.

### 20.2 ORGANISATION DETAILS



## 20.3 SCHEDULE OF MEETING HELD

15<sup>th</sup> Governing body meeting held on 24.09.2019.

## 20.4 GOVERNING BODY

The members of the Governing Body of the Society and their designation are as follows:

Sl. No.	Name	Designation
(i)	Addl. Chief Secretary/Principal Secretary to Govt. of West Bengal, Department of Forests	Chairperson
(ii)	Principal Chief Conservator of Forests, Head of Forest Force, West Bengal	Member
(iii)	Principal Chief Conservator of Forests, Wildlife and Chief Wildlife Warden, West Bengal	Member
(iv)	Principal Chief Conservator of Forests, General, West Bengal	Member
(v)	Principal Chief Conservator of Forests, Research, Monitoring and Development	Member
(vi)	Representative of Finance Department, Government of West Bengal, not below the Rank of Joint Secretary, to be nominated by the Additional Chief Secretary/ Principal Secretary to the Government of West Bengal, Finance Department	Member
(vii)	Representative of Department of Forests, Government of West Bengal, not below the Rank of Joint Secretary, to be nominated by the Additional Chief Secretary/ Principal Secretary to the Government of West Bengal, Department of Forests	Member
(viii)	Managing Director West Bengal Forest Development Corporation Ltd.	Member
(ix)	Managing Director West Bengal Wasteland Development Corporation Ltd.	Member
(x)	Addl. Principal Chief Conservator of Forests, Human Resource Development, West Bengal	Member
(xi)	Addl. Principal Chief Conservator of Forests, Finance, West Bengal	Member
(xii)	Addl. Principal Chief Conservator of Forests, North Bengal	Member
(xiii)	Chief Project Director, West Bengal Forest and Biodiversity Conservation Project	Member-Secretary

## 20.5 MAJOR ACTIVITIES

- A) Afforestation and allied activities
- B) Biodiversity Conservation
- C) Community Development
- D) Institutional Capacity Development
- E) Consultancy Services

### 20.5.1 Afforestation And Allied Activities

- i) **Afforestation:** The major activity of the Society is afforestation. Till 2018–19, the total plantation raised under Models (A1 to A6) is 20282 hectares and under models B1 & B2 (Social Forestry) is 1500 hectares. There was no new plantation activity in 2019–20. However, all plantations underwent MY-I, MY-2 and MY-3 as stipulated.
- ii) **Production of QPM:** For raising Quality Planting Material (QPM) 24.75 New and 15.25 Expanded Central Nurseries have been constructed and have become

operational. During 2019–20, 79.00 lakh seedlings were raised in 40 No central nurseries with an outlay of ₹ 302.52 lakh.

### 20.5.2 Biodiversity Conservation

- i) **Biodiversity Research:** The following research projects (6 nos.) on Biodiversity is undergoing in the field.
  - a) Ecology of Elephant in S-W Bengal- final report submitted.
  - b) Ecology of Elephant in North Bengal-Draft final report submitted.
  - c) Ecology of Gaur in North Bengal-ongoing.
  - d) Ecology of Leopard in North Bengal-ongoing.
  - e) Impact of Habitat Management in N.P.s & Sanctuaries-ongoing.
  - f) Population Estimation and Ecological Reconnaissance of the Small Mammals of South Bengal-final report awaited.



### 20.5.3 Institutional Capacity Building

- i) **Building Construction:** Out of the total target of 59no of Beat offices, 17No of Beat offices were constructed in 2019–20 with an expenditure of ₹176.38lakh. Expansion of Aranya Bhawan and construction of new building at Salt Lake has been completed. Construction work of Administrative Building at Siliguri (G+3) has made substantial progress during 2019–20.
- ii) **MIS and GIS Work:** Development of the MIS is a key component of the project. Under this component the following major components are made operational:
- Project dashboard has been made operational.
  - Comprehensive database on all project components at DMU, FMU and JFMC level with particular emphasis on data retrieval mechanism has been made available.
  - e-plantation journals for all afforestation works under the WBFBC project as well as other projects like SPAP, Namami Gange etc. made available at domain name [www.wbfdpj.org](http://www.wbfdpj.org).

An ambitious project for digitization of complete forest boundaries as well as JFMC boundaries has been on progress for three forest Divisions of Purulia district in collaboration with WP and GIS Circle. Similar work for forest Divisions of Paschim Medinipur District (under Western Circle) is also under process by outsourcing.

- vi) **Inland training and field visit:** An exposure visit to the 'Tripura JICA Project' of the state of Tripura for the 15 No officers of the rank of ACF, RO and BOs of various DMUs were arranged between 25<sup>th</sup> February, 2020 and 1<sup>st</sup> March, 2020.
- vii) **Overseas training:** An Officer of DCF rank was deputed for overseas training programme on 'Carbon Forestry' at Institute of Forest Sciences, the University of Freiburg, Germany during 27<sup>th</sup> January, 2020 to 14<sup>th</sup> February, 2020.

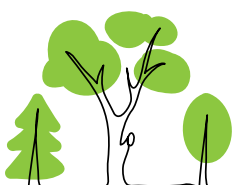
- viii) **Forest Resource Baseline survey:** The work for conducting Forest Resource Baseline Survey has been assigned to Forest Survey of India, Government of India. Field level study in the field has been completed. Data entry as per guideline of FSI is under process.

### 20.5.4 Community Development

- i) **IGA:** For livelihood improvement of the JFMC members 1200 SHGs have been formed under Project JFMCs. Till date more than 10661 business plans have been approved and an amount of ₹6.48 Crore have been released as seed money to various JFMCs through DMUs. The unique feature in this component is assured income generation as well as paying back the seed money. The recovered amount on initial loan stands at 5.91 Crore which is a commendable achievement.
- ii) **CID:** Various development works at JFMC level have been taken up over 600 JFMCs- an amount of ₹3330.16lakh have been spent during 2019–20 for community infrastructure development work. The works were taken up as per priority list in approved micro plan and work executing agencies are paid from the JFMCs through their accounts- a mechanism that exemplify bottom-up planning and execution. This approach seeks to empower the primary stakeholders and root out any sources of leakage.

## 20.6 FINANCIAL RESULTS

Sl. No	Item	Amount in Crore
1	Total Project cost upto 2021–22	406.00
2	Fund Released upto March,2020	358.61
3	Fund utilised upto March,2020	296.77





## 20.7 PHOTOGRAPHS



Inauguration of newly constructed Beat Office at Panchkahania Beat of Nayagram FMU under Kharagpur DMU.



Inauguration of newly constructed Beat Office at Narayangarh Beat of Belda FMU under Kharagpur DMU.







Newly constructed of Beat Office at Godrasole Beat of Gidhni FMU under Jhargram DMU.



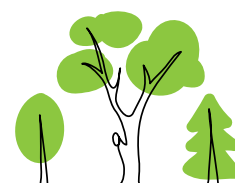
MS-Cutting (A4 Model) of Sal Forest under Hijli FMU of Kharagpur DMU







Photographs of Tripura Tour on 25<sup>th</sup> February, 2020 to 1<sup>st</sup> March, 2020







Photographs of Germany Tour on 27<sup>th</sup> January, 2020 to 14<sup>th</sup> February, 2020







Making of Bel Mala at Hamirhati JFMC under Sonamukhi FMU in Bankura South DMU.



Making of Bel Mala at Mithum JFMC under Ranibandh FMU in Bankura South DMU.



Construction of Community Hall at Brikabhanupur JFMC under Hijli FMU in Kharagpur DMU





Making of Plate using Sal leaves



Business of Handicraft Items







GOVT. OF WEST BENGAL



# MELIA DUBIA PLANTATION 2019 - 20

## SCHEME - SFDA

Mouza : GHUGIMURA JPMC : GHUGIMURA - BINODHABARI

JL. No. : 121 PLOT NO. : 1521, 1572

AREA : 01 HA. BEAT : BISHNUPUR I BEAT

RANGE : BISHNUPUR DIVISION : PANCHET

GPS Location : N 23°01'42.62" E 86°18'53.18"



# WEST BENGAL STATE FOREST DEVELOPMENT AGENCY

## CHAPTER 21

### 21.1 EXECUTIVE BODY

WBSFDA Executive Body Members are as follows:

1. The Principal Chief Conservator of Forests & HoFF
2. The Principal Chief Conservator of Forests, General
3. The Managing Director, West Bengal Forest Development Corporation Ltd
4. The Principal Chief Conservator of Forests, Wildlife
5. The Addl. Principal Chief Conservator of Forests, Finance
6. The Addl. Principal Chief Conservator of Forests, North Bengal
7. The Project Director, WBFBCP [JICA]
8. The Chairman, SPMU of JICA for Project on training
9. The Chief Conservator of Forests, SDP
  - Principal Chief Conservator of Forests & Head of Forest Force – **Chairman**
  - Chief Conservator of Forests, Special Development Project – **Member Secretary**
  - Upper Division Clerk
  - Chief Accounts Officer

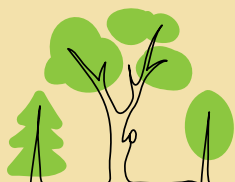
WBSFDA General Body Members are as follows:

1. The Principal Chief Conservator of Forests & HoFF
2. The Principal Chief Conservator of Forests, General
3. The Managing Director, West Bengal Forest Development Corporation Ltd
4. The Principal Chief Conservator of Forests, Wildlife
5. The Addl. Principal Chief Conservator of Forests, Finance
6. The Addl. Principal Chief Conservator of Forests, North Bengal
7. The Project Director, WBFBCP [JICA]
8. The Chairman, SPMU of JICA for Project on training

9. The Chief Conservator of Forests, SDP
10. The Chief Conservator of Forests, Western circle
11. The Chief Conservator of Forests, Central circle
12. The Chief Conservator of Forests, South-East circle
13. The Chief Conservator of Forests, South-West circle
14. The Chief Conservator of Forests, Northern circle
15. The Chief Conservator of Forests, Hill circle
16. The Chief Conservator of Forests, Wildlife (N) circle
17. The Divisional Forest Officer, Jhargram Division & CEO, West Medinipur FDA
18. The Divisional Forest Officer, Gorumara WL Division & CEO, Wildlife-II FDA
19. The Principal Secretary, Panchayat & Rural Development Department, Govt. of West Bengal or his/her authorised representatives.
20. The Principal Secretary, Backward Classes & Welfare Department, Govt. of West Bengal or his/her authorised representatives.
21. Financial Advisor, Deptt. of Forests, Representative, Finance Deptt. WB
  - During the year 2019–20, the 17<sup>th</sup> EB Meeting & 14<sup>th</sup> GB meeting had been held on 17.03.2020.

### 21.2 Objective

National Afforestation and Eco – development Board [NAEB], Ministry of Environment, Forests and Climate Change, Government of India launched the National Afforestation Programme [NAP] to be implemented by Forest Development Agencies [FDA] of the states during 10<sup>th</sup>. Plan period. As per its guidelines, a State Level Co – ordination Committee was formed vide Notification No. 5890 – For dated 10.12.2007 and No. 3491 – For dated 18.08.2010. Subsequently, in compliance with guidelines of





the NAEB, "West Bengal State Forest Development Agency" [WBSFDA] was registered as Society in the year 2010.

In addition to the NAP programme, WBSFDA was made one of the signatories of the quadripartite agreement for implementation of the "Capacity Development for Forest Management & Training of Personnel" funded by JICA in 2010.

Regulations for WBSFDA were notified vide Notification No. 1130 – FRIIIM – 19/ 2003 dated 10<sup>th</sup> June, 2014.

In order to enlarge the outlays, eliminate fragmentation of efforts, reduce inefficiencies and optimize the decision making processes as well as impacts to achieve the objectives of increasing forest cover, carbon sequestration/ storage, hydrological services and biodiversity, etc., it has been decided, with the approval of Minister of Environment Forest and Climate Change, to merge National Afforestation Programme [NAP] under NAEB and Desertification Cell [DC] with National Mission for a Green India [GIM]

Some of the key schemes taken up by the WBSFDA and their performance in the year 2019–20 are given below:

## 21.3 MAJOR ACTIVITIES

**Rashtriya Krishi Vikas Yojana [RKVY]:** The most important sector of Indian as well as State Economy is Agriculture. Rastriya Krishi Vikas Yojna (RKVY) was launched by the Department of Agriculture & Co-operation (DAC) Ministry of Agriculture, Govt. of India from 2007–08, as an umbrella scheme for ensuring holistic development of agriculture and allied sectors with 4% annual growth. The allied Sectors has an important role to play in the total Agricultural Development of the Country and the Natural Resource Management Component of the Scheme is being implemented all over the State by the Forest Department of West Bengal. Forest plays a very important role in the agriculture of forest fringe areas inhabited by the economically weaker people, through the different soil moisture conservation works such as gully plugging, contour trenching, boulder sausage walls, river training works and earthen dam which not only safeguards the agricultural lands and crops but also help to replenish the water table of the area benefitting cultivation as a whole.

Based on the feedback from the States during implementation in the 12<sup>th</sup> plan the aim of the scheme

was shifted towards making farming a remunerative through strengthening farmer's efforts, risk mitigation and promoting agri-business entrepreneurship. The erstwhile scheme of RKVY guidelines have been revamped as RKVY-RAFTAAR—Remunerative Approaches for Agriculture and Allied Sector Rejuvenation, to enhance efficiency, efficacy and inclusiveness of the programme for the remaining period of the Fourteenth Finance Commission. The main objectives of RKVY—RAFTAAR are as follows:

1. Creation of pre-and post-harvest infrastructures to strengthen the farmers efforts
2. Promoting value chain addition linked production model
3. Ensuring local/farmers' needs being better reflected in the agricultural plan of the State
4. Mitigating risk of farmers with focus on additional income
5. Empowering youth through skill development, innovation and agri-entrepreneurship
6. Attending national priorities through sub schemes.

RKVY—RAFTAAR is implemented as a Centrally Sponsored Scheme having the funding pattern in the ratio of 60:40 (Gol: State Share)

The State of West Bengal has nearly 3% of the nation's cultivable land and about 8% of the country's population. The state is characterized by the predominance of small and marginal farmers cultivating more than 68% of the cultivable area of the State. Since the scope of bringing more area under cultivation is limited emphasis is being laid mainly on increasing the productivity of different crops by using quality seeds, fertilizers, plant protection measures, introducing suitable mechanizations and emphasizing on soil amelioration and soil moisture conservation measures being IMPORTANT PRE-HARVEST STRATEGIES to ensure optimum crop production. Our objective is to undertake relevant soil moisture conservation works in the forestland to conserve natural resources and achieve consequent improvement in agriculture crop productivity in fringe areas. In order to achieve the goal, relevant work programme have been identified in different sites of West Bengal, which will help in rain water harvesting, reduced erosion, and increase canopy cover, and minimized impacts of floods, increase humidity, increase regeneration and change in micro-climate and thereby ensuring increased farming opportunity and production to the forest fringe



population. The major objectives of the RKVY-RAFTAAR 2019–20 are as follows:

1. To improve the productivity of the areas under treatment
2. To improve the ground water regime
3. To control soil erosion and arrest the sedimentation to the extent possible
4. To create water impounding structures in the forest fringes for making water available for the agricultural lands in the proximity of forest areas.

#### RKVY Projects approved during the last 4 years:

[₹ in Crore]

(₹ in Crore)	2016–17	2017–18	2018–19	2019–20
DPR Approved	14.30	14.08	7.29	15.00
Fund Received	10.99	13.41	6.9234	5.93

#### RKVY Projects Achievement during the last 3 years:

[₹ in Crore]

[₹ In Crore]	2017–18	2018–19	2019–20
Soil Conservation	4.6638	4.1401	5.93
Central Nursery	8.6852	3.0341	–
<b>Total</b>	<b>13.3490</b>	<b>7.1742</b>	

**Online Booking System:** In March 2015, WBSFDA had started the Online Booking System for different eco-tourism centres in the State. The web site was [www.wbsfda.gov.in](http://www.wbsfda.gov.in). Recently WBSFDA has launched its new revamped website

[www.wbsfda.org](http://www.wbsfda.org) for online booking of Eco-tourism Centres, Elephant Ride and Car Safari. The inventory of accommodation in the Eco-tourism Centres and receipts during 2019–20 is given below:

Sl. No.	Name	Location	Divisions	Cottages/Rooms	Receipts During 2019–20 (₹)
1	Mouchaki Camp	Samsing	Gorumara Wildlife	4 Rooms (DB)	3,53,200.00
2	Hornbill Nest	Bichabhanga	Gorumara Wildlife	4 Cottages (DB)	1,63,200.00
3	Murti Tents	Murti	Gorumara Wildlife	4 Cottages (DB)	3,22,700.00
4	Dhupjhora Elephant Camp	Dhupjhora	Gorumara Wildlife	3 Rooms (Non AC, DB)	14,08,020.00
5	Dhupjhora Elephant Ride	Dhupjhora	Gorumara Wildlife		80,800.00
6	Dhupjhora Tree House	Dhupjhora	Gorumara Wildlife	1 Room,(Non AC, DB)	5,80,800.00
7	Dhupjhora Tree House Elephant Ride	Dhupjhora	Gorumara Wildlife		29,600.00
8	Kalipur Eco Village	Ramsai	Gorumara Wildlife	3 Rooms Non AC, DB	14,64,500.00
9	Kalipur Elephant Ride (From medla)	Ramsai	Gorumara Wildlife		1,04,000.00
10	Panjhora Wilderness Camp	Panjhora	Gorumara Wildlife	4 Rooms Non AC, DB	11,98,800.00
11	Rhino Camp	Ramsai	Gorumara Wildlife	3 Rooms, Non AC, DB	8,91,300.00
12	Rhino Camp Elephant Ride	Ramsai	Gorumara Wildlife		64,800.00



Sl. No.	Name	Location	Divisions	Cottages/Rooms	Receipts During 2019-20 (₹)
13	Kunjanagar	Kunjanagar	Jaldapara Wildlife	4 rooms (DB)	52,800.00
14	South Khairbari	South Khairbari	Jaldapara Wildlife	3 cottages (DB)	1,26,000.00
15	Mendabari Jungle Camp	Mendabari	Jaldapara Wildlife	2 Rooms(DB), 1 Dorm. (4beds)	8,08,500.00
16	Neora Jungle Camp	Lataguri	Jalpaiguri	4 rooms (DB)	8,80,000.00
17	Bandapani	Bandapani	Jalpaiguri	1 Room (DB)	32,500.00
18	Rosomoti Twin Cottage	Patlakhawa	Coochbehar	2 Rooms (DB)	61,000.00
19	Gosanimari Twin Cottage	Gosanimari	Coochbehar	2 Rooms (DB)	21,000.00
20	Susunia ETC	Susunia	Bankura North	2 Rooms (DB), 1 Dorm. (8 Beds)	3,07,600.00
21	Beharinath ETC	Beharinath	Bankura North	6 Rooms (DB)	2,34,400.00
22	Matha Tree House	Matha	Purulia	1 Room (DB)	51,500.00
23	Menebhanjan Trekker's Hut	Manebhanjan	Darjeeling	2 Rooms (DB)	42,960.00
24	Gopegarh ETC	Gopegarh (Near Midnapore Town)	Medinipur	4 AC -Rooms (DB) 2 1 Dorm.(10 Beds) 2 NON AC-(DB)	6,69,800.00
25	Parimal Kanan	Chandrakona	URF	Paribahan Cottages	4,69,100.00
				2 Rooms AC, (DB)	
				2 Rooms Non AC, DB	
				Bakul Cottage	
				1 Room DB	
				Balaka Cottage	
				2 Rooms DB	
26	Kshudiram Bose Park	Chandrakona	URF	5 Rooms (DB)	29,050.00
27	Bolepur NIC	Bolepur	Birbhum	3 Rooms Non AC, DB 3 Rooms AC, DB 1 Dormitory (6 Beds).	7,98,300.00
28	Bethuadahari Cottages	Betuaduari	Nadia-Murshidabad	2 Rooms (DB)	1,83,000.00
	<b>Total</b>				<b>1,14,29,230.00</b>

### 21.3.1 Green India Mission

WBSFDA is the implementing Agency of Green India Mission for the State. Till 2019-20 an allocation of ₹ 242.47 lakh was made to the Divisions for entry point activities.

Fund received from Gol = ₹ 300.75 lakh  
Fund allotted to Divisions = ₹ 242.47 lakh  
Expenditure till 31<sup>st</sup> Mar, 2020  
(Including H.O salary) = ₹ 293.19 lakh

### 21.3.2 NMPB Scheme

Funds were received in different stages from Government of India, Department of Ayurveda, Yoga & Naturopathy, Unani, Siddha & Homeopathy (AYUSH) of the Ministry of Health & Family Welfare for emphasising the importance of medicinal plants, its cultivation, production and marketing and strengthening the natural product based system for health and welfare.



Project Name	Fund received	Allotment	Expenditure
For "Socio-Economic Upliftment of JFMC through Conservation of Medicinal Plants, Value Addition & Marketing of Medicinal plants" – to be implemented in 225 FPCs of 9 Divisions in the State of West Bengal.	₹667.92 lakh	₹639.45 lakh	603.53 lakh
For Revisiting MPCAs in West Bengal.	₹54.54 lakh	₹41.14 lakh	₹41.14 lakh
7 new MPCAs	₹57.34 lakh	₹17.16 lakh	₹17.16 lakh

### 21.3.3 Wild Animal Depredation

During the year 2019–20 WBSFDA has received ₹928.30 lakh from PCCF Wildlife and Chief Wildlife Warden for this following item of works:

1. Death.
2. Injury.
3. Crop damage.
4. Hut damage.
5. Live stock damage.

#### Status of Expenditure of compensation for Wild Animal Depredation Status (As on March, 2020)

[₹ In Lakh]

Sl. No.	Divisions	Fund Allotted	Expenditure
1	Rupnarayan	67.96	62.06
2	Kharagpur	105.00	104.81
3	Medinipur	207.86	193.08
4	Jhargram	98.81	78.30
5	Kangsabati(S)	1.47	1.47
6	Bankura (N)	38.42	31.79
7	Bankura (S)	12.00	11.63
8	Panchet	15.00	12.68
9	Baikunthapur	17.30	14.59
10	Jalpaiguri	35.00	32.15
11	Purulia	70.03	63.36
12	Darjeeling – WL	13.00	11.91
13	Gorumara – WL	55.15	52.89
14	Jaldapara – WL	78.18	67.80
15	Burdwan	0.57	0.04
16	BTR (E)	17.19	12.82
17	BTR (W)	21.32	16.98
18	Kurseong	50.51	50.12
19	24-Pargans(S)	4.00	4.00
20	Howrah	1.50	1.50
21	Birbhum	2.53	2.09
22	Durgapur	8.50	8.00
23	Coochbehar	2.00	1.85
24	Kalimpong	5.00	4.76
	<b>Total</b>	<b>928.30</b>	<b>840.68</b>





### 21.3.4 Fund Received for felling, logging in connection with land diversion

During the year 2019–20 WBSFDA were received funds in different stages under CAMPA fund. The details fund received pertaining to 2019–20 are tabulated below:

Nature of Works	Fund Received (₹ in lakh)	Fund Allotment (₹ in Lakh)	Fund Released (₹ in lakh)
Diversion of Forest Land for establishment of Gangaramchak—Bhadulia Coal Mines in favour of WBPDCCL under Birbhum Forest Division	3.44	3.44	0.00
For extension of Paradip-Haldia of IOCL under Birbhum Forest Division	2.38482	2.38482	0.00
Construction of 1000 MW of WBSEDCL Ajodhya Hills under Purulia Forest Division	404.24513	404.24513	0.98
Diversion of Forest Land in favour of North Frontier Railway, Jalpaiguri for construction of Sevoke—Rongpo New Broad Gauge Railway Line	357.36793	357.36793	66.84

### 21.3.5 Centrally Sponsored Scheme

During the year 2019–20 WBSFDA were received funds in different stages under Centrally Sponsored Scheme fund. The details fund received pertaining to 2019–20 are tabulated below:

Scheme	Fund Received (₹ in lakh)	Fund Allotment (₹ in Lakh)	Fund Released (₹ in lakh)
Conservation and Management of Sundarban Mangroves	127.00	127.00	127.00
Conservation and Management of Sundarban Mangroves for SC Sub-Plan in Sundarbans	249.00	249.00	249.00

### 21.3.6 Parks & Gardens & Eco-tourism Activities

During the year 2018–19 and 2019–20, WBSFDA have received funds from different divisions under Parks & Gardens & Eco-tourism Activities. The details fund received pertaining to 2018–19 and 2019–20 are tabulated below:

Year	Fund Received		Total Fund Received
	Parks & Gardens	Eco-tourism Activities	
2018–19 (up to March'2019)	3,67,40,952.00	5,48,91,558.00	9,16,32,510.00
2019–20 (up to March,2020)	4,60,26,130.00	6,35,37,539.00	10,95,63,669.00

### 21.3.7 Tree Felling

During the year 2018–19 and 2019–20 WBSFDA were received funds from different divisions under Tree Felling vide Forest Dept., Notification No. 3011-FR/O/FP/6M-10/99 (Part-II), dated 07.09.2017. The details fund received pertaining to 2017–18 and 2018–19 are tabulated below:

Year	Fund Received	Refund
2018–19	1,34,58,517.00	1,83,320.00
2019–20	1,27,08,892.00	27,900.00



# WEST BENGAL ZOO AUTHORITY



## CHAPTER 22

### 22.1 INTRODUCTION

The West Bengal Zoo Authority was constituted as a registered society vide Gazette notification no. 382-For; Kolkata, **27<sup>th</sup> August, 2009** and notification no.10036-For/11M-27/2002, dt. 23.12.2009, as a government controlled registered society under the Department of Forests, Govt. of West Bengal. The Authority became functional during **2012–13** only. The West Bengal Zoo Authority is governed by a 14 member body headed by the Chief Secretary, Govt. of West Bengal as Chairman and Addl. Chief Secretary, Department of Forests, Govt. of West Bengal as the Vice-Chairman. The Member Secretary, West Bengal Zoo Authority is responsible for the management of the affairs of the Authority, subject to the overall direction, control and superintendent of the Governing Board. West Bengal Zoo Authority has its own Regulations and Memorandum of Association to run the activities of Society. West Bengal Zoo Authority has its Secretariat at Aranya Bhawan, Block – LA-10A, Sector – III, Salt Lake City, Kolkata 700 106, West Bengal.

#### 22.1.1 Vision

Our vision is to become a leading organisation in the country in the field of ex-situ conservation ensuring the rich bio-diversity of the state by supporting in situ conservation with intensive Scientific Zoo Management & Research programme by trained staff and by developing zoos as centre of learning for people and making zoo self-sufficient to accomplish their objectives.

#### 22.1.2 Mission

Our mission is to provide exemplary care to the zoo's wildlife population in a planned manner to ensure eco-system based naturalistic animal enclosures which will help

in conservation breeding of rare and endangered species through best practices of zoo management, veterinary care and inspiring current and future generations to become active citizens in wildlife conservation through nature education and awareness programme.

#### 22.1.3 Objective

The Authority has been assigned to perform the following functions:

- a) To take over the management of the Govt. controlled Zoological Parks/Gardens, Deer Parks, Breeding Centres, Rescue Centres, Safari Parks and other similar establishments/Organisations in West Bengal as may be specifically ordered, from time to time, by the Govt. of WB.
- b) To co-ordinate with collection and exchange programme and to procure such animals as may be required for the enrichment of the Zoological Gardens/Mini Zoo through exchange from other zoos in India or from abroad.
- c) To function as the apex technical advisory body for the Zoological Parks/Gardens, Deer Parks, Breeding Centres, Rescue Centres, Safari Parks and other similar establishments/ organisations in West Bengal.
- d) To promote scientific management of zoos. To undertake Ex-situ conservation of endangered species of animals in captivity.
- e) To undertake programmes for re-stocking and re-introduction of captive bred animals in the wild.
- f) To undertake research on habits and breeding of animals and birds in natural habitat as well as in captivity.
- g) To create awareness about the rich faunal diversity by organising programmes, exhibitions, seminars, etc. and publishing's journals, bulletins etc.
- h) To undertake dissemination of zoo education.



## 22.2 ORGANISATION DETAILS

The West Bengal Zoo Authority is governed by a 14 Member Body headed by the Chief Secretary, West Bengal as Chairman and Additional Chief Secretary /Principal Secretary, Department of Forests, Govt. of West Bengal as

the Vice-Chairman. Member Secretary is the responsible for the management of the Zoo Authority. Detailed list of Governing Body of West Bengal Zoo Authority is appended below:

1.	The Chief Secretary to the Govt. of West Bengal	Chairman
2.	Addl. Chief/Principal Secretary to the Govt. of West Bengal, Dept. of Forests	Vice-Chairman
3.	Addl. Chief Secretary to the Govt. of West Bengal, Dept of Finance	Member
4.	Principal Chief Conservator of Forests & HoFF, West Bengal	Memberw
5.	Principal Chief Conservator of Forests (Wildlife) and Chief Wildlife Warden, West Bengal	Member
6.	Member Secretary, Central Zoo Authority, New Delhi	Member
7.	Member Secretary, West Bengal Zoo Authority	Convenor
8.	Director, Animal Husbandry & Vet. Services, W.B	Member
9.	Director, Padmaja Naidu Himalayan Zoological Park, Darjeeling	Member
10.	Director, Zoological Garden, Alipore, Kolkata	Member
11.	Shri Debasish Paramanik, Raigunj Panchayet Samiti, Uttardinaipur	Member
12.	Shri Sankar Dhar, People for Animals, Alipurduar	Member
13.	Sk. Johar Ali, President, All Backward Class Relief & Development Mission	Member
14.	Smt. Debolina Biswas, Councilor, Kolkata Municipal Corporation, Ward No. 74	Member

Technical Committee of West Bengal Zoo Authority is headed by Principal Chief Conservator of Forests, Wildlife and Chief Wildlife Warden, as Chairman and other 4 members are:

- Director, Padmaja Naidu Himalayan Zoological Park, Darjeeling
- Director, Zoological Garden, Alipore, Kolkata
- Director, Animal Husbandry & Veterinary Services
- Member Secretary, West Bengal Zoo Authority is the Convenor of Technical Committee.

Technical Committee provide technical assistance to Zoos under West Bengal Zoo Authority for proper and scientific development/management.

West Bengal has 5 no. clearly identifiable eco-regions. The WBZA is in process of establishing at least one representative zoo in each eco-region of the State. State has an already established zoo at Darjeeling (Padmaja Naidu Himalayan Zoological Park) dealing with the Himalayan Fauna of Darjeeling hills. A new zoo has been set up at Siliguri (North Bengal Wild Animals Park, viz. Bengal Safari) mainly to deal with the Megafauna of North Bengal flood plains. A

Mangrove Zoo (Sundarban Wild Animals Park) to focus on the Megafauna at Sundarban is being created at Jharkhali. It was proposed to develop the zoo at Jhargram mainly for focusing on the Megafauna of Paschimanchal/Junglemahal like Leopard, Hyena, Indian Wolf, Bengal Fox, Jackal, Porcupine, different Herbivores and Birds. The Junglemahal Zoological Park, Jhargram has already been recognized as a 'Medium category zoo' by the Central Zoo Authority by order no. 18-1.2017-CZA (Vol.I)(AK)/2048/2-17, dtd. 21/11/2017.

West Bengal Zoo Authority is also in process of developing Ramnabagan Mini Zoo to focus on the fauna of Gangetic Plains (Alluvial region).

Zoological Garden, Alipore is one of the oldest Zoo in the country dealing with major fauna of the country.

In addition to above representative zoos of respective eco region there are another 6 Zoos viz., (i) Rasikbeel Mini Zoo, (ii) Surulia Mini Zoo, (iii) Garchumuk Deer Park (iv) Adina Deer Park, & (v) South Khairbari Mini Zoo (vi) Harinalaya (Deer Park), New Town are managed by West Bengal Zoo Authority.





## 22.3 SCHEDULE OF MEETINGS HELD

During 2019–2020 the meetings of Governing Body and Technical Committee were held as follows:

### 22.3.1 Governing Board Meeting

16<sup>th</sup> Governing Body Meeting: On 21.05.2019

17<sup>th</sup> Governing Body Meeting: On 24.10.2019

### 22.3.2 Technical Committee Meeting

18<sup>th</sup> Technical Committee Meeting: On 12.04.2019

## 22.4 FACILITIES HAVING WILD ANIMALS IN CAPTIVITY IN WEST BENGAL

### (a) West Bengal Zoo Authority Controlled Government Zoos in West Bengal (Recognized by CZA)

Sl. No.	Name of the Zoo	Location	Category of the Zoo	Recognition Valid up to
1	Zoological Garden, Alipore	Kolkata	Large	19.08.2023
2	Padmaja Naidu Himalayan Zoological Park	Darjeeling	Medium	19.08.2022
3	North Bengal Wild Animals Park (Bengal Safari)	Siliguri	Mini	19.08.2021
4	Sundarban Wild Animals Park	Jharkhali	Mini	19.08.2021
5	Junglemahal Zoological Park	Jhargram	Medium	19.08.2022
6	Bardhaman Zoological Park	Bardhaman	Small	19.08.2021
7	South Khairbari Mini Zoo	Alipurduar	Rescue Centre	19.08.2021
8	Rasikbeel Mini Zoo	Coochbehar	Mini	19.08.2021
9	Adina Deer Park	Malda	Mini	19.08.2021
10	Garhchumuk Deer Park	Howrah	Mini	19.08.2021
11	Surulia Mini Zoo	Purulia	Mini	19.08.2021
12	Harinalaya (Deer Park)	New Town, Rajarhat	Mini	19.08.2021

### (b) Facilities having wild animals in captivity and functioning as Conservation Breeding Centres in West Bengal are working successfully.

1. Birchhill Conservation Breeding Center (Snow Leopard & Red Panda), Darjeeling
2. Topkeydara Conservation Breeding Center (Snow Leopard & Red Panda), 3<sup>rd</sup> mile.
3. Dowhill Conservation Breeding Center (high altitude herbivores & Pheasants), Kurseong.
4. Vultures Conservation Breeding Centre, Rajabhatkhawa (Buxa Tiger Reserve).
5. Sundarban Crocodilian Species Conservation Breeding Centre, Bhagabatpur (Sundarban Biosphere Reserve).
6. Batagur Baska in Sajnekhali & other islands of Sundarban Tiger Reserve.
7. Pheasants at Padmaja Naidu Himalayan Zoological Park, Darjeeling & Topkedara
8. Himalayan Goral at Dowhill in Kurseong.
9. Himalayan Newt at Padmaja Naidu Himalayan Zoological Park, Darjeeling
10. Fishing Cat in Zoological Garden, Alipore, Kolkata
11. Thamin at Zoological Garden, Alipore, Kolkata
12. The Conservation Breeding Programme of pheasants, Red Panda and Snow Leopard is quite successful and birth of 5 Red Panda and 2 Snow Leopard has been recorded during 2018–2019



## 22.5 MAJOR ACHIEVEMENTS DURING 2019–2020

- Hon'ble MIC, Forest Deptt. Govt. of West Bengal, Hon'ble MIC, North Bengal Development Deptt., Govt. of West Bengal and Hon'ble MIC, Tourism Deptt, Govt. of West Bengal inaugurated Nature interpretation Centre (NIC Building) and Break Point (Watch tower cum Cafeteria near the exit gate of Bear Safari), Bengal Safari on 5<sup>th</sup> March, 2019
- Four Nos of Yellow Anaconda (2:2:0) were brought from Madras Crocodile Bank Trust, Tamilnadu to Zoological Garden, Alipore on 13.06.2019.
- International Tiger Day celebrated on 29<sup>th</sup> July, 2019 at 12.30 PM at Zoological Garden, Alipore, Kolkata. Hon'ble MIC, Forest Department, Govt. of West Bengal inaugurated enclosure of Anaconda, Hyena and released one white tiger & two Leopard in the enclosure.
- Two (2) Female Tiger Cubs "Kika" & "Rika" released in the 20ha area of Tiger safari for public display on 1<sup>st</sup> October, 2019 at 11.am by Hon'ble Minister-in-Charge, Forest Dept., Govt. of West Bengal in North Bengal Wild Animals Park (Bengal Safari), Siliguri.
- Honb'le MIC, Dept. of Forests, Govt. of West Bengal and Honb'le MIC, Dept. of Tourism inaugurated Trackless Toy Train at the North Bengal Wild Animals Park (Bengal Safari) on 16<sup>th</sup> December, 2019 at Siliguri.
- Honb'le MIC, Dept. of Forests, Govt. of West Bengal and Honb'le MOS Dept. of Forests, Govt. of West Bengal inaugurated Nocturnal House for animals active during night, New Enclosure of Wild Dog and Release of newly born Lion Cubs at Alipore Zoo, Kolkata on 22<sup>nd</sup> December, 2019 at 2.pm
- Honb'le MIC, Dept. of Forests, Govt. of West Bengal inaugurated Wolf Enclosure, Reptile House, Pheasantry and Flying Bird Aviary enclosure at Junglemahal Zoological Park, Jhargram on 31<sup>st</sup> January, 2020

## 22.6 BUDGET 2019–20

### Non-Plan

Name of the Department provided Fund	Head of Service	Name of Zoos	Amount (₹)
Department of Forests, Govt. of West Bengal	Non Plan of 2018–19 "2406-02-111-NP-002-31"	For maintenance of all Zoos under WBZA	24.47 Crore
West Bengal Zoo Authority Fund	Non Plan	– do –	

### State Plan

Name of the Department provided Fund	Head of Service	Name of Zoos	Amount (₹)
Department of Forests, Govt. of West Bengal	State Plan(Annual Plan) 2018–19 "2406-02-111-SP-002-31"	For improvement and development of all Zoos under WBZA	9 Crore

## 22.7 PERFORMANCE 2019–20

### A. Statement of Non-plan Fund allocated during the year 2019–20

Sl. No.	Name of Zoo	Amount Spent (₹)
1	Head Office WBZA	45,00,000
2	Zoological Garden	14,04,95,000
3	Padmaja Naidu Himalayan Zoological Park	6,18,32,333
4	North Bengal Wild Animal Park (Bengal Safari)	4,75,00,000
5	Janglamahal Zoological Park	94,00,000
6	Sundarban Wild Animal Park	99,43,979
7	Bardhaman Zoological Park	57,86,064
8	Rasikbeel Mini Zoo	41,00,000



Sl. No.	Name of Zoo	Amount Spent (₹)
9	Surulia Mini Zoo	58,00,000
10	Garchumuk Deer Park	73,13,141
11	Adina Deer Park	22,00,000
12	South Khairbari Mini Zoo	30,00,000
13	Harinalaya Deer Park	55,11,741
	<b>Total</b>	<b>30,73,82,258</b>

#### B. Details of Plan Fund utilised by different Zoos/Parks for the year 2019–20

SL No.	Name of Zoo	Departments	Expenditure
1	Zoological Garden, Alipore, Kolkata	West Bengal Forest Deptt.	41,04,634
		West Bengal Zoo Authority Fund	12,90,651
2	Padmaja Naidu Himalayan Zoological Park, Darjeeling	West Bengal Forest Deptt.	50,06,825
		West Bengal Corpus	24,00,000
3	North Bengal Wild Animal Park (Bengal Safari), Siliguri	West Bengal Forest Deptt.	20,31,307
		North Bengal Dev. Deptt.	1,83,47,953
		West Bengal Tourism Dept.	40,00,000
4	Janglemahal Zoological Park, Jhargram	West Bengal Forest Deptt.	1,33,94,119
		Paschimanchal Unnayan Parishad	47,74,894
5	Sundarban Wild Animal Park, Jharkhali	West Bengal Forest Deptt.	28,60,460
6	Bardhaman Zoological Park, Bardhaman	West Bengal Forest Deptt.	74,63,881
		West Bengal Zoo Authority Fund	10,02,850
7	Surulia Mini Zoo, Purulia	West Bengal Forest Deptt.	2,68,795
		Paschimanchal Unnayan Parishad	27,23,028
8	Adina Deer Park, Malda	West Bengal Forest Deptt.	–
9	Rasikbeel Mini Zoo, Coochbehar	West Bengal Forest Deptt.	6,49,534
10.	Garchumuk Deer Park, Howrah	West Bengal Forest Deptt.	33,03,314
11.	Harinalaya Deer Park, New Town	West Bengal Forest Deptt.	–
	<b>Total</b>		<b>7,36,22,254</b>

## 22.8 REVENUE COLLECTION

Month	2015–2016	2016–2017	2017–2018	2018–2019	2019–2020
April	66,27,346.00	60,96,037	81,11,006.00	0.00	95,32,240.96
May	39,99,021.00	48,22,063	1,03,71,521.00	29,29,770.23	1,10,64,761.30
June	55,76,398.00	57,82,116	1,41,81,823.00	84,04,936.94	1,62,99,363.60
July	41,57,466.00	71,79,117	67,72,892.00	1,96,74,689.50	95,07,294.76
August	48,64,448.00	68,80,325	93,72,505.00	5,51,964.00	96,94,228.50
September	48,32,886.00	54,34,876	48,62,497.00	23,96,055.00	68,92,262.44
October	42,37,167.00	65,15,270	95,22,442.00	1,34,76,188.00	1,65,44,027.50
November	81,07,087.00	1,09,80,744	90,51,539.00	42,43,329.00	1,07,56,783.50
December	63,85,373.00	1,07,62,209	1,07,10,375.00	3,03,03,900.00	2,83,27,340.50
January	2,33,62,337.00	2,56,19,172	1,07,85,437.00	1,40,19,165.00	3,29,72,636.80



Month	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
February	2,34,32,505.00	2,69,50,587	3,22,23,134.00	5,94,86,200.00	1,58,06,684.50
March	75,39,458.00	1,00,07,353	66,33,924.00	1,54,52,783.00	91,97,583.75
Total	<b>1,03,121,492.00</b>	<b>12,70,29,869</b>	<b>13,25,99,095.00</b>	<b>17,09,38,980.67</b>	<b>17,65,95,208.11</b>

## 22.9 VISITORS OF ZOOS

Sl. No	Name of the Zoo	2016-17	2017-18	2018-19	2019-2020
1	Zoological Garden, Alipore, Kolkata	34,12,446	35,41,978	32,97,579	29,32,910
2	Padmaja Naidu Himalayan Zoological Park, Darjeeling	4,98,789	3,76,397	7,94,892	7,30,950
3	North Bengal Wild Animals Park, Siliguri	1,42,259	2,72,250	2,91,999	2,48,643
4	Sundarban Wild Animals Park, Sundarban	1,29,200	1,40,700	1,44,595	1,42,234
5	Junglemahal Zoological Park, Jhargram	1,29,406	1,61,472	1,58,235	1,36,556
6	Bardhaman Zoological Park, Bardhaman	1,02,798	1,00,199	1,24,953	1,60,468
7	Garchumuk Deer Park, Howrah	1,70,304	1,97,635	1,90,875	1,65,030
8	Surulia Mini Zoo, Purulia	30,635	39,737	44,129	42,332
9	Rasikbeel Mini Zoo, Cooch Behar	1,05,152	1,22,990	1,22,404	1,05,827
10	Adina Deer Park, Malda	75,120	90,808	97,708	82,855
11	Harinalaya Deer Park, New Town	–	8,597	7,561	7,016
	<b>Total No.</b>	<b>48,96,797</b>	<b>50,00,449</b>	<b>52,74,930</b>	<b>47,33,576</b>

### 22.9.a Statement of Adoption of Animals of Zoological Garden, Alipore during 2019-2020:

Party Name	Amount	Animal	Address	Date	Period
Anshul Jain	50000.00	Chimpanzee	182, A J C Bose Road, Kol-14	02.07.19	10.07.19 to 09.07.20
Caring Minds	75000.00	Zebra	24, Ballygunge Circular Road, Kol-19(a unit of Patton Developers Pvt.Ltd)	03.08.19	03.08.19 to 02.08.20
Pallishree Ltd.	40000.00	Fishing Cat	Merlin Infinite, DN-51, Room no.1205, 12 <sup>th</sup> floor, Sector V, Salt Lake City, Kolkata-700091	24.07.19	09.08.19 to 08.08.20
Pallishree Ltd.	20000.00	Fishing Cat	Merlin Infinite, DN-51, Room no.1205, 12 <sup>th</sup> floor, Sector V, Salt Lake City, Kolkata-700091	03.08.19	09.08.19 to 08.08.20
<b>Total</b>	<b>185000.00</b>				

### 22.9.b Statement of Adoption of Animals of Padmaja Naidu Himalayan Zoological Park, Darjeeling during the year 2019-2020:

Sl No	Name of the Animal Adopted	Name of the Adopter	Duration of the adoption	Rate of Adoption
1	Snow Leopard ( <i>Uncia uncia</i> )	Pallishree Limited, Kolkata	1 <sup>st</sup> August, 2019 to 31 <sup>st</sup> July, 2020	₹ 1,00,000
2	Red panda ( <i>Ailurus fulgens fulgens</i> )	Pallishree Limited, Kolkata	1 <sup>st</sup> August, 2019 to 31 <sup>st</sup> July, 2020	₹ 60,000
3	Markhor	Vanachar Welfare Flora and Fauna Foundation, Gurgaon Haryana	16 <sup>th</sup> January, 2020 to 15 <sup>th</sup> January, 2021.	₹ 10,000







Second Red Panda Global Species Management plan workshop hosted by Padmaja Naidu Himalayan Zoological Park, Darjeeling (24-27th April, 2019)



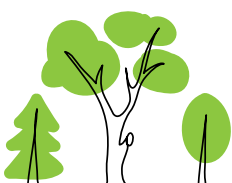
World Elephant Day (12 August 2019) celebrated by North Bengal Wild Animals Park, Siliguri



Four Nos of Yellow Anaconda (2:2:0) were brought from Madras Crocodile Bank Trust, Tamilnadu to Zoological Garden, Alipore on 13.06.2019.



Zoo Festival, 2019 at Zoological Garden, Alipore







Two (2) Female Tiger Cubs “Kika” & “Rika” released in the 20 ha area of Tiger safari for public display on 1<sup>st</sup> October, 2019 at 11.am by Hon’ble Minister-in-Charge, Forest Dept., Govt. of West Bengal in North Bengal Wild Animals Park (Bengal Safari), Siliguri.



Inauguration of the wild dog enclosure in Zoological Garden Alipore, Kolkata (22.12. 2019)



Inauguration of the Nocturnal House in Zoological Garden Alipore, Kolkata (22.12. 2019)



Inauguration of the Hyena Enclosure in Zoological Garden Alipore, Kolkata (29.07. 2019)





# SECTION B









# STATE DEMOGRAPHY

## CHAPTER 1

### 1.1 CENSUS OF INDIA 2011

**Table 1.1** Provisional Population Totals for West Bengal

Area, Population, Decennial Growth Rate and Density for 2001 and 2011 at a glance for West Bengal and the Districts

Sl. No	District	Area Sq. Km	Population 2001			Population 2011			Decennial Growth Rate (%)		Population Density Per Sq.Km.	
			P	M	F	P	M	F	1991–2001	2001–2011	2001	2011
1	2	3	4	5	6	7	8	9	10	11	12	13
	West Bengal	88,752	80176197	41465995	38710212	91276115	46809027	44467088	17.77	13.84	903	1028
1	Darjeeling#	3,149	1609172	830644	778528	1846823	937259	909564	23.79	14.77	511	586
2	Jalpaiguri#	6,227	3401173	1751145	1650028	3872846	1983064	1889782	21.45	13.87	546	622
3	Coochbehar	3,387	2479155	1272094	1207061	2819086	1451542	1367544	14.19	13.71	732	832
4	Uttar Dinajpur	3,140	2441794	1259737	1182057	3007134	1551066	1456068	28.72	23.15	778	958
5	Dakshin Dinajpur	2,219	1503178	770335	732843	1676276	857199	819077	22.15	11.52	677	755
6	Malda	3,733	3290468	1689406	1601062	3988845	2051541	1937304	24.78	21.22	881	1069
7	Murshidabad	5,324	5866569	3005000	2861569	7103807	3627564	3476243	23.76	21.09	1102	1334
8	Birbhum	4,545	3015422	1546633	1468789	3502404	1790920	1711484	17.99	16.15	663	771
9	Bardhaman#	7,024	6895514	3588376	3307138	7717563	3966889	3750674	13.96	11.92	982	1099
10	Nadia	3,927	4604827	2366853	2237974	5167600	2653768	2513832	19.54	12.22	1173	1316
11	North 24-Parganas	4,094	8934286	4638756	4295530	10009781	5119389	4890392	22.69	12.04	2182	2445
12	Hooghly	3,149	5041976	2589625	2452351	5519145	2814653	2704492	15.77	9.46	1601	1753
13	Bankura	6,882	3192695	1636002	1556693	3596674	1838095	1758579	13.82	12.65	464	523
14	Purulia	6,259	2536516	1298078	1238438	2930115	1496996	1433119	14.02	15.52	405	468
15	Howrah	1,467	4273099	2241898	2031201	4850029	2500819	2349210	14.57	13.50	2913	3306
16	Kolkata	185	4572876	2500040	2072836	4496694	2356766	2139928	3.93	-1.67	24718	24306
17	South Twenty Four Parganas	9,960	6906689	3564993	3341696	8161961	4173778	3988183	20.85	18.17	693	819
18	Paschim Medinipur*#	9,345	5193411	2648048	2545363	5913457	3007885	2905572	15.76	13.86	556	631
19	Purba Medinipur*	4,736	4417377	2268322	2149055	5095875	2629834	2466041	14.87	15.36	933	1081

\*Figures of Paschim Medinipur & Purba Medinipur for 2001 have been recast as erstwhile Medinipur divided into two districts after 2001 Census.

# Darjeeling including present district Kalimpong, Jalpaiguri including present district Alipurduar, Bardhaman- combined of Purba Bardhaman and Paschim Bardhaman, Paschim Medinipur including present Jhargram district.



**Table 1.2 Administrative Units in West Bengal (As on 31.12.2015)**

Number

Division and District (1)	Subdivision (2)	Police Station # (3)	Development Blocks (4)	Panchayat Samiti (5)	Gram Panchayat (6)	Villages (7)	Municipalities (8)	MC (9)
West Bengal	<b>66</b>	<b>508(30)</b>	<b>341</b>	<b>333</b>	<b>3347</b>	<b>40218</b>	<b>118</b>	<b>7</b>
<b>Burdwan Division</b>	<b>27</b>	<b>192 (14)</b>	<b>164</b>	<b>164</b>	<b>1524</b>	<b>25009</b>	<b>43</b>	<b>3</b>
Burdwan	6	36(3)	31	31	277	2502	6	2
Birbhum	3	23(1)	19	19	167	2458	6	–
Bankura	3	24(1)	22	22	190	3823	3	–
Purba Mednipur	4	28(2)	25	25	223	2998	5	–
Paschim Mednipur	4	32(3)	29	29	290	8695	8	–
Hoogly	4	26(3)	18	18	207	1866	12	1
Purulia	3	23(1)	20	20	170	2667	3	–
<b>Presidency Division</b>	<b>21</b>	<b>234(9)</b>	<b>108</b>	<b>108</b>	<b>1106</b>	<b>7697</b>	<b>52</b>	<b>3</b>
North 24-Parganas	5	47(3)	22	22	200	1528	25	1
South 24-Parganas	5	40(2)	29	29	310	2044	7	–
Kolkata	–	69(0)	–	–	–	–	–	1
Howrah	2	27(2)	14	14	157	650	1	1
Nadia	4	23(1)	17	17	185	1308	11	–
Murshidabad	5	28(1)	26	26	254	2167	8	–
<b>Jalpaiguri Division</b>	<b>18</b>	<b>82(7)</b>	<b>69</b>	<b>61</b>	<b>717</b>	<b>7512</b>	<b>23</b>	<b>1</b>
Uttar Dinajpur	2	10(1)	9	9	98	1494	4	–
Dakshin Dinajpur	2	9(1)	8	8	65	1631	3	–
Malda	2	13(1)	15	15	146	1772	2	–
Jalpaiguri	2	14(1)	7	7	80	406	3	–
Alipurduar	1	8(0)	6	6	66	327	1	–
Darjeeling	4	16(2)	12	4*	134	688	4	1
Cooch Behar	5	12(1)	12	12	128	1194	6	–

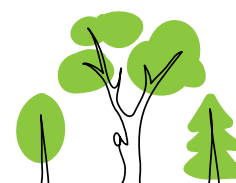
# 30 Women Police Stations are mentioned in parenthesis but excludes 43 G.R.P. of Sealdah, Howrah, Kharagpur & Siliguri and 6 Cyber Crime Police Stations along with a Special Task Force Police Station

\* Figures related to Siliguri Mahakuma Parisad only Darjeeling Hill Council Area is excluded and this Hill Council Area is Constituted of 112 Gram Panchayats

M.C.= Municipal Corporation

Sources:

- (1) Directorate of Panchayat & Rural Development, Govt of West Bengal
- (2) Primary Census Abstract, 2011
- (3) Directorate of Police, Govt of West Bengal



**Table 1.3** District wise Population of West Bengal By Rural and Urban Areas, 2011

State/ District	Population (Census 2011)			% of Urban Population
	Total	Rural	Urban	
<b>WEST BENGAL</b>	<b>91276115</b>	<b>62183113</b>	<b>29093002</b>	<b>31.87</b>
Darjeeling #	1846823	1118860	727963	39.42
Jalpaiguri #	3872846	2812495	1060351	27.38
Coochbehar	2819086	2529652	289434	10.27
Uttar Dinajpur	3007134	2644906	362228	12.05
Dakshin Dinajpur	1676276	1439981	236295	14.10
Malda	3988845	3447185	541660	13.58
Murshidabad	7103807	5703115	1400692	19.72
Birbhum	3502404	3052956	449448	12.83
Bardhaman #	7717563	4639264	3078299	39.89
Nadia	5167600	3728727	1438873	27.84
North 24 Parganas	10009781	4277619	5732162	57.27
Hooghly	5519145	3390646	2128499	38.57
Bankura	3596674	3296901	299773	8.33
Purulia	2930115	2556801	373314	12.74
Howrah	4850029	1775885	3074144	63.38
Kolkata	4496694	0	4496694	100.00
South 24 Parganas	8161961	6074188	2087773	25.58
Paschim Medinipur #	5913457	5190771	722686	12.22
Purba Medinipur	5095875	4503161	592714	11.63

# Darjeeling including present Kalimpong district, Jalpaiguri including present Alipurduar district, Bardhaman- combined of Purba Bardhaman and Paschim Bardhaman districts, Paschim Medinipur including present Jhargram district.





**Table 1.4 Demography Of West Bengal**

Demography					
Population			2001	2011	
		Total	80176197	91,276,115	
		Male	41465985	46,809,027	
		Female	38710212	44,467,088	
% Share in Country's Population			7.79	7.54	
% Share in Urban Population (India)			27.97 (27.82)	31.87 (31.16)	
% Share in Rural Population (India)			72.03 (72.18)	68.13 (68.84)	
% Share in Major religious communities (India)		Hindus	72.47(80.46)	70.54(79.80)	
		Muslims	25.25(13.43)	27.01(14.23)	
% Share of SC (India)			23.02(16.2)	23.51(16.6)	
% Share of ST (India)			5.50 (8.2)	5.8(8.6)	
% Share of Children (0–6)			14.24 (15.93)	11.59(13.12)	
Sex Ratio (India)		All	934 (933)	950(943)	
		SC	949 (936)	951(945)	
		ST	982 (978)		
		Children of (0–6)	960 (927)	956(919)	
Population Density (per Sq.Km.)			903 (324)	1030(382)	
Decadal Growth rate (%) (India)			17.77 (21.34)	13.9(17.70)	
Education					
Literary Rate (%) (India)	All		2001	2011	
		Total	68.64 (64.8)	76.26(74.04)	
		Male	77.20 (75.3)	81.69(82.14)	
		Female	59.61 (53.7)	70.54(65.46)	
		Rural	63.42 (38.7)	72.13(67.8)	
	Urban	Total	81.25 (79.9)	84.78(84.1)	
		SC	Total	59.04 (54.7)	69.43(66.10)
		Male	70.54 (66.6)	77.22(75.20)	
	Female	46.90 (41.9)	61.23(56.50)		
		ST	Total	43.40 (47.1)	57.93(58.96)
			Male	57.38 (59.2)	68.16(68.53)
			Female	29.15 (34.8)	47.71(49.35)
Gender Gap in Literacy			11.2%		
		Primary	Upper Primary		
No. of Schools-SSA-2006		50255 (Govt.)	11440 (Govt/ Govt. added)		
Pupil – Teacher Ratio (Govt)-SSA-'06		45.20	61.41		
Net Enrolment Ratio (Overall) SSA'06		98.03	78.74		
Dropout Rate (Cohort study SSA-2004)		19.92	29.70		
Health #					
Infant Mortality Rate (India) (per thousand population ↓)		2013	31 (40)		
		2015	26 (37)		
		2016	25 (34)		
Under five Mortality Rate		2015	26 (43)		
Maternal Mortality Rate (per lakh live births)		2014–16	101 (130)		
Birth Rate		2016	15.4 (20.4)		
Death Rate		2016	5.8 (6.4)		
Life Expectancy (2010–14)		Male	68.9		
		Female	71.6		
Mean age at Marriage (IIPS)		Male	25.9 (26.0)		
		Female	21.5 (22.3)		
beds per lakhs population (2003)			86		

# Source: Sample Registration System

Administrative Information	
No. of Sub-divisions	
No. of Municipalities (2015)	
No. of Sub-divisions	66
No. of Municipalities (2015)	118
No. of Municipal Corporation (2015)	7
No. of Blocks	341
No. of Mouza	40782
No. of Police Stations (2015)	508
No. of Gram Panchayats	3347
Inhabited Villages (2011)	37463
Area (Sq. Km.)	88752
No. of Family Welfare Centre	506
No. of PHCs	1664
% of Electrified Villages**	100.0
Electrified Household (%) (31.12.18)**	100.0
Av. Population Per Bank Offices (SLBC WB)	11492

\*\* Source: WBSDECL

Indices		
NHRE-2001	Value	Rank
Human Development Index (India)	0.4404 (0.381)	20
Gender Disparity Index (India)	0.631 (0.676)	26

Employment			
		2001	
		Male	Female
Work participation rate (India)	Rural	54.1 (52.11)	20.9 (30.79)
	Urban	53.7 (50.60)	11.6 (11.88)
% of main worker (India)	Rural	45.8 (44.51)	9.1 (16.77)
	Urban	50.2 (47.46)	9.2 (9.12)
% of marginal worker (India)	Rural	8.3 (7.85)	11.8 (14.21)
	Urban	3.6 (3.38)	2.4 (2.43)
% of agricultural laboures		22.7 (20.82)	
No. of registration during the year through employment exch.(2015)			
No. of placements effected during 2004			

Others		
Per Capita Income (2014–2015) at current prices in ₹	78903	
% of cultivable area to total area (2012–13)	63.92	
Cultivable area per agri worker (hectres)	0.77*	
% of forest area (2018–19)	13.38%	
% of BPL families (P&RD,2005)	34.12	
% of Population below poverty (2011–12, RBI) (India)	Total	19.98 (21.92)
	Rural	22.52 (25.70)
	Urban	14.66 (13.70)
No. of Dowry Deaths	2003	313
	2004	386
% change in Dowry Deaths	2002–2003	16.36
	2003–2004	22.32

\* Source: wb.gov.in

Source: Statistical Hand Book 2015, Department of Statistics, Programme Implementation, Government of West Bengal.  
Census of India, 2011 & data.gov.in



**Table 1.5** Livestock in West Bengal

(Number in thousand)

Particulars (1)	2010 (2)	2011 (3)	2012 (4)
1. Cattle:	20229	20607	16514
2. Buffalo:	689	666	597
3. Others:	20628	21820	13234
(i) Sheep	1714	1763	1076
(ii) Goats	18153	19315	11506
(iii) Horses & Ponnies	4	4	4
(iv) Pigs	757	738	648
4. Poultry:	86175	97463	52838
(i) Fowl	74315	85675	46216
(ii) Duck	11611	11540	6535
(iii) Other Poultry	249	248	86

Note: 1. Figures of 2010 & 2011 are projected figures, 2. 2012 (19<sup>th</sup> Livestock Census figure)

Source: Directorate of Animal Resources & Animal Health Govt. of West Bengal.

**Table 1.6** District-wise Geographical Area of West Bengal

State/District ....	Geographical Area in Sq.Kms.(Census 2011)		
	Total Geographical Area In Sq.Kms.	Rural Geographical Area In Sq.Kms.	Urban Geographical Area In Sq.Kms.
<b>WEST BENGAL</b>	<b>88752</b>	<b>83632.59</b>	<b>5119.41</b>
Darjeeling #	3149	2995.51	153.49
Jalpaiguri #	6227	5859.7	367.3
Coochbehar	3387	3318.06	68.94
Uttar Dinajpur	3140	3075.26	64.74
Dakshin Dinajpur	2219	2187.75	31.25
Malda	3733	3646.91	86.09
Murshidabad	5324	5048.06	275.94
Birbhum	4545	4424.56	120.44
Bardhaman #	7024	6090.35	933.65
Nadia	3927	3612.14	314.86
North 24 Parganas	4094	3470.09	623.91
Hooghly	3149	2820.63	328.37
Bankura	6882	6791.53	90.47
Purulia	6259	6111.47	147.53
Howrah	1467	1035.92	431.08
Kolkata	185	0	185
South 24 Parganas	9960	9541.28	418.72
Paschim Medinipur #	9368	9114.68	253.32
Purba Medinipur	4713	4488.69	224.31

# Darjeeling including present Kalimpong district, Jalpaiguri including present Alipurduar district, Bardhaman- combined of Purba Bardhaman and Paschim Bardhaman districts, Paschim Medinipur including present Jhargram district.









# LAND USE, CLIMATE AND SOIL

## CHAPTER 2

### 2.1 LAND USE

The overall land use pattern in the state of West Bengal depends mostly on the physiographic condition of the area. Total geographical area of the state is divided into two major classes i.e. (a) arable land, that includes net sown area and fallow land (b) non-arable land, which includes forest area not available for cultivation and other uncultivable land excluding current fallow. The percentage of arable land is about 63.48 % and about 34.36% land is under non-arable category (Economic Review, GoWB, 2009–10), which includes notified forest area to the tune of 13.38% of total geographical area. Agricultural activities are mostly restricted to the Gangetic plains having fertile cultivable land. The percentage of net sown area is higher (above 70%) in Uttar and Dakshin Dinajpur, Nadia, Murshidabad, Cooch behar, North 24-Parganas, Purba Bardhaman, Paschim Bardhaman and Birbhum districts. High percentage of forest cover exists in the Districts having hills and mountain ranges and also in the coastal areas. Protected forests also cover considerable areas in Purulia, Bankura, Paschim Medinipur, Jhargram, Paschim Bardhaman and Birbhum districts. The maximum area under forest (44.68 %) is found in erstwhile Darjeeling district.

### 2.2 CLIMATE

In general, the climate of West Bengal varies from subhumid to perhumid with uniformity of temperature. The tropic of cancer runs across the middle of Nadia, erstwhile Burdwan, northern parts of Bankura and Purulia districts. In spite of its position in equatorial zone, the Himalayan Mountains in

the north, Bay of Bengal in the south and extensive network of rivers, canals, tanks etc. do not allow extreme climatic conditions to prevail in the state,

Heavy rainfall occurs in the northern part of West Bengal and gradually decreases towards south forming an area of moderate rainfall zone around central part of West Bengal. Annual rainfall is maximum (>3000 mm) at the foothill region on the north (sub-Himalayan West Bengal) whereas, the coastal region in the south receives around 1500–2000 mm of rainfall and it decreases to 900 mm in South-West. The average annual rainfall in the state is about 1,900 mm of which 1,600 mm occurs during monsoon months.

In the Northern part of the state that includes the mountain region (Himalayas), temperature ranges from freezing point to 10°C in winter. It hovers around 12°C to 18°C in the plains. January is the coldest month and winter starts from the end of November and extends to February. Darjeeling has a normal mean temperature ranging from 5.8°C to 17.0°C where snowfall also occurs occasionally. Rest of the area has mean winter temperature ranging from 9°C to 14°C.

The summer season begins from the month of March and temperature starts rising upto June. May is the hottest month. The summer temperature shows variations from 20°C in Darjeeling district to about 48°C in Purulia district. Temperature in the rainy seasons is more or less uniform in the plains and it varies from 21°C at Kolkata to 30°C at Canning. This uniformity indicates the influence of southwest monsoon in lowering temperatures.



## 2.3 SOIL

In the Himalayan region soils are predominantly shallow to moderately shallow but also deep at places, well drained, coarse-loamy to gravelly loamy in texture. These soils occur on steep side slopes. These are classified as Typic Haplumbrepts and Typic Udorthents.

In the foothills of Himalayas and in piedmont plains soils are deep to very deep, imperfectly drained and coarse-loamy to fine loamy in texture and are placed in Aquic Ustifluvents and Fluventic Eutrochrepts.

Soils of the alluvial plain which includes Indo-gangetic alluvium (recent, active and old) are also very deep, imperfectly to poorly drained, fine-loamy and also coarse-loamy in texture and with moderate flooding problem in some cases. These soils are classified as Aerice Haplaquepts, Typic Fluvaquents, Typic Haplaquepts, and Typic Ustochrepts. Undulating plain area is represented by very deep, fine-loamy and coarse-loamy soils with moderate erosion and classified as Aerice Ochraqualfs, Typic Ustifluvents and Typic Haplustalfs.

The western part of the state i.e., predominantly Chhotanagpur plateau area has soils shallow to very shallow, well-drained and gravelly loam and coarse-loamy in texture with moderate erosion whereas soils in the remaining part are deep to very deep, well drained, fine loamy in texture. They are classified as Lithic Haplustalfs and Typic Haplustalfs.

Coastal plain is represented by soils of both sandy as well as fine in texture, very deep with salinity problems in some places. Soils are placed in Aquic Ustipsamments and Vertic Haplaquepts. Whereas soils of delta plain are very deep, imperfectly to poorly drained, fine in texture and has the problem of inundation and salinity and classified as Aerice Haplaquepts and Typic Haplaquepts.

The physiography of West Bengal can be divided into two major regions:

- A. Himalayan Region
- B. Gangetic Plains

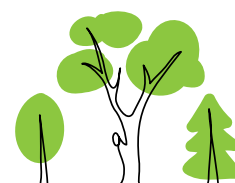
**A. Himalayan Region:** This is sub-divided further into two parts:

- i) **Darjeeling Himalayas:** This zone consists of Darjeeling district (except the Siliguri Sub-Division) and Kalimpong District. The hills are comparatively of recent origin, generally steep sided and prone to landslides. Soils are brown, loamy in nature, rich in nutrients, organically rich and acidic in reaction. Most of the rivers originate here.
- ii) **Sub-Himalayan:** This zone comprises of the plains districts of Alipurduar, Jalpaiguri and Cooch behar and Siliguri Sub-Division of Darjeeling district. Soils are mostly sandy, highly acidic, heavily leached and poor in base and plant nutrients. Since most of the hilly river flow through this region, these areas are flood prone.

**B. Gangetic Plains:** The Lower Ganga Plain in West Bengal forms a part of the Indo-Gangetic Plains.

- 8 districts of West Bengal are contained in this physiographic region. This region is further divided into four micro physiographic zones. These are
- Barind tract comprising Malda, North and South Dinajpur districts.
- Moribund Delta comprising of Murshidabad and Nadia districts.
- Proper Delta consisting of the districts of Purba Bardhaman, Paschim Bardhaman, Kolkata, Hooghly, Howrah, South & North 24-Parganas.
- Rarh plain is spread over Purba and Paschim Medinipur district, Jhargram District, Bankura, Birbhum and Purulia.

(Agro climatic zoning refers to the division of an area of land into land resource units, based on numerical expressions of crop climate quantified in the form of agro-climatic indices, having an unique combination of landforms, soils and climatic characteristics with a specific range of potentials and constraints for land use.)



**Table 2.1** Mean Maximum and Minimum Temperature By Station and Month in West Bengal (Average of daily Maximum and Minimum Temperature) - 2005

Station/Degrees in Celsius	January		February		March		April		May		June	
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
1	2	3	4	5	6	7	8	9	10	11	12	13
<b>Hill Station</b>												
Kalimpong	12	9	14	12	20	15	23	17	22	16	25	19
Darjeeling	9	1	13	4	15	6	19	8	18	10	19	13
<b>Sub Himalayan West Bengal</b>												
Jalpaiguri	24	12	27	15	30	18	32	21	31	23	33	24
Coochbehar	23	11	26	15	29	18	30	20	30	23	32	25
Balurghat	25	–	34	12	–	–	–	–	37	23	39	30
Malda	23	13	28	17	32	21	35	24	35	25	36	27
<b>Gangetic West Bengal</b>												
Kolkata	25	15	30	19	33	23	35	26	36	27	36	28
Krishnanagar	25	16	30	22	34	26	35	27	37	29	38	30
Berhampur	23	13	28	18	32	21	35	24	37	27	36	26
Burdwan	24	13	30	18	33	22	35	24	37	25	38	27
Suri	24	12	29	16	33	20	36	23	37	25	38	27
Bankura	24	13	30	17	34	22	36	25	39	27	39	28
Midnapur	25	15	30	18	34	23	36	25	37	25	38	28
Purulia	–	–	–	–	–	–	–	–	–	–	–	–

**Table 2.2** Mean Maximum and Minimum Temperature By Station and Month in West Bengal (Average of daily Maximum and Minimum Temperature) - 2005

Station/Degrees in Celsius	July		August		September		October		November		December	
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
1	2	3	4	5	6	7	8	9	10	11	12	13
<b>Hill Station</b>												
Kalimpong	23	20	30	26	26	20	25	17	23	13	–	–
Darjeeling	19	13	20	13	21	13	17	9	16	4	14	6
<b>Sub Himalayan West Bengal</b>												
Jalpaiguri	32	25	32	25	34	25	30	21	30	16	28	13
Coochbehar	32	25	32	26	33	25	29	21	29	16	27	12
Balurghat	–	27	–	–	–	–	–	–	28	17	–	14
Malda	32	26	33	27	34	27	30	24	28	18	26	14
<b>Gangetic West Bengal</b>												
Kolkata	32	26	33	27	33	26	30	24	30	18	27	15
Krishnanagar	33	27	33	27	34	26	31	24	30	17	26	13
Berhampur	32	26	32	26	33	26	30	23	28	18	26	14
Burdwan	32	26	33	26	33	26	30	23	29	16	26	14
Suri	32	26	33	26	33	25	22	22	29	15	26	13
Bankura	32	26	33	27	33	26	30	24	29	16	26	12
Midnapur	32	26	32	26	31	26	30	24	28	17	25	14
Purulia	–	–	–	–	–	–	–	–	–	–	–	–





**Table 2.3 Annual Rainfall in West Bengal**

District (1)	Normal (2)	1990 (3)	2009 (4)	2010 (5)	2011 (6)	2012 (7)	2013 (8)	2014 (9)
Burdwan	1271	1557	1229	856	1322	1030	1216	1045
Birbhum	1234	1542	1278	985	1482	976	1319	1130
Bankura	1271	1640	1231	917*	1740	1269	1809	1028
Purba Medinipur	1428	2152	1301	1244	1538	1342	2078	1728
Paschim Medinipur			1191	1055	1656	1222	1977	1119
Howrah	1676	1953	1352	1219	1502	1138	2179	1189
Hooghly	1516	1571	1263	1044	1556	1152	1494	1188
North 24-Parganas	1579	2208	1410	1180	1669	1208	1658	1321
South 24-Parganas			1415	1227	1535	1420	1701	1413
Kolkata (Alipur)	1605	2077	1583	1536	1583	1656	2355	1381
Nadia	1401	1685	1209	940	1488	1039	1245	1129
Murshidabad	1338	1538	1180	989	1526	1001	1143	1126
Uttar Dinajpur	1802	2377	1521	1588	1785	1163	1580	1328
Dakshin Dinajpur			1256	1683	1479	1244	1428	1327
Malda	1498	1526	1204	1129	1440	955	1265	1293
Jalpaiguri	4136	3434	3155	3882	3146	3787	3506	3047
Darjeeling	3212	3810	3341	4018	3415	2845	3254	3186
Cooch Behar	3193	3157	2438	3673	2669	3354	2431	2552
Purulia	1365	1811	1024	798	1557	1396	1560	1023

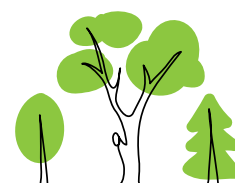
Source: i) Agricultural Meteorologist, Directorate of Agriculture, Govt. of West Bengal (Other than District Kolkata)

ii) Meteorological Department, Govt. of India (Only for Kolkata)

**Table 2.4 Agro-climate regions/zones in India**

SL. No.	Agro-climatic Regions in India	States Represented
I	Western Himalayan regions	Himachal Pradesh, Jammu & Kashmir, Uttarakhand
II	<b>Eastern Himalayan region</b>	Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, West Bengal
III	<b>Lower Gangetic plain region</b>	West Bengal
IV	Middle Gangetic plain region	Uttar Pradesh, Bihar
V	Upper Gangetic plain region	Uttar Pradesh
VI	Trans Gangetic plain region	Chandigarh, Delhi, Haryana, Punjab, Rajasthan
VII	<b>Eastern plateau and hills region</b>	Chhattisgarh, Jharkhand, Madhya Pradesh, Maharashtra, Orissa, West Bengal
VIII	Central plateau and hills region	Madhya Pradesh, Rajasthan, Uttar Pradesh
IX	Western plateau and hills region	Madhya Pradesh, Maharashtra
X	Southern plateau and hills region	Andhra Pradesh, Karnataka, Tamil Nadu
XI	East coast plains and hills region	Andhra Pradesh, Orissa, Pondicherry, Tamil Nadu
XII	West coast plains and ghat region	Goa, Karnataka, Kerala, Maharashtra, Tamil Nadu
XIII	Gujrat plains and hills region	Gujrat, Dadra & Nagar Haveli, Daman & Diu
XIV	Western dry region	Rajasthan
XV	Island region	Andaman & Nicobar Islands, Lakshdweep

Source: Planning Commission (Khanna, 1989) has identified 15 resource development regions in the country, 14 in the main land and remaining one in the islands f Bay of Bengal and Arabian Sea.



**Table 2.5 Land utilisation in West Bengal**

Land Use	Area (m.ha.)
Total geographical area	8.87
Reporting area for land utilisation statistics	8.84
Forest	1.09
Area is available for cultivation	1.63
Other uncultivated land excluding fallow land	0.36
Fallow land	0.43
Net area shown	5.33

Source: Economic Review, Bureau of Applied Economics and Statistics. GeM. of West Senpl, 1988–89.

**Table 2.6 Description of agro-ecological subregions**

Agro-ecological Sub Region Number	Description	Area(per cent of TGA) (8.87 m. ha)
16.2	Darjeeling Himalayas, warm, perhumid agro-ecological sub region with shallow to moderately deep, loamy Brown and Red hill soils, low to medium AWC (75–100 mm/m) and more than 300 days of LGP	2.9
16.1	Moderately to gently sloping foothills of Bhutan Himalayas, warm to hot perhumid agro-ecological sub region with shallow to moderately deep loamy skeletal to loamy Tarai soils, low to medium AWC (50–120 mm/m) and 270–300 days of LGP	1.9
15.3	Level Teesta Plain, hot, perhumid agro-ecological sub region with deep, loamy to clayey alluvium-derived soils, medium AWC (100–150 mm/m) and 270–300 days of LGP.	9.6
15.1	Nearly level to gently sloping Ganga plain (Bengal Basin), hot moist-Subhumid agro-ecological sub-region with deep, loamy to clayey, alluvium-derived soils, medium to high AWC (150–200 mm/m) and 210–240 days of LGP.	55.7
18.5	Gently sloping to level Gangetic lower Delta, moist sub- humid agro-ecological sub region with deep, loamy to clayey coastal and Deltaic Alluvium-derived soils, medium AWC (150–200 mm/m) and 240–270 days of LGP.	7.6
12.3	Gently sloping and/or gently undulating Chottanagpur plateau, hot, dry-subhumid agro-ecological sub region, deep, loamy to clayey Red and Lateritic soils, medium AWC (100–150 mm/m) and 150–180 days of LGP.	22.3

(Source: Soils of West Bengal for Optimising Land Use. NBSS Publ. 27b (Soils of India Series). National Bureau of Soil Survey and Land Use Planning. Nagpur (India), December, 1992)



**Table 2.7** Soils under limiting depth classes

Class	Location		Area Affected	
	Agro-eco Subregion	Distribution (District)	'000ha	Percent of Mapped Area (% of TGA)
Very Shallow (0–25 cm)	Hot Subhumid	Purulia	30.7	0.4 (0.3)
Shallow (25–50 cm)	Warm Perhumid	Part of erstwhile Darjeeling	15.4	0.2 (0.2)
	Hot Subhumid	Purulia, Erstwhile Medinipur, Bankura	303.00	3.5 (3.4)
Moderately shallow (50–75 cm)	Warm Perhumid	Part of erstwhile Darjeeling	109.8	1.3 (1.2)
	Hot Subhumid	Part of erstwhile Medinipur, erstwhile Bardhaman, Birbhum, Purulia, Bankura	15.4	0.2 (0.2) w

(Source: *Soils of West Bengal for Optimising Land Use*. NBSS Publ. 27b (Soils of India Series). National Bureau of Soil Survey and Land Use Planning. Nagpur (India), December, 1992)

**Table 2.8** Soils under limiting drainage classes

Class	Location		Area Affected	
	Agro-eco Subregion	Distribution (District)	'000ha	Percent of Mapped Area (% of TGA)
Very poor	Hot Subhumid	Part of erstwhile Medinipur, Hooghly and 24-Parganas(S)	173.4	2.0 (1.9)
Poor	Hot Part Perhumid to Subhumid	Part of both 24-Parganas, Nadia, Murshidabad, Jalpaiguri, Cooch behar, erstwhile Medinipur, Howrah Hooghly	2453.3	28.4 (27.6)
Imperfect	Hot Subhumid	Part of erstwhile Bardhaman, Birbhum, Hooghly, W. Dinajpur, Malda, erstwhile Medinipur & Purulia	1747.6	20.3 (19.7)
Excessive	Warm Perhumid	Part of erstwhile Darjeeling and erstwhile Jalpaiguri	56.1	0.6(0.6)
	Hot Subhumid	Part of Bankura & Purulia	8.6	0.1 (0.1)

(Source: *Soils of West Bengal for Optimising Land Use*. NBSS Publ. 27b (Soils of India Series). National Bureau of Soil Survey and Land Use Planning. Nagpur (India), December, 1992)

**Table 2.9** Soils under limiting erosion classes

Class	Location		Area Affected	
	Agro-eco Subregion	Distribution (District)	'000ha	Percent of Mapped Area (% of TGA)
Severe	Warm Perhumid	erstwhile Darjeeling (part)	37.0	0.4(0.4)
	Hot Subhumid	Western part of Purulia, Birbhum, Bankura and erstwhile Medinipur	20.4	0.2(0.2)
Moderate,	Hot Subhumid	Western part of erstwhile Bardhaman Birbhum, erstwhile Medinipur, Bankura Murshidabad, Malda, N&S Dinajpur, Cooch-Bihar and entire Purulia	1137.1	13.2 (12.8)
	Warm Perhumid	erstwhile Darjeeling and erstwhile Jalpaiguri (part)	166.0	1.9 (1.8)

(Source: *Soils of West Bengal for Optimising Land Use*. NBSS Publ. 27b (Soils of India Series). National Bureau of Soil Survey and Land Use Planning. Nagpur (India), December, 1992)





**Table 2.10** Soils under limiting textural classes (surface)

Class	Location		Area affected	
	Agro-eco Subregion	Distribution (District)	'000ha	Percent of Mapped Area (% of TGA)
Sandy	Hot Subhumid	Coastal part of erstwhile Medinipur	13.7	0.16(0.2)
Gravelly loam	Hot Subhumid/Warm Perhumid	Part of erstwhile Darjeeling,erstwhile Medinipur, Bankura, Purulia	488.4	5.6(5.5)
Clayey	Hot Subhumid	24-Parganas(S), erstwhile Medinipur, erstwhile Barddhaman, Murshidabad, Nadia	1550.7	18.0 (17.5)

(Source: Soils of West Bengal for Optimising Land Use. NBSS Publ. 27b (Soils of India Series). National Bureau of Soil Survey and Land Use Planning. Nagpur (India), December, 1992)

**Table 2.11** Soils under limiting salinity classes

Class	Location		Area affected	
	Agro-eco Subregion	Distribution (District)	'000ha	Percent of Mapped Area (% of TGA)
Very Strong	Hot Subhumid	South strong 24-Parganas & erstwhile Medinipur	241.0	2.8 (2.7)
Strong	–do–	–do–	5.7	0.06 (0.06)
Moderate	–do–	–do–	131.0	1.5 (1.5)

(Source: Soils of West Bengal for Optimising Land Use. NBSS Publ. 27b (Soils of India Series). National Bureau of Soil Survey and Land Use Planning. Nagpur (India), December, 1992)

**Table 2.12** Soils under limiting flooding classes

Class	Location		Area Affected	
	Agro-eco Subregion	Distribution (District)	'000ha	Percent of Mapped Area (% of TGA)
Moderate	Hot Humid	Part of Jalpaiguri, Cooch Bihar, North Dinajpur	112.0	1.3 (1.3)
	Hot Subhumid	Part of North Dinajpur, Malda, Murshidabad, Nadia, Erstwhile Barddhaman, 24-Parganas, Erstwhile Medinipur	931.2	10.8 (10.5)
Severe	Hot Subhumid	Part of Hooghly Medinipur, Murshidabad, Nadia and 24-Parganas	907.2	10.5 (10.2)

(Source: Soils of West Bengal for Optimising Land Use. NBSS Publ. 27b (Soils of India Series). National Bureau of Soil Survey and Land Use Planning. Nagpur (India), December, 1992)



**Table 2.13** Soils under limiting water logging classes

Class	Location		Area affected	
	Agro-eco Subregion	Distribution (District)	'000ha	Percent of Mapped Area (% of TGA)
Moderate	Hot Perhumid	Cooch behar, erstwhile Jalpaiguri	111.3	1.3(1.2)
	Hot, moist Subhumid (Bengal Basin)	W.Dinajpur erstwhile Medinipur erstwhile Bardhaman, Birbhum, Murshidabad	337.5	3.9(3.8)
Slight	Hot, Perhumid	erstwhile Darjeeling erstwhile Jalpaiguri, Cooch behar	189.8	2.2(2.1)
	Hot,moist, Subhumid (Bengal Basin)	W.Dinajpur Malda, Murshidabad, Birbhum, erstwhile Medinipur, Hooghly, erstwhile Bardhaman, Nadia, Howrah	618.5	7.1(6.9)

(Source: *Soils of West Bengal for Optimising Land Use*. NBSS Publ. 27b (Soils of India Series). National Bureau of Soil Survey and Land Use Planning. Nagpur (India), December, 1992)



### 3.1 FOREST LAND, FOREST COVER, AND VEGETATION

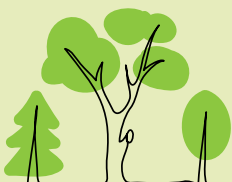
West Bengal (Area 88,752 Sq.Km. Comprising of 23 Districts) is the only Indian State to have a coastline as well as the Himalayas and is situated between 21°20' and 27°32' N latitude and 85°50' and 89°52' E longitudes. Five States (Sikkim, Assam, Bihar, Jharkhand and Orissa) and three countries (Bhutan, Nepal and Bangladesh) surround West Bengal- Sikkim to the North, Bhutan to the North and North-East, Assam and Bangladesh to the East, Nepal, Bihar and Jharkhand to the West and Jharkhand and Orissa to the South-West. The extreme south end touches the Bay of Bengal.

Total recorded forest land in the state is 11,879 sq. km, of which 7,054 sq.km. is Reserved Forest, 3,772 sq.km. is Protected Forest and 1,053 sq.km. is Unclassed State Forest, thus constituting 13.38% of the total geographical area of the state.

The forest cover including the forests created outside the recorded forest area is 15.68% of the geographical area as assessed by the GIS Cell of the W.B. Forest Department in the year 2006 on the basis of Satellite Imagery procured from NRSA, Hyderabad in digital data format. While computing the forest cover of the State, the protocol developed by RRSSC, Kharagpur under Dept. of Space, Gal, NRSA, Hyderabad in earlier studies was followed. Estuarine water bodies like rivers & creeks in mangrove forest and river flowing through the recorded forest land in Jalpaiguri and other districts have been included while computing the forest cover. Similarly large portions of farm forestry plantations, raised outside forest land, having forest like micro-ecosystem, have been enumerated as forest cover. The vegetation cover includes village orchards/groves, tea garden and horticulture plantations.

**Table 3.1**

Geographical Area	88,752 sq km
Population (as per Census 2011)	91.27 million
Urban	29.09 million (11.29%)
Rural	62.18 million (88.71%)
Tribal	5.30 million (5.80%)
Average Population Density (as per Census 2011)	1,028 per sq km
Livestock population (as per 19 <sup>th</sup> Live Stock Census)	30.35 million
No. of Districts (as per Census 2011)	19 (Now 23)
No. of Hill Districts	1 (Now 2)
No. of Tribal Districts	11



**Table 3.2** Land Use Pattern

Land use Pattern		
Land use	Area in '000 ha	Percentage
Total Geographical Area	8,875	
Reporting area for land utilization	8,683	100.00
Forests	1,173	13.50
Not available for land cultivation	1,853	21.34
Permanent pastures and other grazing lands	2	0.03
Land under misc. tree crops and groves	50	0.57
Culturable wasteland	17	0.20
Fallow land other than current fallows	11	0.13
Current fallows	339	3.90
Net area sown	5,238	60.33

Source: Land use Statistics, Ministry of Agriculture, GoI, 2014–15

**Table: 3.3** Forest Cover Within Recorded Forest Area

Forest Cover Within Recorded Forest Area	
Very Dense Forest	2,608 sq km
Moderately Dense Forest	2,353 sq km
Open Forest	2,116 sq km
<b>Sub Total</b>	<b>7,077 sq km</b>

Source: ISFR, 2019

**Table: 3.4** Forest Cover Outside Recorded Forest Area

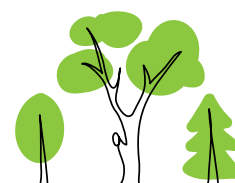
Forest Cover Outside Recorded Forest Area	
Very Dense Forest	411 sq km
Moderately Dense Forest	1,807 sq km
Open Forest	7,607 sq km
<b>Sub Total</b>	<b>9,825 sq km</b>
<b>Total Forest Cover</b>	<b>16,902 sq km</b>
<b>Tree Cover</b>	<b>2,006 sq km</b>
<b>Total Forest &amp; Tree Cover</b>	<b>18,908 sq km</b>
Per capita Forest & Tree Cover	0.02 ha
Of State's Geographical Area	21.304%
Of India's Forest & Tree Cover	2.34%

Source: ISFR, 2019

**Table: 3.5** Forest Cover in different Slope Classes

Forest Cover in different slope classes in West Bengal (Area in km <sup>2</sup> )						
Slope (in degrees)	Geographical Area	VDF	MDF	OF	Total	Scrub
0–5	85,130	2,209	3,244	8,729	14,182 (83.90%)	131
5–10	1,227	141	217	227	585 (3.46%)	6
10–15	508	119	151	152	422 (2.50%)	3
15–20	539	147	157	171	475 (2.81%)	2
20–25	514	149	148	168	465 (2.75%)	2
25–30	404	122	117	134	373 (2.21%)	1
> 30	430	132	126	142	400 (2.37%)	1
<b>Total</b>	<b>88,752</b>	<b>3,019</b>	<b>4,160</b>	<b>9,723</b>	<b>16,902</b>	<b>146</b>

(Based on SRTM, Digital Elevation Model, 30 m, 2016)





**Table: 3.6** Percentage area under different forest types

Sl. No.	Forest Type	% of Forest cover
1.	2B/2S3 Sub Himalayan Secondary Wet Mixed Forest	2.09
2.	3C/C1a(i) East Himalayan Sal	2.35
3.	3C/C1b(i) East Himalayan Upper Bhabar Sal	0.90
4.	3C/C1b(ii) East Himalayan Lower Bhabar Sal	0.69
5.	3C/C1c Eastern Tarai Sal Forest	1.91
6.	3C/C2d (iii) Eastern Heavy Alluvium Plains Sal	0.02
7.	3C/DS1 Moist Sal Savannah	0.07
8.	3C/C3a West Gangatic Moist Mixed Deciduous Forest	0.08
9.	3C/C3b East Himalayan Moist Mixed Deciduous Forest	2.45
10.	3C/C3/2S2 (Secondary Euphorbiaceous Scrub)	0.06
11.	3C/1S1 Low Alluvial Savannah Woodland ( <i>Salmalia albizzia</i> )	0.18
12.	4B/TS1 Mangrove Scrub	0.71
13.	4B/TS2 Mangrove Forest	5.89
14.	4B/TS3 Salt Water Mixed Forest (Heritiera)	2.80
15.	4B/TS4 Brackish Water Mixed Forest (Heritiera)	1.80
16.	4B/E1 Palm Swamp	0.87
17.	4C/FS2 Submontane Hill-Valley Swamp Forest	0.03
18.	4D/SS2 Barringtonia Swamp Forest	0.02
19.	4D/2S2 Eastern Wet Alluvial Grassland	0.01
20.	5B/C1c Dry Peninsular Sal Forest	16.31
21.	5B/C2 Northern Dry Mixed Deciduous Forest	1.49
22.	5B/DS1 Dry Deciduous Scrub	0.21
23.	5/E5 Butea Forest	0.12
24.	5/1S2 Khair-Sissu Forest	1.18
25.	8B/C1 East Himalayan Sub-Tropical Wet Hill Forest	2.81
26.	11B/C1a Lauraceous Forest	0.72
27.	11B/C1b Buk Oak Forest	0.33
28.	11B/C1c High Level Oak Forest	0.12
29.	12/C3a East Himalayan Mixed Coniferous Forest	1.90
30.	14/C2 East Himalayan Sub-Alpine Birch/Fir Forest	0.08
31.	Plantation/ TOF	51.8
	<b>Total</b>	<b>100.00</b>

**Table 3.7** Growing Stock

(in m cum)

Growing Stock (GS)		% of Country's GS
Growing Stock in Recorded Forest Area	54.87	1.28
Growing Stock in TOF	32.63	1.99

**Table 3.8** Recorded Forest Area

Recorded Forest Area	
Reserved Forest	7,054 sq km
Protected Forest	3,772 sq km
Unclassed Forest	1,053 sq km
Total	11,879 sq km
of State's Geographical Area	13.38 %
of India's Forest Area	1.55 %



**Table 3.9** District-wise Forest Cover of West Bengal

District	District-wise Forest Cover						(Area in km <sup>2</sup> )	
	Geo-graphical Area	Very Dense Forest	Mod. Dense Forest	Open Forest	Total	Percentage of GA	Change	Scrub
Bankura	6,882	222.33	395.27	667.98	1,285.58	18.68	15.58	28.59
Bardhaman*	7,024	57.53	91.78	190.00	339.31	4.83	4.31	7.35
Birbhum	4,545	1.00	34.14	149.66	184.80	4.07	7.80	8.90
Kolkata	2,219	0.00	5.83	81.29	87.12	3.93	0.12	0.00
Coochbehar	3,149	720.76	654.52	992.52	2,367.80	75.19	2.80	9.21
Dakshin Dinajpur	1,467	0.00	50.00	253.77	303.77	20.71	-0.23	0.00
Darjeeling	3,149	0.00	14.00	146.00	160.00	5.08	0.00	0.00
Howrah	6,227	724.22	434.92	1,703.26	2,862.40	45.97	5.40	39.65
Hooghly	3,387	0.00	27.00	322.06	349.06	10.31	0.06	0.00
Jalpaiguri*	185	0.00	0.00	1.00	1.00	0.54	0.00	0.00
Malda	3,733	0.00	209.04	282.65	491.69	13.17	0.69	0.00
Paschim Medinipur*	5,324	0.00	53.06	291.83	344.89	6.48	-1.11	0.00
Purba Medinipur	3,927	1.00	160.16	318.84	480.00	12.22	0.00	0.00
Murshidabad	4,094	13.02	184.98	524.98	722.98	17.66	-0.02	0.00
Nadia	9,368	256.21	591.64	1,313.69	2,161.54	23.07	10.54	20.24
North 24 Parganas	4,713	1.99	197.96	620.10	820.05	17.40	0.05	2.50
Purulia	6,259	37.36	306.94	571.58	915.88	14.63	11.88	28.68
South 24 Parganas	9,960	983.10	745.03	1,060.58	2,788.71	27.99	-3.29	1.00
Uttar Dinajpur	3,140	0.00	3.99	230.94	234.93	7.48	-0.07	0.00
<b>Grand Total</b>	<b>88,752</b>	<b>3,018.52</b>	<b>4,160.26</b>	<b>9,722.73</b>	<b>16,901.51</b>	<b>19.04</b>	<b>54.51</b>	<b>146.12</b>

\* Including Forest Area of both Purba & Paschim Bardhaman Districts, Kalimpong District, Alipurduar District & Jhargram District respectively.

**Table: 3.10** Change Matrix of West Bengal

Change Matrix of West Bengal (Area in km <sup>2</sup> )						
Class	2019 Assessment					Total ISFR 2017
	VDF	MDF	OF	SCRub	NF	
Very Dense Forest	2,963	19	7	1	4	2,994
Moderately Dense Forest	53	4,070	17	1	6	4,147
Open Forest	3	65	9,581	9	48	9,706
Scrub	0	0	17	115	4	136
Non Forest	0	6	101	20	71,642	71,769
Total ISFR 2019	3,019	4,160	9,723	146	71,704	88,752
Net Change	25	13	17	10	-65	-



**Table: 3.11** Altitude-wise Forest Cover of West Bengal

Altitude Zone (m)	Geographical Area	Altitude-wise Forest Cover (Area in km <sup>2</sup> )				
		VDF	MDF	OF	Total	Scrub
0-500	86,650	2,389	3,612	9,035	15,036 (88.96%)	146
500-1000	807	141	272	262	675 (3.99%)	0
1000-2000	970	267	228	383	878 (5.19%)	0
2000-3000	292	196	44	40	280 (1.66%)	0
> 3000	33	26	4	3	33 (0.20%)	0
<b>Total</b>	<b>88,752</b>	<b>3,019</b>	<b>4,160</b>	<b>9,723</b>	<b>16,902</b>	<b>146</b>

**Reasons for change detected in 2019 assessment:**

Main reasons for the increase in forest cover in the State are plantation and conservation activities.









### 4.1 CADRE STRENGTH OF IFS AND WBFS IN WEST BENGAL

#### IFS Cadre of West Bengal

As on 01.01.2020

Sl. No.	Authorised Structure of the Cadre vide G.O No. 16016/2(i)/2011-AIS-(II)(A) dt.13.03.2012	No of Post	Present Srength of Cadre as on 01.01.2020	No of Post
1.	Senior Duty Post under the State Govt	78	Senior Duty Post	78*
2.	Central Deputation Reserve @ 20% of (1) above	15	Central Deputation	5
3.	State Deputation Reserve @ 25% of (1) above	19	State Deputation	19
4.	Training Reserve @ 3.5% of (1) above	2	Training Reserve	6
5.	Post to be filled by promotion in accordance with Rule 8 of India Forest Service (Recruitment) Rules,1966 not exceeding 33.33% of items (1),(2),(3) & (4) above	38	Posts Filled by promotion from WBFS	37
6.	Leave Reserve & Junior Posts Reserve @ 16.5% if item (1) above	12	Leave Reserve & Junior Posts	4
8.	<b>Total Authorised Strength</b>	<b>126</b>	<b>Total Present Strength</b>	<b>107</b>

\*Includes 10 IFS officers of Junior Time Scale holding Senior Duty Posts

#### WBFS Cadre of West Bengal

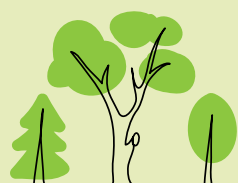
#### Authorised & existing cadre strength of the West Bengal Forest Service

(As per Govt Order No. 1499-For dated 15.05.2000 & 3887-For. dated 10.11.2006)

As on 01.01.2020

Sl. No.	Description	Nos.	Actually Posted
1	Direct Recruit Officers	63	51
2	Promoted Officers	63	55
3	Officers in charge of Division/Sr. Duty Post (DFO/DCF)	23	23
4	Officers posted as ADFO/Jr. Duty Post	87	70
5	Officers on deputation @ 10% of (3+4)	11	13
6	Officers undergoing training & Leave Reserve @ 5% of (3+4)	5	0
	<b>Total Authorised Strength:</b>	<b>126</b>	<b>106</b>

\*\*Names in the list have been arranged as per provisional seniority



## 4.2 STATEMENT SHOWING THE SANCTIONED STRENGTHS OF OFFICERS AND STAFF OF THE FOREST DIRECTORATE ALONG WITH THE EXISTING STRENGTHS AND VACANCY POSITIONS AS ON 31.3.2020 GIVEN BELOW

Sl. No	Name of Posts	Sanction Strength	Existing Strength	Vacancies
1.	IFS	126	107	19
2.	WBFS	126	109	17
3.	A.O.	1	1	0
4.	FR	586	400	186
5.	DR/Fr.	1284	733	551
6.	FG	2458	1311	1147
7.	HFG	231	81	150
8.	Head Clerk (Regional)	65	60	5
9.	Head Clerk (Directorate)	8	7	1
10.	Accountant (Reg.)	8	1	7
11.	Accountant (Directorate)	2	2	0
12.	Asst. Statistician	1	0	1
13.	Computing Spr.	2	2	0
14.	Computer	7	0	7
15.	UDC (Regional)	327	152	175
16.	UDC (Directorate)	26	26	0
17.	Typist (Directorate)	15	6	9
18.	Typist (Regional)	28	1	27
19.	LDC (Regional)	327	91	236
20.	LDC (Directorate)	26	4	22
21.	Statistician	1	0	1
22.	Drivers	146	39	107
23.	Agriculture Extension Officer	2	0	2
24.	Asst. Foreman (Mech.)	4	0	4
25.	Asst. Saw Doctor	2	1	1
26.	Attendant	1	0	1
27.	Asst. Soil Chemist	1	0	1
28.	Band Saw operator	10	1	9
29.	Bearer	3	1	2
30.	Boatman	102	25	77
31.	Boiler Driver	1	0	1
32.	Boiler Fireman	3	0	3
33.	Bungalow Chowkidar	94	66	28
34.	Bengali Translator	1	1	0
35.	Cashaub	1	0	1
36.	Chowkidar	2	1	1
37.	Cleaner/Truck Cleaner	27	16	11
38.	Cook	4	0	4
39.	Cook-cum-Bearer	2	1	1



Sl. No	Name of Posts	Sanction Strength	Existing Strength	Vacancies
40.	Crane Operator	3	2	1
41.	Cross-cut-Operator	6	1	5
42.	C.T.Mobile Medical Unit	1	0	1
43	Compounder	1	1	0
44	Dakwalla	104	50	54
45	Darwan	34	25	9
46	Draftsman/Head Draftsman	35	16	19
47	Driver-cum-Mechanic	3	0	3
48	Duftary	13	7	6
49	Duplicating Operator	1	1	0
50	Electrician	1	1	0
51	Engine Driver	9	4	5
52	Electric Workman	4	1	3
53	ECG Technician	1	0	1
54	Fitter	1	0	1
55	Forest Watcher	13	1	12
56	Forest Worker	17	6	11
57	GDA (Medical Unit)	2	0	2
58	Gate Operator/ H.G.O.	5	1	4
59	Grass Cutter	22	2	20
60	Game Watcher	2	1	1
61	Game Guard	4	0	4
62	Installation Guard	10	0	10
63	Kiln Supervisor	1	0	1
64	Laskar	17	6	11
65	Lathe man	1	0	1
66	Laboratory Assistant	3	0	3
67	Laboratory Attendant	1	1	0
68	Mahut	23	3	20
69	Majhi	44	12	32
70	Mali	193	116	77
71	Medical Officer	2	0	2
72	Mosalchi	1	0	1
73	Muharrir Grade-I, Grade-II	2	1	1
74	Museum Darwan	1	0	1
75	Night Guard	11	6	5
76	Night Watchman	5	1	4
77	Nurse	2	0	2
78	Oil Man – greaser	9	3	6
79	Orderly	534	439	95
80	Peon	102	69	33
81	Office Supdt.	1	1	0
82	Pharmacist	2	0	2



Sl. No	Name of Posts	Sanction Strength	Existing Strength	Vacancies
83	Power Saw Operator	5	0	5
84	Pump Driver	1	0	1
85	Road Roller Driver	3	0	3
86	Record Supplier	2	2	0
87	Renepont Operator	2	0	2
88	Road Roller Mate	3	0	3
89	Research Officer	1	0	1
90	Ropeway Motor Driver	7	0	7
91	Road Khalasi	3	0	3
92	Saw Doctor	1	0	1
93	Serang	7	3	4
94	Skilled Mazdoor	10	0	10
95	Station Helper	5	0	5
96	Personal Assistant	48	22	26
97	Sub-Station Operator	2	1	1
98	Karmabandhu (Sweeper)	52	22	30
99	Sukhani	5	1	4
100	Tractor Driver	1	0	1
101	Tractor Mate	5	0	5
102	Taxidermist	1	0	1
103	Ticket Seller	1	0	1
104	Technical Asstt.	1	1	0
105	Tractor Mount Roller Driver	1	1	0
106	Unskilled Mazdoor	46	1	45
107	Veterinary Officer	1	0	1
108	Watcher	1	1	0
109	Wildlife Guard	1	1	0
110	X-Ray Assistant	1	1	0
111	Karmasathi (Zamadar)	2	0	2

### 4.3 PARKS & GARDENS WING

Sl.No	Name of Posts	Sanction Strength	Existing Strength	Vacancies
1	Garden Supervisor	22	13	9
2	Head Uddyan Rakshi	31	11	20
3	Horticulture Officer	5	0	5
4	Senior Horticulture Officer	2	0	2
5	Senior Mali	70	37	33
6	Supdt. Horticulture officer	1	1	0
7	Uddyan Rakshi	126	92	34
8	Uddyan Shramik	284	160	124





### 4.3.1 Lloyd Botanic Garden

Sl.No	Name of Posts	Sanction Strength	Existing Strength	Vacancies
1	Black smith	1	0	1
2	Carpenter	1	1	0
3	CT	1	0	1
4	Darwan	6	2	4
5	Head Mali	1	0	1
6	Herbarium Cleaner	4	0	4
7	Horticulture Officer	1	0	1
8	Junior Mali	1	0	1
9	Lebel Writer	1	0	1
10	Man Mazdoor	11	3	8
11	Night Guard/Chowkidar	1	0	1
12	Orchid Supervisor	1	0	1
13	Orderly	1	1	0
14	Plant Collector	1	0	1
15	Peon	1	1	0
16	Sardar	1	0	1
17	Senior Mali	1	1	0
18	Store Keeper	1	0	1
19	Karmabandhu (Sweeper)	2	0	2
20	UDC	1	1	0
21	Women Mazdoor	25	0	25

### 4.4 SUPERNUMERARY POSTS

Bana Majdoor	125
Bana Shramik	1657

### 4.5 ADMINISTRATIVE UNITS UNDER FOREST DIRECTORATE

	Circle	Division	Range	Beat
Territorial	7	25	243	509
Wildlife	5	7	86	142
Social Forestry	1	2	52	72
Soil Conservation	1	2	22	39
Functional	4	17	72	–
<b>Total</b>	<b>18</b>	<b>53</b>	<b>475</b>	<b>762</b>









# JOINT FOREST MANAGEMENT COMMITTEE

## CHAPTER 5

### 5.1 JFMCs IN WEST BENGAL

#### 5.1.1 JFMCs in Forest area outside Protected Areas

West Bengal has a total of 4319 numbers of JFMCs (erstwhile FPCs) with total membership of 495235 with approximate ratio of male: female membership (first member) at 10:1 which have been reported to be registered in West Bengal covering 562475.027 ha forest area being protected by them. The SC & ST constitute 54.90 % of members in the JFMCs (erstwhile FPCs).

(As on 31.03.2020)

Division	No of JFMC	Area Protected (in Ha)	Members					
			Male	Female	Total	SC	ST	Others
Darjeeling	80	15239.108	4513	532	5045	220	2217	2608
Kurseong	46	13094.61	1084	1624	2708	440	1052	1216
Kalimpong	64	27104.86	3698	205	3903	205	1038	2660
Darjeeling WL	0	0	0	0	0	0	0	0
Baikunthapur	66	14023.78	6192	131	6323	4529	790	1004
Jalpaiguri	61	20722	10207	863	11070	4760	3336	2974
BTR East	17	9331.09	3340	103	3443	1591	1392	460
BTR West	27	14786	4320	665	4985	825	2876	1284
Coochbehar	25	3903.67	2932	209	3141	1497	517	1127
Jaldapara WL	31	6499.338	8255	1144	9399	1692	5004	2703
Gorumara WL	0	0	0	0	0	0	0	0
Raiganj	21	1162.6	1727	74	1801	864	412	525
Malda	6	456.219	479	114	593	319	200	74
Bankura North	543	43567.94	50584	2094	52678	19947	7917	24814
Bankura South	646	45367.96	56551	4822	61373	14892	18868	27613
Panchet	232	27905.09	27811	1594	29405	11160	4758	13487
Kangsabati North	246	17501.96	24019	885	24904	5748	8100	11056
Kangsabati South	305	25446	29561	569	30130	4293	10889	14948
Purulia	225	30845.22	20812	898	21710	7035	5913	8762
Burdwan	70	17641.5	17747	2645	20392	8813	4954	6625
Durgapur	22	2698.748	3782	3787	7569	2524	1329	3716
Midnapur	364	48637.378	48038	2801	50839	10131	9186	31522



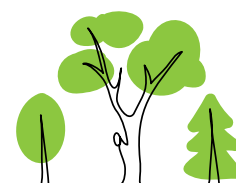
Division	No of JMFC	Area Protected (in Ha)	Members					
			Male	Female	Total	SC	ST	Others
Jhargram	474	62109.444	38254	2449	40703	9135	14906	16662
Rupnarayan	222	27066.24	27392	1019	28411	7391	7875	13145
Kharagpur	254	31401.04	29025	1586	30611	7028	8925	14658
Purba Midnapur	19	1887.48	4760	1097	5857	1256	50	4551
Birbhum	198	10391.1	14550	352	14902	4826	5028	5048
Nadia Msd	11	916.332	989	44	1033	253	243	537
24 Parganas (S)	40	42534	10801	10718	21519	11830	514	9175
STR	0	0	0	0	0	0	0	0
24 Parganas (N)	0	0	0	0	0	0	0	0
Howrah	4	234.32	788	0	788	332	108	348
<b>TOTAL</b>	<b>4319</b>	<b>562475.027</b>	<b>452211</b>	<b>43024</b>	<b>495235</b>	<b>143536</b>	<b>128397</b>	<b>223302</b>

### 5.1.2 JFMCs in Protected Areas in West Bengal

A total of 146 numbers of EDCs (now re-designated as JFMC) having total membership of 40477 with approximate ratio of male: female membership at 3:2 have been reported to be registered in West Bengal covering 76112.691 ha forest within Protected Areas being protected by them. The SC & ST constitute 64.38% of members in the EDCs. With the promulgation of the latest JFMC resolutions, the erstwhile EDCs are called JFMCs vide no. 40-FOR dated 31.01.2017.

(As on 31.03.2020)

Name of Forest Division	Name of Protected Area	No. of EDC	Area Protected (in Ha)	No. of Members			SC	ST	Others
				Male	Female	Total			
Darjeeling Wildlife	Mahananda WLS	15	12406.55	2693	2218	4911	1305	1022	2584
	Senchal WLS	15	4114.81	1587	1211	2798	102	1496	1200
	Singalila N.P.	1	350	63	72	135	0	59	76
Gorumara Wildlife	Neora Valley N.P.	6	5020.01	1391	1198	2589	64	952	1573
	Gorumara N.P.	6	3695.62	1293	149	1442	482	457	503
	Chapramari Beat Forest Area	1	960.31	47	2	49	4	8	37
	Khunia Beat Forest area	2	1443.9	341	5	346	7	154	185
	Murti Beat Forest area	3	1613.04	460	90	550	115	189	246
Buxa Tiger Reserve (E)	Buxa Tiger Reserve	14	23534.97	1454	173	1627	238	612	777
Buxa Tiger Reserve (W)		7	10809.17	263	181	444	126	318	0
Jaldapara Wildlife	Jaldapara WLS	40	9079.251	9757	1398	11155	5173	3306	2676
Raiganj	Kulik WLS	3	130	193	21	214	172	30	12





Name of Forest Division	Name of Protected Area	No. of EDC	Area Protected (in Ha)	No. of Members			SC	ST	Others
				Male	Female	Total			
Birbhum	Ballavpur WLS	4	200.80	276	34	310	9	196	105
Nadia –Murshidabad	Bethuadahari WLS	1	66.67	96	6	102	55	29	18
Sunderban Tiger Reserve	Sundarban Tiger Reserve	26	2584.89	4400	9048	13448	8736	326	4386
24 Parganas North	Bibhuti Bhushan WLS	1	93.70	35	2	37	24	5	8
Purba Midnapur	Arakbari EDC	1	9.0	192	128	320	290	0	30
TOTAL		146	76112.691	24541	15936	40477	16902	9159	14416

**Table 5.2** Status of Self-Help Group as on 31/03/2020 (Excluding Women SHG)

It is reported that there are 2902 SHGs in various districts in West Bengal of which 1803 are exclusively women SHGs.

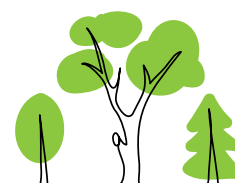
District	Division	No of SHG	Members			No of JFMC/ EDC in SHG	Corpus Fund Generated (in INR)
			Male	Female	Total		
Darjeeling	Darjeeling	1	5	5	10	1	5000.00
Darjeeling	Kurseong	0	0	0	0	0	0.00
Kalimpong	Kalimpong	0	0	0	0	0	0.00
Darjeeling	Darjeeling WL	0	0	0	0	0	0.00
Jalpaiguri	Baikunthapur	63	79	604	683	49	721000.00
Jalpaiguri	Jalpaiguri	0	0	0	0	0	0.00
Jalpaiguri	Gorumara WL	5	0	63	63	2	0.00
Alipurduar	BTR East	0	0	0	0	0	0.00
Alipurduar	BTR West	229	0	0	0	0	0.00
Coochbehar	Cooch Behar	79	135	138	273	25	0.00
Coochbehar	Jaldapara WL	0	0	0	0	0	0.00
Uttar & Dakshin Dinajpur	Raiganj	0	0	0	0	0	0.00
Malda	Malda	0	0	0	0	0	0.00
Bankura	Bankura North	27	177	122	299	09	0.00
Bankura	Bankura South	0	0	0	0	0	0.00
Bankura	Panchet	2	39	0	39	2	97600.00
Purulia	Kangsabati North	0	0	0	0	0	0.00
Purulia	Kangsabati South	0	0	0	0	0	0.00
Purulia	Purulia	43	232	0	232	21	2476249.00
Burdwan	Burdwan	0	0	0	0	0	0.00



District	Division	No of SHG	Members			No of JFMC/ EDC in SHG	Corpus Fund Generated (in INR)
			Male	Female	Total		
Burdwan	Durgapur	1	10	0	10	1	0.00
Paschim Medinipur	Midnapur	168	1741	0	1741	41	1049337.00
Paschim Medinipur	Jhargram	172	1637	204	1841	0	0.00
Paschim Medinipur	Rupnarayan	83	10	834	844	41	1842000.00
Paschim Medinipur	Kharagpur	0	0	0	0	0	0.00
Purba Medinipur	Purba Midnapur	0	0	0	0	0	0.00
Birbhum	Birbhum	91	574	510	1084	0	0.00
Nadia & MSD	Nadia Msd	0	0	0	0	0	0.00
24 Parganas (S)	24 Parganas(S)	135	888	1332	2220	185	0.00
Howrah	Howrah	0	0	0	0	0	0.00
24 Parganas (S)	STR	0	0	0	0	0	0.00
24 Parganas (N)	24 Parganas (N)	0	0	0	0	0	0.00
<b>TOTAL</b>		<b>1099</b>	<b>5527</b>	<b>3812</b>	<b>9339</b>	<b>377</b>	<b>61,91,186.00</b>

**Table 5.3** Status of Self-Help Group as on 31/03/2020 (Exclusive Women SHG)

District	Division	No of SHG	MembersC	No of JFMC/EDC in SHG	Corpus Fund Generated (in INR)
			Female		
Darjeeling	Darjeeling	34	345	17	1090166.00
Darjeeling	Kurseong	21	255	16	0.00
Kalimpong	Kalimpong	0	0	0	0.00
Darjeeling	Darjeeling WL	25	275	16	0.00
Jalpaiguri	Baikunthapur	56	604	49	0.00
Jalpaiguri	Jalpaiguri	256	2560	61	0.00
Jalpaiguri	Gorumara WL	12	158	8	0.00
Alipurduar	BTR East	97	1085	0	0.00
Alipurduar	BTR West	0	0	0	0.00
Coochbehar	Coochbehar	0	0	0	0.00
Coochbehar	Jaldapara WL	39	326	23	1219500.00
Uttar & Dakshin Dinajpur	Raiganj	0	0	0	0.00
Malda	Malda	0	0	0	0.00
Bankura	Bankura North	174	1796	53	0.00
Bankura	Bankura South	102	1110	51	6019710.00



District	Division	No of SHG	MembersC	No of JFMC/EDC in SHG	Corpus Fund Generated (in INR)
			Female		
Bankura	Panchet	100	1109	50	2346760.00
Purulia	Kangsabati North	64	673	30	3744542.00
Purulia	Kangsabati South	66	660	33	2246084.00
Purulia	Purulia	258	2606	139	999996.00
Burdwan	Burdwan	0	0	0	0.00
Burdwan	Durgapur	123	1252	21	1236954.00
Paschim Medinipur	Midnapur	29	291	03	5532227.00
Paschim Medinipur	Jhargram	0	0	0	0.00
Paschim Medinipur	Rupnarayan	43	430	21	0.00
Paschim Medinipur	Kharagpur	45	460	31	2630889.00
Purba Medinipur	Purba Midnapur	0	0	0	0.00
Birbhum	Birbhum	5	1456	288	0.00
Nadia & MSD	Nadia Msd	0	0	0	0.00
24 Parganas (S)	24 Parganas(S)	111	1332	0	0.00
24 Parganas (S)	STR	143	1430	26	3146000.00
24 Parganas (N)	24 Parganas (N)	0	0	0	0.00
Howrah	Howrah	0	0	0	0.00
<b>TOTAL</b>		<b>1803</b>	<b>20213</b>	<b>936</b>	<b>3,02,12,828.00</b>

**Table 5.4 STATUS OF FDA as on 31/03/2020**

A total of 1095 numbers of JFMCs in the state are part of FDA with total membership of 136633 with approximate ratio of male: female membership at 9:1 have been reported to be registered in West Bengal. The SC & ST constitute 56.59% of members in the FDA. The status of FDAs as on 31.03.2020 has been tabulated below:

Name of FDA	No of JFMC/EDC in FDA	No of JFMC/EDC members in FDA						Fund Utilisation in NAP/other Schemes (in ₹ Lakh)
		Male	Female	Total	SC	ST	Others	
Darjeeling	80	4513	532	5045	220	2217	2608	0.00
Kurseong	46	1084	1624	2708	440	1052	1216	0.00
Kalimpong	64	3698	205	3903	205	1032	2666	0.00
Darjeeling WL	31	4343	3501	7844	1406	2648	3790	0.00
Baikunthapur	66	6192	131	6323	4529	790	1004	0.00
Jalpaiguri	61	0	0	0	0	0	0	0.00
Gorumara WL	18	3524	1452	4976	672	1758	2546	0.00
BTR East	0	0	0	0	0	0	0	0.00
BTR West	34	2013	206	2219	147	1611	461	0.00
Cooch Behar	0	0	0	0	0	0	0	0.00
Jaldapara WL	0	0	0	0	0	0	0	0.00
Raiganj	0	0	0	0	0	0	0	0.00
Malda	0	0	0	0	0	0	0	0.00



Name of FDA	No of JFMC/EDC in FDA	No of JFMC/EDC members in FDA						Fund Utilisation in NAP/other Schemes (in ₹ Lakh)
		Male	Female	Total	SC	ST	Others	
Bankura North	29	810	19	829	266	38	525	0.00
Bankura South	85	8606	330	8936	3178	2103	3655	0.00
Panchet	0	0	0	0	0	0	0	0.00
Kangsabati North	57	5940	160	6100	789	2563	2748	0.00
Kangsabati South	46	19211	396	19607	3203	7562	8842	0.00
Purulia	49	5961	356	6317	2107	1554	2656	0.00
Burdwan	57	13937	2312	16249	6764	4329	5156	0.00
Durgapur	0	0	0	0	0	0	0	0.00
Midnapur	0	0	0	0	0	0	0	0.00
Jhargram	0	0	0	0	0	0	0	0.00
Rupnarayan	85	11246	712	11958	3025	3417	5516	0.00
Kharagpur	254	29025	1586	30611	7028	8925	14658	0.00
Purba Midnapur	0	0	0	0	0	0	0	0.00
Birbhum	33	2787	221	3008	805	935	1268	0.00
Nadia Msd	0	0	0	0	0	0	0	0.00
24 Parganas (S)	0	0	0	0	0	0	0	0.00
STR	0	0	0	0	0	0	0	0.00
24 Parganas (N)	0	0	0	0	0	0	0	0.00
Howrah	0	0	0	0	0	0	0	0.00
<b>TOTAL</b>	<b>1095</b>	<b>122890</b>	<b>13743</b>	<b>136633</b>	<b>34784</b>	<b>42534</b>	<b>59315</b>	<b>0.0</b>



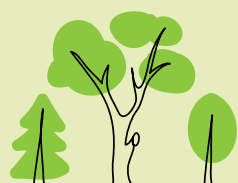


# MISCELLANEOUS INFORMATION

## CHAPTER 6

### 6.1 DISTRICT AND DIVISION WISE INFORMATION OF SAW MILLS AND OTHER WOOD BASED INDUSTRIES OF WEST BENGAL AS ON 31.03.2020

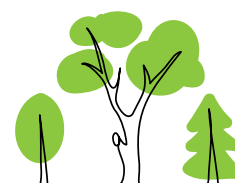
Sl. No.	District	Division	No of Licensed Units (General Category)	No. of Licensed Units (Secondary non-Pasting Category)	No. of Licensed Units (OGL Category)
1.	Erstwhile Paschim Medinipur	Medinipur	45	58	0
2.		Jhargram	20	51	0
3.		Rupnarayan	16	25	0
4.		Kharagpur	137	373	0
5.	Purba Medinipur	Purba Medinipur	141	163	3
6.	Bankura	Bankura (North)	39	104	0
7.		Bankura (South)	35	93	0
8.		Panchet	21	27	0
9.	Purulia	Purulia	13	48	0
10.		Kangsabati (North)	42	76	0
11.		Kangsabati (South)	9	6	0
12.	Birbhum	Birbhum	77	358	0
13.	Purba Bardhaman	Burdwan	134	201	0
14.	Paschim Bardhaman	Durgapur	86	94	0
15.	Howrah	Howrah	44	265	71
16.	Hooghly	Howrah	128	0	0
17.	North 24 Parganas	24 Parganas (North)	164	553	11
18.	South 24 Parganas	24 Parganas (South)	115	560	13
19.		Sunderban TR	0	8	0
20.	Nadia	Nadia-Murshidabad	91	191	1
21.	Murshidabad	Nadia-Murshidabad	77	0	0
22.	Kolkata	Forest Utilization	172	29	1
23.	Malda	Malda	139	295	0
24.	Uttar Dinajpur	Raiganj	69	560	0
25.	Dakshin Dinajpur		31	0	0



Sl. No.	District	Division	No of Licensed Units (General Category)	No. of Licensed Units (Secondary non-Pasting Category)	No. of Licensed Units (OGL Category)
26.	Erstwhile Darjeeling	Darjeeling	3	8	0
27.		Kurseong	8	57	0
28.		Kalimpong	3	0	0
29.		Baikunthapur(P)	23	394	0
30.	Erstwhile Jalpaiguri	Baikunthapur(P)	64	0	0
31.		Jalpaiguri	83	96	0
32.		Jaldapara WL-III	19	125	0
33.		Buxa TR (East)	13	98	0
34.		Buxa TR (West)	13	49	0
35	Coochbehar	Coochbehar	129	668	0
<b>Grand Total</b>			<b>2203</b>	<b>5633</b>	<b>100</b>

## 6.2 PARKS MAINTAINED BY PARKS & GARDENS (NORTH) DIVISION

District	Name of the Park/Garden	Range	Area (in Acres)
Coochbehar	1. Narendra Narayan Park	Coochbehar	13.62
	2. Keshab Ashram	Coochbehar	2.17
	3. Hitendra Narayan Park	Coochbehar	0.32
	4. Station Garden	Coochbehar	0.79
	5. Shahid bag (Mukta Mancha)	Coochbehar	0.73
	6. Haldibari Park	Jalpaiguri	2.50
Alipurduar	7. Alipurduar Park	Coochbehar	4.45
	8. Birpara Park	Jalpaiguri	3.50
	9. Falakata Park	Jalpaiguri	1.23
Jalpaiguri	10. TeestaUdyan	Jalpaiguri	2.00
	11. Karala Beautification	Jalpaiguri	2.10
	12. Dhupguri Park	Jalpaiguri	2.53
	13. Banarhat Park	Jalpaiguri	3.00
	14. Maynaguri Park	Jalpaiguri	2.00
	15. Lataguri Park	Jalpaiguri	1.00
	16. Kranti Park	Jalpaiguri	2.00
	17. Nagrakata Park	Siliguri	3.75
	18. Oodlabari Park	Siliguri	2.00
	19. Mal Park	Siliguri	6.10
Darjeeling	20. Siliguri Park	Siliguri	1.19
Uttar Dinajpur	21. Islampur Park	Siliguri	2.03
Dakshin Dinajpur	22. Balurghat Park	Balurghat	10.47
<b>TOTAL</b>			<b>69.48</b>



### 6.3 LENGTH OF FOREST ROAD (IN KM) AS ON 31.03.2020

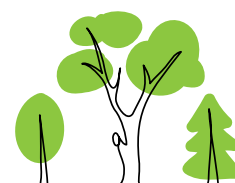
THE LENGTH OF FOREST ROAD AS ON 31.03.2020 WAS 6971.9755 KM.

District	Name of Division	Water Bound Macadam (Km.)	Block Top Motorable (Km.)	Cement Concrete (Km.)	Earthen (Km.)	Non Motorable Foot Tracks (Km.)	Other Motorable Road (Km.)	Total (km.)
Darjeeling	Darjeeling	0	0.31	0	20.7	173.49	96.44	290.94
	Kurseong	0	14.15	0	118.577	219.85	0	352.577
	Darjeeling WL	8	15.25	0.225	131.9	215.5	0	370.875
	WBFS, Dowhill	0	1.2	0.220	0.10	0.8	0	2.32
Kalimpong	Kalimpong	0	92.5	0	145.55	264.60	0	502.65
Jalpaiguri	Baikunthapur	0	0	0	76.53	120	0	196.53
	Jalpaiguri	0	0	0	234.69	4.40	0	239.09
	Gorumara WL	0	0	0	98.5	70	0	168.5
Alipurduar	BTR East	0	55	0	260	320	0	635
	BTR West	0	63	0	203	367	0	633
	Jaldapara WL	0	0	0	177.02	212.95	0	389.97
Coochbehar	Cooch Behar	0	0	0	94	0	0	94
Uttar & Dakshin Dinajpur	Raiganj	0	0	0	8	20	2.691	30.691
Malda	Malda	0	2.4	0	2.0	4.5	0	8.9
Bankura	Bankura North	0	30	0	145	0	0	175
	Bankura South	0	0	0	86	0	0	86
	Panchet	0	0	160	314	50	0	524
Purulia	Kangsabati North	0	0	0.8755	1	277.45	0	279.3255
	Kangsabati South	0	0	0	12	0	0	12
	Purulia	0	0	1007.60	132.787	0	0	1140.387
Purba Bardhaman	Burdwan	0	0	0	140	96	0	236
Paschim Bardhaman	Durgapur	21	5.5	2.15	10	21.5	0	60.15
Paschim Medinipur	Midnapur	0	0	0	176	85.05	0	261.05
	Rupnarayan	0	0	0	71.5	0	0	71.5
Jhargram	Jhargram	0	0	0	0	0	0	0.00
Paschim Medinipur & Jhargram	Kharagpur	0	0	0	0	0	0	0.00
Purba Medinipur	Purba Midnapur	0	0	0.1	20	0	0	20.1
Birbhum	Birbhum	20.5	0	0	69	26	0	115.5
Nadia & MSD	Nadia Msd	0	0	0	30	10	0	40
24 Parganas (S)	24 Parganas (S)	0	0	0	0	0	0	0.00
	STR	0	0	0	0	0	0	0.00
24 Parganas (N)	24 Parganas (N)	0	0	0.42	0	10.5	0	10.92
Howrah	Howrah	0	0	0	10	15	0	25
<b>Total</b>		<b>49.5</b>	<b>279.31</b>	<b>1171.5905</b>	<b>2787.854</b>	<b>2584.59</b>	<b>99.131</b>	<b>6971.9755</b>



**6.3.1 Schedule of Forest Villages converted as Revenue Villages in Alipurduar District w.e.f 17.10.2014 under provision of The Schedule Tribes & Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006.**

Sl. No.	Name of the Forest Village	Name of the Forest Mouza to which the Village so far belongs to	J.L. No.	Police Station	Name of the newly formed Revenue Mouza	J.L. No. Assigned to the newly formed Revenue Mouza
1	Riti	Riti	2	Madarihat	Riti	51
2	BallalGuri	Titi Forest	32		BallalGuri	52
3	Titi				Titi	53
4	DumchiRava	Dumchi Forest	25		DumchiRava	54
5	Dumchi				Dumchi	55
6	Dalgaon	Dalgaon Forest	8	Falakata	Dalgaon	65
7	Lehra				Lehra	66
8	Sanu				Sanu	67
9	Buxa Road 28 <sup>th</sup> Mile	Buxa Forest (Raja Bhatkhawa)	43	Kalchini	Buxa Road 28 <sup>th</sup> Mile	46
10	Buxa Road 29 <sup>th</sup> Mile				Buxa Road 29 <sup>th</sup> Mile	47
11	LepchkhaDuar				LepchkhaDuar	48
12	Uttar Panihora				Uttar Panihora	49
13	Dara Gaon Buxa Duar				Dara Gaon Buxa Duar	50
14	Buxa Duar				Buxa Duar	51
15	Seugaon				Seugaon	52
16	Lamna				Lamna	53
17	TashiGaon				TashiGaon	54
18	BhutiaBusti				BhutiaBusti	55
19	PampuBusti				PampuBusti	56
20	Uttar Poro				Uttar Poro	57
21	GaramBusti				GaramBusti	58
22	Kalkut				Kalkut	59
23	PaniJhora				PaniJhora	60
24	AdmaBusti				AdmaBusti	61
25	Godam Bari				Godam Bari	62
26	BamniBusti				BamniBusti	63
27	20 <sup>th</sup> Mile				20 <sup>th</sup> Mile	64
28	21 <sup>st</sup> Mile				21 <sup>st</sup> Mile	65
29	Gadaliar				Gadaliar	66
30	Raimatang				Raimatang	67
31	NimtiDabri				NimtiDabri	68
32	DakdhinPoro				DakdhinPoro	69
33	Gangutia				Gangutia	70
34	GaroBusti				GaroBusti	71
35	Damanpur				Damanpur	72
36	Raja BhatKhawa				Raja BhatKhawa	73





Sl. No.	Name of the Forest Village	Name of the Forest Mouza to which the Village so far belongs to	J.L. No.	Police Station	Name of the newly formed Revenue Mouza	J.L. No. Assigned to the newly formed Revenue Mouza
37	Santra Bari	Buxa Hill Forest	44	Kalchini	Santra Bari	74
38	AdmaFulbari				AdmaFulbari	75
39	AdmaPanbari				AdmaPanbari	76
40	Chuna Bhatti				Chuna Bhatti	77
41	Marchent Para	Nilpara Forest	3	Kalchini (Presently Jaygaon)	Marchent Para	78
42	Nil Para				Nil Para	79
43	Dalbadal	Uttar Barajhar Forest	1		Dalbadal	80
44	Bhutri	Bhutri Forest	31	Kalchini	Bhutri	81
45	Pana				Pana	82
46	Andu	Bhalka Forest	47	Kumargram	Andu	57
47	LapraGuri				LapraGuri	58
48	Balapara				Balapara	59
49	Khuttimari				Khuttimari	60
50	Bengdoba				Bengdoba	61
51	PurabaSaldoba				PurabaSaldoba	62
52	InduBusti				InduBusti	63
53	BhutiaBusti	Sachaphu Forest	1		BhutiaBusti	64
54	ChuniaJhora				ChuniaJhora	65
55	Phanskhowa				Phanskhowa	66
56	JoyantiHatipota				JoyantiHatipota	67
57	New Lands	Dhumpara Forest	32		New Lands	68
58	Sankosh				Sankosh	69
59	Kumargram				Kumargram	70
60	Shiltong	Raydak Forest	11		Shiltong	71
61	Tiamari				Tiamari	72
62	Chipra				Chipra	73
63	Salkumar	Salkumar Forest	15	Alipurduar	Salkumar	134
64	Bania	Dakshin Barajhar Forest	12		Bania	135
65	Chilapata Kumai				Chilapata Kumai	136
66	AnduBusti				AnduBusti	137
67	Kurmai				Kurmai	138
68	Motharam				Motharam	139
69	KodalBasti				KodalBasti	140

\* Ref: G.O. No. - 2802-LP dated 17.10.2014 issued from Land & Land Reforms Department, Land Policy Branch, Govt. of West Bengal



**6.3.2 Schedule of Forest Villages converted as Revenue Villages in Jalpaiguri District w.e.f 29.09.2014 under Provision of The Schedule Tribes & Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006.**

Sl. No.	Name of the Forest Village	Name of the Forest Mouza to which the Village so far belongs to	J.L. No.	Police Station	Name of the newly formed Revenue Mouza	J.L. No. Assigned to the newly formed Revenue Mouza
1	Kalarnati	Forest Ramsai	3	Maynaguri	Kalamati	91
2	Budhuram				Budhuram	92
3	Chakowa				Chakowa	93
4	Kalipur				Kalipur	94
5	Baradhighi	NimnaTandu Forest	31	Matiali	Baradhighi	32
6	Barnni				Bamni	33
7	South Indong				South Indong	34
8	BichaBhanga				BichaBhanga	35
9	Saraswati				Saraswati.	36
10	Murti				Murti	37
11	Uttar DhupJhora				Uttar DhupJhora	38
12	Mela	Maraghat Forest	28	Dhupguri (Presently Within Banarhat)	Mela	109
13	Khuntimari				Khuntirnari	110
14	Sonakhali	Gosair Hat Forest	58	Dhupguri	Sonakhali	111
15	Gossaihat				Gossaihat	112
16	Khuklong				Khuklong	113
17	Sipchu	Diana Forest	23	Nagrakata (Presently within Dhupguri)	Sipchu	34
18	Panjhora				Panjhora	35
19	North Indong				North Indong	36
20	New Khunia				NewKhunia	37
21	Dakshin Panjhora				Dakshin Panjhora	38
22	GajolDoba	Appal Chand Forest	16	Mal	GajolDoba	108
23	MechBasti				MechBasti	109
24	Magurmari				Magurmari	110
25	Sologharia				Sologharia	111

\* Ref: G.O. No. - 2699-LP dated 29.09.2014 issued from Land & Land Reforms Department, Land Policy Branch, Govt. of West Bengal

**6.4 STATUS OF FOREST CHECK POST (F.C.P.) IN WEST BENGAL AS ON 31.03.2020**

As reported by Divisions, there are 55 numbers of Forest Check Posts existing in West Bengal as on 31.03.2020, out which 11 numbers of Forest Check Posts are presently non-functional.

Division	Name of F.C.P	Location of F.C.P.	Beat	Range	Contact Number	Status of Operation
Darjeeling	Ghoombhanjang FCP	Ghoomb Bhanjang, Sukhia Pokhri Rd.	GhoombBhanjang	Darjeeling	8116602242	F
Kurseong	Ghoshpukur FCP	Ghoshpukur NH 31D	FCP Beat	Bagdogra	–	F
	Gosainpur FCP	GosainpurAsean H.W.	FCP Beat	Bagdogra	–	F



Division	Name of F.C.P	Location of F.C.P.	Beat	Range	Contact Number	Status of Operation
Darjeeling WL	Jorebunglow FCP	Jorebunglow old Military Road	Jorebunglow	Senchal west	9733119550	F
	Sonada F.C.P.	Sanada old Military Road	Sonada	Senchal west	9733119550	F
	3 <sup>rd</sup> Mile FCP	3 <sup>rd</sup> Mile, Simkuna, Darjeeling	Rambi	Senchal East	9832346189	F
	Tumling FCP	Tumling Gairibus Sandakphu	Gairibus	Singalila South	900288508	F
	Gairibus FCP	Gairibus Sandakphu				F
	Maneybanjan FCP	Maneybanjan Sandakphu				F
	Gorkey FCP	Gorkey Sandakphu	Gorkey	Singalila North	9735061411	F
	Chamta FCP	Chamta Sukna	Chamta	Sukna	9748993914	NF
Baikunthapur	2&1/2 Mile FCP	2&1/2 Mile Sevoke Road & NH 31, Siliguri	Sarugarah HQ	Sarugarah	9609819500	F
	Gazaldoba FCP	Gazaldoba	Gazaldoba	Targhera	8768673349	F
	Kathambari FCP	New Depot, Kathambari	kathambari	Apalchand	8768673349	F
	4 <sup>th</sup> Mile FCP	New Saraswatipur Beat	Saraswatipur	Sarugarah	9609819500	F
	Patherline FCP	Kholachand Fapri – Patherline Junction	Saragarah HQ	Sarugarah	9609819500	F
Jalpaiguri	Teesta Bridge FCP	NH 31 near Teesta Bridge	–	Teesta Bridge Range	9002523388	F
BTR East	Barobisha FCP	Barobisha NH–31	Barobisha	Bholka	–	F
	Mainabari FCP	Mainabari	Mainabari	North Raydak	–	F
	Jainti FCP	Jainty	Jainty HQ	Jainty	–	F
BTR West	Damanpur FCP	Damanpur	Damanpur	East Damanpur		F
	Rajabhatkhawa FCP	Rajabhatkhawa	West Rajabhatkhawa	Rajabhatkhawa	–	F
CoochBehar	NIL	–	–	–	–	–
Jaldapara WL	Chilapata FCP	Chilapata Range	Chilapata	Chilapata	9593448229	F
	Kodalbasti FCP	Kodalbasti	Kodalbasti	Kodalbasti	8250149855	F
	Hasimara FCP	Hasimara	Dalsingpara	Nilpara	7980823356	F
	Nilpara FCP	Nilpara	Nilpara	Nilpara	7980823356	F
Gorumara WL	NIL	–	–	–	–	–
Raiganj	NIL	–	–	–	–	–
Malda	NIL	–	–	–	–	–
Bankura North	Salbani FCP	Keshiaakole	Salbani	Bankura North	7595078342	F
	Barjora FCP	Barjora	Barjora	Barjora	7595078340	NF
Bankura South	Ranibandh FCP	Ranibandh	Ranibandh	Ranibandh	03243–250234	F
Panchet	Joypur FCP	Joypur Bishnupur–Arambagh State HW	Joypur	Joypur	03244–249007	F
Kangsabati North*	Maheshnadi FCP	Maheshnadi	Naturia	Raghunathpur	9734159160	F
	Simulia FCP	Simulia	Purulia–1	Purulia para	9932353129	F
	Raghunathpur FCP	Raghunathpur	Raghunathpur – I	Raghunathpur	9681240757	NF



Division	Name of F.C.P	Location of F.C.P.	Beat	Range	Contact Number	Status of Operation
Kangsabati South	NIL	–	–	–	–	–
Purulia	Joypur Forest FCP	Purulia to Ranchi Road, Joypur	Joypur beat	Joypur	–	NF
Burdwan	NIL	–	–	–	–	–
Durgapur	NIL	–	–	–	–	–
Midnapur	Bhadutala FCP	Bhadutala	Bhadutala	Bhadutala	–	–
	Pirkata FCP	Pirkata	Bhimsole	Pirkata	–	–
	Chandrakona FCP	Chandrakona	Andharnayan	Chandrakona	–	F
Jhargram	Lodhasuli FCP	Lodhasuli	Lodhasuli	Lodhasuli	7063403846	NF
	Gopiballavpur FCP	Gopiballavpur	Gopiballavpur	Gopiballavpur	9474372199	F
Rupnarayan	Raskundu More FCP	–	Pathrisole	Amlogora	–	F
	Monglapota FCP	–	Chandabala	Amlogora	–	F
	Panikotor FCP	Panikotor	Raskundu	Amlagora	–	NF
	Pingboni FCP	Pingboni	Barapatasole	Goaltore	–	NF
	Dhachati FCP	Dhachati	Barapatasole	Goaltore	–	NF
	Kesia FCP	Kesia	Reparghara	Mahalisai	–	NF
Kharagpur	Belda–Contai Rd. –FCP	Belda–Contai Rd.	Belda HQ	Belda	8240814271	F
	Kalaikunda NH–6 FCP	Kalaikunda NH–6	Kalaikunda	Kalaikunda	8918603744	F
Purba Midnapur	Bajkul FCP	Bajkul More – Meechada – Digha Rd.	Bajkul HQ	Bajkul	NA	NF
Birbhum	Illambazar FCP	Near Ajay River	Illambazar	Bolepur	870003205	F
Nadia Msd	NIL	–	–	–	–	–
24 Parganas North	NIL	–	–	–	–	–
24 Parganas(S)	Shikarpur FCP	–	–	–	–	NF
	Namkhana FCP	–	–	–	–	F
	Nalgora FCP	–	–	–	–	F
	Kultali FCP	–	–	–	–	F
	Matla FCP	–	–	–	–	F
	Patharpratima FCP	–	–	–	–	F
STR.	Nil	–	–	–	–	–
Howrah	NIL	–	–	–	–	–
Forest Utilisation	NIL	–	–	–	–	–

Note:F: Functional

NF: Non-Functional





## 6.5 OUT TURN OF FOREST PRODUCE FOR FINANCIAL YEAR 2019–20

As per Divisional report, area felled during F.Y.2019–20 was 5756.67 ha and outturn of Timber was 26947.171 m<sup>3</sup>, outturn of Firewood was 95916.919 m<sup>3</sup>. The outturn of poles, post and cogging sleeper was 2031466, 9204 and 453480 numbers respectively and it includes the produce of all dimensions and of all species.

Name of Division	Area felled (in Ha)	Outturn of Timber (in m <sup>3</sup> )	Outturn of Fire wood (in m <sup>3</sup> )	Outturn of Pulp wood (in m <sup>3</sup> )	Outturn of Poles In Nos	Outturn of Post In Nos	Outturn of Cogging Sleepers In Nos
Darjeeling	0.00	1070.305	168.0	0	0	0	0
Kurseong	0.00	331.848	79.8	0	0*	0	0
Kalimpong	0.00	2826.118	52.08	0	0	0	0
Darjeeling WL	0.00	0	0	0	0	0	0
Siliguri SF	0.00	30.328	0.00	0	110	0	0
Baikunthapur	0.00	1614.764	19.32	0	0	0	0
Jalpaiguri	0.00	676.927	0	0	0	0	0
BTR East	0.00	577.868	0.00	0	0	0	0
BTR West	0.00	561.216	0	0	0	0	0
Coochbehar	8.030	1548.768	11.76	0	0	0	0
Jaldapara WL	19.14	1474.638	37.8	0	0	0	0
Gorumara WL	0	0	0	0	0	0	0
Raiganj	0	589.785	218.127	0	0	0	0
Malda	0	0	0	0	0	0	0
Bankura North	679.0	1904.55	16665.75	0	304240	0	198007
Bankura South	986.0	2572.671	19692.634	0	334095	0	167926
Panchet	710.0	2297.492	4343.135	0	252889	0	87547
Kangsabati North	287.0	477.908	8843.591	0	2679	0	0
Kangsabati South	180.0	85.038	1105.08	0	4220	37	0
Purulia	102.0	645.842	1280.743	0	12294	0	0
Burdwan	263.0	1029.557	6193.08	0	150171	0	0
Durgapur	60	500.098	2385.471	0	30006	0	0
Midnapur	1175.0	1376.342	14389.724	0	504366	95	0
Jhargram	392.0	1383.0	9793.0	0	158842	0	0
Rupnarayan	561.0	1012.167	2324.624	0	188764	0	0
Kharagpur	186.50	544.456	5240.718	0	61269	0	0
Purba Midnapur	0.00	162.529	1957.475	0	0	0	0
Birbhum	148	1652.956	1115.007	0	27521	9072	0
Nadia Msd	0	0	0	0	0	0	0
24 Parganas(S)	0	0	0	0	0	0	0
STR	0	0	0	0	0	0	0
24 Parganas (N)	0	0	0	0	0	0	0
Howrah	0	0	0	0	0	0	0
<b>Total</b>	<b>5756.67</b>	<b>26947.171</b>	<b>95916.919</b>	<b>0</b>	<b>2031466</b>	<b>9204</b>	<b>453480</b>

Note:

1. Outturn of Timber, pulpwood & Firewood includes that of all species.
2. Outturn of Poles, Posts and Cogging sleepers includes various dimensions and of all species.

3. Firewood Stack Volume taken as 0.84 m<sup>3</sup> per stack.

\* Outturn of Poles for Kurseong division is 10.53 M<sup>3</sup> as per the report of the DFO.



### 6.6 OUTTURN OF NON TIMBER FOREST PRODUCE FOR THE YEAR 2019-20

NTFP	Unit	Darjeeling	NTFP	Bankura (North)	Bankura (South)	Panchet	Kang-South	Medinipur	Jhargram	Rupnarayan	Kharagpur	Purba Medinipur	24 Parganas South	STR	BTR West	Total
BAMBOO	Nos	132751	0	0	0	1000	0	0	0	0	0	0	0	0	0	133751
HONEY	Kg	0	0	0	0	0	0	0	0	0	0	0	0	17800	0	17800
CASHEW	Kg	0	0	0	0	15000	0	0	4700	15600	0	0	0	0	0	35300
AMLOKI	Qntl.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BAHERA	Qntl	0	0	0	0	100	0	0	0	0	0	0	0	0	0	100
MAHUA FLOWER	Qntl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MAHUA SEED	Qntl	0	0	0	0	200	0	0	0	0	0	0	0	0	0	200
NATA SEED	Qntl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NEEM SEED	Qntl	0	0	0	0	10	0	0	0	0	0	0	0	0	0	10
KENDU LEAVES	Qntl	0	0	0	0	200	234.0	0	0	0	0	0	0	0	0	434
SAL SEED	Qntl	0	0	0	0	100	0	0	0	0	0	0	0	0	0	100
CITRONELLA OIL	Ltr.	0	756.0	0	0	0	0	0	0	0	0	0	0	0	0	756
CITRONELLA GRASS	Qntl	0	1512.0	0	0	0	0	0	0	0	0	0	0	0	0	1512
HARITAKI	Qntl	0	0	0	0	10	0	0	0	0	0	0	0	0	0	10
KUSUM	Qntl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KARANJ	Qntl	0	0	0	0	10	0	0	0	0	0	0	0	0	0	10
KURCHI	Qntl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PIAL	kg	0	0	0	0	100	0	0	0	0	0	0	0	0	0	100
TULSI	Kg	0	25.0	0	0	0	0	0	0	0	0	0	0	0	0	25
BLACK PEPPER	Kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PURNAVA	Kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0





## 6.7 VALUE (IN ₹ LAKH) OF NTFP COLLECTED IN VARIOUS FOREST DIVISIONS IN WEST BENGAL.

Division	Bamboo	Honey	Kendu Leaves	Sal Seeds	Cashew Seeds	Bahera	Haritaki	Mushroom	Neem	Kusum	Citronella Grass	Citronella Oil	Mahua Flower	Mahua Seeds	Boulder	RBM	Others	Total Value
Baikunthapur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bankura (North)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Birbhum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bankura South	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BTR (E)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BTR (W)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.10	0	0.99	3.09
Burdwan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coochbehar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Darjeeling	1.66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.66
Durgapur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Darjeeling WL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gorumara WL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Howrah	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jaldapara WL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jalpaiguri	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jhargram	0	0	0	0	3.76	0	0	0	0	0	0	0	0	0	0	0	0	3.76
Kangsabati North	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kangsabati South	0	0	0.702	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.702
Kharagpur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kurseong	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kalimpong	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Malda	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Medinipur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0





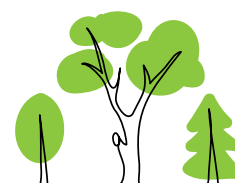
Division	Bamboo	Honey	Kendu Leaves	Sal Seeds	Cashew Seeds	Bahera	Haritaki	Mushroom	Neem	Kusum	Citronella Grass	Citronella Oil	Mahua Flower	Mahua Seeds	Boulder	RBM	Others	Total Value
Nadia-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Murshidabad	0	0	0	0	0	0	0	0	0	0	3.024	11.67	0	0	0	0	0.28	14.974
NTPP	1.0	0	0.60	0.53	22.5	0.52	7.80	4.05	0.27	0	0	0	0	0.80	0	0	0.21	38.28
Panchet	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Purba-Medinipur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Purulia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Raiganj	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rupnarayan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24 Parganas (N)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24 Parganas (S)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STR	0	24.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24.03
Wildlife (HQ)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2.66	24.03	1.302	0.53	26.26	0.52	7.8	4.05	0.27	0	3.024	11.67	0	0.8	2.1	0	1.48	86.496



## 6.8 MANDAYS GENERATED DURING F.Y. 2019–20 IN FORESTRY ACTIVITIES

### 6.8.1 Mandays generated in various Forestry activities during F.Y. 2019–20 was 35,20,765.

Sl. No.	Unit	State-Plan	CSS	Jalatirtha	Namami-Gange	CAMPA	RKVY	Total Mandays generated	Rate
1	General Direction Division	0	0	0	0	0	0	0	0
2	Publicity Division	0	0	0	0	0	0	0	0
3	Forest Utilisation Division	0	0	0	0	0	0	0	0
4	Monitoring (South) Division	4411	0	0	0	0	0	4411	243
5	Monitoring (North) Division	3708	0	0	0	0	0	3708	245
6	Working Plan & GIS Circle	0	0		0	0	0	0	0
7	Working Plan (South) Division - I	0	0	0	0	0	0	0	0
8	Working Plan (South) Division - II	4706	0	0	0	0	0	4706	234
9	Working Plan (North) Division	7051	0	0	0	0	0	7051	242
10	Research Circle	0	0	0	0	0	0	0	0
11	Silviculture (South) Division	10570	0	0	0	9140	0	19710	247
12	Silviculture (North) Division	8912	0	0	0	6169	230	15311	244
13	Silviculture (Hill) Division	12295	0	0	0	4098	0	16393	244
14	Development Circle	0	0	0	0	0	0	0	
15	West Bengal Forest School	0	0	0	0	0	0	0	247
16	State Forest Training Institute	0	0	0	0	0	0	0	0
17	South-West Circle	0	0		0	0		0	0
18	Purulia Division	76000	6700	90000	13000	19000	4500	209200	247
19	Kangsabati (North) Division	107344	891	20429	34966	8986	7253	179869	244
20	Kangsabati (South) Division	73485	1197	14832	10134	5167	8171	112986	244
21	Extension Forestry Division	21033	0	0	19990	0	0	41023	244
22	Urban & Recreational Forestry Division	68842	0	0	34019	0	0	102861	244
23	Parks & Gardens (North) Division	59215	0	0	0	0	0	59215	247
24	Howrah Division	27500	0	0	4250	0	580	32330	244
25	Burdwan Division	98842	1037	0	22509	0	49383	171771	247
26	Birbhum Division	88500	525	1000	11776	13452	6500	121753	244
27	Durgapur Division	42485	1049	0	2072	14997	6670	67273	243
28	Jhargram Division	6861	4923	0	0	16828	0	28612	244
29	Medinipur Division	117838	2192	0	0	37487	9274	166791	244
30	Kharagpur Division	118896	573	0	0	20070	3140	142679	244
31	Rupnarayan Division	29099	0	0	0	0	0	29099	247



Sl. No.	Unit	State-Plan	CSS	Jalairtha	Namami-Gange	CAMPA	RKVY	Total Mandays generated	Rate
32	Purba Medinipur Division	26698	0	0	0	0	0	26698	244
33	Bankura (North) Division	298591	3012	0	0	6770	0	308373	244
34	Bankura (South) Division	328351	3013	26138	2723	2358	14255	376838	243
35	Panchet Division	77189	1270	0	2261	0	2293	83013	244
36	Sundarbans Tiger Reserve	6407	71936	0	0	0	0	78343	245
37	Sunderbans Biosphere Reserve	0	0	0	0	0	0	0	0
38	24-Parganas (South) Division	31389	42231	0	238	0	0	73858	244
39	24-Parganas (North) Division	5524	0	0	1392	0	0	6916	245
40	Nadia-Murshidabad Division	48290	3568	0	1280	0	1643	54781	244
41	Wildlife (Headquarter)	4063	0	0	0	3547	0	7610	315
42	Wildlife (North) Circle	0	0	0	0	0	0	0	0
43	Darjeeling Wildlife Division	8957	78836	0	136	0	0	87929	244
44	Gorumara Wildlife Division	53138	70710	0	0	8655	0	132503	243
45	Jaldapara Wildlife Division	146397	42621	0	0	10655	0	199673	244
46	Buxa Tiger Reserve	0		0	0	0	0	0	0
47	Buxa Tiger Reserve (West)	27892	13942	0	0	1698	0	43532	244
48	Buxa Tiger Reserve (East)	54309	26443	0	0	8020	0	88772	244
49	Hill Circle	0	0		0	0	0	0	0
50	Darjeeling Division	22569	3060	0	1148	9974	2686	39437	245
51	Kurseong Division	20246	1762	0	3931	5288	2563	33790	244
52	Kalimpong Forest Division	42231	2192	0	0	8550	27086	80059	244
53	Northern Circle	0	0	0	0	0	0	0	0
54	Jalpaiguri Division	43823	0	0	0	2586	784	47193	247
55	Baikunthapur Division	26889	740	0	0	140	300	28069	244
56	Coochbehar Division	4330	0	0	0	0	0	4330	257
57	Non-Timber Forest Produce Division	7002	0	0	0	0	0	7002	245
58	North-West Circle	0	0	0	0	0	0	0	0
59	Siliguri Social Forestry Division	44326	0	0	0	0	3535	47861	244
60	Malda Division	21521	0	0	1135	738	0	23394	245
61	Jalpaiguri Social Forestry Division	10497	0	0	0	0	0	10497	243
62	Raiganj Division	52581	3100	0	1450	0	0	57131	243
63	Soil Conservation (N) Circle	0	0	0	0	0	0	0	0
64	Kurseong Soil Conservation Division	6769	0	0	0	221	0	6990	244
65	Jalpaiguri Soil Conservation Division	28310	0	0	0	0	1111	29421	247
<b>GRAND TOTAL</b>		<b>2435882</b>	<b>387523</b>	<b>152399</b>	<b>168410</b>	<b>224594</b>	<b>151957</b>	<b>3520765</b>	



# ACRONYMS AND ABBREVIATIONS

1	AC	Air Conditioned
2	ATR	Action Taken Report
3	AWC	Available Water Capacity
4	CAMPA	Compensatory Afforestation Fund Management and Planning Authority
5	CID	Community Infrastructure Development
6	COR	Compoundable Offence Report
7	CZA	Central Zoo Authority
8	DB	Double Bedded
9	DCF	Deputy Conservator of Forests
10	DMU	Divisional Management Unit
11	DPR	Detailed Project Report
12	FCA	Forest Conservation Act
13	FDA	Forest Development Agency
14	FMU	Field Management Unit
15	FRLHT	Foundation for Revitalisation of Local Health Traditions
16	GIS	Geographic Information System
17	IGA	Income Generation Activity
18	IFS	Indian Forest Service
19	ISFR	India State of Forest Report
20	JFMC	Joint Forest Management Committee
21	KFRI	Kerala Forest Research Institute
22	LGP	Lower Gangetic Plain
23	MIC	Minister in Charge
24	MOS	Minister of State
25	MPCA	Medicinal Plant Conservation Areas
26	MPP	Mobile Patrolling Party
27	NMPB	National Medicinal Plants Board
28	NTFP	Non Timber Forest Produce
29	NRSA	National Remote Sensing Agency
30	POR	Prosecution Offence Report
31	RET	Rare Endangered Threatened
32	SHG	Self Help Groups
33	SLUSI	Soil and Land Use Survey of India
34	TOF	Trees Outside Forests
35	UDOR	Un-Detected Offence Report
36	WBFBCP	West Bengal Forest and Biodiversity Conservation Project
37	WBFS	West Bengal Forest Service
38	WBZA	West Bengal Zoo Authority









**Department of Forests**  
**Government of West Bengal**