

**West Bengal Forest Department  
Government of West Bengal  
India**

**INDIA**

**THE PREPARATORY SURVEY  
ON  
WEST BENGAL  
INTEGRATED FORESTRY DEVELOPMENT  
AND  
BIODIVERSITY CONSERVATION PROJECT**

**FINAL REPORT**

**ANNEXURE**

**SEPTEMBER**

**JAPAN INTERNATIONAL COOPERATION AGENCY**

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**ORIENTAL CONSULTANTS CO., LTD.**

<b>S A D</b>
<b>CR (3)</b>
<b>11-008</b>

**West Bengal Forest Department  
Government of West Bengal  
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## Annexure

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Detailed Cost Table

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**Precondition of Cost Estimate**

**Common terms for Appraisal**

**Name of Local Currency**

		<b>Rs</b>	
(1) Yen/\$	US\$ 1 =	<b>83.40</b>	Yen
(2) LC/\$	US\$ 1 =	<b>45.0</b>	Rs
(3) Yen/Rs	Rs 1 =	<b>1.85</b>	Yen

**Price Escalation**

(1) FC	<b>1.60%</b>	LC	<b>6.60%</b>
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**Physical Contingency**

(2) Construction	<b>10.00%</b>	Consultant	<b>10.00%</b>
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**Base Year for Cost Estimation:**

**2011-May**

**Schedule**

Start **2012-Apr** End **2019-Apr**

**Billing Rate of Consultant**

	FC Yen	LC Rs
Pro-(A)	<b>2,591,000</b>	<b>0</b>
Pro-(B)	<b>0</b>	<b>280,000</b>
Supporting Staff	<b>0</b>	<b>0</b>

**Others**

**Rate of Tax**

Service Tax	<b>3.35%</b>	Import Tax	<b>0.0%</b>
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**Rate of Administration Cost**

**10.55%**

**Rate of Interest During Construction**

Construction	<b>0.65%</b>	Consultant	<b>0.01%</b>
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**Rate of Commitment Charges**

**0.1%**

**Payment Method for Interest during construction and Commitment charge**

**not loan covered**

**Fiscal Year**

**Apr - Mar**

**Annual Fund Requirement**

Base Year for Cost Estimation: May, 2011

Rs = Yen 1.85

FC: 1.6%

10%

Physical Contingency

Physical Contingency Consulting Services)

FC & Total: million JPY

LC : million Rs

LC: 6.6%

Item	Total		2012		2013		2014		2015		2016		2017		2018		2019		
	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	
<b>A. ELIGIBLE PORTION</b>																			
<b>1. Procurement / Construction</b>																			
1.A Afforestation of Degraded Forest Land in Recorded Forest Area	0	3,213	3,213	5,943	0	15	28	0	433	802	0	570	1,054	0	688	1,272	0	774	1,431
1.B Tree Planting Outside Forest Area (Social Forestry)	0	1,363	1,363	2,521	0	0	0	0	96	177	0	255	472	0	328	607	0	364	674
1.C Soil & moisture conservation in Forestry Treatment	0	779	779	1,440	0	0	0	0	0	0	0	133	247	0	184	340	0	229	423
1.D Production of Quality Planting material	0	258	258	478	0	0	0	0	58	107	0	38	71	0	58	107	0	75	139
2. Biodiversity Conservation	0	161	161	333	0	0	0	0	96	177	0	46	84	0	46	84	0	15	28
2.A Habitat Management	0	34	34	63	0	0	0	0	0	0	0	2	5	0	8	14	0	10	18
2.B Man-Animal conflict mitigation	0	109	109	201	0	0	0	0	17	32	0	17	31	0	17	32	0	18	34
2.C Research	0	19	19	34	0	0	0	0	5	9	0	5	9	0	4	7	0	4	7
3. Community Development	0	282	282	522	0	0	0	0	4	7	0	94	174	0	94	174	0	90	167
3.A Meeting	0	6	6	11	0	0	0	0	2	4	0	2	4	0	2	4	0	0	0
3.B Microplan	0	6	6	11	0	0	0	0	2	4	0	2	4	0	2	4	0	0	0
3.C Income Generation Activities	0	60	60	111	0	0	0	0	0	0	0	20	37	0	20	37	0	20	37
3.D Community Development Infrastructure Development for JPMC-	0	210	210	389	0	0	0	0	0	0	0	70	130	0	70	130	0	70	130
4. Institutional Capacity Development	0	411	411	760	0	13	24	0	229	423	0	55	101	0	32	60	0	25	46
4.A Base line survey of the state's forest resources at the start of project	0	10	10	18	0	0	0	0	5	8	0	0	0	0	0	0	0	0	0
4.B Training & Capacity Building of Project Implementing Officials, Field & Office Staffs and Other Stakeholders	0	61	61	113	0	0	0	0	26	48	0	26	48	0	26	48	0	26	48
4.C Training, research, GIS, forest protection etc including Building, Equipment & Vehicle	0	306	306	565	0	11	20	0	194	358	0	24	45	0	19	35	0	19	35
4.D Forestry Research Activities	0	23	23	42	0	2	4	0	5	8	0	5	8	0	2	4	0	3	6
4.E biodiversity & community development studies	0	8	8	15	0	0	0	0	0	0	0	0	0	0	2	3	0	3	5
4.F End-term Monitoring and Evaluation	0	4	4	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Base cost	0	2,217	2,217	4,101	0	13	24	0	347	641	0	428	791	0	484	896	0	511	945
Price escalation	0	704	704	1,302	0	1	2	0	47	87	0	90	167	0	141	261	0	192	356
Physical contingency	0	292	292	540	0	1	3	0	39	73	0	52	96	0	63	116	0	70	130
<b>II) Consulting services</b>																			
Base cost	128	111	180	333	28	21	66	34	20	72	10	12	33	19	16	49	20	17	52
Price escalation	110	80	139	257	25	18	58	30	16	60	9	26	60	16	11	38	16	11	38
Physical contingency	6	21	25	46	0	1	3	1	2	5	0	2	4	1	3	7	1	4	9
Total (I + II)	128	3,324	3,393	6,277	28	36	94	34	454	873	10	582	1,087	19	704	1,322	20	791	1,483
<b>B. NON ELIGIBLE PORTION</b>																			
<b>a Procurement / Construction</b>																			
Contingency & Administrative Expenditure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Base cost for JICA financing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Price escalation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physical contingency	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>b Land Acquisition</b>																			
Base cost	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Price escalation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physical contingency	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>c Administration cost</b>																			
Base cost	0	358	358	662	0	5	10	0	50	92	0	62	115	0	75	139	0	85	156
VAT	0	126	126	232	0	2	3	0	17	32	0	22	40	0	26	49	0	30	55
Import Tax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total (a+b+c+d+e)	0	484	484	895	0	7	13	0	67	124	0	84	155	0	102	188	0	114	211
<b>TOTAL (A+B)</b>	128	3,807	3,876	7,171	28	43	108	34	521	998	10	666	1,242	19	806	1,510	20	905	1,694
Interest during Construction	178	0	96	178	0	0	0	0	5	12	0	5	12	0	12	21	0	30	34
Interest during Construction(Consul.)	178	0	96	178	0	0	0	0	5	12	0	5	12	0	12	21	0	30	34
Interest during Construction (Consul.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Commitment Charge	50	0	0	27	50	6	6	6	6	6	6	6	6	6	6	6	6	6	6
<b>GRAND TOTAL (A+B+C+D)</b>	356	3,807	4,000	7,400	34	43	114	45	521	1,010	28	666	1,261	46	806	1,537	56	905	1,730
<b>E. JICA finance portion (A)</b>	128	3,324	3,393	6,277	28	36	94	34	454	873	10	582	1,087	19	704	1,322	20	791	1,483

Administration Cost = 10.55% of the expenditure of the eligible portion (Total service tax is estimated 129 million Rs)  
 Service Tax= 3.95%  
 Import Tax= 0.0%













# 1. Afforestation and Allied Works

## 1.A Afforestation of Degraded Forest Land in Recorded Forest Area

Base Year: 2011

Price Escalation: Labour 10.00%  
Material 0.00%

	2012	2013	2014	2015	2016	2017	2018	2019
Labour	1,1000	1,2100	1,3310	1,4641	1,6105	1,7716	1,9487	2,1436
Material	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000

Price Escalation: scalation: 6.60%  
Physical Contingency: 10.00%

	2012	2013	2014	2015	2016	2017	2018	2019
	0.0660	0.1364	0.2114	0.2913	0.3765	0.4674	0.5642	0.6675

### 1.A1 Plantation of High Yielding Eucalyptus hybrid clones in South West Bengal

Items of Work	UNIT COST (per Ha)										PHYSICAL TARGETS (Ha)										FINANCIAL OUTLAYS (Rs)										Total (Rs)
	2012	2013	2014	2015	2016	2017	2018	2019	2012	2013	2014	2015	2016	2017	2018	2019	2012	2013	2014	2015	2016	2017	2018	2019							
Soil work & Creation	Labour	16,440	18,000	19,800	21,800	24,000	26,400	29,100	32,000	35,200	0	0	150	150	150	0	0	450	0	0	3,270,000	3,600,000	3,960,000	0	0	10,830,000					
	Material	3,560	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	0	0	150	150	150	0	0	450	0	0	525,000	525,000	525,000	0	0	1,575,000					
Maint Y1	Labour	4,440	4,800	5,300	5,900	6,500	7,100	7,800	8,600	9,500	0	0	150	150	150	0	0	450	0	0	975,000	1,065,000	1,170,000	0	0	3,210,000					
	Material	7,600	700	700	700	700	700	700	700	700	0	0	150	150	150	0	0	450	0	0	105,000	105,000	105,000	0	0	315,000					
Maint Y2	Labour	3,120	3,400	3,700	4,100	4,500	5,000	5,500	6,000	6,600	0	0	150	150	150	0	0	450	0	0	750,000	825,000	900,000	0	0	2,475,000					
	Material	280	200	200	200	200	200	200	200	200	0	0	150	150	150	0	0	450	0	0	30,000	30,000	30,000	0	0	90,000					
Maint Y3	Labour	2,400	2,600	2,900	3,100	3,500	3,800	4,200	4,600	5,100	0	0	150	150	150	0	0	450	0	0	630,000	690,000	765,000	0	0	2,085,000					
	Material	100	100	100	100	100	100	100	100	100	0	0	150	150	150	0	0	450	0	0	15,000	15,000	15,000	0	0	45,000					
	Base Cost	0	0	3,795,000	5,205,000	6,435,000	7,775,000	9,265,000	10,830,000	12,625,000	0	0	15,000	15,000	15,000	0	0	45,000	0	0	163,500,000	1,635,000	1,635,000	0	0	20,625,000					
	Price Escalation	0	0	802,094	1,516,242	2,422,978	3,596,985	5,205,000	6,960,000	9,265,000	0	0	15,000	15,000	15,000	0	0	45,000	0	0	2,422,978	2,422,978	2,422,978	0	0	7,481,440					
	Physical Contingency	0	0	459,709	672,124	885,798	1,199,407	1,635,000	2,205,000	2,970,000	0	0	15,000	15,000	15,000	0	0	45,000	0	0	885,798	885,798	885,798	0	0	2,610,644					
	Total Cost	0	0	5,056,804	7,393,367	9,743,775	11,670,407	13,800,000	15,830,000	18,000,000	0	0	15,000	15,000	15,000	0	0	45,000	0	0	172,000,000	1,720,000	1,720,000	0	0	21,281,044					

### 1.A2 Plantation of Sal and Associate in South Bengal

Items of Work	UNIT COST (per Ha)										PHYSICAL TARGETS (Ha)										FINANCIAL OUTLAYS (Rs)										Total (Rs)
	2012	2013	2014	2015	2016	2017	2018	2019	2012	2013	2014	2015	2016	2017	2018	2019	2012	2013	2014	2015	2016	2017	2018	2019							
Soil work & Creation	Labour	22,800	25,000	27,500	30,300	33,300	36,700	40,300	44,400	48,800	0	0	1,140	1,140	1,140	0	0	3,430	0	0	34,845,000	37,962,000	41,838,000	0	0	114,645,000					
	Material	12,300	12,300	12,300	12,300	12,300	12,300	12,300	12,300	12,300	0	0	1,140	1,140	1,140	0	0	3,430	0	0	14,145,000	14,022,000	14,022,000	0	0	42,189,000					
Maint Y1	Labour	10,440	11,400	12,600	13,800	15,200	16,800	18,400	20,300	22,300	0	0	1,140	1,140	1,140	0	0	3,430	0	0	17,480,000	19,152,000	20,976,000	0	0	57,608,000					
	Material	2,280	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	0	0	1,140	1,140	1,140	0	0	3,430	0	0	2,530,000	2,508,000	2,508,000	0	0	7,546,000					
Maint Y2	Labour	7,440	8,100	9,000	9,900	10,800	11,900	13,100	14,400	15,900	0	0	1,140	1,140	1,140	0	0	3,430	0	0	13,685,000	14,934,000	16,416,000	0	0	45,035,000					
	Material	2,060	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	0	0	1,140	1,140	1,140	0	0	3,430	0	0	2,300,000	2,280,000	2,280,000	0	0	6,860,000					
Maint Y3	Labour	6,600	7,200	7,900	8,700	9,600	10,600	11,600	12,800	14,100	0	0	1,140	1,140	1,140	0	0	3,430	0	0	13,340,000	14,592,000	16,074,000	0	0	44,006,000					
	Material	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	0	0	1,140	1,140	1,140	0	0	3,430	0	0	2,300,000	2,280,000	2,280,000	0	0	6,860,000					
	Base Cost	0	0	48,990,000	71,994,000	93,505,000	114,934,000	136,416,000	164,160,000	191,520,000	0	0	15,000	15,000	15,000	0	0	45,000	0	0	563,338,000	563,338,000	563,338,000	0	0	324,749,000					
	Price Escalation	0	0	10,354,306	20,972,209	35,207,539	56,338,000	82,666,937	119,934,000	164,160,000	0	0	15,000	15,000	15,000	0	0	45,000	0	0	20,972,209	20,972,209	20,972,209	0	0	125,184,656					
	Physical Contingency	0	0	5,934,431	9,296,621	12,871,254	18,266,937	25,666,937	35,207,539	47,666,937	0	0	15,000	15,000	15,000	0	0	45,000	0	0	9,296,621	9,296,621	9,296,621	0	0	44,993,366					
	Total Cost	0	0	65,278,736	102,262,830	141,583,793	199,939,937	274,734,868	374,338,000	494,927,021	0	0	15,000	15,000	15,000	0	0	45,000	0	0	141,583,793	141,583,793	141,583,793	0	0	494,927,021					

**1.A3 Plantation of Quick Growing Small timber, Fuel & Fodder Species**

Items of Work	UNIT COST (per Ha)												PHYSICAL TARGETS (Ha)											FINANCIAL OUTLAYS (Rs)											Total (Rs)
	UNIT COST (per Ha)												PHYSICAL TARGETS (Ha)											FINANCIAL OUTLAYS (Rs)											
	Base year Cost	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Soil work & Creation	Labour	18,000	19,800	21,800	24,000	26,400	29,100	32,000	35,200	0	0	2,000	2,000	2,000	2,000	2,000	2,000	2,000	0	0	0	6,000	0	0	0	43,600,000	48,000,000	52,800,000	58,200,000	0	0	0	144,400,000		
	Material	4,160	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	0	0	2,000	2,000	2,000	2,000	2,000	2,000	0	0	0	6,000	0	0	0	8,200,000	8,200,000	8,200,000	8,200,000	0	0	0	24,600,000		
Maint Y1	Labour	4,440	4,800	5,300	5,900	6,500	7,100	7,800	8,600	9,500	0	0	2,000	2,000	2,000	2,000	2,000	2,000	0	0	0	6,000	0	0	0	13,000,000	14,200,000	15,600,000	0	0	0	42,800,000			
	Material	760	700	700	700	700	700	700	700	700	0	0	2,000	2,000	2,000	2,000	2,000	2,000	0	0	0	6,000	0	0	0	1,400,000	1,400,000	1,400,000	0	0	0	4,200,000			
Maint Y2	Labour	3,120	3,400	3,700	4,100	4,500	5,000	5,500	6,000	6,600	0	0	2,000	2,000	2,000	2,000	2,000	2,000	0	0	0	6,000	0	0	0	10,000,000	11,000,000	12,000,000	0	0	0	33,000,000			
	Material	280	200	200	200	200	200	200	200	200	0	0	2,000	2,000	2,000	2,000	2,000	2,000	0	0	0	6,000	0	0	0	400,000	400,000	400,000	0	0	0	1,200,000			
Maint Y3	Labour	2,400	2,600	2,900	3,100	3,500	3,800	4,200	4,600	5,100	0	0	2,000	2,000	2,000	2,000	2,000	2,000	0	0	0	6,000	0	0	0	8,400,000	9,200,000	10,200,000	0	0	0	27,800,000			
	Material	100	100	100	100	100	100	100	100	100	0	0	2,000	2,000	2,000	2,000	2,000	2,000	0	0	0	6,000	0	0	0	200,000	200,000	200,000	0	0	0	600,000			
																							Base Cost	0	0	51,800,000	70,600,000	87,000,000	37,000,000	21,800,000	10,400,000	278,600,000			
																							Price Escalation	0	0	10,948,215	20,566,130	32,788,204	17,293,139	12,300,200	6,941,672	100,807,561			
																							Physical Contingency	0	0	6,274,821	9,116,613	11,975,820	5,429,314	3,410,020	1,734,167	37,940,756			
																							Total Cost	0	0	69,023,036	100,282,743	131,734,025	59,722,453	37,510,220	19,075,840	417,348,317			

**1.A4 Enrichment of Degraded Forests of South West Bengal through coppice regeneration**

Items of Work	UNIT COST (per Ha)												PHYSICAL TARGETS (Ha)											FINANCIAL OUTLAYS (Rs)											Total (Rs)
	UNIT COST (per Ha)												PHYSICAL TARGETS (Ha)											FINANCIAL OUTLAYS (Rs)											
	Base year Cost	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
RDF	Labour	3,120	3,400	3,700	4,100	4,500	5,000	5,500	6,000	6,600	0	0	2,500	2,500	2,500	2,500	2,500	2,500	0	0	0	7,500	0	0	0	10,250,000	11,250,000	12,500,000	0	0	0	34,000,000			
	Material	1,380	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	0	0	2,500	2,500	2,500	2,500	2,500	2,500	0	0	0	7,500	0	0	0	3,250,000	3,250,000	3,250,000	0	0	0	9,750,000			
MSC	Labour	1,560	1,700	1,800	2,000	2,200	2,500	2,700	3,000	3,300	0	0	2,500	2,500	2,500	2,500	2,500	2,500	0	0	0	7,500	0	0	0	6,750,000	7,500,000	8,250,000	0	0	0	22,500,000			
	Material	840	800	800	800	800	800	800	800	800	0	0	2,500	2,500	2,500	2,500	2,500	2,500	0	0	0	7,500	0	0	0	2,000,000	2,000,000	2,000,000	0	0	0	6,000,000			
																							Base Cost	0	0	13,500,000	14,500,000	15,750,000	8,750,000	9,500,000	10,250,000	72,250,000			
																							Price Escalation	0	0	2,853,299	4,223,922	5,930,365	4,089,594	5,360,179	6,841,552	29,298,910			
																							Physical Contingency	0	0	1,635,330	1,872,392	2,168,036	1,283,959	1,486,018	1,709,155	10,154,891			
																							Total Cost	0	0	17,988,629	20,596,314	23,848,401	14,123,553	16,346,197	18,800,707	111,703,801			

**1.A5 Economic Plantation of Miscellaneous Species in North Bengal**

Items of Work	UNIT COST (per Ha)												PHYSICAL TARGETS (Ha)											FINANCIAL OUTLAYS (Rs)											Total (Rs)
	UNIT COST (per Ha)												PHYSICAL TARGETS (Ha)											FINANCIAL OUTLAYS (Rs)											
	Base year Cost	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Soil work & Creation	Labour	18,360	20,100	22,200	24,400	26,800	29,500	32,500	35,700	39,300	0	0	350	350	350	350	350	350	0	0	0	1,050	0	0	0	8,540,000	9,380,000	10,325,000	0	0	0	28,245,000			
	Material	4,040	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	0	0	350	350	350	350	350	350	0	0	0	1,050	0	0	0	1,400,000	1,400,000	1,400,000	0	0	0	4,200,000			
Maint Y1	Labour	5,880	6,400	7,100	7,800	8,600	9,400	10,400	11,400	12,600	0	0	350	350	350	350	350	350	0	0	0	1,050	0	0	0	3,010,000	3,290,000	3,640,000	0	0	0	9,940,000			
	Material	760	700	700	700	700	700	700	700	700	0	0	350	350	350	350	350	350	0	0	0	1,050	0	0	0	245,000	245,000	245,000	0	0	0	735,000			
Maint Y2	Labour	3,120	3,400	3,700	4,100	4,500	5,000	5,500	6,000	6,600	0	0	350	350	350	350	350	350	0	0	0	1,050	0	0	0	1,750,000	1,925,000	2,100,000	0	0	0	5,775,000			
	Material	280	200	200	200	200	200	200	200	200	0	0	350	350	350	350	350	350	0	0	0	1,050	0	0	0	70,000	70,000	70,000	0	0	0	210,000			
Maint Y3	Labour	2,400	2,600	2,900	3,100	3,500	3,800	4,200	4,600	5,100	0	0	350	350	350	350	350	350	0	0	0	1,050	0	0	0	4,088,465	4,315,151	4,631,617	0	0	0	14,075,000			
	Material	100	100	100	100	100	100	100	100	100	0	0	350	350	350	350	350	350	0	0	0	1,050	0	0	0	14,035,000	17,080,000	7,385,000	3,815,000	3,815,000	1,820,000	54,075,000			
																							Base Cost	0	0	9,940,000	14,035,000	17,080,000	7,385,000	7,385,000	3,815,000	1,820,000	54,075,000		
																							Price Escalation	0	0	2,100,874	4,088,465	6,431,151	3,451,617	2,152,535	1,214,793	19,439,434			
																							Physical Contingency	0	0	1,204,087	1,812,347	2,351,115	1,083,662	596,754	735,479	7,351,443			
																							Total Cost	0	0	13,244,961	19,935,812	25,862,266	11,920,279	6,564,289	3,338,272	80,865,878			

### 1.A6 Plantation of Sal and Associates Species In North Bengal

Items of Work	UNIT COST (per Ha)												PHYSICAL TARGETS (Ha)												Total	FINANCIAL OUTLAYS (Rs)										Total (Rs)
	Base year Cost	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022													
	Soil work & Creation		18,840	20,700	22,700	25,000	27,500	30,300	33,300	36,700	40,300	0	0	180	180	180	180	180	180	180	180	0	0	0		0	4,500,000	4,950,000	5,454,000	0	0	0	0	14,904,000		
	Material	4,160	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	0	0	180	180	180	180	180	180	180	180	0	0	0	0	738,000	738,000	738,000	0	0	0	0	2,214,000				
Maint Y1	Labour	5,880	6,400	7,100	7,800	8,600	9,400	10,400	11,400	12,600	0	0	0	0	0	180	180	180	180	180	0	0	0	0	0	1,548,000	1,692,000	1,872,000	0	0	0	0	5,112,000			
	Material	760	700	700	700	700	700	700	700	700	0	0	0	0	0	180	180	180	180	180	0	0	0	0	0	126,000	126,000	126,000	0	0	0	0	378,000			
Maint Y2	Labour	3,120	3,400	3,700	4,100	4,500	5,000	5,500	6,000	6,600	0	0	0	0	0	180	180	180	180	180	0	0	0	0	0	900,000	900,000	900,000	0	0	0	0	2,970,000			
	Material	280	200	200	200	200	200	200	200	200	0	0	0	0	0	180	180	180	180	180	0	0	0	0	0	36,000	36,000	36,000	0	0	0	0	108,000			
Maint Y3	Labour	2,400	2,600	2,900	3,100	3,500	4,200	4,200	4,600	5,100	0	0	0	0	0	180	180	180	180	180	0	0	0	0	0	756,000	828,000	828,000	0	0	0	0	2,502,000			
	Material	100	100	100	100	100	100	100	100	100	0	0	0	0	0	180	180	180	180	180	0	0	0	0	0	18,000	18,000	18,000	0	0	0	0	54,000			
																										Base Cost	7,362,000	8,946,000	3,798,000	1,962,000	1,962,000	936,000	28,242,000			
																											Price Escalation	2,144,587	3,368,447	1,775,117	1,107,018	1,107,018	624,751	10,127,000		
																												Physical Contingency	950,659	1,231,445	557,312	306,902	306,902	156,075	3,836,900	
																											Total Cost	10,457,246	13,545,892	6,130,429	3,375,920	3,375,920	1,716,826	42,205,900		

## 1.A : Afforestation of Degraded Forest Land in Recorded Forest Area

### Type A1: Plantation of High Yielding Eucalyptus hybrid clones in South West Bengal

Spacing 2.5 m x 2.5 m  
No. of Plants = 1600 Nos/ha

Description	Unit	Quantity/ha		Unit Price		Cost (Rs./ha)		
		Labour	Material	Labour	Material	Labour	Material	Total
<b>I. Advance Soil Works</b>								
1. Survey and demarcation of the plantation area	man-day	1	120	120	0	120	0	120
2. Advance Soil works by digging planting pits of size (0.60+0.45)/2 x 0.45 x0.45 m3 including site cleaning	man-day	18	120	2,160	0	2,160	0	2,160
3. Cost of insecticide, fertilizer including carriage	L.S	1	320	0	320	0	320	320
<b>Sub Total of I</b>		<b>19</b>		<b>2,280</b>	<b>320</b>	<b>2,280</b>	<b>320</b>	<b>2,600</b>
<b>II. CREATION WORKS--Miscellaneous Plantation</b>								
4. Digging of pits of size (0.6+0.45)/2 x 0.45 x 0.45	man-day	20	120	2,400	0	2,400	0	2,400
5. Filling up of planting pits with dug up pulverized soil	man-day	15	120	1,800	0	1,800	0	1,800
6. Cleaning the plantation area before planting	man-day	4	120	480	0	480	0	480
7. Transplanting of ramets including carriage from field nursery to planting site and staking	man-day	26	120	3,120	0	3,120	0	3,120
8. Infilling of vacancy created due to field mortality including carriage	man-day	4	120	480	0	480	0	480
9. 1st mulching by digging earth around pits and cleaning, weeding and application of fertilizer	man-day	14	120	1,680	0	1,680	0	1,680
10. 2nd mulching, cleaning, weeding including application of 2nd dose of fertilizer	man-day	12	120	1,440	0	1,440	0	1,440
11. Cutting firelines 3 m wide to prevent accidental fire	man-day	4	120	480	0	480	0	480
12. Cutting trenches of size 0.60m x 0.45m inside the plantation area and boundary where necessary @ 100 m per hectare	man-day	8	120	960	0	960	0	960
13. Watering of seedlings and watch and ward	man-day	8	120	960	0	960	0	960
14. Making livehedge fencing	man-day	3	120	360	0	360	0	360
16. Cost of insecticide, fertilizer including carriage	L.S			0	2,000	0	2,000	2,000
17. Cost of materials like Ipomeea sp for livehood fence	L.S			0	500	0	500	500
18. Cost of Bamboo for livehedge fencing - 3 nos	nos	3	60	0	180	0	180	180
19. Contingencies Rope/lin/Watering can/hatch carriage of ramets etc	L.S			0	560	0	560	560
<b>Sub Total of II</b>		<b>118</b>		<b>14,160</b>	<b>3,240</b>	<b>14,160</b>	<b>3,240</b>	<b>17,400</b>
<b>Sub Total of I+II</b>		<b>137</b>		<b>16,440</b>	<b>3,560</b>	<b>16,440</b>	<b>3,560</b>	<b>20,000</b>
<b>III. 1st YEAR MAINTENANCE --Miscellaneous Plantation</b>								
20. Vacancy filling /Beating up operation	man-day	3	120	360	0	360	0	360
21. Mulching with fertilizers including weeding and cleaning over the entire area--two times	man-day	26	120	3,120	0	3,120	0	3,120
22. Maintenance of the fire lines by cutting grasses /bushes	man-day	6	120	720	0	720	0	720
23. Repairing of live hedge fencing	man-day	2	120	240	0	240	0	240
24. Cost of fertilizers, fencing materials etc.	L.S	1	760	0	760	0	760	760
<b>Sub Total of III</b>		<b>37</b>		<b>4,440</b>	<b>760</b>	<b>4,440</b>	<b>760</b>	<b>5,200</b>
<b>IV. 2nd YEAR MAINTENANCE --Miscellaneous Plantation</b>								
25. Mulching without fertilizers including hoeing the base over the entire area--two times	man-day	26	120	3,120	0	3,120	0	3,120
26. Cost of fencing materials including repairs etc.	L.S	1	280	0	280	0	280	280
<b>Sub Total of IV</b>		<b>26</b>		<b>3,120</b>	<b>280</b>	<b>3,120</b>	<b>280</b>	<b>3,400</b>
<b>V. 3rd YEAR MAINTENANCE --Miscellaneous Plantation</b>								
27. Mulching without fertilizers including hoeing the base over the entire area--two times	man-day	20	120	2,400	0	2,400	0	2,400
28. Cost of fencing materials including repairs etc.	L.S	1	100	0	100	0	100	100
<b>Sub Total of IV</b>		<b>20</b>		<b>2,400</b>	<b>100</b>	<b>2,400</b>	<b>100</b>	<b>2,500</b>
<b>Grand Total</b>		<b>220</b>		<b>26,400</b>	<b>4,700</b>	<b>26,400</b>	<b>4,700</b>	<b>31,100</b>



## Type A2: Plantation of Sal and Associate in South Bengal

Spacing 2.5 m x 2.5 m

No. of Plants = 1600 Nos/ha

Description	Unit	Quantity		Unit Price		Cost (Rs./ha)	
		Labour	Material	Labour	Material	Labour	Material
		Total		Total		Total	
<b>I. Advance Soil Works</b>							
1. Survey and demarcation of the plantation area	man-day	2	120	240	0	240	0
2. Alignment of planting lines and staking the pit positions	man-day	2	120	240	0	240	0
3. Advance Soil works by digging planting pits of size (0.90+0.60)/2 x 0.60 x 0.60 m <sup>3</sup> at 2.5 x 2.5 m spacing (1600 nos)	man-day	40	120	4,800	0	4,800	0
4. Cost of supply of cowdung manure	L.S	1	600	0	600	600	0
5. Cost of Polybags--10" x 6"	L.S	1	350	0	350	350	0
6. Cost of supply of good earth	L.S	1	500	0	500	500	0
7. Supply of Bamboo @ Rs 60 each	nos	6	60	0	360	360	0
8. Supply of thatch	L.S	1	300	0	300	300	0
9. Supply of galvanised wire, rope etc	L.S	1	200	0	200	200	0
10. Cost of carriage of the materials to field nursery	L.S	1	410	0	410	410	0
<b>Sub Total of I</b>		<b>44</b>		<b>5,280</b>	<b>2,720</b>	<b>8,000</b>	
<b>II. CREATION WORKS--Sal Plantation</b>							
11 Filling up of planting pits with dug up pulverized soil	man-day	3	120	360	0	360	0
12 Staking the seedlings for plantation	man-day	2	120	240	0	240	0
13 Transplanting of potted seedlings in pits, including carriage	man-day		120	0	0	0	0
14 From field nursery to planting site	man-day	25	120	3,000	0	3,000	0
15 Vacancy infilling including application of insecticide, fertilizer etc	man-day	3	120	360	0	360	0
16 Sowing Arhar seeds for raising nurse crop	man-day	4	120	480	0	480	0
17 1st mulching, weeding, cleaning and application of fertilizer	man-day	18	120	2,160	0	2,160	0
18 2nd mulching, weeding, cleaning and application of fertilizer	man-day	16	120	1,920	0	1,920	0
19 3rd mulching, cleaning, weeding	man-day	10.00	120	1,200	0	1,200	0
20 4th mulching, cleaning, weeding	man-day	10.00	120	1,200	0	1,200	0
21 Making 3m wide inspection path and cutting firelines	man-day	4	120	480	0	480	0
22 Erection of barbed wire fencing including carriage of fencing posts	man-day	6	120	720	0	720	0
23 Making trenches across the contour of size 2.0m x (0.60+0.45)/2 x 0.45 m of appropriate running metre	man-day	5	120	600	0	600	0
24 Watering, weeding, cleaning of 1yr old nursery seedlings	man-day	10	120	1,200	0	1,200	0
25 Watering the seedlings in the field during dry spell with 15 days interval, as and when required	man-day	30	120	3,600	0	3,600	0
26 Cost of fencing post	L.S	1	1,500	0	1,500	1,500	0
27 Cost of barbed wire along with plain wire all complete with appropriate running metre	L.S	1	5,300	0	5,300	5,300	0
28 Cost of Arhar seeds	L.S	1	150	0	150	150	0
29 Digging dug well/shallow tube well including labour	L.S	1	1,550	0	1,550	1,550	0
30 Cost of carriage of manure, insecticide, post, fencing materials and other contingencies	L.S	1	1,080	0	1,080	1,080	0
<b>Sub Total of II</b>		<b>146</b>		<b>17,520</b>	<b>9,580</b>	<b>27,100</b>	
<b>Sub Total of I+II</b>		<b>190</b>		<b>22,800</b>	<b>12,300</b>	<b>35,100</b>	
<b>III. 1st YEAR MAINTENANCE --Sal Plantation</b>							
31. Cost of weeding, cleaning, mulching and manuring--threeo times	man-day	38	120	4,560	0	4,560	0
32. Cost of infilling including digging pit, carriage of plants (150 no/ha)	man-day	5	120	600	0	600	0
33. Cutting of firelines 3 m wide for protection against fire	man-day	4	120	480	0	480	0
34. Watering planted seedlings every 15 days for 6 times during April to June	man-day	40	120	4,800	0	4,800	0
35. Cost of fertilizers @50gm/plant & Organic manure including carriage upto the site	L.S	1	1,800	0	1,800	1,800	0
36. Cost of insecticide and pesticide etc	L.S	1	480	0	480	480	0



<b>Sub Total of III</b>	<b>87</b>	<b>10,440</b>	<b>2,280</b>	<b>12,720</b>
<b>IV. 2nd YEAR MAINTENANCE --Sal Plantation</b>				
37. Cost of weeding, cleaning, mulching and application of fertilizer	man-day	14	120	1,680
38. Fireline cutting to prevent from accidental fire destruction	man-day	6	120	720
39. Watering planted seedlings every 18 days for 5 times during April to June	man-day	42	120	5,040
40. Cost of fertilizer @ 100 kgs/ha	kg	100	16	1,600
41. Contingency, i.e: repairing of fence etc	L.S	1	460	460
<b>Sub Total of IV</b>	<b>62</b>	<b>7,440</b>	<b>2,060</b>	<b>9,500</b>
<b>V. 3rd YEAR MAINTENANCE --Sal Plantation</b>				
42. Cost of weeding, cleaning, mulching and application of fertilizer	man-day	8	120	960
43. Fireline cutting to prevent from accidental fire destruction	man-day	5	120	600
44. Watering planted seedlings every 18 days for 5 times during April to June	man-day	42	120	5,040
45. Cost of fertilizer @ 100 kgs/ha	kg	100	16	1,600
46. Contingency, i.e: repairing of fence etc	L.S	1	400	400
<b>Sub Total of IV</b>	<b>55</b>	<b>6,600</b>	<b>2,000</b>	<b>8,600</b>
<b>Grand Total</b>	<b>332</b>	<b>47,280</b>	<b>18,640</b>	<b>65,920</b>

**Type A3: Plantation of Quick Growing Small timber, Fuel & Fodder Species**

Spacing 2.5 m x 2.5 m  
No. of Plants = 1600 Nos/ha

Description	Unit	Quantity		Unit Price		Cost (Rs./ha)	
		Labour	Material	Labour	Material	Labour	Material
		Total		Total			
<b>I. Advance Soil Works--Labour Component</b>							
1. Survey and demarcation of the plantation area	man-day	1	120	120	0	120	0
2. Advance Soil works by digging planting pits of size (0.60+0.45)/2 x 0.45 x0.45 m3 including site cleaning	man-day	18	120	2,160	0	2,160	0
3. Cost of insecticide, fertilizer including carriage	LS	1	300	0	300	300	0
4. Cost of Rope/tin/watering cambamboo/hatch etc	LS	1	400	0	400	400	0
5. Contingencies	LS	1	120	0	120	120	0
<b>Sub Total of I</b>		<b>19</b>		<b>2,280</b>	<b>820</b>	<b>3,100</b>	
<b>II. CREATION WORKS--Miscellaneous Plantation</b>							
6. Digging of pits of size (0.6+0.45)/2 x 0.45 x 0.45	man-day	20	120	2,400	0	2,400	0
7. Filling up of planting pits with dug up pulverized soil	man-day	15	120	1,800	0	1,800	0
8. Cleaning the plantation area before planting	man-day	4	120	480	0	480	0
9. Transplanting of potted seedlings including carriage from field nursery to planting site and staking	man-day	26	120	3,120	0	3,120	0
10. Infilling of vacancy created due to field mortality including carriage	man-day	4	120	480	0	480	0
11. 1st mulching by digging earth around pits and cleaning, weeding and application of fertilizer	man-day	14	120	1,680	0	1,680	0
12. 2nd mulching, cleaning, weeding including application of 2nd dose of fertilizer	man-day	12	120	1,440	0	1,440	0
13. Cutting firelines 3 m wide to prevent accidental fire	man-day	4	120	480	0	480	0
14. Cutting trenches of size 0.60m x 0.45m inside the plantation area and boundary where necessary @ 100 m per hectare	man-day	8	120	960	0	960	0
15. Watering of seedlings and watch and ward	man-day	8	120	960	0	960	0
16. Making livehedge fencing	man-day	3	120	360	0	360	0
17. Cost of insecticide, fertilizer including carriage	LS	1	2,000	0	2,000	2,000	0
18. Cost of materials like Ipomeea sp for livehood fence	LS	1	500	0	500	500	0
19. Cost of Bamboo for livehedge fencing - 3 nos	nos	3	60	0	180	180	0
20. Contingencies Rope/tin/watering can/hatch & carriage of seedling etc	LS	1	660	0	660	660	0
<b>Sub Total of II</b>		<b>118</b>		<b>14,160</b>	<b>3,340</b>	<b>17,500</b>	
<b>Sub Total of I+II</b>		<b>137</b>		<b>16,440</b>	<b>4,160</b>	<b>20,600</b>	
<b>III. 1st YEAR MAINTENANCE --Miscellaneous Plantation</b>							
21. Vacancy filling /Beating up operation	man-day	3	120	360	0	360	0
22. Mulching with fertilizers including weeding and cleaning over the entire area--two times	man-day	26	120	3,120	0	3,120	0
23. Maintenance of the fire lines by cutting grasses /bushes	man-day	6	120	720	0	720	0
24. Repairing of live hedge fencing	man-day	2	120	240	0	240	0
25. Cost of fertilizers, fencing materials etc.	LS	1	760	0	760	760	0
<b>Sub Total of III</b>		<b>37</b>		<b>4,440</b>	<b>760</b>	<b>5,200</b>	
<b>IV. 2nd YEAR MAINTENANCE --Miscellaneous Plantation</b>							
26. Mulching without fertilizers including hoeing the base over the entire area--two times	man-day	26	120	3,120	0	3,120	0
27. Cost of fencing materials including repairs etc.	LS	1	280	0	280	280	0
<b>Sub Total of IV</b>		<b>26</b>		<b>3,120</b>	<b>280</b>	<b>3,400</b>	
<b>V. 3rd YEAR MAINTENANCE --Miscellaneous Plantation</b>							
28. Mulching without fertilizers including hoeing the base over the entire area--two times	man-day	20	120	2,400	0	2,400	0
29. Cost of fencing materials including repairs etc.	LS	1	100	0	100	100	0
<b>Sub Total of IV</b>		<b>20</b>		<b>2,400</b>	<b>100</b>	<b>2,500</b>	
<b>Grand Total</b>		<b>220</b>		<b>26,400</b>	<b>5,300</b>	<b>31,700</b>	

### Type A4: Enrichment of Degraded Forests of South West Bengal through coppice regeneration

Description	Unit	Quantity		Unit Price		Cost (Rs./ha)		
		Labour	Material	Labour	Material	Labour	Material	Total
<b>I. Rehabilitation of Degraded Forest (Thinning, RDF)</b>								
1. Surveying & demarcation area.	man-day	1		120		120	0	120
2. Marking poles to be retained.	man-day	2		120		240	0	240
3. Thinning of the produces (poles) by removing bend,dead and dying trees and conversion of stems in to pole firewood etc.	man-day	12		120		1,440	0	1,440
4. Convension of thinned produces to fire-wood, short size poles, including stacking and carriage up to depots	man-day	11		120		1,320	0	1,320
5. Cost for paint etc. for marking and carriage.	LS		1		1,380		0	1,380
<b>Sub Total of I</b>		<b>26</b>				<b>3,120</b>	<b>1,380</b>	<b>4,500</b>
<b>II. Multiple Shoot Cutting (MSC)</b>								
1. Surveying, demarcation of working site,including coaltering to pre & dominated classes of leading shoots (4 nos/living stump)	man-day	5		120		600	0	600
Cutting of dead, dying/moribund,bend, suppressed coppice shoots, unwanted coppice shoots excluding pre & dominated								
2. Hoing around basal portion of living stumps and putting dug up earth at base of stumps, including application of fertilizers	man-day	5		120		600	0	600
3. Cost of applying hormones for promoting growth.	man-day	3		120		360	0	360
4. Fertilizers	LS		1		360		0	360
5. Growth promoting hormones.	LS		1		300		0	300
6. Sign board.	LS		1		180		0	180
<b>Sub Total of II.</b>		<b>13</b>				<b>1,560</b>	<b>840</b>	<b>2,400</b>
<b>Grand Total</b>		<b>39</b>				<b>4,680</b>	<b>2,220</b>	<b>6,900</b>

**Type A5: Economic. Plantation of Miscellaneous Species In North Bengal**

Spacing 2.5 m x 2.5 m  
No. of Plants = 1600 Nos/ha

Description	Unit	Quantity		Unit Price		Cost (Rs./ha)	
		Labour	Material	Labour	Material	Labour	Material
		Total					
<b>I. Advance Soil Works--Labour Component</b>							
1. Survey and demarcation of the plantation area	man-day	1	120	120	0	120	0
2. Advance Soil works by digging planting pits of size (0.60+0.45)/2 x 0.45 x0.45 m3 including site cleaning	man-day	18	120	2,160	0	2,160	0
3. Cost of insecticide, fertilizer including carriage	L.S	1	300	0	300	0	300
4. Cost of Rope/lin/watering can/bamboo/hatch etc	L.S	1	400	0	400	0	400
5. Contingencies	L.S	1	120	0	120	0	120
<b>Sub Total of I</b>		<b>19</b>		<b>2,280</b>	<b>820</b>	<b>3,100</b>	
<b>II. CREATION WORKS--Miscellaneous Plantation A 5</b>							
6. Digging of pits of size (0.6+0.45)/2 x 0.45 x 0.45	man-day	20	120	2,400	0	2,400	0
7. Filling up of planting pits with dug up pulverized soil	man-day	15	120	1,800	0	1,800	0
8. Cleaning the plantation area before planting	man-day	4	120	480	0	480	0
9. Transplanting of potted seedlings including carriage from field nursery to planting site and staking	man-day	26	120	3,120	0	3,120	0
10. Infilling of vacancy created due to field mortality including carriage	man-day	4	120	480	0	480	0
11. 1st mulching by digging earth around pits and cleaning, weeding and application of fertilizer	man-day	14	120	1,680	0	1,680	0
12. 2nd mulching, cleaning, weeding including application of 2nd dose of fertilizer	man-day	12	120	1,440	0	1,440	0
13. 3rd mulching, cleaning, weeding	man-day	10	120	1,200	0	1,200	0
14. 4th mulching, cleaning, weeding	man-day	10	120	1,200	0	1,200	0
15. Cutting firelines 3 m wide to prevent accidental fire	man-day	4	120	480	0	480	0
16. Cutting trenches of size 0.60m x 0.45m inside the plantation area and boundary where necessary @ 100 m per hectare	man-day	6	120	720	0	720	0
17. Watering of seedlings and watch and ward	man-day	6	120	720	0	720	0
18. Making livehedge fencing	man-day	3	120	360	0	360	0
19. Cost of insecticide, fertilizer including carriage	LS	1	1,900	0	1,900	0	1,900
20. Cost of materials like Ipomoea sp for livehood fence	LS	1	500	0	500	0	500
21. Cost of Bamboo for livehedge fencing - 3 nos	nos	3	60	0	180	0	180
22. Contingencies Rope/lin/watering can/hatch & carriage of seedling etc	LS	1	640	0	640	0	640
<b>Sub Total of II</b>		<b>134</b>		<b>16,080</b>	<b>3,220</b>	<b>19,300</b>	
<b>Sub Total of I+II</b>		<b>153</b>		<b>18,360</b>	<b>4,040</b>	<b>22,400</b>	
<b>III. 1st YEAR MAINTENANCE --Miscellaneous Plantation A 5</b>							
23. Vacancy filling /Beating up operation	man-day	3	120	360	0	360	0
24. Mulching with fertilizers including weeding and cleaning over the entire area--three times	man-day	38	120	4,560	0	4,560	0
25. Maintenance of the fire lines by cutting grasses /bushes	man-day	6	120	720	0	720	0
26. Repairing of live hedge fencing	man-day	2	120	240	0	240	0
27. Cost of fertilizers, fencing materials etc.	LS	1	760	0	760	0	760
<b>Sub Total of III</b>		<b>49</b>		<b>5,880</b>	<b>760</b>	<b>6,640</b>	
<b>IV. 2nd YEAR MAINTENANCE --Miscellaneous Plantation A 5</b>							
28. Mulching without fertilizers including hoeing the base over the entire area--two times	man-day	26	120	3,120	0	3,120	0
29. Cost of fencing materials including repairs etc.	LS	1	280	0	280	0	280
<b>Sub Total of IV</b>		<b>26</b>		<b>3,120</b>	<b>280</b>	<b>3,400</b>	
<b>V. 3rd YEAR MAINTENANCE --Miscellaneous Plantation A 5</b>							
30. Mulching without fertilizers including hoeing the base over the entire area--two times	man-day	20	120	2,400	0	2,400	0
31. Cost of fencing materials including repairs etc.	LS	1	100	0	100	0	100
<b>Sub Total of V</b>		<b>20</b>		<b>2,400</b>	<b>100</b>	<b>2,500</b>	
<b>Grand Total</b>		<b>248</b>		<b>29,760</b>	<b>5,180</b>	<b>34,940</b>	

**Type A6: Plantation of Sal and Associates Species In North Bengal**

Spacing 2.5 m x 2.5 m  
No. of Plants = 1600 Nos/ha

Description	Unit	Quantity		Unit Price		Cost (Rs./ha)	
		Labour	Material	Labour	Material	Labour	Material
		Total		Total		Total	
<b>I. Advance Soil Works--Labour Component</b>							
1. Survey and demarcation of the plantation area	man-day	1	120	120	0	120	0
2. Advance Soil works by digging planting pits of size (0.60+0.45)/2 x 0.45 x 0.45 m <sup>3</sup> including site cleaning	man-day	18	120	2,160	0	2,160	0
3. Cost of insecticide, fertilizer including carriage	LS	1	300	0	300	300	0
4. Cost of Rope/lin/watering can/bamboo/hatch etc	LS	1	400	0	400	400	0
5. Contingencies	LS	1	120	0	120	120	0
<b>Sub Total of I</b>		<b>19</b>		<b>2,280</b>	<b>820</b>	<b>3,100</b>	
<b>II. CREATION WORKS--SAL PLANTATION NORTH BENGAL A 6</b>							
6. Digging of pits of size (0.6+0.45)/2 x 0.45 x 0.45	man-day	20	120	2,400	0	2,400	0
7. Filling up of planting pits with dug up pulverized soil	man-day	15	120	1,800	0	1,800	0
8. Cleaning the plantation area before planting	man-day	4	120	480	0	480	0
9. Transplanting of potted seedlings including carriage from field nursery to planting site and staking	man-day	26	120	3,120	0	3,120	0
10. Infilling of vacancy created due to field mortality including carriage	man-day	4	120	480	0	480	0
11. 1st mulching by digging earth around pits and cleaning, weeding and application of fertilizer	man-day	14	120	1,680	0	1,680	0
12. 2nd mulching, cleaning, weeding including application of 2nd dose of fertilizer	man-day	12	120	1,440	0	1,440	0
13. 3rd mulching, cleaning, weeding	man-day	10	120	1,200	0	1,200	0
14. 4th mulching, cleaning, weeding	man-day	10	120	1,200	0	1,200	0
15. Cutting firelines 3 m wide to prevent accidental fire	man-day	4	120	480	0	480	0
16. Cutting trenches of size 0.60m x 0.45m inside the plantation area and boundary where necessary @ 100 m per hectare	man-day	8	120	960	0	960	0
17. Watering of seedlings and watch and ward	man-day	8	120	960	0	960	0
18. Making livehedge fencing	man-day	3	120	360	0	360	0
19. Cost of insecticide, fertilizer including carriage	LS	1	2,000	0	2,000	2,000	0
20. Cost of materials like Ipomoea sp for livehood fence	LS	1	500	0	500	500	0
21. Cost of Bamboo for livehedge fencing - 3 nos	nos	3	60	0	180	180	0
22. Contingencies Rope/lin/watering can/hatch & carriage of seeding etc	LS	1	660	0	660	660	0
<b>Sub Total of II</b>		<b>138</b>		<b>16,560</b>	<b>3,340</b>	<b>19,900</b>	
<b>Sub Total of I+II</b>		<b>157</b>		<b>18,840</b>	<b>4,160</b>	<b>23,000</b>	
<b>III. 1st YEAR MAINTENANCE --Miscellaneous Plantation</b>							
23. Vacancy filling/Beating up operation	man-day	3	120	360	0	360	0
24. Mulching with fertilizers including weeding and cleaning over the entire area--three times	man-day	38	120	4,560	0	4,560	0
25. Maintenance of the fire lines by cutting grasses /bushes	man-day	6	120	720	0	720	0
26. Repairing of live hedge fencing	man-day	2	120	240	0	240	0
27. Cost of fertilizers, fencing materials etc.	LS	1	760	0	760	760	0
<b>Sub Total of III</b>		<b>49</b>		<b>5,880</b>	<b>760</b>	<b>6,640</b>	
<b>IV. 2nd YEAR MAINTENANCE --Miscellaneous Plantation</b>							
28. Mulching without fertilizers including hoeing the base over the entire area--two times	man-day	26	120	3,120	0	3,120	0
29. Cost of fencing materials including repairs etc.	LS	1	280	0	280	280	0
<b>Sub Total of IV</b>		<b>26</b>		<b>3,120</b>	<b>280</b>	<b>3,400</b>	
<b>V. 3rd YEAR MAINTENANCE --Miscellaneous Plantation</b>							
30. Mulching without fertilizers including hoeing the base over the entire area--two times	man-day	20	120	2,400	0	2,400	0
31. Cost of fencing materials including repairs etc.	LS	1	100	0	100	100	0
<b>Sub Total of V</b>		<b>20</b>		<b>2,400</b>	<b>100</b>	<b>2,500</b>	
<b>Grand Total</b>		<b>252</b>		<b>30,240</b>	<b>5,300</b>	<b>35,540</b>	

## 1. Afforestation and Allied Works 1.B Tree Planting Outside Forest Area (Social Forestry)

Base Year: 2011

Price Escalation: Labour 10.00%  
Material 0.00%

Price Escalation 6.60%  
Physical Contingency 10.00%

	2012	2013	2014	2015	2016	2017	2018	2019
Labour	1,1000	1,2100	1,3310	1,4641	1,6105	1,7716	1,9487	2,1436
Material	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000	1,0000

	2012	2013	2014	2015	2016	2017	2018	2019
	0.0660	0.1364	0.2114	0.2913	0.3765	0.4674	0.5642	0.6675

### 1.B1 Strip Plantation in Road side/Canal side/Railway side

Items of Work	UNIT COST (per Ha)											PHYSICAL TARGETS (Ha)									FINANCIAL OUTLAYS (Rs)									Total (Rs)
	Base year Cost	2012	2013	2014	2015	2016	2017	2018	2019	2012	2013	2014	2015	2016	2017	2018	2019	2012	2013	2014	2015	2016	2017	2018	2019					
Advance	Labour	4,680	5,100	5,600	6,200	6,800	7,500	8,200	9,100	10,000	1,400	470	470	460	0	0	0	1,400	0	0	2,914,000	3,196,000	3,450,000	0	0	0	0	9,560,000		
	Material	1,320	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,400	470	470	460	0	0	0	1,400	0	0	611,000	611,000	598,000	0	0	0	0	1,820,000		
Creation	Labour	22,920	25,200	27,700	30,500	33,500	36,900	40,600	44,600	49,100	1,400	470	470	460	0	0	0	1,400	0	0	14,335,000	15,745,000	16,974,000	0	0	0	0	47,054,000		
	Material	2,980	2,900	2,900	2,900	2,900	2,900	2,900	2,900	2,900	1,400	470	470	460	0	0	0	1,400	0	0	1,363,000	1,363,000	1,334,000	0	0	0	0	4,060,000		
M.maint Y1	Labour	11,400	12,500	13,700	15,100	16,600	18,300	20,100	22,200	24,400	1,400	470	470	460	0	0	0	1,400	0	0	7,802,000	8,601,000	9,246,000	0	0	0	0	25,649,000		
	Material	580	500	500	500	500	500	500	500	500	1,400	470	470	460	0	0	0	1,400	0	0	235,000	235,000	230,000	0	0	0	0	700,000		
M.maint Y2	Labour	8,400	9,200	10,100	11,100	12,200	13,500	14,800	16,300	18,000	1,400	470	470	460	0	0	0	1,400	0	0	6,345,000	6,956,000	7,498,000	0	0	0	0	20,799,000		
	Material	200	200	200	200	200	200	200	200	200	1,400	470	470	460	0	0	0	1,400	0	0	94,000	94,000	92,000	0	0	0	0	280,000		
M.maint Y3	Labour	6,960	7,600	8,400	9,200	10,100	11,200	12,300	13,500	14,900	1,400	470	470	460	0	0	0	1,400	0	0	5,781,000	6,345,000	6,854,000	0	0	0	0	18,980,000		
	Material	240	200	200	200	200	200	200	200	200	460	470	470	460	0	0	0	460	0	0	0	0	94,000	94,000	92,000	0	0	0	280,000	
	Base Cost																				19,223,000	28,952,000	37,631,000	22,401,000	14,029,000	6,946,000	129,182,000			
	Price Escalation																				4,062,887	8,433,861	14,169,241	10,469,827	7,915,574	4,636,236	49,687,626			
	Physical Contingency																				2,328,589	3,738,586	5,180,024	3,287,083	2,194,457	1,158,224	17,886,963			
	Total Cost																				25,614,475	41,124,447	56,980,265	36,157,910	24,139,031	12,740,460	196,756,589			

### 1.B2 Block Plantation In non-forest land

Items of Work	UNIT COST (per Ha)											PHYSICAL TARGETS (Ha)									FINANCIAL OUTLAYS (Rs)									Total (Rs)
	Base year Cost	2012	2013	2014	2015	2016	2017	2018	2019	2012	2013	2014	2015	2016	2017	2018	2019	2012	2013	2014	2015	2016	2017	2018	2019					
Advance	Labour	4,680	5,100	5,600	6,200	6,800	7,500	8,200	9,100	10,000	1,400	470	470	460	0	0	0	1,400	0	0	2,914,000	3,196,000	3,450,000	0	0	0	0	9,560,000		
	Material	1,320	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,400	470	470	460	0	0	0	1,400	0	0	611,000	611,000	598,000	0	0	0	0	1,820,000		
Creation	Labour	22,920	25,200	27,700	30,500	33,500	36,900	40,600	44,600	49,100	1,400	470	470	460	0	0	0	1,400	0	0	14,335,000	15,745,000	16,974,000	0	0	0	0	47,054,000		
	Material	2,980	2,900	2,900	2,900	2,900	2,900	2,900	2,900	2,900	1,400	470	470	460	0	0	0	1,400	0	0	1,363,000	1,363,000	1,334,000	0	0	0	0	4,060,000		
M.maint Y1	Labour	11,400	12,500	13,700	15,100	16,600	18,300	20,100	22,200	24,400	1,400	470	470	460	0	0	0	1,400	0	0	7,802,000	8,601,000	9,246,000	0	0	0	0	25,649,000		
	Material	580	500	500	500	500	500	500	500	500	1,400	470	470	460	0	0	0	1,400	0	0	235,000	235,000	230,000	0	0	0	0	700,000		
M.maint Y2	Labour	8,400	9,200	10,100	11,100	12,200	13,500	14,800	16,300	18,000	1,400	470	470	460	0	0	0	1,400	0	0	6,345,000	6,956,000	7,498,000	0	0	0	0	20,799,000		
	Material	200	200	200	200	200	200	200	200	200	1,400	470	470	460	0	0	0	1,400	0	0	94,000	94,000	92,000	0	0	0	0	280,000		
M.maint Y3	Labour	6,960	7,600	8,400	9,200	10,100	11,200	12,300	13,500	14,900	1,400	470	470	460	0	0	0	1,400	0	0	5,781,000	6,345,000	6,854,000	0	0	0	0	18,980,000		
	Material	240	200	200	200	200	200	200	200	200	460	470	470	460	0	0	0	460	0	0	0	0	94,000	94,000	92,000	0	0	0	280,000	
	Base Cost																				19,223,000	28,952,000	37,631,000	22,401,000	14,029,000	6,946,000	129,182,000			
	Price Escalation																				4,062,887	8,433,861	14,169,241	10,469,827	7,915,574	4,636,236	49,687,626			
	Physical Contingency																				2,328,589	3,738,586	5,180,024	3,287,083	2,194,457	1,158,224	17,886,963			
	Total Cost																				25,614,475	41,124,447	56,980,265	36,157,910	24,139,031	12,740,460	196,756,589			

**Component 1.B : Tree Planting Outside Forest Area (Social Forestry)**

**Type B1& B2: Strip & Block Plantation**

Spacing 2.5 m x 2.5 m

No. of Plants = 1600 Nos/ha

Description	Unit	Quantity		Unit Price		Cost (Rs.)	
		Labour	Material	Labour	Material	Labour	Material
		Total		Total		Total	
<b>I. ADVANCE WORKS-OF B1 &amp; B2 (Strip &amp; Block Plantation)</b>							
1. Survey and demarcation of the field nursery area	man-day	1	120	60	0	60	0
2. Cleaning the field nursery site by bush cutting /burning and removing debris	man-day	1	120	60	0	60	0
3. Preparation of mother beds	man-day	2	120	240	0	240	0
4. Preparation of Polygot beds	man-day	2	120	240	0	240	0
5. Collection of seeds	man-day	1	120	120	0	120	0
6. Sowing of seeds in mother beds	man-day	2	120	240	0	240	0
7. Pricking out the sprouted seedlings and transplanting to polygot beds	man-day	3	120	360	0	360	0
8. Watering the seedlings	man-day	3	120	360	0	360	0
9. Sorting & Shifting of seedlings two times	man-day	2	120	240	0	240	0
10. Digging of Kuticha well for water source	man-day	2	120	240	0	240	0
11. Making a temporary field nursery hut of Bamboo. Thatch mudwall etc	man-day	2	120	240	0	240	0
12. Survey and demarcation of the plantation area	man-day	1	120	120	0	120	0
13. Advance Soil works by digging planting pits of size (0.60+0.45)/2 x 0.45 x0.45 m3 including site cleaning	man-day	18	120	2,160	0	2,160	0
14. Cost of insecticide, fertilizer including carriage	L.S	1	300	0	300	0	300
15. Cost of Polybags	L.S	1	200	0	200	0	200
16. Cost of transported good earth and cow dung manure for application in the field and nursery	L.S	1	350	0	350	0	350
17. Cost of Rope/tin/watering can/bamboo/thatch etc	L.S	1	364	0	364	0	364
18. Contingencies	L.S	1	106	0	106	0	106
<b>Sub Total of I.</b>		<b>39</b>		<b>4,680</b>	<b>1,320</b>	<b>6,000</b>	
<b>II. CREATION WORKS--OF B1 &amp; B2 (Strip &amp; Block Plantation)</b>							
19. Digging of pits of size (0.6+0.45)/2 x 0.45 x 0.45	man-day	20	120	2,400	0	2,400	0
20. Filling up of planting pits with dug up pulverized soil	man-day	15	120	1,800	0	1,800	0
21. Cleaning the plantation area before planting	man-day	4	120	480	0	480	0
22. Transplanting of potted seedlings including carriage from field nursery to planting site and staking	man-day	26	120	3,120	0	3,120	0
23. Application of insecticide to the planted seedlings	man-day	2	120	240	0	240	0
24. Pricking out and sorting & shifting of the seedlings in the field nursery	man-day	4	120	480	0	480	0
25. Infilling of vacancy created due to field mortality including carriage	man-day	4	120	480	0	480	0
26. 1st mulching by digging earth around pits and cleaning, weeding and application of fertilizer	man-day	14	120	1,680	0	1,680	0
27. 2nd mulching, cleaning, weeding including application of 2nd dose of fertilizer	man-day	12	120	1,440	0	1,440	0
28. 3rd mulching, cleaning, weeding	man-day	10	120	1,200	0	1,200	0
29. 4th mulching, cleaning, weeding	man-day	10	120	1,200	0	1,200	0
30. Cutting firelines 3 m wide to prevent accidental fire	man-day	4	120	480	0	480	0
31. Cutting trenches of size 0.60m x 0.45m inside the plantation area and boundary where necessary @ 100 m per hectare	man-day	8	120	960	0	960	0
32. Watering of seedlings and watch and ward	man-day	8	120	960	0	960	0
33. Making livehedge fencing	man-day	4	120	480	0	480	0
34. Cost of insecticide, fertilizer including carriage	LS	1	2,000	0	2,000	0	2,000
35. Cost of materials like Ipomoea sp for livehood fence	LS	1	500	0	500	0	500
36. Cost of Bamboo for livehedge fencing - 3 nos	nos	3	60	0	180	180	180
37. Contingencies Rope/tin/watering can/thatch etc	LS	1	300	0	300	0	300
38. Watch & ward from cattle, fire etc. mandays	man-day	46	120	5,520	0	5,520	0
<b>Sub Total of II.</b>		<b>191</b>		<b>22,920</b>	<b>2,980</b>	<b>25,900</b>	

<b>III. 1st YEAR MAINTENANCE --OF B1 &amp; B2 ( Strip &amp; Block Plantation)</b>								
39.	Vacancy filling /Beating up operation	man-day	3	120	360	0	360	
40.	Mulching with fertilizers including weeding and cleaning over the entire area--three times	man-day	38	120	4,560	0	4,560	
41.	Maintenance of the fire lines by cutting grasses /bushes	man-day	6	120	720	0	720	
42.	Repairing of live hedge fencing	man-day	2	120	240	0	240	
43.	Watch & ward from cattle, fire etc. mandays	man-day	46	120	5,520	0	5,520	
44.	Cost of fertilizers, fencing materials etc.	LOS	1	580	0	580	580	
<b>Sub Total of III.</b>						<b>11,400</b>	<b>580</b>	<b>11,980</b>
<b>IV. 2nd YEAR MAINTENANCE -OF B1 &amp; B2 ( Strip &amp; Block Plantation)</b>								
45.	Mulching without fertilizers including hoeing the base over the entire area--two times	man-day	24	120	2,880	0	2,880	
46.	Watch & ward from cattle, fire etc. mandays	man-day	46	120	5,520	0	5,520	
47.	Cost of fencing materials including repairs etc.	LS	1	200	0	200	200	
<b>Sub Total of IV.</b>						<b>8,400</b>	<b>200</b>	<b>8,600</b>
<b>V. 3rd YEAR MAINTENANCE -OF B1 &amp; B2 ( Strip &amp; Block Plantation)</b>								
48.	Mulching without fertilizers including hoeing the base over the entire area--one times	man-day	12	120	1,440	0	1,440	
49.	Watch & ward from cattle, fire etc. mandays	man-day	46	120	5,520	0	5,520	
50.	Cost of fencing materials including repairs etc.	LS	1	240	0	240	240	
<b>Sub Total of V.</b>						<b>6,960</b>	<b>240</b>	<b>7,200</b>
<b>Grand Total</b>						<b>54,360</b>	<b>5,320</b>	<b>59,680</b>



# 1. Afforestation and Allied Works

## 1.C Soil & Moisture Conservation in Forestry Treatment Areas

Base Year: 2011

Price Escalation: Labour

10.00%

Price Escalation: 6.60%

Physical Contingency: 10.00%

2012	2013	2014	2015	2016	2017	2018	2019
1.1000	1.2100	1.3310	1.4641	1.6105	1.7716	1.9487	2.1436

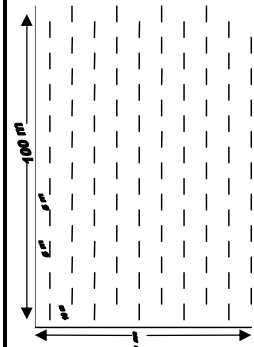
2012	2013	2014	2015	2016	2017	2018	2019
0.0660	0.1364	0.2114	0.2913	0.3765	0.4674	0.5642	0.6675

Items of Work	Base year Cost	UNIT COST (per Ha)								PHYSICAL TARGETS (Ha)								FINANCIAL OUTLAYS (Rs)													
		2012	2013	2014	2015	2016	2017	2018	2019	2012	2013	2014	2015	2016	2017	2018	2019	2012	2013	2014	2015	2016	2017	2018	2019						
1.C1 Plantation of High Yielding Eucalyptus hybrid clones in South West Bengal	4,860	5,300	5,900	6,500	7,100	7,800	8,600	9,500	10,400	0	0	150	150	150	150	0	0	450	0	0	975,000	1,065,000	1,170,000	0	0	0	0				
		Price Escalation		0		206,072		310,240		440,541		0		0		0		0		0		118,107		137,524		161,054		0		0	
Total Cost		0		0		1,299,179		1,512,764		1,771,596		0		0		0		0		0		0		0		0		0		0	

Items of Work	Base year Cost	UNIT COST (per Ha)								PHYSICAL TARGETS (Ha)								FINANCIAL OUTLAYS (Rs)													
		2012	2013	2014	2015	2016	2017	2018	2019	2012	2013	2014	2015	2016	2017	2018	2019	2012	2013	2014	2015	2016	2017	2018	2019						
1.C2 Plantation of Sal and Associate in South Bengal	4,860	5,300	5,900	6,500	7,100	7,800	8,600	9,500	10,400	0	0	1,140	1,140	1,140	1,140	0	0	3,430	0	0	7,475,000	8,094,000	8,892,000	0	0	0	0	0	0	0	0
		Price Escalation		0		1,579,882		2,357,822		3,348,114		0		0		0		0		0		0		1,579,882		2,357,822		3,348,114		0	
Total Cost		0		0		905,488		1,045,182		1,224,011		0		0		0		0		0		9,960,371		11,497,008		13,464,126		0		0	

Items of Work	Base year Cost	UNIT COST (per Ha)								PHYSICAL TARGETS (Ha)								FINANCIAL OUTLAYS (Rs)													
		2012	2013	2014	2015	2016	2017	2018	2019	2012	2013	2014	2015	2016	2017	2018	2019	2012	2013	2014	2015	2016	2017	2018	2019						
1.C3 Plantation of Quick Growing Small timber, Fuel & Fodder Species	4,860	5,300	5,900	6,500	7,100	7,800	8,600	9,500	10,400	0	0	2,000	2,000	2,000	2,000	0	0	6,000	0	0	13,000,000	14,200,000	15,600,000	0	0	0	0	0	0	0	
		Price Escalation		0		2,747,621		4,136,530		5,873,885		0		0		0		0		0		0		2,747,621		4,136,530		5,873,885		0	
Total Cost		0		0		1,574,762		2,147,388		2,822,418		3,508,018		4,211,903		4,947,288		5,712,070		6,515,250		7,357,072		8,238,153		9,161,085		10,126,867		11,135,909	

Items of Work	Base year Cost	UNIT COST (per Ha)								PHYSICAL TARGETS (Ha)								FINANCIAL OUTLAYS (Rs)													
		2012	2013	2014	2015	2016	2017	2018	2019	2012	2013	2014	2015	2016	2017	2018	2019	2012	2013	2014	2015	2016	2017	2018	2019						
1.C4 Enrichment of Degraded Forests of SouthWest Bengal through coppice regeneration	4,860	5,300	5,900	6,500	7,100	7,800	8,600	9,500	10,400	0	0	2,500	2,500	2,500	2,500	0	0	7,500	0	0	16,250,000	17,750,000	19,500,000	0	0	0	0	0	0	0	
		Price Escalation		0		3,434,527		5,170,663		7,342,356		0		0		0		0		0		0		3,434,527		5,170,663		7,342,356		0	
Total Cost		0		0		1,968,453		2,292,066		2,684,236		3,116,809		3,608,472		4,143,135		4,716,888		5,331,741		5,989,694		6,694,157		7,439,720		8,279,383		9,214,146	



**Contour trench**

Trench Excavation	Width (m)	Depth (m)	Length (m)	Excavation Volume (m3)	Number of trench / ha	Total Excavation volume (m3) / ha
	0.45	0.45	5	1.0125	100	101.25

Labour output per day = 2.5 m3/day  
 Required Labour per ha = 40.5 man-day  
 Cost per ha = 4,860 Rs / ha

(At 5.0 m interval, there will be 10 no. of 5m long trenches per line of 100m along length. Such lines will be spaced at 10m. There will be 100 trenches per ha (100mx100m) Specification of trench is 5mx0.45mx0.45m)

1. Afforestation and Allied Works  
1.D Production of Quality Planting material

Base Year: 2017  
Physical Contingency: 10.09%  
Price Escalation: 6.60%  
Local

2012	2013	2014	2015	2016	2017	2018	2019
0.0660	0.1364	0.2114	0.2913	0.3765	0.4674	0.5642	0.6675

Year wise Financial Outlay in Rs lacs

SI No.	Items of Work	2012		2013		2014		2015		2016		2017		2018		2019	
		FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC
1.D1	Capital cost of setting up Hitech Central Nursery	0	50,000,000	0	50,000,000	0	50,000,000	0	50,000,000	0	50,000,000	0	50,000,000	0	50,000,000	0	50,000,000
	Price Escalation	0	6,817,800	0	6,817,800	0	6,817,800	0	6,817,800	0	6,817,800	0	6,817,800	0	6,817,800	0	6,817,800
	Physical Contingency	0	5,681,780	0	5,681,780	0	5,681,780	0	5,681,780	0	5,681,780	0	5,681,780	0	5,681,780	0	5,681,780
	<b>Total Cost</b>	<b>0</b>	<b>62,499,580</b>	<b>0</b>	<b>62,499,580</b>	<b>0</b>	<b>62,499,580</b>	<b>0</b>	<b>62,499,580</b>	<b>0</b>	<b>62,499,580</b>	<b>0</b>	<b>62,499,580</b>	<b>0</b>	<b>62,499,580</b>	<b>0</b>	<b>62,499,580</b>
1.D2	Capacity expansion of existing Hitech Central Nursery	0	15,000,000	0	15,000,000	0	15,000,000	0	15,000,000	0	15,000,000	0	15,000,000	0	15,000,000	0	15,000,000
	Price Escalation	0	2,045,340	0	2,045,340	0	2,045,340	0	2,045,340	0	2,045,340	0	2,045,340	0	2,045,340	0	2,045,340
	Physical Contingency	0	1,704,534	0	1,704,534	0	1,704,534	0	1,704,534	0	1,704,534	0	1,704,534	0	1,704,534	0	1,704,534
	<b>Total Cost</b>	<b>0</b>	<b>18,749,874</b>	<b>0</b>	<b>18,749,874</b>	<b>0</b>	<b>18,749,874</b>	<b>0</b>	<b>18,749,874</b>	<b>0</b>	<b>18,749,874</b>	<b>0</b>	<b>18,749,874</b>	<b>0</b>	<b>18,749,874</b>	<b>0</b>	<b>18,749,874</b>

Required Units	Cost per Unit	Total Cost
20 Units	Rs 2,500,000	Rs 50,000,000
20 Units	Rs 750,000	Rs 15,000,000

Year wise Financial Outlay in Rs lacs

SI No.	Items of Work	2012		2013		2014		2015		2016		2017		2018		2019	
		FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC
1.D3	Prodn. of 1 yr old gilly clone @2000/ha	0	4,500,000	0	4,500,000	0	4,500,000	0	4,500,000	0	4,500,000	0	4,500,000	0	4,500,000	0	4,500,000
	Price Escalation	0	1,030,577	0	1,030,577	0	1,030,577	0	1,030,577	0	1,030,577	0	1,030,577	0	1,030,577	0	1,030,577
	Physical Contingency	0	553,058	0	553,058	0	553,058	0	553,058	0	553,058	0	553,058	0	553,058	0	553,058
	<b>Total Cost</b>	<b>0</b>	<b>6,083,635</b>	<b>0</b>	<b>6,083,635</b>	<b>0</b>	<b>6,083,635</b>	<b>0</b>	<b>6,083,635</b>	<b>0</b>	<b>6,083,635</b>	<b>0</b>	<b>6,083,635</b>	<b>0</b>	<b>6,083,635</b>	<b>0</b>	<b>6,083,635</b>
	Prodn. of 1 yr old gilly seedling @ 2000/ha	0	132,240,000	0	132,240,000	0	132,240,000	0	132,240,000	0	132,240,000	0	132,240,000	0	132,240,000	0	132,240,000
1.D4	Price Escalation	0	31,687,418	0	31,687,418	0	31,687,418	0	31,687,418	0	31,687,418	0	31,687,418	0	31,687,418	0	31,687,418
	Physical Contingency	0	16,392,742	0	16,392,742	0	16,392,742	0	16,392,742	0	16,392,742	0	16,392,742	0	16,392,742	0	16,392,742
	<b>Total Cost</b>	<b>0</b>	<b>180,320,159</b>	<b>0</b>	<b>180,320,159</b>	<b>0</b>	<b>180,320,159</b>	<b>0</b>	<b>180,320,159</b>	<b>0</b>	<b>180,320,159</b>	<b>0</b>	<b>180,320,159</b>	<b>0</b>	<b>180,320,159</b>	<b>0</b>	<b>180,320,159</b>

Items of Work	Unit	Unit Cost (Rs)	Quantity	PHYSICAL TARGETS (seedlings)														
				2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total			
Prodn. of 1 yr old gilly clone- 1st yr seedling	Rs 4 / seedling	300,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prodn. of 1 yr old gilly clone- 2nd yr seedling	Rs 1 / seedling	300,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Sub total 1.D3</b>				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prodn. of 1 yr old gilly seedling - 1st yr seedling	Rs 4 / seedling	7,340,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prodn. of 1 yr old gilly seedling-2nd yr seedling	Rs 2 / seedling	7,340,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Sub total 1.D4</b>				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Items of Work	Unit	Unit Cost (Rs)	Quantity	FINANCIAL OUTLAYS (Rs)														
				2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total				
Prodn. of 1 yr old gilly clone- 1st yr seedling	Rs 4 / seedling	1,200,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prodn. of 1 yr old gilly clone- 2nd yr seedling	Rs 1 / seedling	1,500,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Sub total 1.D3</b>				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prodn. of 1 yr old gilly seedling - 1st yr seedling	Rs 4 / seedling	29,440,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prodn. of 1 yr old gilly seedling-2nd yr seedling	Rs 2 / seedling	14,680,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Sub total 1.D4</b>				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Items of Work	Type	unit	Total	Afforestation plan (ha)														
				2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total				
Plantation with High Yielding Eucalyptus clones in South West Bengal	ha	450	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
Plantation of Sal & Associate Species in South Bengal	ha	3,430	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140
Quick growing & small timber spp. plantation in South Bengal	ha	6,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Economic Plantation in North Bengal	ha	1,050	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350
Sal & associate Plantation in North Bengal	ha	540	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180
<b>Total</b>			11,020	3,680	3,670	3,670	3,670	3,670	3,670	3,670	3,670	3,670	3,670	3,670	3,670	3,670	3,670	3,670

2,000 seedlings / ha

Items of Work	Type	unit	Total
Prodn. of 1 yr old gilly clone @ 2000/ha	A1	450 ha	900,000 seedlings
Prodn. of 1 yr old gilly seedling @ 2000/ha	A2	3,430 ha	6,860,000 seedlings
	A3	6,000 ha	12,000,000 seedlings
	A5	1,050 ha	2,100,000 seedlings
	A6	540 ha	1,080,000 seedlings
		11,470 ha	22,940,000 seedlings







<b>Habitat Improvement in Protected Areas</b>
<b>Unit Cost Structure for Fodder Development : Rs. Lakh</b>

Unit = One Hectare

Rate / Personday (Rs.) = 120.00

Component / Activities	Persondays		Material		Total
	Phy	Fin (Rs.)	Phy	Fin (Rs.)	Fin (Rs. lakh)
<b>2.A1 Grass and fodder tree plantation in Gorumara NP, Jaldapara WS and Buxa TR</b>					
<b>Advance Work - Year 1</b>					
Cleaning, tree girdling and control burning of the area	12	1,440			1,440
Preparation of mother beds	8	960			960
Collection of grass seeds / slips and tree seeds	8	960			960
Shifting of slips and seedlings to different beds	10	1,200			1,200
Making of sheds for beds	12	1,440		600.00	2,040
Weeding/ cleaning of beds	8	960			960
Watering of beds	8	960			960
Manuring /application of organic pesticide/fungicides	4	480	set	400.00	880
Cost of implements like measuring tape, ropes, axe, lime powder, sickle etc	0	0	set	600.00	600
<b>Sub total</b>	<b>70</b>	<b>8,400</b>		<b>1600.00</b>	<b>10,000</b>
<b>Creation - Year 2</b>					
Survey and demarcation of area	4	480			480
Removal of woody weeds and climbers and energisec	40	4,800		1000	5,800
Burning the site carefully in a controlled manner	5	600			600
Collection of grass slips and seedling from nursery and transportaion	5	600	set	500.00	1,100
Digging of trenches and pits and planting of grass slips and seedlings	30	3,600			3,600
Gap filling and three times weed cleaning	50	6,000			6,000
Watching the plantation against grazing and applying fertiliser	16	1,920	set	500.00	2,420
<b>Sub total</b>	<b>150</b>	<b>18,000</b>		<b>2000.00</b>	<b>20,000</b>
<b>Maintenance - Year 3</b>					
Cleaning of weeds two times and gap filling	40	4,800			4,800
Watching the plantation against grazing and other damage	10	1,200	set	1000.00	2,200
<b>Sub total</b>	<b>50</b>	<b>6,000</b>		<b>1000.00</b>	<b>7,000</b>
<b>Maintenance - Year 4</b>					
Cleaning of weeds two times and gap filling	20	2400.00	set	400.00	2,800
Watching the plantation against grazing and other damage	10	1200.00			1,200
<b>Sub total</b>	<b>30</b>	<b>3600</b>	<b>0</b>	<b>400.00</b>	<b>4,000</b>

<b>2.A2 Bamboo under-planting in Mahananda WS</b>					
<b>Advance Work - Year 1</b>					
Cleaning, tree girdling and control burning of the area	12	1,440			1,440
Preparation of nursery beds	8	960			960
Collection of bamboo offsets and planting in mother beds	8	960		2800.00	3,760
Shifting of culms to other beds	10	1,200			1,200
Making of sheds for beds	12	1,440		1600.00	3,040
Weeding/ cleaning of beds	8	960			960
Watering of beds	8	960			960
Manuring /application of organic pesticide/fungicides	4	480	set	1500.00	1,980
Cost of implements like measuring tape, ropes, axe, lime	0	0	set	700.00	700
<b>Sub total</b>	<b>70</b>	<b>8,400</b>		<b>6600.00</b>	<b>15,000</b>

<b>Creation - Year 2</b>					
Survey and demarcation of area	4	480			480
Removal of woody weeds and climbers and energisec	40	4,800		1000	5,800
Burning the site carefully in a controlled manner	6	720			720
Collection of bamboo seedling from nursery and	10	1,200	set	200.00	1,400
Digging of pits, manuring and planting bamboo seedlings	60	7,200		500.00	7,700
Gap filling and three times weed cleaning	50	6,000			6,000
Watching the plantation against grazing and applying	20	2,400	set	500.00	2,900
<b>Sub total</b>	<b>190</b>	<b>22,800</b>		<b>2200.00</b>	<b>25,000</b>
<b>Maintenance - Year 3</b>					
Cleaning of weeds two times and gap filling	40	4,800			4,800
Watching the plantation against grazing and other damage	10	1,200	set	1000.00	2,200
<b>Sub total</b>	<b>50</b>	<b>6,000</b>		<b>1000.00</b>	<b>7,000</b>
<b>Maintenance - Year 4</b>					
Cleaning of weeds two times and gap filling	20	2,400	set	400.00	2,800
Watching the plantation against grazing and other damage	10	1,200			1,200
<b>Sub total</b>	<b>30</b>	<b>3,600</b>	<b>0</b>	<b>400.00</b>	<b>4,000</b>

<b>2.A3 Fodder tree plantation after removal of maling bamboo in Neora Valley NP, Singhalila NP and</b>					
<b>Advance Work - Year 1</b>					
Cleaning and control burning of the area	12	1,440			1,440
Preparation of mother beds	8	960			960
Collection of tree seeds	8	960			960
Shifting of seedlings to different beds	10	1,200			1,200
Making of sheds for beds	12	1,440		600.00	2,040
Weeding/ cleaning of beds	8	960			960
Watering of beds	8	960			960
Manuring /application of organic pesticide/fungicides	4	480	set	400.00	880
Cost of implements like measuring tape, ropes, axe, lime	0	0	set	600.00	600
<b>Sub total</b>	<b>70</b>	<b>8,400</b>		<b>1600.00</b>	<b>10,000</b>
<b>Advance Work - Year 2</b>					
Shifting of seedlings to different beds	10	1,200			1,200
Repair of sheds for beds	12	1,440		600.00	2,040
Weeding/ cleaning of beds	20	2,400			2,400
Watering of beds	24	2,880			2,880
Manuring /application of organic pesticide/fungicides	4	480	set	400.00	880
Cost of implements like measuring tape, ropes, axe, lime	0	0	set	600.00	600
<b>Sub total</b>	<b>70</b>	<b>8,400</b>		<b>1600.00</b>	<b>10,000</b>
<b>Creation - Year 3</b>					
Survey and demarcation of area	4	480			480
Removal of maling bamboo from planting lines and	50	6,000		2000.00	8,000
Burning the site carefully in a controlled manner	6	720			720
Collection of seedling from nursery and transportaion	10	1,200	set	1000.00	2,200
Digging of pits, manuring and planting bamboo seedlings	60	7,200		1500.00	8,700
Gap filling and three times weed cleaning	50	6,000			6,000
Watching the plantation against grazing and applying	20	2,400	set	1500.00	3,900
<b>Sub total</b>	<b>200</b>	<b>24,000</b>		<b>6000.00</b>	<b>30,000</b>
<b>Maintenance - Year 4</b>					
Cleaning of weeds two times and gap filling	60	7,200		600.00	7,800
Watching the plantation against grazing and other damage	10	1,200	set	1000.00	2,200
<b>Sub total</b>	<b>70</b>	<b>8,400</b>		<b>1600.00</b>	<b>10,000</b>
<b>Maintenance - Year 5</b>					
Cleaning of weeds two times and gap filling	60	7,200	set	600.00	7,800
Watching the plantation against grazing and other damage	10	1,200		1000.00	2,200
<b>Sub total</b>	<b>70</b>	<b>8,400</b>	<b>0</b>	<b>1600.00</b>	<b>10,000</b>

### 3. Community Development

Base Year: 2011  
 Price Escalation: 6.00%  
 Physical Contingency: 10.00%

2012	2013	2014	2015	2016	2017	2018	2019
0.0660	0.1364	0.2114	0.2913	0.3765	0.4674	0.5642	0.6675

Sl No.	Components	Year wise Financial Outlay in Rs lacs																							
		2012			2013			2014			2015			2016			2017			2018			2019		
		FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total			
3.A	Meeting	0	6,000,000	11,100,000	0	0	0	2,000,000	3,700,000	2,000,000	3,700,000	2,000,000	3,700,000	2,000,000	3,700,000	0	0	0	0	0	0	0	0	0	
	Price Escalation	0	1,278,033	2,364,361	0	0	0	272,712	504,517	0	422,711	782,015	0	582,610	1,077,828	0	0	0	0	0	0	0	0	0	0
	Physical Contingency	0	727,803	1,346,434	0	0	0	227,271	420,452	0	242,271	448,202	0	258,261	477,783	0	0	0	0	0	0	0	0	0	0
	<b>Total Cost</b>	0	<b>8,005,836</b>	<b>14,810,797</b>	0	0	0	<b>2,499,983</b>	<b>4,624,969</b>	0	<b>2,664,982</b>	<b>4,930,217</b>	0	<b>2,840,871</b>	<b>5,255,611</b>	0	0	0	0	0	0	0	0	0	0
3.B	Microplan	0	6,000,000	11,100,000	0	0	0	2,000,000	3,700,000	2,000,000	3,700,000	2,000,000	3,700,000	2,000,000	3,700,000	0	0	0	0	0	0	0	0	0	0
	Price Escalation	0	1,278,033	2,364,361	0	0	0	272,712	504,517	0	422,711	782,015	0	582,610	1,077,828	0	0	0	0	0	0	0	0	0	0
	Physical Contingency	0	727,803	1,346,434	0	0	0	227,271	420,452	0	242,271	448,202	0	258,261	477,783	0	0	0	0	0	0	0	0	0	0
	<b>Total Cost</b>	0	<b>8,005,836</b>	<b>14,810,797</b>	0	0	0	<b>2,499,983</b>	<b>4,624,969</b>	0	<b>2,664,982</b>	<b>4,930,217</b>	0	<b>2,840,871</b>	<b>5,255,611</b>	0	0	0	0	0	0	0	0	0	0
3.C	Income Generation Activities	0	60,000,000	111,000,000	0	0	0	20,000,000	37,000,000	20,000,000	37,000,000	20,000,000	37,000,000	20,000,000	37,000,000	0	0	0	0	0	0	0	0	0	0
	Price Escalation	0	17,583,831	32,530,087	0	0	0	4,227,110	7,820,153	0	5,826,099	10,778,283	0	7,530,622	13,931,650	0	0	0	0	0	0	0	0	0	0
	Physical Contingency	0	7,758,383	14,353,009	0	0	0	2,422,711	4,482,015	0	2,582,610	4,777,828	0	2,753,062	5,093,165	0	0	0	0	0	0	0	0	0	0
	<b>Total Cost</b>	0	<b>85,342,214</b>	<b>157,883,096</b>	0	0	0	<b>26,649,821</b>	<b>49,302,169</b>	0	<b>28,408,709</b>	<b>52,556,112</b>	0	<b>30,283,684</b>	<b>56,024,815</b>	0	0	0	0	0	0	0	0	0	0
3.D	Community Development Infrastructure Development of JFMC*	0	210,000,000	388,500,000	0	0	0	70,000,000	129,500,000	70,000,000	129,500,000	70,000,000	129,500,000	70,000,000	129,500,000	0	0	0	0	0	0	0	0	0	0
	Price Escalation	0	61,543,408	113,855,305	0	0	0	14,794,885	27,370,537	0	20,391,347	37,723,992	0	26,357,176	48,760,776	0	0	0	0	0	0	0	0	0	0
	Physical Contingency	0	27,154,341	50,235,530	0	0	0	8,479,488	15,687,054	0	9,039,135	16,722,399	0	9,635,718	17,826,078	0	0	0	0	0	0	0	0	0	0
	<b>Total Cost</b>	0	<b>298,697,749</b>	<b>552,590,835</b>	0	0	0	<b>93,274,373</b>	<b>172,557,590</b>	0	<b>99,430,482</b>	<b>183,946,391</b>	0	<b>105,992,894</b>	<b>196,086,853</b>	0	0	0	0	0	0	0	0	0	0

\* Detail Breakdown will be prepare by Microplan

Items of Work	Unit	Unit Cost	Quantity	PHYSICAL TARGETS						FINANCIAL OUTLAYS (Rs)						Remarks									
				2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023		2024	2025	2026	2027	2028	2029	Total		
3.A Meeting	Unit	10,000	600	200	200	200	200	200	200	600	0	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	0	0	0	0	0	0	0	6,000,000	
3.B Microplan	Unit	10,000	600	200	200	200	200	200	200	600	0	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	0	0	0	0	0	0	0	0	6,000,000
3.C Income Generation Activities	Unit	100,000	600	200	200	200	200	200	200	600	0	0	20,000,000	20,000,000	20,000,000	20,000,000	20,000,000	0	0	0	0	0	0	0	60,000,000
3.D Community Infrastructure Deveik Unit	Unit	350,000	600	200	200	200	200	200	200	600	0	0	70,000,000	70,000,000	70,000,000	70,000,000	70,000,000	0	0	0	0	0	0	0	210,000,000
											0	4,000,000	94,000,000	94,000,000	94,000,000	94,000,000	90,000,000	0	0	0	0	0	0	0	282,000,000



**4.A Base line survey of the state's forest resources at the start of project**

Base Year: 2011

Price Escalation: 4.40%

Physical Contingency: 10.00%

2012	2013	2014	2015	2016	2017	2018	2019
0.0660	0.1364	0.2114	0.2913	0.3765	0.4674	0.5642	0.6675

SI No.	Component s	Year wise Financial Outlay (Rp)																										
		Total		2012		2013		2014		2015		2016		2017		2018		2019										
		FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	Total								
	Base line survey of the Forest growing stock, soil & water quality NITFP Working plan Circle, M.F.P. Div & Research Circle and soil nutrient in about 2 lac ha forest area covered under the Forest Protection Committee	0	6,000,000	0	0	0	3,000,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,000,000	5,550,000
	Price Escalation	0	2,411,473	0	0	0	409,068	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,002,405	3,704,450
	Physical Contingency	0	841,147	0	0	0	340,907	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	500,241	925,445
4.A1	Total Cost	0	9,252,621	0	0	0	3,749,975	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,502,646	10,179,895

Items of Work	Unit	Unit Cost	Quantity	PHYSICAL TARGETS												FINANCIAL OUTLAYS (RS)																						
				2012	2013	2014	2015	2016	2017	2018	2019	Total	2012	2013	2014	2015	2016	2017	2018	2019	Total																	
600FPC x 250 ha =150,000ha	ha	20	300,000	150,000																																		
				150,000																																		
				300,000																																		
				150,000																																		

SI No.	Component s	Year wise Financial Outlay (Rp)																											
		Total		2012		2013		2014		2015		2016		2017		2018		2019											
		FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	Total									
	Base line survey of the Socio-economic Conditions of the target population by NGO/Govt.Agencies over about 2 lacs ha forest area covered under the Forest Protection Committee	0	3,500,000	0	0	0	1,500,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,000,000	3,700,000
	Price Escalation	0	1,539,471	0	0	0	204,534	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,334,937	2,469,633	
	Physical Contingency	0	503,947	0	0	0	170,453	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	333,494	616,963	
4.A2	Total Cost	0	5,543,418	0	0	0	1,874,987	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,668,431	6,786,597	

Items of Work	Unit	Unit Cost	Quantity	PHYSICAL TARGETS												FINANCIAL OUTLAYS (RS)					Remarks																
				2012	2013	2014	2015	2016	2017	2018	2019	Total	2012	2013	2014	2015	2016	2017	2018	2019		Total															
600FPC x 250 ha =150,000ha	ha	10	150,000	150,000																																	
				150,000																																	
				150,000																																	
				150,000																																	

#### 4. Institutional Capacity Development

##### 4.B Training & Capacity Building of Project Implementing Officials, Field & Office Staffs and Other Stakeholders

Base Year: 2011  
 Price Escalation: 6.60%  
 Physical Contingency: 15.00%

2012	0.0660	2013	0.1364	2014	0.2114	2015	0.2913	2016	0.3765	2017	0.4674	2018	0.5642	2019	0.6675
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Sl.No.	Components	Year wise Financial Outlay in Rs lacs																										
		Total		2012		2013		2014		2015		2016		2017		2018		2019										
		FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	Total								
4.B1	Package-I for Senior Officers	0	16,500,000	0	0	0	5,500,000	0	5,500,000	0	10,175,000	0	10,175,000	0	5,500,000	0	10,175,000	0	0	0	0	0	0	0	0	0	0	
	Price Escalation	0	3,514,591	0	0	0	749,948	0	1,387,422	0	1,162,455	0	1,162,455	0	1,602,177	0	2,964,028	0	0	0	0	0	0	0	0	0	0	0
	Physical Contingency	0	2,001,459	0	0	0	624,996	0	1,156,242	0	666,246	0	1,232,554	0	710,218	0	1,315,903	0	0	0	0	0	0	0	0	0	0	0
	<b>Total Cost</b>	0	<b>22,016,050</b>	0	0	0	<b>6,874,954</b>	0	<b>12,718,665</b>	0	<b>7,328,701</b>	0	<b>13,558,096</b>	0	<b>7,812,395</b>	0	<b>14,452,931</b>	0	0	0	0	0	0	0	0	0	0	0
4.B2	Package-II for Middle and Junior level officers	0	6,250,000	0	0	0	2,250,000	0	2,250,000	0	4,162,500	0	4,162,500	0	1,750,000	0	3,237,500	0	0	0	0	0	0	0	0	0	0	0
	Price Escalation	0	1,292,135	0	0	0	306,801	0	567,582	0	475,550	0	879,767	0	509,794	0	945,100	0	0	0	0	0	0	0	0	0	0	0
	Physical Contingency	0	754,213	0	0	0	255,690	0	473,008	0	272,555	0	504,227	0	225,978	0	418,060	0	0	0	0	0	0	0	0	0	0	0
	<b>Total Cost</b>	0	<b>8,296,348</b>	0	0	0	<b>2,812,481</b>	0	<b>5,203,090</b>	0	<b>2,998,105</b>	0	<b>5,546,494</b>	0	<b>2,485,762</b>	0	<b>4,596,660</b>	0	0	0	0	0	0	0	0	0	0	0
4.B3	Package-III- For Junior level Officers and FRS	0	2,000,000	0	0	0	600,000	0	1,110,000	0	600,000	0	1,110,000	0	800,000	0	1,480,000	0	0	0	0	0	0	0	0	0	0	0
	Price Escalation	0	441,671	0	0	0	81,814	0	151,355	0	233,044	0	431,131	0	233,044	0	431,131	0	0	0	0	0	0	0	0	0	0	0
	Physical Contingency	0	244,167	0	0	0	68,181	0	126,136	0	72,681	0	134,460	0	103,304	0	191,113	0	0	0	0	0	0	0	0	0	0	0
	<b>Total Cost</b>	0	<b>2,685,838</b>	0	0	0	<b>749,995</b>	0	<b>1,387,491</b>	0	<b>799,495</b>	0	<b>1,479,065</b>	0	<b>1,136,348</b>	0	<b>2,102,244</b>	0	0	0	0	0	0	0	0	0	0	0
4.B4	Package-IV Frontline staff and FFC/EDC/SHG	0	36,500,000	0	0	0	17,500,000	0	32,375,000	0	17,500,000	0	32,375,000	0	1,500,000	0	2,775,000	0	0	0	0	0	0	0	0	0	0	0
	Price Escalation	0	6,521,999	0	0	0	2,386,230	0	4,414,526	0	3,698,721	0	6,842,634	0	436,957	0	808,371	0	0	0	0	0	0	0	0	0	0	0
	Physical Contingency	0	4,302,191	0	0	0	1,988,623	0	3,678,953	0	2,119,872	0	3,921,763	0	193,696	0	358,337	0	0	0	0	0	0	0	0	0	0	0
	<b>Total Cost</b>	0	<b>47,324,099</b>	0	0	0	<b>21,874,853</b>	0	<b>40,466,478</b>	0	<b>23,318,593</b>	0	<b>43,139,398</b>	0	<b>2,130,653</b>	0	<b>3,941,708</b>	0	0	0	0	0	0	0	0	0	0	0

Items of Work	Unit	Cost	Quantity	PHYSICAL TARGETS										FINANCIAL OUTLAYS (RS)										Remarks															
				2012	2013	2014	2015	2016	2017	2018	2019	Total	2012	2013	2014	2015	2016	2017	2018	2019	Total																		
4.B1.1 Training in Foreign institute	head	550,000	30	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	0	5,500,000	5,500,000	5,500,000	5,500,000	0	0	0	0	0	0	0	0	0	0	0	16,500,000	Carbon sequestration, resource survey and accounting, Biodiversity conservation and management, Climate change and adaptation, Timber certification. (10-15 days)	
4.B2.1 Long-term training	head	250,000	10	3	3	3	4															0	750,000	750,000	1,000,000	0	0	0	0	0	0	0	0	0	0	0	2,500,000	GIS-Remote sensing, Wildlife and biodiversity (60-90 days)	
4.B2.2 Short term	head	150,000	25	10	10	10	5															0	1,500,000	1,500,000	750,000	750,000	0	0	0	0	0	0	0	0	0	0	3,750,000	Soil and water conservation, Tropical Forest management, Project formulation & monitoring Wildlife biodiversity management (10-15 days)	
<b>Total of 4.B2</b>																						<b>0</b>	<b>2,250,000</b>	<b>2,250,000</b>	<b>1,750,000</b>	<b>1,750,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6,250,000</b>		
4.B3.1 Training in Indian institute	head	100,000	20	6	6	6	8															0	600,000	600,000	800,000	800,000	0	0	0	0	0	0	0	0	0	0	2,000,000	Designing of soil conservation structures, OPM & containerized nursery management, seed technology and certification (10-15 days)	
4.B4.1 Training of frontline staff, FPC, SHG in micro planning, PRA, Capacity Building	days	50,000	300	150	150																	0	7,500,000	7,500,000	7,500,000	0	0	0	0	0	0	0	0	0	0	0	15,000,000		
4.B4.2 Micro finance, Accounting, Capacity Building	days	50,000	400	200	200																	0	10,000,000	10,000,000	0	0	0	0	0	0	0	0	0	0	0	0	0	20,000,000	
4.B4.3 Mid-Project Capacity Building in Accounting and Micro Financing	days	30,000	50				50															0	0	0	1,500,000	1,500,000	0	0	0	0	0	0	0	0	0	0	1,500,000		
<b>Total of 4.B4</b>																						<b>0</b>	<b>17,500,000</b>	<b>17,500,000</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>36,500,000</b>	



### 4. Institutional Capacity Development 4.D Forestry Research Activities

Base Year: 2011  
Price Escalation: 6.40%  
Physical Contingency: 10.00%

2012	0.0660	2013	0.1364	2014	0.2114	2015	0.2913	2016	0.3765	2017	0.4674	2018	0.5642	2019	0.6675
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SI No.	Components	Year wise Financial Outlay in Rs lacs																
		2012		2013		2014		2015		2016		2017		2018		2019		
		LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	
4.D1	Research work in Tree Improvement programme (Tree breeding)	13,500,000	0	2,700,000	0	2,700,000	0	4,995,000	0	4,995,000	0	4,995,000	0	1,080,000	0	1,080,000	0	1,248,750
	Price Escalation	4,000,726	0	89,100	0	164,835	0	368,161	0	681,098	0	1,055,721	0	762,475	0	1,400,744	0	833,501
	Physical Contingency	1,750,073	0	143,910	0	266,234	0	567,610	0	1,174,326	0	322,503	0	278,748	0	439,774	0	208,225
	<b>Total Cost</b>	<b>19,250,799</b>	<b>0</b>	<b>3,547,978</b>	<b>0</b>	<b>3,547,978</b>	<b>0</b>	<b>6,665,793</b>	<b>0</b>	<b>6,665,793</b>	<b>0</b>	<b>8,657,224</b>	<b>0</b>	<b>12,872,958</b>	<b>0</b>	<b>17,748,522</b>	<b>0</b>	<b>22,990,476</b>
4.D2	Field Research on Nursery and Plantation techniques and plantation models to improve productivity	9,000,000	0	1,800,000	0	1,800,000	0	3,330,000	0	3,330,000	0	3,330,000	0	720,000	0	720,000	0	832,500
	Price Escalation	2,667,151	0	59,400	0	109,890	0	245,441	0	454,065	0	703,814	0	508,317	0	933,830	0	555,668
	Physical Contingency	1,166,715	0	95,940	0	177,489	0	204,544	0	378,407	0	403,381	0	185,832	0	293,163	0	138,817
	<b>Total Cost</b>	<b>12,833,866</b>	<b>0</b>	<b>2,495,379</b>	<b>0</b>	<b>2,495,379</b>	<b>0</b>	<b>4,162,472</b>	<b>0</b>	<b>4,162,472</b>	<b>0</b>	<b>4,437,195</b>	<b>0</b>	<b>1,743,250</b>	<b>0</b>	<b>1,743,250</b>	<b>0</b>	<b>1,526,984</b>

Items of Work	Unit	Unit Cost (Rs)	Quantity	PHYSICAL TARGETS										FINANCIAL OUTLAYS (RS)			Remarks						
				2012	2013	2014	2015	2016	2017	2018	2019	Total	2012	2013	2014	2015		2016	2017	2018	2019	Total	
4.D1	LS	13,500,000	1	0.1	0.2	0.2	0.1	0.15	0.12	0.08	0.05	1.0	1,350,000	2,700,000	2,700,000	1,350,000	2,025,000	2,025,000	1,620,000	1,080,000	675,000	13,500,000	Selection of CPI, Creation and Maintenance of Seed Stand, thinning of research plot to open out
4.D2.1	LS	4,500,000	1	0.1	0.2	0.2	0.1	0.15	0.12	0.08	0.05	1.0	450,000	900,000	900,000	450,000	675,000	675,000	540,000	360,000	225,000	4,500,000	
4.D2.2	LS	4,500,000	1	0.1	0.2	0.2	0.1	0.15	0.12	0.08	0.05	1.0	450,000	900,000	900,000	450,000	675,000	675,000	540,000	360,000	225,000	4,500,000	
<b>Total of 4.D2</b>													<b>900,000</b>	<b>1,800,000</b>	<b>1,800,000</b>	<b>900,000</b>	<b>1,350,000</b>	<b>1,350,000</b>	<b>1,080,000</b>	<b>720,000</b>	<b>450,000</b>	<b>9,000,000</b>	

## 4. Institutional Capacity Development

### 4.E Mid-term Monitoring & Evaluation including periodic biodiversity & community development studies

Base Year: 2011 Price Escalation: 6.60%  
Physical Contingency: 10.00%

2012	2013	2014	2015	2016	2017	2018	2019
0.0660	0.1364	0.2114	0.2913	0.3765	0.4674	0.5642	0.6675

SI No.	Components	Year wise Financial Outlay in Rs lacs																										
		Total		2012		2013		2014		2015		2016		2017		2018		2019										
		FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	Total								
	Mid-term Monitoring & Evaluation including periodic biodiversity & community development studies	0	8,000,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Price Escalation	0	3,202,951	0	0	0	0	0	0	0	466,088	862,263	0	1,054,287	1,950,431	0	1,682,576	3,112,765	0	0	0	0	0	0	0	0	0	0
	Physical Contingency	0	1,120,295	0	0	0	0	0	0	0	206,609	382,226	0	385,429	713,043	0	528,258	977,277	0	0	0	0	0	0	0	0	0	0
	Total Cost	0	12,323,246	0	0	0	0	0	0	0	2,272,697	4,204,489	0	4,239,716	7,843,474	0	5,810,833	10,750,042	0	0	0	0	0	0	0	0	0	0

Items of Work	Unit	Unit Cost (Rs)	Quantity	PHYSICAL TARGETS												FINANCIAL OUTLAYS (Rs)												Remarks								
				2012		2013		2014		2015		2016		2017		2018		2019		2012		2013		2014		2015			2016		2017		2018		2019	
				Total	LC	Total	LC	Total	LC	Total	LC	Total	LC	Total	LC	Total	LC	Total	LC	Total	LC	Total	LC	Total	LC	Total	LC		Total	LC	Total	LC	Total			
LS	8,000,000	1	0.2	0.35	0.45	1	0	0	0	0	1,600,000	2,800,000	360,000	0	0	8,000,000																				

### 4.F End-term Monitoring and Evaluation

Base Year: 2011 Price Escalation: 6.60%  
Physical Contingency: 10.00%

2012	2013	2014	2015	2016	2017	2018	2019
0.0660	0.1364	0.2114	0.2913	0.3765	0.4674	0.5642	0.6675

SI No.	Components	Year wise Financial Outlay in Rs lacs																																					
		Total		2012		2013		2014		2015		2016		2017		2018		2019																					
		FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	FC	LC	Total																			
	End-term Monitoring and Evaluation	0	4,000,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Price Escalation	0	2,669,874	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Physical Contingency	0	666,987	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Total Cost	0	7,336,861	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Items of Work	Unit	Unit Cost (Rs)	Quantity	PHYSICAL TARGETS												FINANCIAL OUTLAYS (Rs)												Remarks										
				2012		2013		2014		2015		2016		2017		2018		2019		2012		2013		2014		2015			2016		2017		2018		2019			
				Total	LC	Total	LC	Total	LC	Total	LC	Total	LC	Total	LC	Total	LC	Total	LC	Total	LC	Total	LC	Total	LC	Total	LC		Total	LC	Total	LC	Total					
LS	4,000,000	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Major Component 5 : Consulting Services

Yearly Fund Distribution of Consulting Services

Base Year: 2011  
 Price Escalation: 1.60%  
 Foreign: 1.60%  
 Local: 6.60%  
 Physical Contingency: 0.00%

	2011		2012		2013		2014		2015		2016		2017		2018		2019			
	FC	Total	FC	Total	FC	Total	FC	Total	FC	Total	FC	Total	FC	Total	FC	Total	FC	Total		
109,940,000	79,700,030	254,055,056	24,989,000	17,685,000	57,706,250	29,761,000	16,355,000	40,017,750	8,613,000	9,345,000	25,901,250	16,386,000	11,490,000	37,642,500	16,396,000	11,430,030	37,541,556	1,800,000	1,800,000	
6,076,213	21,418,040	45,699,586	399,824	1,167,210	2,559,163	959,971	2,230,102	5,085,660	420,074	1,975,117	4,074,041	1,074,142	3,347,094	7,262,266	1,354,331	4,303,762	9,316,290	841,288	1,556,883	
11,601,621	10,111,807	30,308,464	2,538,882	1,885,221	6,026,541	3,072,997	1,858,510	6,510,341	903,307	1,132,012	2,997,529	1,746,014	1,483,709	4,990,877	1,775,033	1,573,379	4,685,785	264,129	488,638	
<b>Total Cost</b>	<b>127,617,834</b>	<b>111,229,877</b>	<b>27,927,706</b>	<b>20,737,431</b>	<b>66,291,954</b>	<b>33,793,068</b>	<b>20,443,613</b>	<b>71,613,751</b>	<b>9,896,391</b>	<b>12,452,129</b>	<b>32,972,820</b>	<b>19,206,157</b>	<b>16,320,803</b>	<b>49,399,643</b>	<b>19,525,364</b>	<b>17,307,171</b>	<b>51,543,630</b>	<b>2,905,417</b>	<b>2,045,021</b>	<b>17,966,139</b>

ITEMS	2011		2012		2013		2014		2015		2016		2017		2018		2019			
	FC	Total	FC	Total	FC	Total	FC	Total	FC	Total	FC	Total	FC	Total	FC	Total	FC	Total		
Remuneration	103,640,000	103,640,000	23,319,000	23,319,000	15,546,000	15,546,000	12,955,000	12,955,000	8,400,000	8,400,000	840,000	840,000	840,000	840,000	840,000	840,000	840,000	840,000	840,000	
Professional A																				
Reimbursable Costs	6,300,000	6,300,000	1,670,000	1,670,000	840,000	840,000	840,000	840,000	840,000	840,000	840,000	840,000	840,000	840,000	840,000	840,000	840,000	840,000	840,000	840,000
Mobilization/Demobilization																				
Total of FC	109,940,000	109,940,000	24,989,000	24,989,000	16,386,000	16,386,000	13,795,000	13,795,000	9,240,000	9,240,000	1,680,000	1,680,000	1,680,000	1,680,000	1,680,000	1,680,000	1,680,000	1,680,000	1,680,000	
Remuneration	18,760,000	18,760,000	8,120,000	8,120,000	4,800,000	4,800,000	4,800,000	4,800,000	4,800,000	4,800,000	4,800,000	4,800,000	4,800,000	4,800,000	4,800,000	4,800,000	4,800,000	4,800,000	4,800,000	
Professional B																				
Supporting Staff	26,000,000	26,000,000	1,200,000	1,200,000	4,800,000	4,800,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	
Sub total	44,760,000	44,760,000	9,320,000	9,320,000	8,720,000	8,720,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	
Reimbursable Costs	9,360,030	9,360,030	2,955,000	2,955,000	1,170,000	1,170,000	1,110,030	1,110,030	1,110,030	1,110,030	1,110,030	1,110,030	1,110,030	1,110,030	1,110,030	1,110,030	1,110,030	1,110,030	1,110,030	
Subsistence Allowance	3,200,000	3,200,000	750,000	750,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	
Local Transportation Costs	12,560,030	12,560,030	3,705,000	3,705,000	865,000	865,000	1,770,000	1,770,030	1,770,030	1,770,030	1,770,030	1,770,030	1,770,030	1,770,030	1,770,030	1,770,030	1,770,030	1,770,030	1,770,030	
Sub total	22,390,000	22,390,000	4,660,000	4,660,000	2,820,000	2,820,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	3,240,000	
Miscellaneous Costs	79,700,030	79,700,030	17,665,000	17,665,000	16,355,000	16,355,000	11,430,030	11,430,030	11,430,030	11,430,030	11,430,030	11,430,030	11,430,030	11,430,030	11,430,030	11,430,030	11,430,030	11,430,030	11,430,030	
Total of Local																				

Annexure 2

List of Threatened Animals

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Annexure 2:  
List of Threatened and Endemic Species of Major Faunal Groups in West Bengal

No.	Scientific Name	Common Name	Main Region	Threatened		Endemic **	WPA Schedule
				IUCN*	ZSI**		
<b>Mammalia</b>							
1	<i>Anathana ellioti</i>	Madras Tree-shrew	SWWB	LC	(T)	+	
2	<i>Petaurista magnificus</i>	Hodgson's Giant Flying Squirrel	NWB	LC	(T)		II
3	<i>P. nobilis</i>	Bhutan Giant Flying Squirrel	NWB	NT	(T)		II
4	<i>Ratufa bicolor</i>	Malayan Giant Squirrel	NWB	NT	(T)		II
5	<i>Myotis annectans</i>	Hairy-faced Bat	NWB	LC	(T)		
6	<i>M. mystacinus</i>	Whiskered Myotis	NWB	LC	(T)		
7	<i>Rhinolophus trifoliatus</i>	Trefoil Horseshoe Bat	NWB	LC	(T)		
8	<i>Manis crassicaudata</i>	Thick-tailed Pangolin	EWB	NT	(T)		I
9	<i>Manis pentadactyla</i>	Chinese Pangolin	NWB	E	V		I
10	<i>Canis lupus</i>	Indian Wolf	SWWB	LC	V		I
11	<i>Cuon alpinus</i>	Indian Wild Dog (Dhole)	NWB, SWB	E	(T)		II
12	<i>Melurnus ursinus</i>	Sloth Bear	NWS, SWWB	V	(T)		I
13	<i>Ailurus fulgens</i>	Lesser Panda	NWB	V	(T)		I
14	<i>Lutra lutra</i>	Eurasian Otter	EWB	NT	(T)		II
15	<i>Aonyx cinerea</i>	Asian Small-clawed Otter	NWB, SWB	V	(T)		II
16	<i>Herpestes palustris</i>	Small Asian Mongoose	SWB	LC	(T)	++	IV
17	<i>Hyaena hyaena</i>	Striped Hyaena	SWWB, NWB	NT	(T)		III
18	<i>Prionailurus bengalensis</i>	Leopard Cat	EWB	LC	V		I
19	<i>P. viverrinus</i>	Fishing Cat	NWB, SWB	E	V		I
20	<i>Pardofelis marmorata</i>	Marble Cat	NWS	V	E		I
21	<i>Catapuma temmincki</i>	Golden Cat	NWS	NT	V		I
22	<i>Neofelis nebulosa</i>	Clouded Leopard	WWB	V	E		I
23	<i>Panthera pardus</i>	Leopard	EWB	NT	V		I
24	<i>P. uncia</i>	Snow Leopard	NWB	E	E		I
25	<i>Panthera tigris</i>	Tiger	NWB, SWB	E	V		I
26	<i>Elephas maximus</i>	Indian Elephant	NWB, SWWB	E	(T)		I
27	<i>Rhinoceros unicornis</i>	Indian Rhinoceros	NWB	V	E		I
28	<i>Bos frontalis(gaurus)</i>	Gaur	NWB	V	V		I
29	<i>Bubalus bulalis</i>	Indian Water Buffalo	NWB	E	E		I
30	<i>Antilope cervicapra</i>	Blackbuck	SWWB	NT	V		I
31	<i>Cervus duvaucelii</i>	Swamp Deer (Barasingha)	NWB	V	V		I
32	<i>Capricornis sumatraensis</i>	Sumatran Serow	NWB	V	V		I
33	<i>Naemorhaedus goral</i>	Himalayan Goral	NWB	NT	E		I
34	<i>Hemitragus jemlahicus</i>	Himalayan Tahr	NWB	NT	E		I
35	<i>Sus salvinus</i>	Pygmy Hog	NWB	CE	E		I
36	<i>Platanista gangetica</i>	Gangetic Dolphin	SWB, NWB	E	(T)		I
37	<i>Orcaella brevirostris</i>	Irawaddy Dolphin	SWB	V	(T)		I
<b>Aves</b>							
38	<i>Ardea goliath</i>	Goliath Heron	SWB	LC	(T)		III
39	<i>Ciconia ciconia</i>	White Stork	NWB,	LC	(T)		I



Annexure 2:  
List of Threatened and Endemic Species of Major Faunal Groups in West Bengal

No.	Scientific Name	Common Name	Main Region	Threatened		Endemic **	WPA Schedule
				IUCN*	ZSI**		
40	<i>Leptoptilos dubius</i>	Greater Adjutant	SWWB, SWB	E	(T)		III
41	<i>L. javanicus</i>	Lesser Adjutant	EWB	V	(T)		III
42	<i>Platalea leucorodia</i>	Eurasian Spoonbill	EWB	LC	(T)		I
43	<i>Dendrocygna bicolor</i>	Fulvous Whistling Duck	NWB, SWB	LC	(T)		III
44	<i>Galloperdix lunulata</i>	Painted Spurfowl	NWB	LC	(T)	+	III
45	<i>Threskiornis aethiopica</i>	White Ibis	SWB	LC	(T)		III
46	<i>Aviceda jerdoni</i>	Jerdon's Baza	NWB	LC	(T)		I
47	<i>A. leuphotes</i>	Black-crested Baza	NWB	LC	(T)		I
48	<i>Accipiter nisus</i>	Eurasian Sparrowhawk	NWB	LC	(T)		III
49	<i>A. virgatus</i>	Besra	NWB	LC	(T)		III
50	<i>Haliaeetus leucogaster</i>	White-bellied Sea Eagle	SWB	LC	(T)		I
51	<i>Sarcogyps calvus</i>	Red-headed Vulture	SWB	CE	(T)		III
52	<i>Gyps indicus</i>	Indian Vulture	SWWB	CE	(T)		I
53	<i>G. bengalensis</i>	White-rumped Vulture	EWB	CE	(T)		I
54	<i>Pandion haliaetus</i>	Osprey	SWWB, SWB	LC	(T)		I
55	<i>Falco peregrinus</i>	Peregrine Falcon	SWWB	LC	(T)		I
56	<i>Polyplectron bicalcaratum</i>		NWB	LC	(T)		III
57	<i>Ithaginis cruentus</i>	Blood Pheasant	NWB	LC	(T)		I
58	<i>Lophurus leucomelana</i>	Black-backed Pheasant	Kaleej NWB		(T)		I
59	<i>Pavo cristatus</i>	Indian Peafowl	NWB	LC	(T)		I
60	<i>Perdicula manipurensis</i>	Manipur Bush Quail	NWB	V		+	III
61	<i>Grus nigricollis</i>	Black-necked Crane	NWB	V	(T)		I
62	<i>Tyto alba</i>	Barn Owl	SWB	LC	(T)		III
63	<i>Aceros nipalensis</i>	Rufous-necked Hornbill	NWB	V	(T)		I
64	<i>Anthracoceros malabaricus</i>	Indian Lesser-pied Hornbill	NWB		(T)		I
<b>Reptiles</b>							
65	<i>Crocodylus porosus</i>	Estuarine Crocodile	SWB	LC	E		I
66	<i>Gavialis gangeticus</i>	Gharial		CE	E		I
67	<i>Chelonia mydas</i>	Green Turtle	SWB	E	(T)		
68	<i>Eretmochelys imbricata</i>	Hawksbill Turtle	SWB	CE	(T)		
69	<i>Lepidochelys olivacea</i>	Olive Ridley Sea Turtle	SWB	V	E		I
70	<i>Batagur buska</i>	Batagur River Terrapin	SWB	CE	E		I
71	<i>Kachuga tecta</i>	Indian Tent Turtle		LC	V		I
72	<i>Lissemys punctata</i>	Indian Flap-shelled Turtle	NWB, SWB	LC	V		I
73	<i>Aspideretes gangeticus</i>	Indian Softshell Turtle		V	V		I
74	<i>A. hurum</i>	Indian Peacock Softshell Turtle		V	V		I
75	<i>Varanus bengalensis</i>	Indian Monitor	EWB	LC	E		II
76	<i>V. flavescens</i>	Yellow Monitor	SWB	LC	E		I
77	<i>V. salvator</i>	Water Monitor		LC	E		II
78	<i>Sitana ponticeriana</i>	Fan-throated Lizard	EWB	LC		+	

Annexure 2:  
List of Threatened and Endemic Species of Major Faunal Groups in West Bengal

No.	Scientific Name	Common Name	Main Region	Threatened		Endemic **	WPA Schedule
				IUCN*	ZSI**		
79	<i>Psammophilus blanfordanus</i>	Blandford's Rock Agama	SWWB, SWB	LC		+	
80	<i>Japalura variegata</i>	Variegated Mountain Lizard	NWB	LC		+	
81	<i>Python molurus</i>	Indian Rock Python	NWB	NT	E		IV
82	<i>P. reticulatus</i>	Reticulated Python	NWB		E		I
83	<i>Elachistodon westermanni</i>	Indian Egg-eating Snake	NWB	LC	E		I
84	<i>Ptyas mucosus</i>	Western Rad Snake	EWB		(T)		II
85	<i>Oligodon juglandifer</i>	Walnut Kukri Snake	NWB	V		++	IV
86	<i>Naja naja</i>	Monocled Cobra	EWB	LC	(T)		II
<b>Amphibia</b>							
87	<i>Bufo abatus</i>	Himalayan Toad	NWB	LC		++	
88	<i>Megophrys robusta</i>		NWB			++	
89	<i>Rana senchalensis</i>		NWB	LC		++	IV
90	<i>R. annandalii</i>	Annandale's Frog	NWB			++	
91	<i>Rhacophorus jerdonii</i>		NWB			++	
92	<i>R. dubius</i>		NWB			++	
93	<i>R. tuberculatus</i>		NWB	DD		+	
94	<i>Limnonectes mawphlangensis</i>		NWB			+	
95	<i>Ichthyophis sikkimensis</i>		NWB	DD		+	
96	<i>Trilotriton verrucosus</i>	Himalayan Newt	EWB	LC	E		II

Note:

Main Region: (EWB) Entire WB, (SWB) Southern WB, (NWB) Northern WB, (SWWB) South-west WB.

IUCN Category: (CE) Critically Endangered, (E) Endangered, (V) Vulnerable, (NT) Near Threatened, (LC) Least Concern, (DD) Data Deficient

ZSI Category: (E) Endangered, (V) Vulnerable, (T) Threatened without categories.

Endemic Species: (+) endemic to India, (++) endemic to exclusively to West Bengal.

WPA (Wildlife Protection Act):

Schedule I animals are more threatened than Schedule II animals and so on. Punishment of offences for Schedule I and Part II of Schedule II is much more severe than those for Schedule III, IV and V.

Source: \* IUCN (2011) IUCN Red List of Threatened Species, Ver. 2011.1. <http://www.iucnredlist.org>

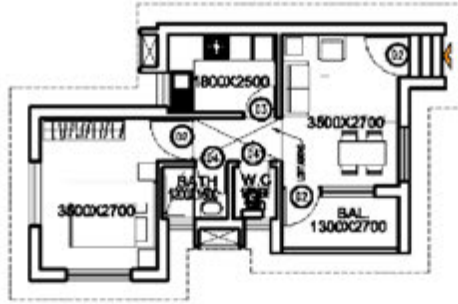
\*\* ZSI (2005) Status of Biodiversity of West Bengal. [http://zsienvs.nic.in/biodiversity\\_wb/WB.htm](http://zsienvs.nic.in/biodiversity_wb/WB.htm)

The Wildlife Protection Act, 1972 (Act No. 53 of 1972).

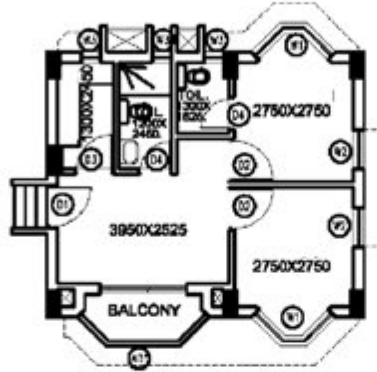
Annexure 3

Constructions Drawings

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BEAT OFFICE COMPLEX (1) (375 SFT)



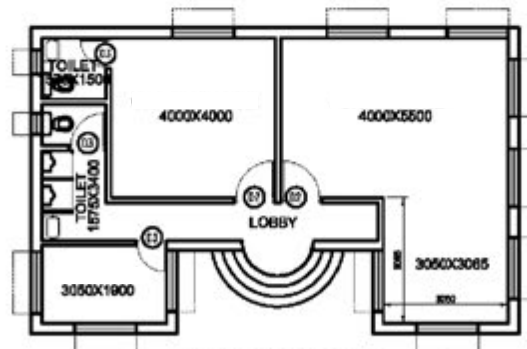
BEAT OFFICE COMPLEX (2) (500 SFT.)

**SCHEDULE OF FINISH - BEAT OFFICE COMPLEX (1)&(2)**

R C C FRAME STRUCTURE, R C C ROOF, WALL-250thk./125thk./75thk. BRICK WORK

**SCHEDULE OF FINISH:-**

- FLOOR - 25mm thk. I.P.S FLOOR
- TOILET - VITRIFIED TILES
- WALL - SAND CEMENT PLASTER & COLOUR  
WASH WITH LIME/DISTEMPER(GROUP-C)
- DOOR - FLUSH DOOR
- WINDOW - STEEL WINDOW



RANGER OFFICES' COMPLEX (650 SFT.)

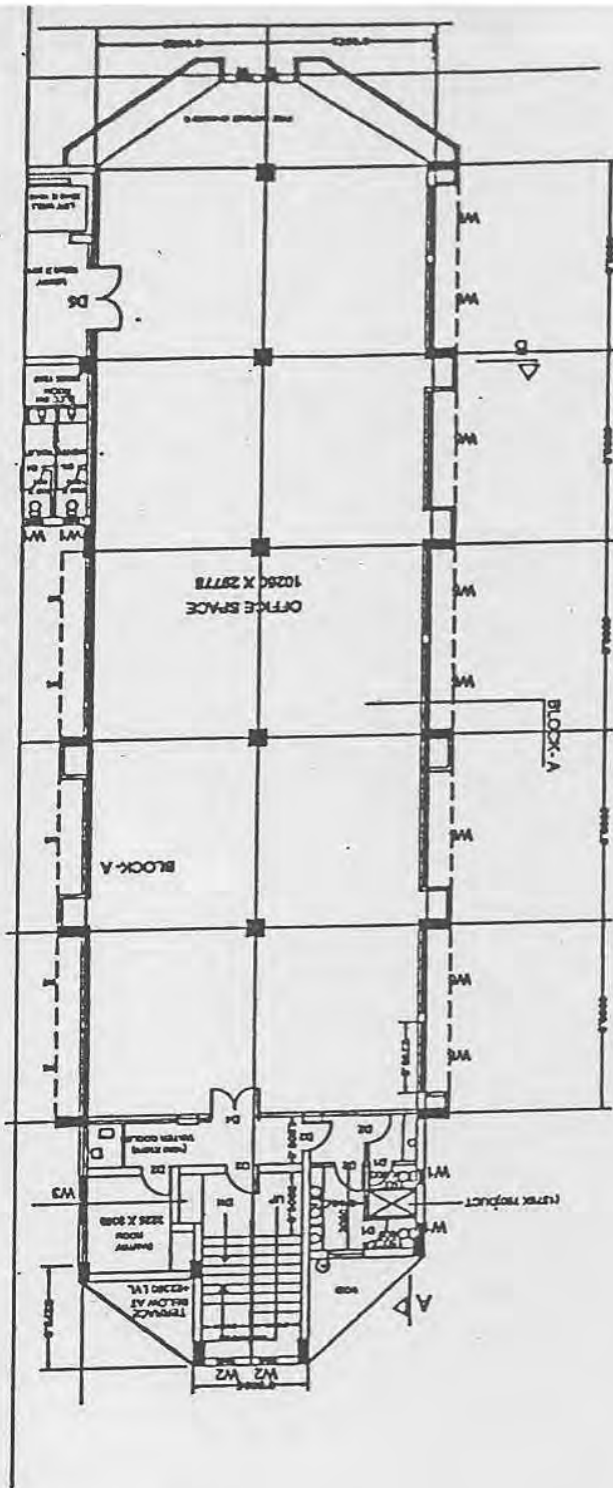
**SCHEDULE OF FINISH - R.O'S COMPLEX**

R C C FRAME STRUCTURE, R C C ROOF, WALL-250thk./125thk./75thk. BRICK WORK

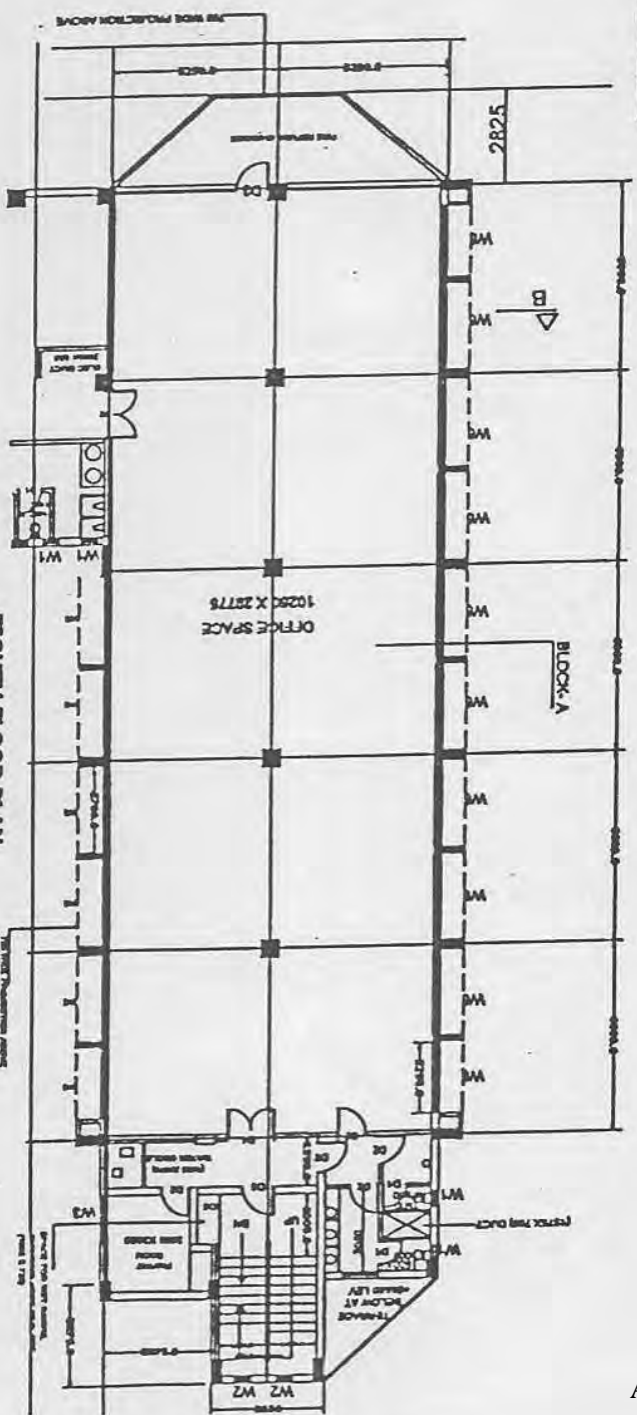
**SCHEDULE OF FINISH:-**

- FLOOR - VITRIFIED TILES
- TOILET - VITRIFIED TILES
- WALL - SAND CEMENT PLASTER & DISTEMPER
- DOOR - FLUSH DOOR
- WINDOW - STEEL WINDOW

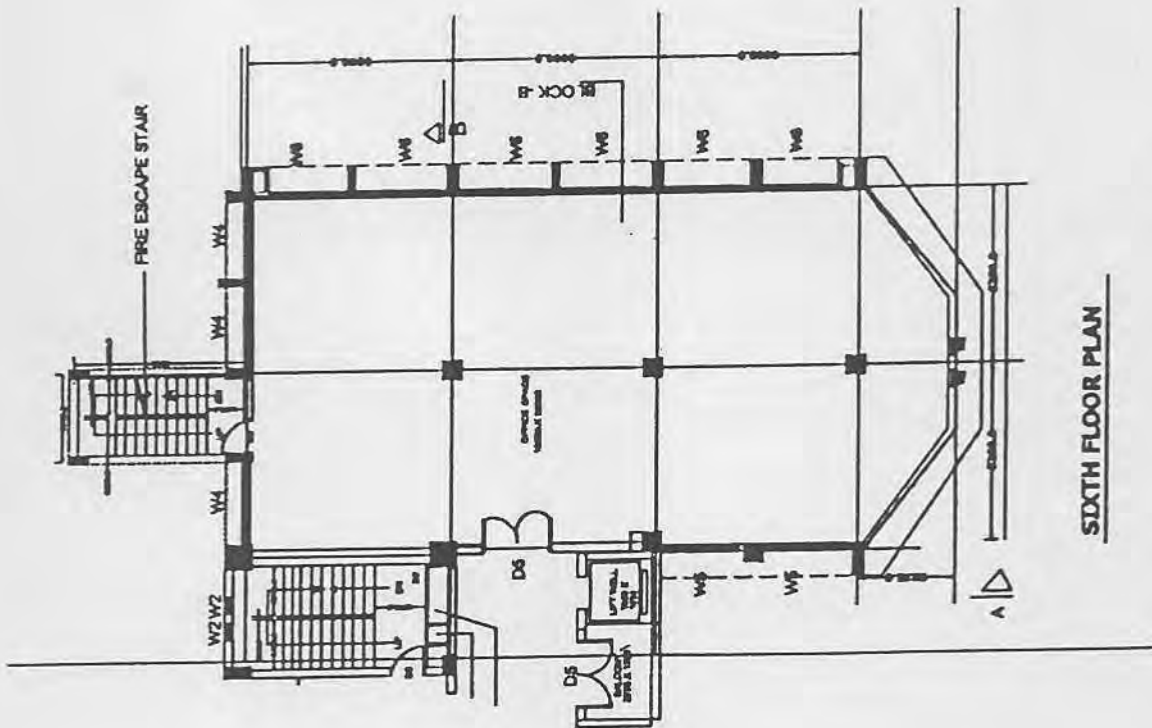
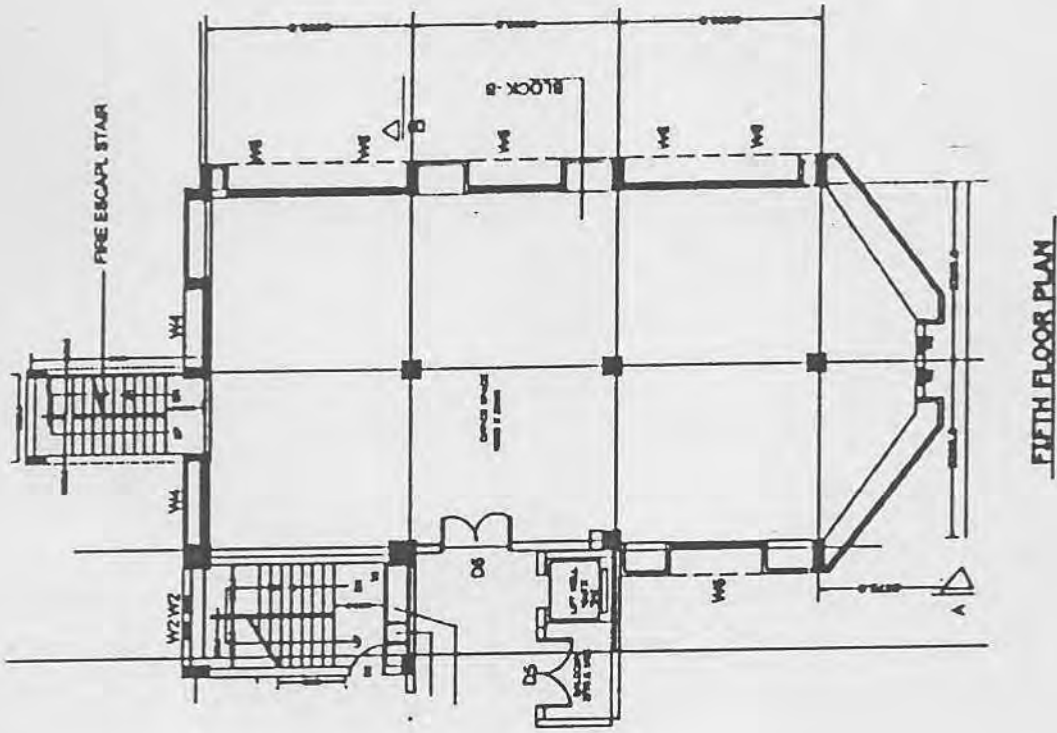
PROPOSED EXTENTION DRAWING OF SEVENTH & EIGHTH FLOOR BLOCK A OF ARANYA BHAVAN



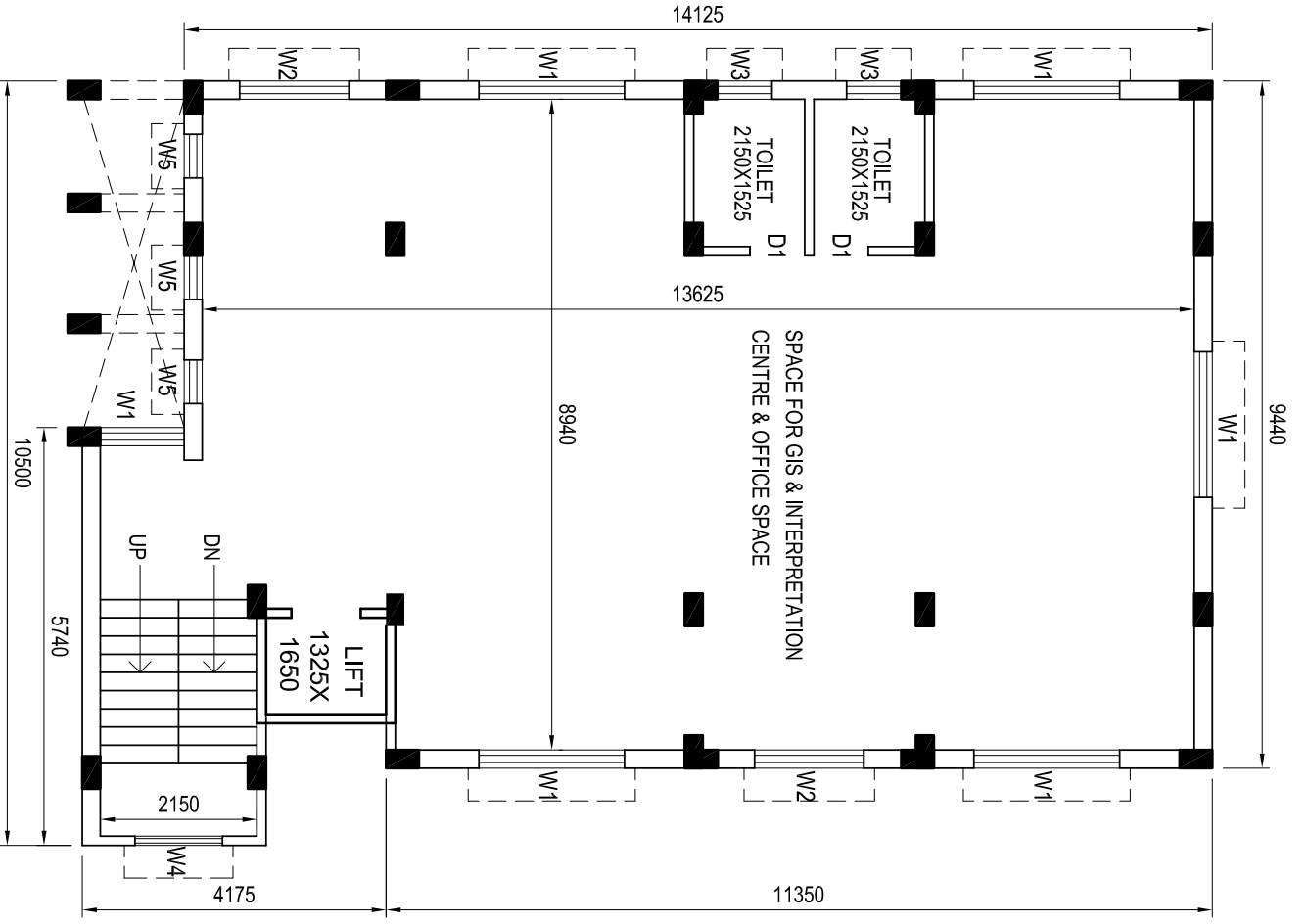
SEVENTH FLOOR PLAN



EIGHTH FLOOR PLAN

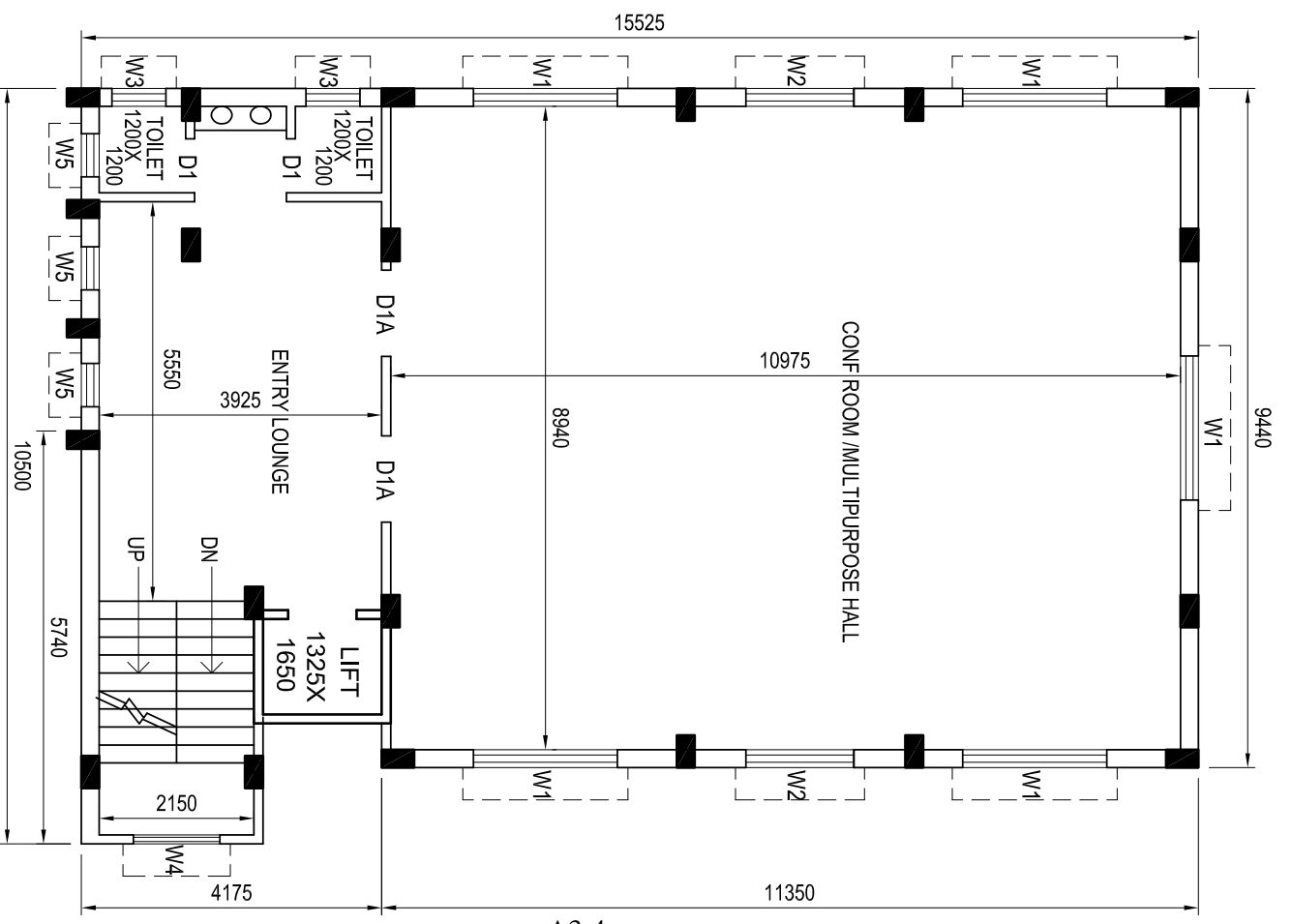


PROPOSED EXTENSION DRAWING OF  
FIFTH & SIXTH FLOOR BLOCK B  
OF ARANYA BHAVAN



# 1ST. & 2ND. FLOOR PLAN

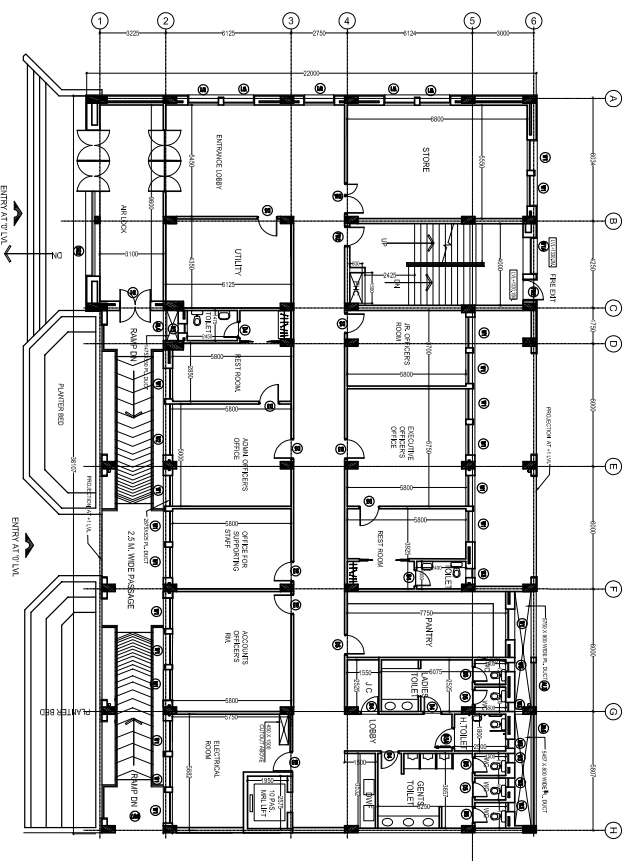
SCALE-1:100



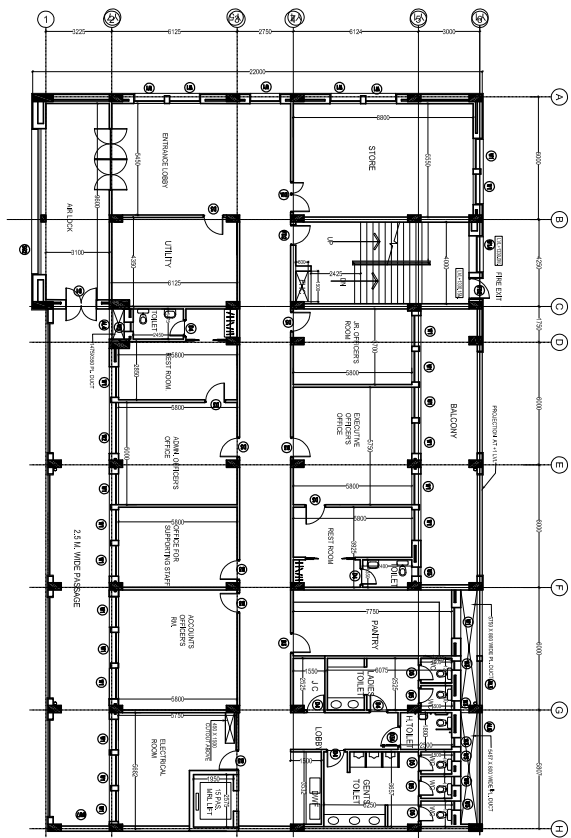
# 3RD. FLOOR PLAN

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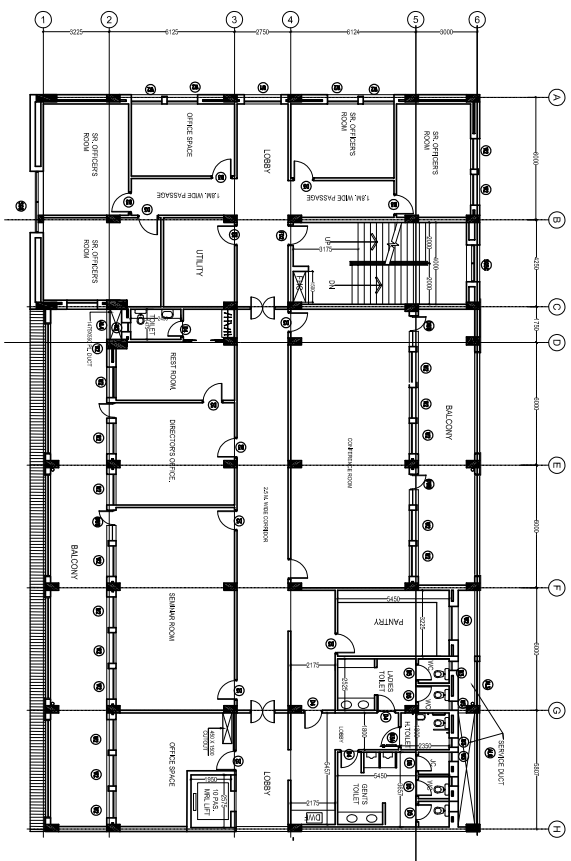
SILIGURI FOREST OFFICE (30000 SFT)



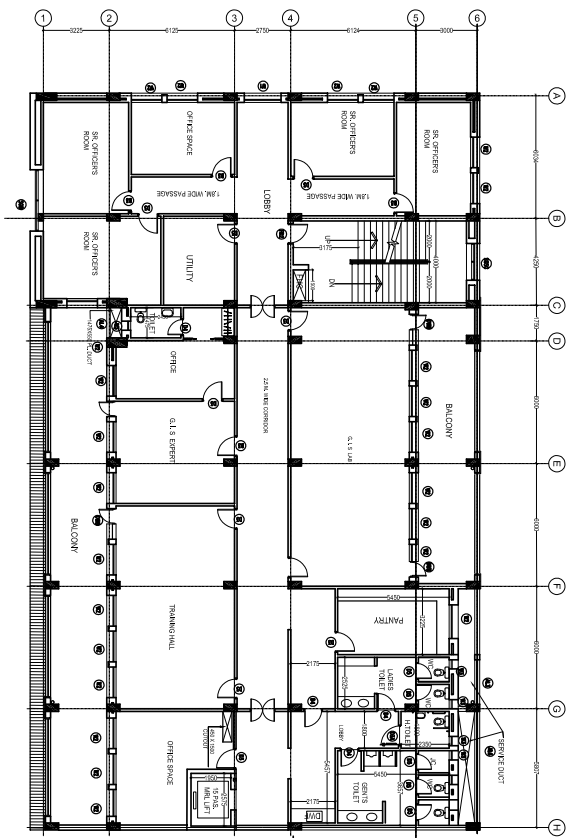
GROUND FLOOR PLAN



SECOND FLOOR PLAN

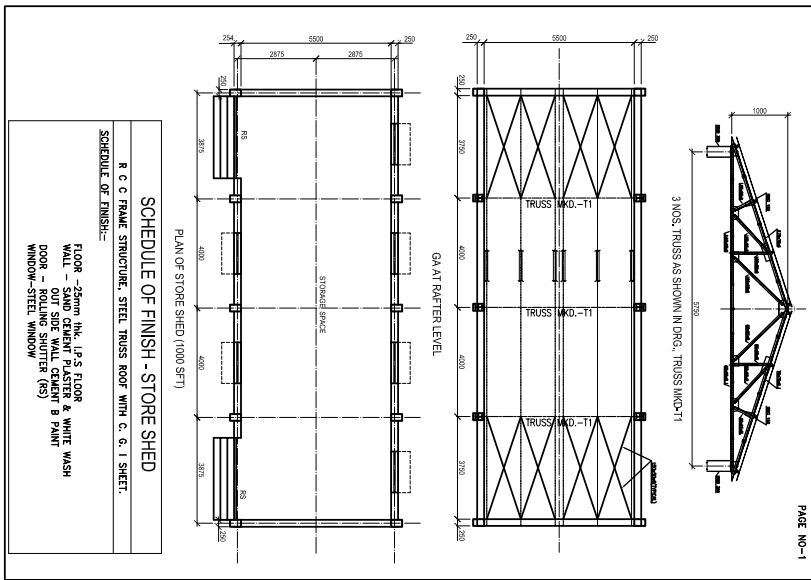


FIRST FLOOR PLAN

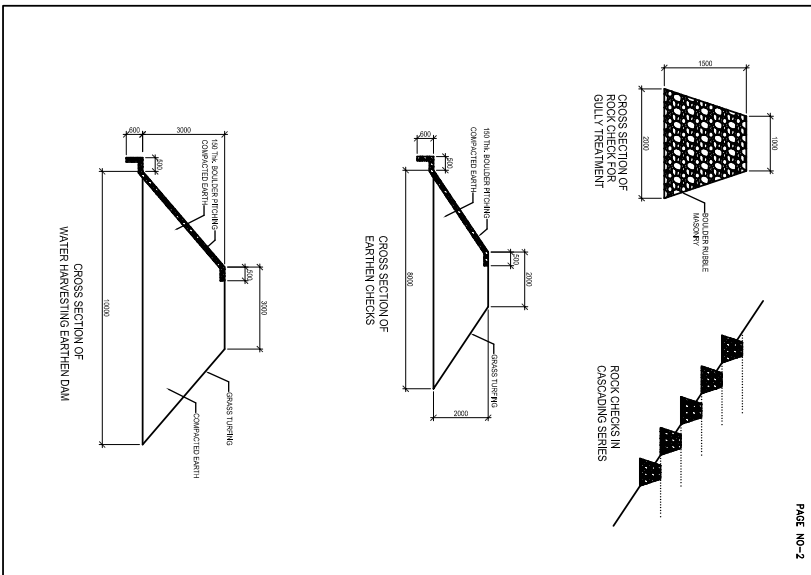


THIRD FLOOR PLAN

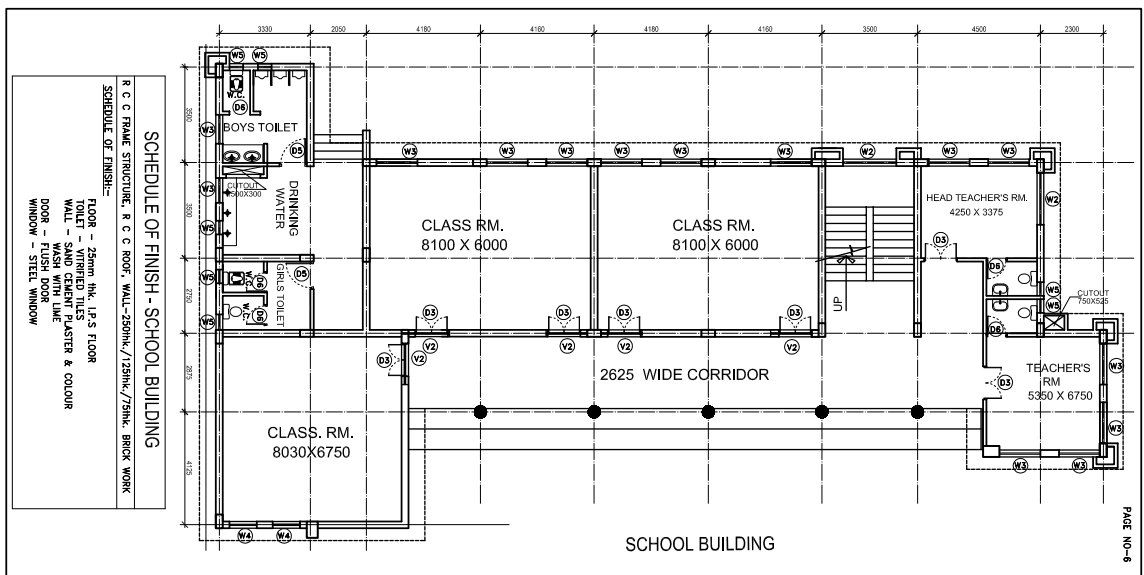




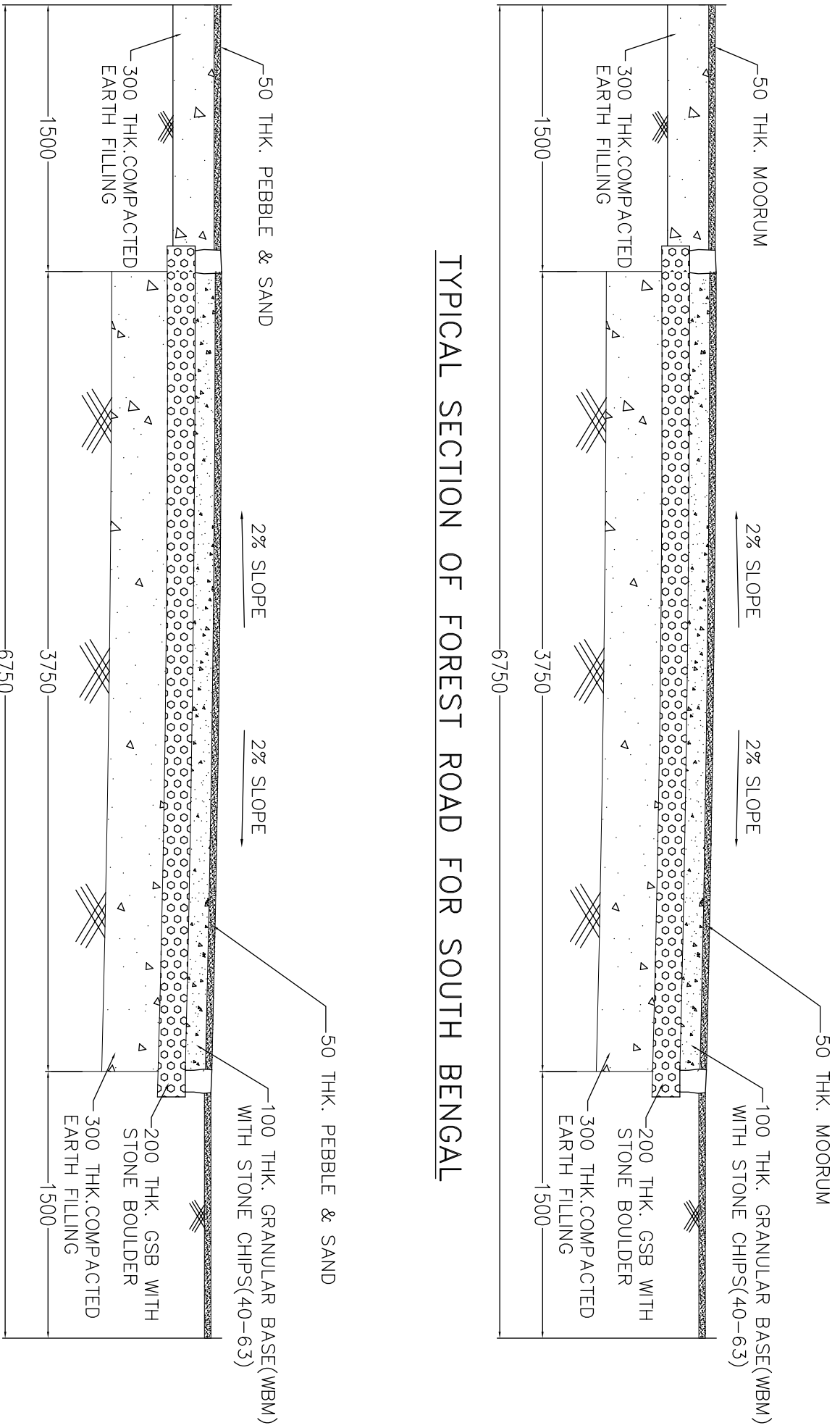
PAGE NO-1



PAGE NO-2



PAGE NO-6



TYPICAL SECTION OF FOREST ROAD FOR SOUTH BENGAL

TYPICAL SECTION OF FOREST ROAD FOR NORTH BENGAL

Annexure 4

Calculation of Carbon  
Sequestration

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# Annexure 4 Calculation Tables for Carbon Sequestration

Table 1 Carbon Sequestration of Component 1 A1-A6 (CO<sub>2</sub> equivalent; biomass above and below ground)

Year	A1		A2				A3				A4		A5				A6			
	Target	450 ha	Target		3430 ha		Target		6000 ha		Target	7500 ha	Target		1050 ha		Target		540 ha	
	Eucalyptus		S. robusta		Associates		S. robusta		Associates		S. robusta		Misc. (T.grandis)		Misc.		S. robusta		Misc.	
	Area (ha)	Total (tCO <sub>2</sub> e)	Area (ha)	Total (tCO <sub>2</sub> e)	Area (ha)	Total (tCO <sub>2</sub> e)	Area (ha)	Total (tCO <sub>2</sub> e)	Area (ha)	Total (tCO <sub>2</sub> e)	Area (ha)	Total (tCO <sub>2</sub> e)	Area (ha)	Total (tCO <sub>2</sub> e)	Area (ha)	Total (tCO <sub>2</sub> e)	Area (ha)	Total (tCO <sub>2</sub> e)	Area (ha)	Total (tCO <sub>2</sub> e)
0	450	0	3,430	0	3,430	0	6,000	0	6,000	0	7,500	0	1,050	0	1,050	0	540	0	540	0
1	450	12	3,430	22	3,430	13,640	6,000	39	6,000	23,860	7,500	96	1,050	6	1,050	4,175	540	8	540	2,147
2	450	632	3,430	20	3,430	27,250	6,000	35	6,000	47,668	7,500	88	1,050	15	1,050	8,342	540	7	540	4,290
3	450	1,008	3,430	21	3,430	40,890	6,000	37	6,000	71,528	7,500	92	1,050	24	1,050	12,517	540	6	540	6,437
4	450	1,904	3,430	25	3,430	54,500	6,000	43	6,000	95,336	7,500	108	1,050	30	1,050	16,684	540	5	540	8,580
5	450	2,909	3,430	15	3,430	38,607	6,000	27	6,000	67,534	7,500	135	1,050	19	1,050	11,818	540	2	540	6,078
6	450	3,971	3,430	20	3,430	46,325	6,000	35	6,000	81,035	7,500	173	1,050	24	1,050	14,181	540	2	540	7,293
7	450	5,062	3,430	25	3,430	54,044	6,000	44	6,000	94,537	7,500	176	1,050	27	1,050	16,544	540	2	540	8,508
8	450	6,167	3,430	32	3,430	61,777	6,000	55	6,000	108,064	7,500	222	1,050	31	1,050	18,911	540	2	540	9,726
9			3,430	39	3,430	69,495	6,000	68	6,000	121,566	7,500	274	1,050	36	1,050	21,274	540	2	540	10,941
10			3,430	48	3,430	77,214	6,000	83	6,000	135,067	7,500	333	1,050	40	1,050	23,637	540	2	540	12,156
11			3,430	57	3,430	78,716	6,000	99	6,000	137,696	7,500	397	1,050	45	1,050	24,097	540	2	540	12,393
12			3,430	67	3,430	85,875	6,000	117	6,000	150,218	7,500	468	1,050	49	1,050	26,288	540	2	540	13,520
13			3,430	78	3,430	93,033	6,000	136	6,000	162,741	7,500	543	1,050	54	1,050	28,480	540	2	540	14,647
14			3,430	89	3,430	100,177	6,000	156	6,000	175,237	7,500	623	1,050	58	1,050	30,667	540	2	540	15,771
15			3,430	101	3,430	53,668	6,000	88	6,000	93,880	7,500	707	1,050	31	1,050	16,429	540	1	540	8,449
16			3,430	57	3,430	57,247	6,000	99	6,000	100,141			1,050	33	1,050	17,525	540	2	540	9,013
17			3,430	63	3,430	60,827	6,000	111	6,000	106,402			1,050	35	1,050	18,620	540	2	540	9,576
18			3,430	70	3,430	64,406	6,000	123	6,000	112,664			1,050	37	1,050	19,716	540	2	540	10,140
19			3,430	77	3,430	67,985	6,000	135	6,000	118,925			1,050	39	1,050	20,812	540	2	540	10,703
20			3,430	84	3,430	71,557	6,000	147	6,000	125,173			1,050	42	1,050	21,905	540	3	540	11,266
21			3,430	91	3,430	75,137	6,000	160	6,000	131,434			1,050	43	1,050	23,001	540	3	540	11,829
22			3,430	99	3,430	78,716	6,000	173	6,000	137,696			1,050	45	1,050	24,097	540	4	540	12,393
23			3,430	106	3,430	82,295	6,000	186	6,000	143,957			1,050	46	1,050	25,192	540	4	540	12,956
24			3,430	114	3,430	85,875	6,000	199	6,000	150,218			1,050	48	1,050	26,288	540	4	540	13,520
25			3,430	61	3,430	89,447	6,000	212	6,000	156,466			1,050	50	1,050	27,382	540	5	540	14,082
26			3,430	64	3,430	93,026	6,000	225	6,000	162,728			1,050	51	1,050	28,477	540	5	540	14,645
27			3,430	68	3,430	96,605	6,000	238	6,000	168,989			1,050	53	1,050	29,573	540	6	540	15,209
28			3,430	72	3,430	100,185	6,000	251	6,000	175,250			1,050	54	1,050	30,669	540	6	540	15,773
29			3,430	76	3,430	103,764	6,000	264	6,000	181,511			1,050	56	1,050	31,764	540	7	540	16,336
30			3,430	79	3,430	107,343	6,000	139	6,000	187,773			1,050	29	1,050	32,860	540	4	540	16,900
31			3,430	83	3,430	107,343	6,000	145	6,000	187,773			1,050	29	1,050	32,860	540	4	540	16,900
32			3,430	86	3,430	107,343	6,000	151	6,000	187,773			1,050	30	1,050	32,860	540	4	540	16,900
33			3,430	90	3,430	107,343	6,000	157	6,000	187,773			1,050	30	1,050	32,860	540	5	540	16,900
34			3,430	93	3,430	107,343	6,000	164	6,000	187,773			1,050	30	1,050	32,860	540	5	540	16,900
35			3,430	97	3,430	107,343	6,000	169	6,000	187,773			1,050	31	1,050	32,860	540	5	540	16,900
36			3,430	100	3,430	107,343	6,000	175	6,000	187,773			1,050	32	1,050	32,860	540	5	540	16,900
37			3,430	103	3,430	107,343	6,000	181	6,000	187,773			1,050	32	1,050	32,860	540	6	540	16,900
38			3,430	106	3,430	107,343	6,000	186	6,000	187,773			1,050	33	1,050	32,860	540	6	540	16,900
39			3,430	109	3,430	107,343	6,000	191	6,000	187,773			1,050	33	1,050	32,860	540	6	540	16,900
40			3,430	112	3,430	107,343	6,000	196	6,000	187,773			1,050	34	1,050	32,860	540	7	540	16,900
41							6,000	201	6,000	187,773			1,050	35	1,050	32,860	540	7	540	16,900
42							6,000	206	6,000	187,773			1,050	35	1,050	32,860	540	7	540	16,900
43							6,000	210	6,000	187,773			1,050	36	1,050	32,860	540	8	540	16,900
44							6,000	214	6,000	187,773			1,050	36	1,050	32,860	540	8	540	16,900
45							6,000	218	6,000	187,773			1,050	37	1,050	32,860	540	9	540	16,900
46							6,000	221	6,000	187,773			1,050	38	1,050	32,860	540	9	540	16,900
47							6,000	225	6,000	187,773			1,050	38	1,050	32,860	540	9	540	16,900
48							6,000	228	6,000	187,773			1,050	39	1,050	32,860	540	10	540	16,900
49							6,000	230	6,000	187,773			1,050	40	1,050	32,860	540	10	540	16,900
50							6,000	233	6,000	187,773			1,050	41	1,050	32,860	540	10	540	16,900
51													1,050	41	1,050	32,860	540	11	540	16,900
52													1,050	42	1,050	32,860	540	11	540	16,900
53													1,050	42	1,050	32,860	540	11	540	16,900
54													1,050	42	1,050	32,860	540	12	540	16,900
55													1,050	43	1,050	32,860	540	12	540	16,900
56													1,050	43	1,050	32,860	540	13	540	16,900
57													1,050	43	1,050	32,860	540	13	540	16,900
58													1,050	44	1,050	32,860	540	13	540	16,900
59													1,050	44	1,050	32,860	540	14	540	16,900
60													1,050	45	1,050	32,860	540	14	540	16,900

Note) A1: Planting with High Yielding Eucalyptus clones in South West Bengal  
A2: Plantation of Sal & Associate Species in South Bengal  
A3: Quick growing & small timber spp. plantation in South Bengal  
A4: Rehabilitation of Degraded Sal Coppice of South West Bengal  
A5: Economic Plantation in North Bengal  
A6: Plantation of Sal & associate Plantation in North Bengal

Table 2 Carbon Sequestration of Component 1 B1-2 (CO2 equivalent; biomass above and below ground)

Year	B1		B2	
	Strip -Eucalyptus		Block-Eucalysptus	
	Target	1400 ha	Target	1400 ha
	Area (ha)	Total (tCO2e)	Area (ha)	Total (tCO2e)
0	1,400	0	1,400	0
1	1,400	38	1,400	38
2	1,400	1,968	1,400	1,968
3	1,400	3,136	1,400	3,136
4	1,400	5,924	1,400	5,924
5	1,400	9,049	1,400	9,049
6	1,400	12,353	1,400	12,353
7	1,400	15,750	1,400	15,750
8	1,400	19,188	1,400	19,188

Note) B1: Strip Plantation  
B2: Block Plantation

Estimated Amount of Carbon Removals in different species

*Eucalytus* hybrid

The carbon removal of *Eucalytus* hybrid is shown in below table.

Table 3 Estimated carbon amount of *Eucalytus* hybrid

1.Age	2.DBH(cm)	3.H(m)	4.Biomass above ground (AGB) for each tree (kg/tree)	5.Number of trees/ha	6.Total Biomass (AGB+BGB) (kg/ha)	7.Total carbon stock (tCO <sub>2</sub> e)
0	0	0	0.00	1600	0	0.00
1	0.63	1.32	0.01	1600	15	0.03
2	2.55	4.16	0.33	1600	767	1.41
3	3.85	5.82	1.05	800	1222	2.24
4	4.83	7.00	1.99	800	2308	4.23
5	5.61	7.91	3.04	800	3526	6.46
6	6.27	8.65	4.15	800	4813	8.82
7	6.83	9.28	5.29	800	6136	11.25

*Shorea robusta* in Southern part (for Component of A2)

The carbon removal of *Shorea robusta* in Southern part is shown in below table.

Table 4 Estimated carbon amount of *Shorea robusta* in Southern part (for Component of A2/A3)

1.Age	2.Girth(cm)	3.DBH(cm)	4.Stem volume for each tree (m <sup>3</sup> )	5.Number of trees/ha	6.Stem volume(m <sup>3</sup> /ha)	7.Total Biomass(AGB+BGB) (kg/ha)	8.Total carbon stock (tCO <sub>2</sub> e)
0	0	0	0	800	0	0	0
1	9.99	1.59	0.001	800	1.01	3.51	0.006
2	12.16	1.94	0.001	800	0.92	3.20	0.006
3	14.30	2.28	0.001	800	0.96	3.35	0.006
4	16.40	2.61	0.001	800	1.13	3.93	0.007
5	18.46	2.94	0.002	400	0.71	2.46	0.005
6	20.48	3.26	0.002	400	0.90	3.14	0.006
7	22.46	3.57	0.003	400	1.15	4.00	0.007
8	24.40	3.88	0.004	400	1.45	5.03	0.009
9	26.30	4.19	0.004	400	1.79	6.22	0.011
10	28.17	4.48	0.005	400	2.17	7.56	0.014
11	29.99	4.77	0.006	400	2.60	9.03	0.017
12	31.78	5.06	0.008	400	3.06	10.63	0.019
13	33.53	5.34	0.009	400	3.55	12.34	0.023
14	35.24	5.61	0.010	400	4.07	14.16	0.026
15	36.91	5.87	0.012	400	4.62	16.07	0.029
16	38.54	6.13	0.013	200	2.60	9.04	0.017
17	40.13	6.39	0.014	200	2.90	10.08	0.018
18	41.69	6.63	0.016	200	3.21	11.15	0.020
19	43.20	6.88	0.018	200	3.53	12.25	0.022
20	44.68	7.11	0.019	200	3.85	13.38	0.025
21	46.12	7.34	0.021	200	4.18	14.53	0.027
22	47.52	7.56	0.023	200	4.52	15.70	0.029

1.Age	2.Girth(cm)	3.DBH(cm)	4.Stem volume for each tree (m <sup>3</sup> )	5.Number of trees/ha	6.Stem volume(m <sup>3</sup> /ha)	7.Total Biomass(AGB+BGB) (kg/ha)	8.Total carbon stock (tCO <sub>2</sub> e)
23	48.88	7.78	0.024	200	4.86	16.88	0.031
24	50.20	7.99	0.026	200	5.20	18.07	0.033
25	51.48	8.19	0.028	100	2.77	9.63	0.018
26	52.72	8.39	0.029	100	2.94	10.23	0.019
27	53.93	8.58	0.031	100	3.12	10.83	0.020
28	55.10	8.77	0.033	100	3.29	11.43	0.021
29	56.22	8.95	0.035	100	3.46	12.02	0.022
30	57.31	9.12	0.036	100	3.63	12.61	0.023
31	58.36	9.29	0.038	100	3.79	13.18	0.024
32	59.38	9.45	0.040	100	3.96	13.76	0.025
33	60.35	9.60	0.041	100	4.12	14.32	0.026
34	61.28	9.75	0.043	100	4.28	14.86	0.027
35	62.18	9.90	0.044	100	4.43	15.40	0.028
36	63.03	10.03	0.046	100	4.58	15.92	0.029
37	63.85	10.16	0.047	100	4.73	16.43	0.030
38	64.63	10.29	0.049	100	4.87	16.92	0.031
39	65.37	10.40	0.050	100	5.00	17.39	0.032
40	66.07	10.52	0.051	100	5.13	17.84	0.033
41	66.73	10.62	0.053	100	5.26	18.28	0.034
42	67.36	10.72	0.054	100	5.38	18.69	0.034
43	67.94	10.81	0.055	100	5.49	19.08	0.035
44	68.49	10.90	0.056	100	5.60	19.45	0.036
45	69.00	10.98	0.057	100	5.70	19.80	0.036
46	69.46	11.06	0.058	100	5.79	20.13	0.037
47	69.89	11.12	0.059	100	5.88	20.42	0.037
48	70.29	11.19	0.060	100	5.95	20.70	0.038
49	70.64	11.24	0.060	100	6.03	20.95	0.038
50	70.95	11.29	0.061	100	6.09	21.17	0.039
51	71.23	11.34	0.061	100	6.15	21.36	0.039
52	71.46	11.37	0.062	100	6.19	21.53	0.039
53	71.66	11.40	0.062	100	6.24	21.67	0.040
54	71.82	11.43	0.063	100	6.27	21.79	0.040
55	71.94	11.45	0.063	100	6.29	21.88	0.040
56	72.02	11.46	0.063	100	6.31	21.93	0.040
57	72.06	11.47	0.063	100	6.32	21.96	0.040
58	72.06	11.47	0.063	100	6.32	21.97	0.040
59	72.03	11.46	0.063	100	6.31	21.94	0.040
60	71.95	11.45	0.063	100	6.30	21.89	0.040

*Shorea robusta* in Southern part (for Component of A3)

The carbon removal of *Shorea robusta* in Southern part is shown in below table.

Table 5 Estimated carbon amount of *Shorea robusta* in Southern part (for Component of A3)

1.Age	2.Girth(cm)	3.DBH(cm)	4.Stem volume for each tree (m <sup>3</sup> )	5.Number of trees/ha	6.Stem volume(m <sup>3</sup> /ha)	7.Total Biomass(AGB+BGB) (kg/ha)	8.Total carbon stock (tCO <sub>2</sub> e)
0	0	0	0	800	0	0	0
1	9.99	1.59	0.001	800	1.01	3.51	0.006
2	12.16	1.94	0.001	800	0.92	3.20	0.006
3	14.30	2.28	0.001	800	0.96	3.35	0.006
4	16.40	2.61	0.001	800	1.13	3.93	0.007
5	18.46	2.94	0.002	400	0.71	2.46	0.005
6	20.48	3.26	0.002	400	0.90	3.14	0.006
7	22.46	3.57	0.003	400	1.15	4.00	0.007
8	24.40	3.88	0.004	400	1.45	5.03	0.009
9	26.30	4.19	0.004	400	1.79	6.22	0.011
10	28.17	4.48	0.005	400	2.17	7.56	0.014
11	29.99	4.77	0.006	400	2.60	9.03	0.017
12	31.78	5.06	0.008	400	3.06	10.63	0.019
13	33.53	5.34	0.009	400	3.55	12.34	0.023
14	35.24	5.61	0.010	400	4.07	14.16	0.026
15	36.91	5.87	0.012	200	2.31	8.04	0.015
16	38.54	6.13	0.013	200	2.60	9.04	0.017
17	40.13	6.39	0.014	200	2.90	10.08	0.018
18	41.69	6.63	0.016	200	3.21	11.15	0.020
19	43.20	6.88	0.018	200	3.53	12.25	0.022
20	44.68	7.11	0.019	200	3.85	13.38	0.025
21	46.12	7.34	0.021	200	4.18	14.53	0.027
22	47.52	7.56	0.023	200	4.52	15.70	0.029

1.Age	2.Girth(cm)	3.DBH(cm)	4.Stem volume for each tree (m <sup>3</sup> )	5.Number of trees/ha	6.Stem volume(m <sup>3</sup> /ha)	7.Total Biomass(AGB+BGB) (kg/ha)	8.Total carbon stock (tCO <sub>2</sub> e)
23	48.88	7.78	0.024	200	4.86	16.88	0.031
24	50.20	7.99	0.026	200	5.20	18.07	0.033
25	51.48	8.19	0.028	200	5.54	19.27	0.035
26	52.72	8.39	0.029	200	5.89	20.47	0.038
27	53.93	8.58	0.031	200	6.23	21.66	0.040
28	55.10	8.77	0.033	200	6.57	22.86	0.042
29	56.22	8.95	0.035	200	6.92	24.04	0.044
30	57.31	9.12	0.036	100	3.63	12.61	0.023
31	58.36	9.29	0.038	100	3.79	13.18	0.024
32	59.38	9.45	0.040	100	3.96	13.76	0.025
33	60.35	9.60	0.041	100	4.12	14.32	0.026
34	61.28	9.75	0.043	100	4.28	14.86	0.027
35	62.18	9.90	0.044	100	4.43	15.40	0.028
36	63.03	10.03	0.046	100	4.58	15.92	0.029
37	63.85	10.16	0.047	100	4.73	16.43	0.030
38	64.63	10.29	0.049	100	4.87	16.92	0.031
39	65.37	10.40	0.050	100	5.00	17.39	0.032
40	66.07	10.52	0.051	100	5.13	17.84	0.033
41	66.73	10.62	0.053	100	5.26	18.28	0.034
42	67.36	10.72	0.054	100	5.38	18.69	0.034
43	67.94	10.81	0.055	100	5.49	19.08	0.035
44	68.49	10.90	0.056	100	5.60	19.45	0.036
45	69.00	10.98	0.057	100	5.70	19.80	0.036
46	69.46	11.06	0.058	100	5.79	20.13	0.037
47	69.89	11.12	0.059	100	5.88	20.42	0.037
48	70.29	11.19	0.060	100	5.95	20.70	0.038
49	70.64	11.24	0.060	100	6.03	20.95	0.038
50	70.95	11.29	0.061	100	6.09	21.17	0.039
51	71.23	11.34	0.061	100	6.15	21.36	0.039
52	71.46	11.37	0.062	100	6.19	21.53	0.039
53	71.66	11.40	0.062	100	6.24	21.67	0.040
54	71.82	11.43	0.063	100	6.27	21.79	0.040
55	71.94	11.45	0.063	100	6.29	21.88	0.040
56	72.02	11.46	0.063	100	6.31	21.93	0.040
57	72.06	11.47	0.063	100	6.32	21.96	0.040
58	72.06	11.47	0.063	100	6.32	21.97	0.040
59	72.03	11.46	0.063	100	6.31	21.94	0.040
60	71.95	11.45	0.063	100	6.30	21.89	0.040

*Shorea robusta* in southern part (for Component of A4)

The carbon removal of *Shorea robusta* in Southern part is shown in below table.

Table 6 Estimated carbon amount of *Shorea robusta* in Southern part (for Component of A4)

1.Age	2.Girth(cm)	3.DBH(cm)	4.Stem volume for each tree (m <sup>3</sup> )	5.Number of trees/ha	6.Stem volume(m <sup>3</sup> /ha)	7.Total Biomass(AGB+BGB) (kg/ha)	8.Total carbon stock (tCO <sub>2</sub> e)
0	0	0	0	1600	0	0	0
1	9.99	1.59	0.001	1600	2.018	7.015	0.013
2	12.16	1.94	0.001	1600	1.843	6.406	0.012
3	14.30	2.28	0.001	1600	1.929	6.705	0.012
4	16.40	2.61	0.001	1600	2.261	7.861	0.014
5	18.46	2.94	0.002	1600	2.828	9.829	0.018
6	20.48	3.26	0.002	1600	3.613	12.561	0.023
7	22.46	3.57	0.003	1280	3.685	12.809	0.023
8	24.40	3.88	0.004	1280	4.634	16.109	0.030
9	26.30	4.19	0.004	1280	5.728	19.913	0.037
10	28.17	4.48	0.005	1280	6.958	24.186	0.044
11	29.99	4.77	0.006	1280	8.312	28.894	0.053
12	31.78	5.06	0.008	1280	9.782	34.005	0.062
13	33.53	5.34	0.009	1280	11.359	39.487	0.072
14	35.24	5.61	0.010	1280	13.034	45.307	0.083
15	36.91	5.87	0.012	1280	14.796	51.434	0.094

## *Shorea robusta* in Northern part (for Component of A6)

The carbon removal of *Shorea robusta* in Southern part is shown in below table.

Table 7 Estimated carbon amount of *Shorea robusta* in Southern part (for Component of A6)

1.Age	2.Girth(cm)	3.DBH(cm)	4.Biomass above ground for each tree (m <sup>3</sup> )	5.Number of trees/ha	6.Biomass above ground(m <sup>3</sup> /ha)	7.Total Biomass(AGB+BGB) (kg/ha)	8.Total carbon stock (tCO <sub>2</sub> e)
0	0	0		800	0	0	0
1	2.525121436	0.40	0.00290	800	2.317	8.053	0.014763514
2	3.833839836	0.61	0.00247	800	1.975	6.864	0.012583856
3	5.131034971	0.82	0.00210	800	1.683	5.850	0.010724931
4	6.416706841	1.02	0.00180	800	1.440	5.007	0.009178738
5	7.690855446	1.22	0.00156	400	0.623	2.165	0.003968675
6	8.953480787	1.42	0.00137	400	0.549	1.907	0.003496453
7	10.20458286	1.62	0.00124	400	0.497	1.728	0.00316881
8	11.44416167	1.82	0.00117	400	0.468	1.626	0.002981888
9	12.67221722	2.02	0.00115	400	0.460	1.599	0.002931865
10	13.8887495	2.21	0.00118	400	0.473	1.645	0.003014953
11	15.09375852	2.40	0.00127	400	0.506	1.760	0.0032274
12	16.28724427	2.59	0.00140	400	0.559	1.945	0.003565492
13	17.46920676	2.78	0.00158	400	0.632	2.196	0.004025547
14	18.63964598	2.97	0.00181	400	0.722	2.511	0.004603921
15	19.79856194	3.15	0.00208	200	0.416	1.445	0.002648502
16	20.94595463	3.33	0.00239	200	0.479	1.664	0.003050611
17	22.08182406	3.51	0.00275	200	0.550	1.913	0.003506519
18	23.20617022	3.69	0.00315	200	0.630	2.190	0.004014474
19	24.31899312	3.87	0.00359	200	0.718	2.494	0.004572743
20	25.42029275	4.05	0.00406	200	0.813	2.825	0.00517961
21	26.51006912	4.22	0.00458	200	0.915	3.182	0.005833376
22	27.58832223	4.39	0.00513	200	1.025	3.563	0.006532362
23	28.65505207	4.56	0.00571	200	1.142	3.968	0.007274905
24	29.71025864	4.73	0.00632	200	1.265	4.396	0.00805936
25	30.75394195	4.89	0.00697	200	1.394	4.846	0.008884101
26	31.786102	5.06	0.00765	200	1.530	5.317	0.009747517
27	32.80673878	5.22	0.00835	200	1.671	5.808	0.010648018
28	33.81585229	5.38	0.00909	200	1.818	6.319	0.011584029
29	34.81344254	5.54	0.00985	200	1.970	6.848	0.012553995
30	35.79950953	5.70	0.01064	100	1.064	3.697	0.006778189
31	36.77405325	5.85	0.01145	100	1.145	3.979	0.007294829
32	37.73707371	6.01	0.01228	100	1.228	4.269	0.007826166
33	38.6885709	6.16	0.01314	100	1.314	4.566	0.008371457
34	39.62854483	6.31	0.01401	100	1.401	4.871	0.008929969
35	40.55699549	6.45	0.01491	100	1.491	5.182	0.009500977
36	41.47392289	6.60	0.01582	100	1.582	5.500	0.010083765
37	42.37932702	6.74	0.01675	100	1.675	5.824	0.010677628
38	43.27320789	6.89	0.01770	100	1.770	6.154	0.011281865
39	44.15556549	7.03	0.01867	100	1.867	6.489	0.011895789
40	45.02639983	7.17	0.01964	100	1.964	6.828	0.01251872
41	45.8857109	7.30	0.02063	100	2.063	7.173	0.013149985
42	46.73349871	7.44	0.02164	100	2.164	7.521	0.013788922
43	47.56976326	7.57	0.02265	100	2.265	7.874	0.014434879
44	48.39450454	7.70	0.02367	100	2.367	8.229	0.015087209
45	49.20772255	7.83	0.02471	100	2.471	8.588	0.015745277
46	50.0094173	7.96	0.02575	100	2.575	8.950	0.016408457
47	50.79958879	8.09	0.02679	100	2.679	9.314	0.01707613
48	51.57823701	8.21	0.02785	100	2.785	9.681	0.017747687
49	52.34536196	8.33	0.02891	100	2.891	10.049	0.018422528
50	53.10096365	8.45	0.02997	100	2.997	10.418	0.019100062



## 16.2.7 *Tectona Grandis*

*Tectona Grandis* is used for calculation as substitute of one of misc. spp. Its carbon removal is shown in below table.

Table 8 Estimated carbon amount of *Tectona Grandis*

1.Age	2.stem volume(m <sup>3</sup> /ha)	3.Stem volume for each tree (m <sup>3</sup> )	4.Number of trees/ha	5.Biomass above ground(m <sup>3</sup> /ha)	6.Total Biomass(AGB+BGB) (ton/ha)	7.Total carbon stock(tcO <sub>2</sub> e)
0	0	0	1600	0	0	0
1	2	0.001	1600	1.280	0.003	0.006
2	5	0.002	1600	3.200	0.008	0.014
3	8	0.003	1600	5.120	0.012	0.023
4	10	0.004	1600	6.400	0.015	0.028
5	13	0.005	800	4.160	0.010	0.018
6	16	0.006	800	5.120	0.012	0.023
7	18	0.007	800	5.760	0.014	0.025
8	21	0.008	800	6.720	0.016	0.030
9	24	0.010	800	7.680	0.019	0.034
10	27	0.011	800	8.640	0.021	0.038
11	30	0.012	800	9.600	0.023	0.042
12	33	0.013	800	10.560	0.025	0.047
13	36	0.014	800	11.520	0.028	0.051
14	39	0.016	800	12.480	0.030	0.055
15	42	0.017	400	6.720	0.016	0.030
16	44	0.018	400	7.040	0.017	0.031
17	47	0.019	400	7.520	0.018	0.033
18	50	0.020	400	8.000	0.019	0.035
19	53	0.021	400	8.480	0.020	0.038
20	56	0.022	400	8.960	0.022	0.040
21	58	0.023	400	9.280	0.022	0.041
22	60	0.024	400	9.600	0.023	0.042
23	62	0.025	400	9.920	0.024	0.044
24	65	0.026	400	10.400	0.025	0.046
25	67	0.027	400	10.720	0.026	0.047
26	69	0.028	400	11.040	0.027	0.049
27	71	0.028	400	11.360	0.027	0.050
28	73	0.029	400	11.680	0.028	0.052
29	75	0.030	400	12.000	0.029	0.053
30	78	0.031	200	6.240	0.015	0.028
31	79	0.032	200	6.320	0.015	0.028
32	80	0.032	200	6.400	0.015	0.028
33	81	0.032	200	6.480	0.016	0.029
34	82	0.033	200	6.560	0.016	0.029
35	84	0.034	200	6.720	0.016	0.030
36	85	0.034	200	6.800	0.016	0.030
37	87	0.035	200	6.960	0.017	0.031
38	88	0.035	200	7.040	0.017	0.031
39	90	0.036	200	7.200	0.017	0.032
40	92	0.037	200	7.360	0.018	0.033
41	93	0.037	200	7.440	0.018	0.033
42	94	0.038	200	7.520	0.018	0.033
43	96	0.038	200	7.680	0.019	0.034
44	97	0.039	200	7.760	0.019	0.034
45	99	0.040	200	7.920	0.019	0.035
46	101	0.040	200	8.080	0.020	0.036
47	103	0.041	200	8.240	0.020	0.036
48	106	0.042	200	8.480	0.020	0.038
49	108	0.043	200	8.640	0.021	0.038
50	110	0.044	200	8.800	0.021	0.039
51	111	0.044	200	8.880	0.021	0.039
52	112	0.045	200	8.960	0.022	0.040
53	113	0.045	200	9.040	0.022	0.040
54	114	0.046	200	9.120	0.022	0.040
55	116	0.046	200	9.280	0.022	0.041
56	116	0.046	200	9.280	0.022	0.041
57	117	0.047	200	9.360	0.023	0.041
58	118	0.047	200	9.440	0.023	0.042
59	119	0.048	200	9.520	0.023	0.042
60	120	0.048	200	9.600	0.023	0.042

## 16.2.6 Associated spp. and Miscellaneous

The carbon removal of associated spp. and miscellaneous is shown in below table.

Table 9 Estimated carbon amount of associated spp. and miscellaneous

1.Age	2.stem volume(t/ha)	3.Stem volume for each tree (t)	4.Number of trees/ha	5.stem volume(t/ha)	6.Total Biomass(AGB+BGB) (ton/ha)	7.Total carbon stock(tCO <sub>2</sub> e)
0	0	0	800	0	0	0
1	4.63	0.002	800	1.48	2.17	3.98
2	9.25	0.004	800	2.96	4.33	7.94
3	13.88	0.006	800	4.44	6.50	11.92
4	18.5	0.007	800	5.92	8.67	15.89
5	26.21	0.010	400	4.19	6.14	11.26
6	31.45	0.013	400	5.03	7.37	13.51
7	36.69	0.015	400	5.87	8.59	15.76
8	41.94	0.017	400	6.71	9.82	18.01
9	47.18	0.019	400	7.55	11.05	20.26
10	52.42	0.021	400	8.39	12.28	22.51
11	53.44	0.021	400	8.55	12.52	22.95
12	58.3	0.023	400	9.33	13.66	25.04
13	63.16	0.025	400	10.11	14.79	27.12
14	68.01	0.027	400	10.88	15.93	29.21
15	72.87	0.029	200	5.83	8.53	15.65
16	77.73	0.031	200	6.22	9.10	16.69
17	82.59	0.033	200	6.61	9.67	17.73
18	87.45	0.035	200	7.00	10.24	18.78
19	92.31	0.037	200	7.38	10.81	19.82
20	97.16	0.039	200	7.77	11.38	20.86
21	102.02	0.041	200	8.16	11.95	21.91
22	106.88	0.043	200	8.55	12.52	22.95
23	111.74	0.045	200	8.94	13.09	23.99
24	116.6	0.047	200	9.33	13.66	25.04
25	121.45	0.049	200	9.72	14.22	26.08
26	126.31	0.051	200	10.10	14.79	27.12
27	131.17	0.052	200	10.49	15.36	28.16
28	136.03	0.054	200	10.88	15.93	29.21
29	140.89	0.056	200	11.27	16.50	30.25
30	145.75	0.058	200	11.66	17.07	31.30
31						31.30
32						31.30
33						31.30
34						31.30
35						31.30
36						31.30
37						31.30
38						31.30
39						31.30
40						31.30
41						31.30
42						31.30
43						31.30
44						31.30
45						31.30
46						31.30
47						31.30
48						31.30
49						31.30
50						31.30
51						31.30
52						31.30
53						31.30
54						31.30
55						31.30
56						31.30
57						31.30
58						31.30
59						31.30
60						31.30

## Annexure 5

## Maps

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- 1 Area of Forest Divisions Under Different Circles in West Bengal
- 2 Target Area 1A1 High Yielding Eucalyptus Clones Plantation
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**AREA OF FOREST DIVISIONS UNDER DIFFERENT CIRCLES IN WEST BENGAL**



**SOIL CONSERVATION NORTH**  
KALIMPONG

**WILD LIFE NORTH CIRCLE**  
WL\_DIVISION\_I  
WL\_DIVISION\_II  
WL\_DIVISION\_III

**HILL CIRCLE**  
DARJEELING  
Kurseong

**FIELD DIRECTOR, BUXA TIGER RESERVE**  
BTR EAST  
BTR WEST

**NORTHERN CIRCLE**  
BAIKUNTHAPUR  
COOCHBEHAR  
JALPAIGURI

**SOUTH EAST CIRCLE**  
BIRBHUM  
BURDWAN  
DURGAPUR

**NORTH WEST CIRCLE**  
MALDA  
RAIGANJ SF

**SOUTH WEST CIRCLE**  
KSC NORTH  
KSC SOUTH  
PURULIA

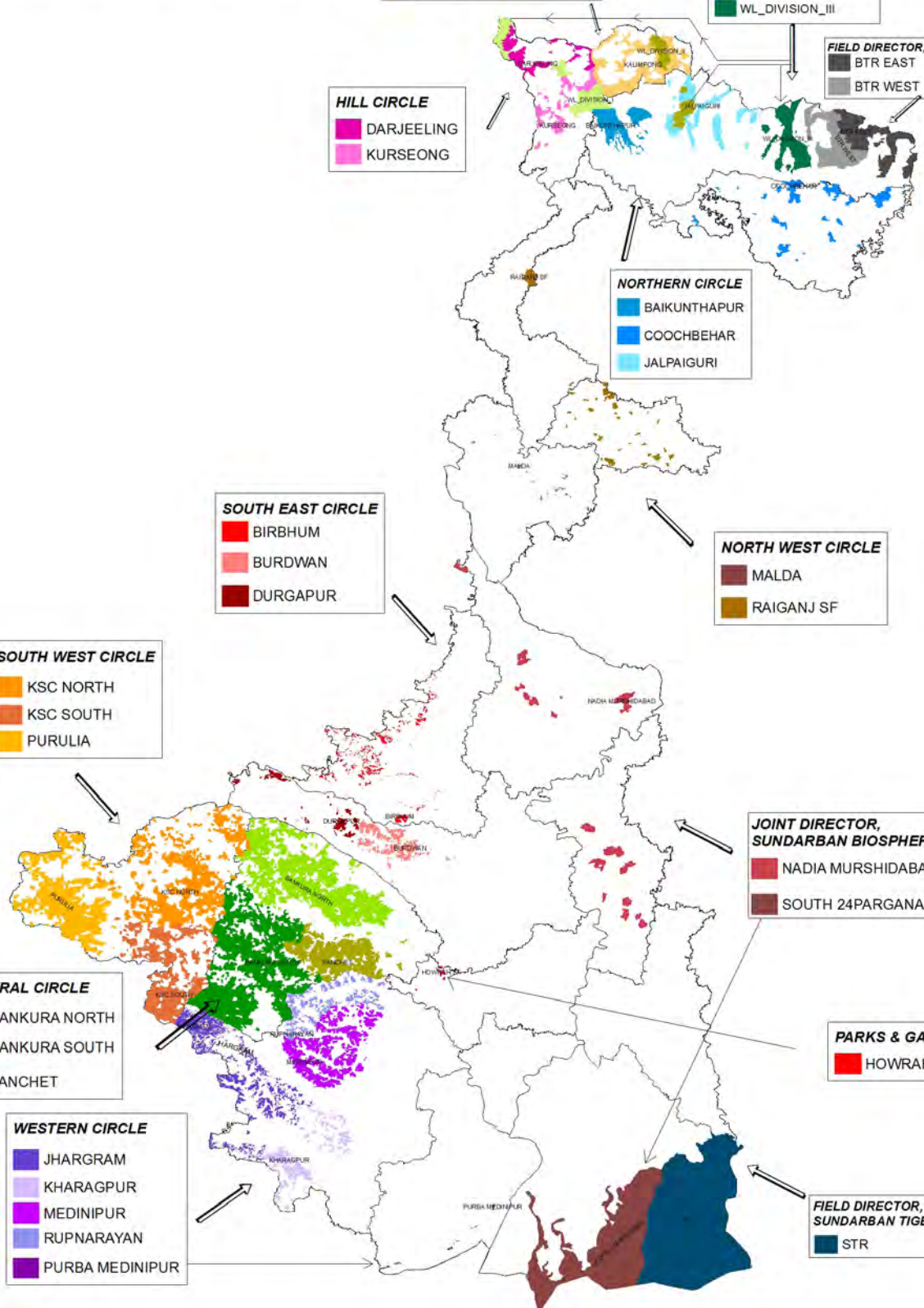
**JOINT DIRECTOR, SUNDARBAN BIOSPHERE RESERVE**  
NADIA MURSHIDABAD  
SOUTH 24PARGANAS

**CENTRAL CIRCLE**  
BANKURA NORTH  
BANKURA SOUTH  
PANCHET

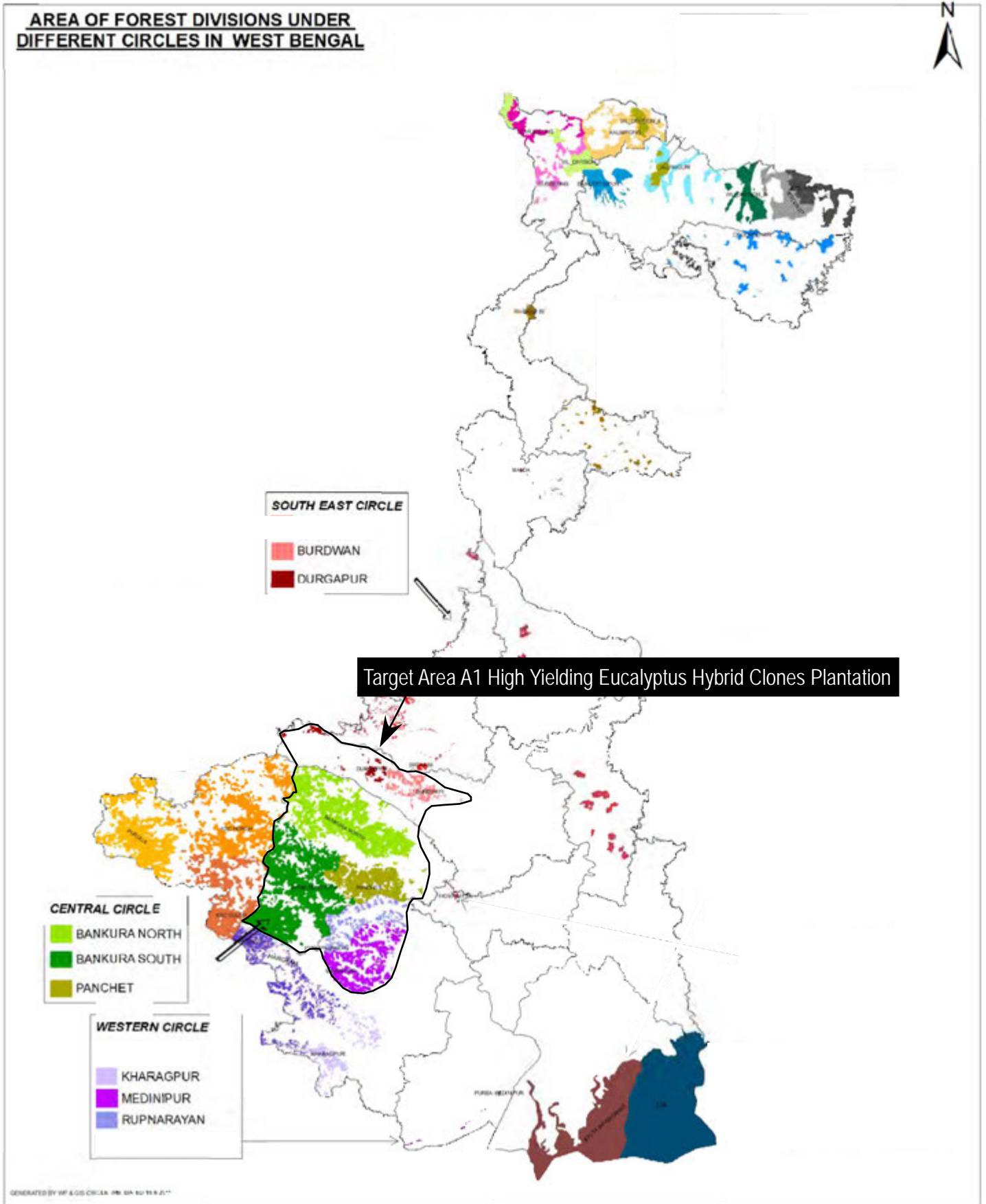
**PARKS & GARDENS**  
HOWRAH SF

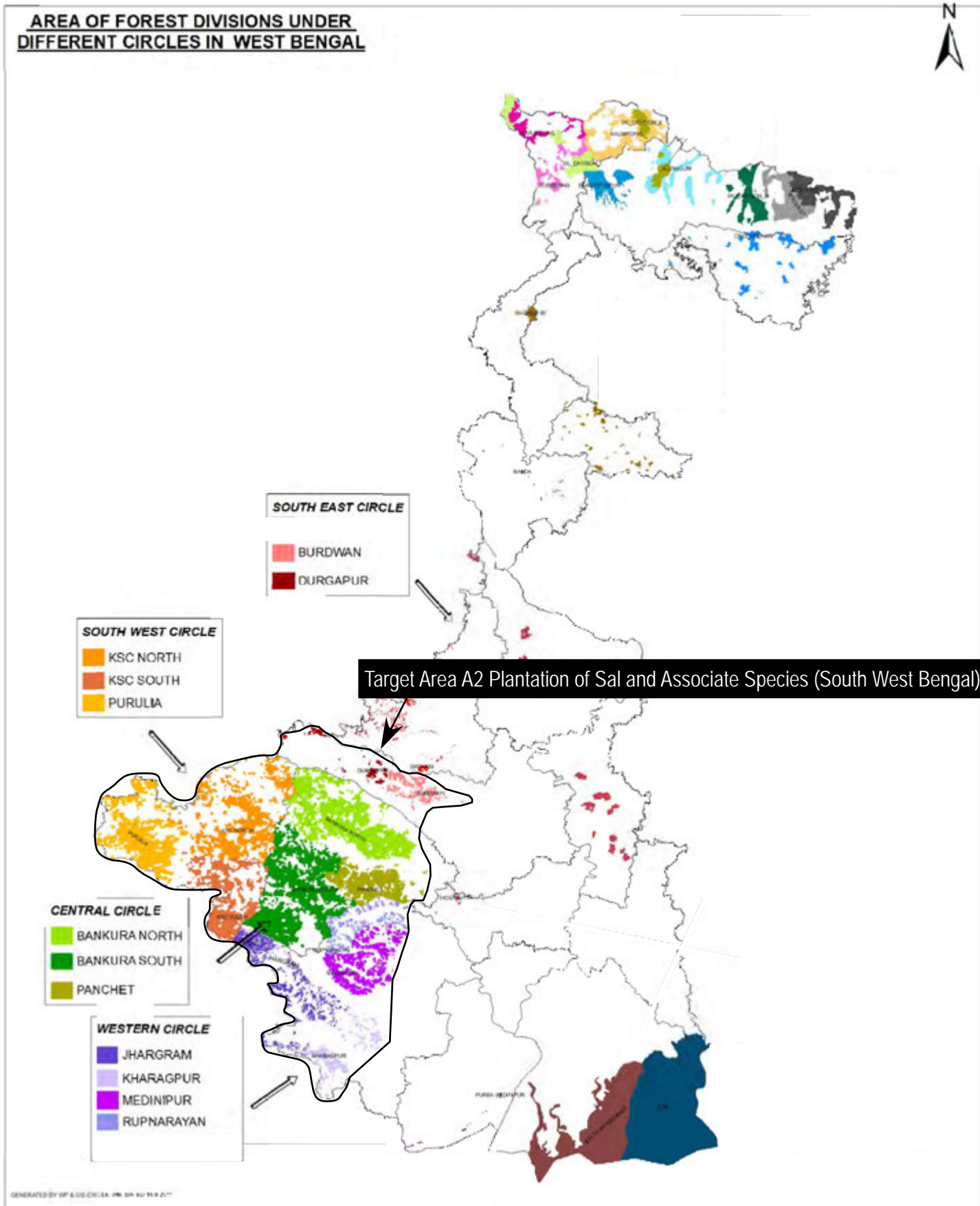
**WESTERN CIRCLE**  
JHARGRAM  
KHARAGPUR  
MEDINIPUR  
RUPNARAYAN  
PURBA MEDINIPUR

**FIELD DIRECTOR, SUNDARBAN TIGER RESERVE**  
STR



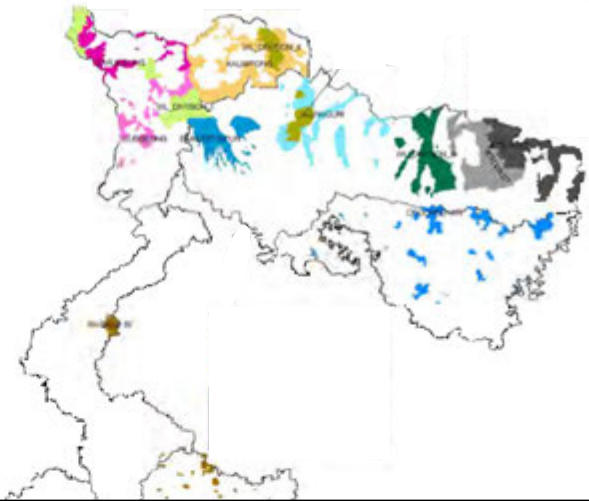
GENERATED BY WP & GIS CIRCLE, WB, DATED 15.6.2011



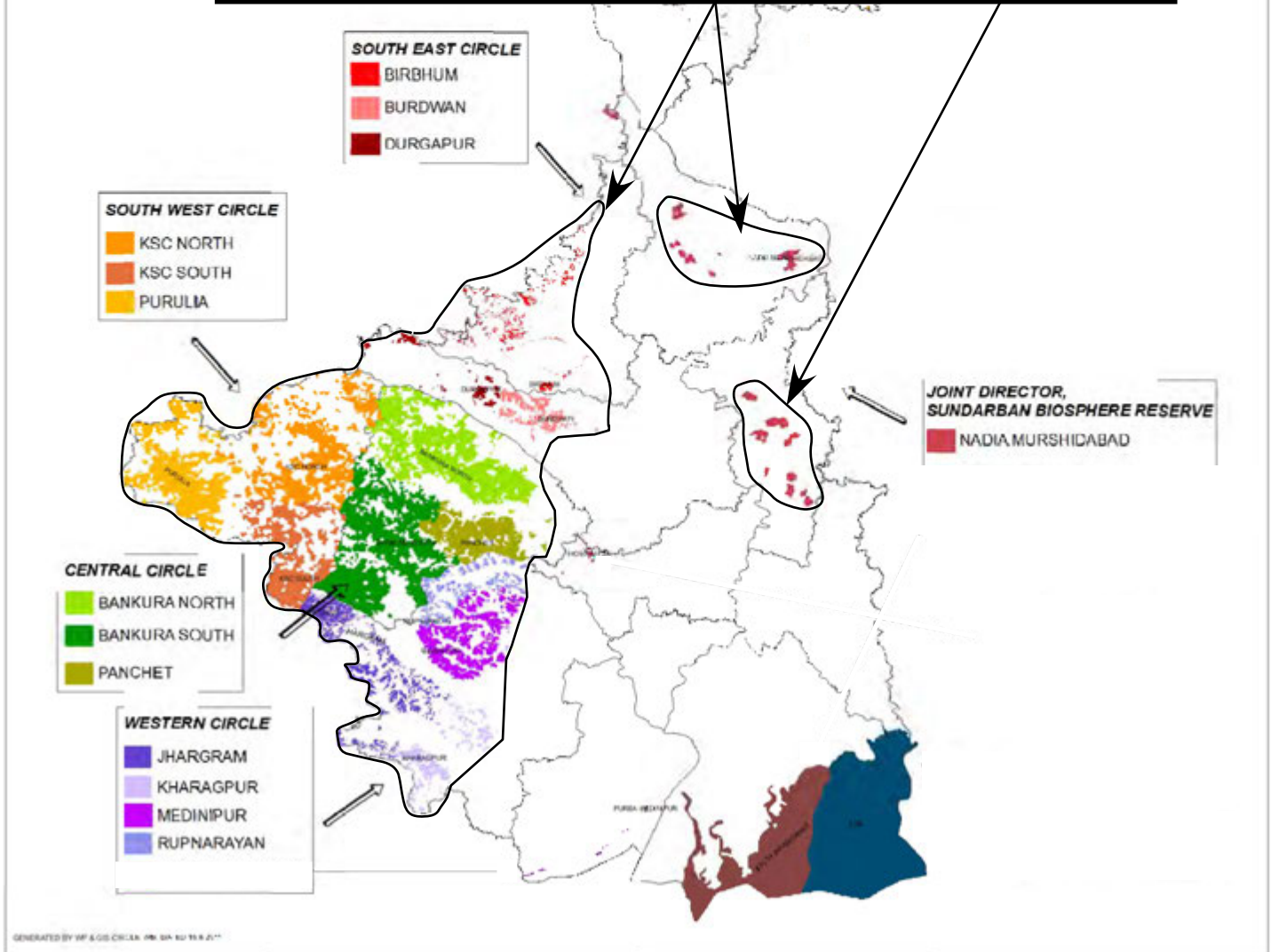




**AREA OF FOREST DIVISIONS UNDER DIFFERENT CIRCLES IN WEST BENGAL**



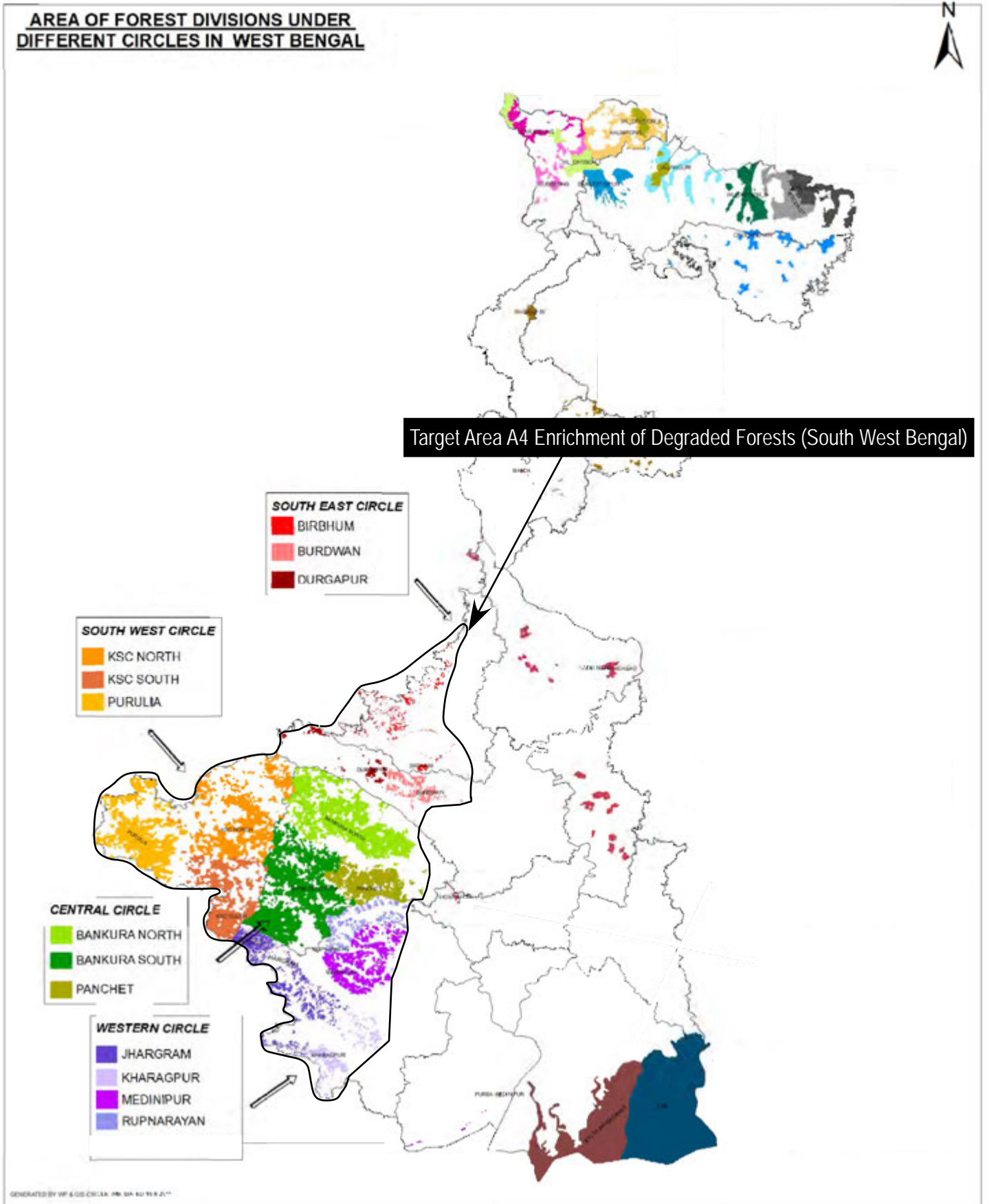
Target Area A3 Quick Growing Small Timber, Fuel & Fodder Plantation (South West Bengal)



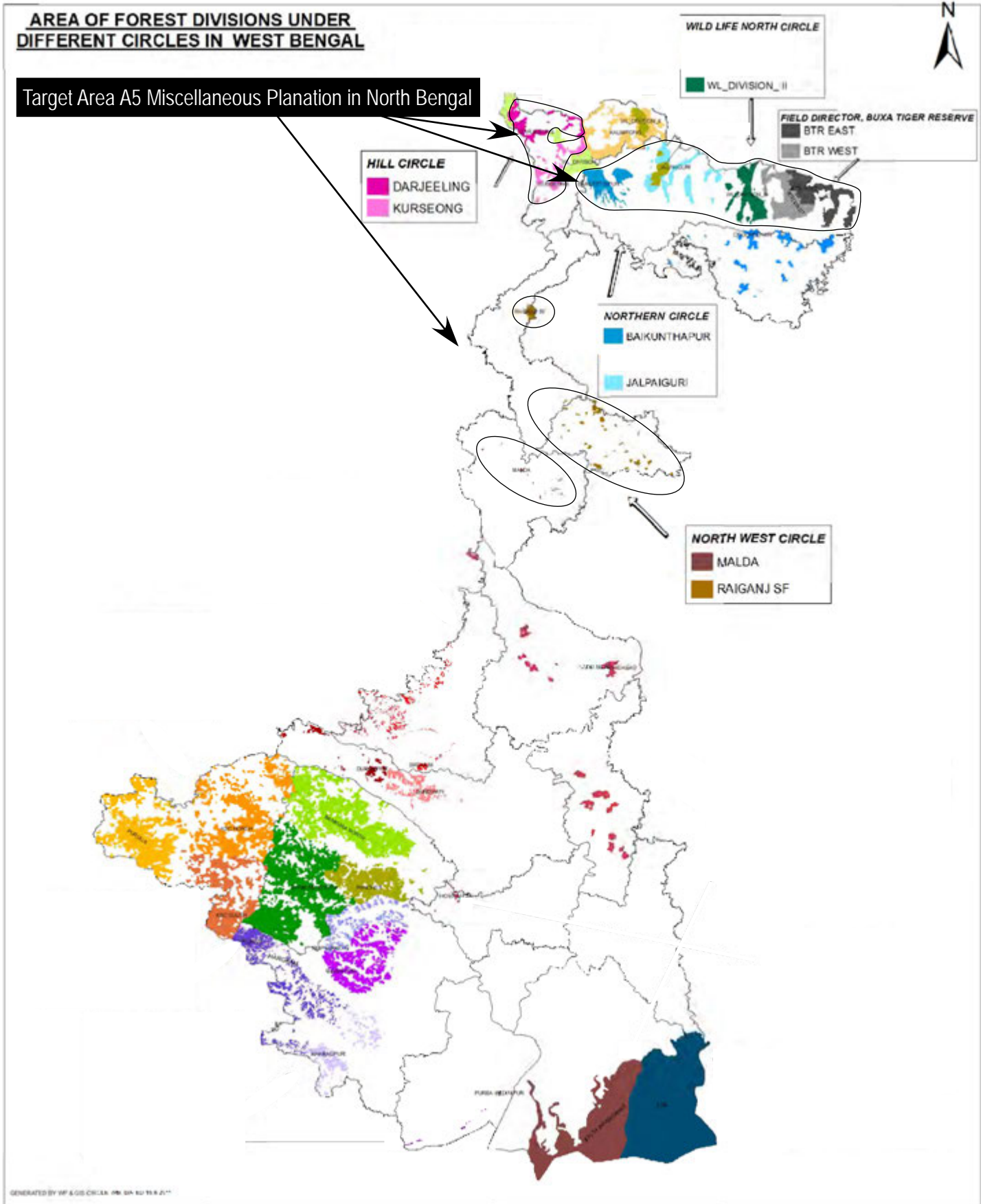
**AREA OF FOREST DIVISIONS UNDER DIFFERENT CIRCLES IN WEST BENGAL**

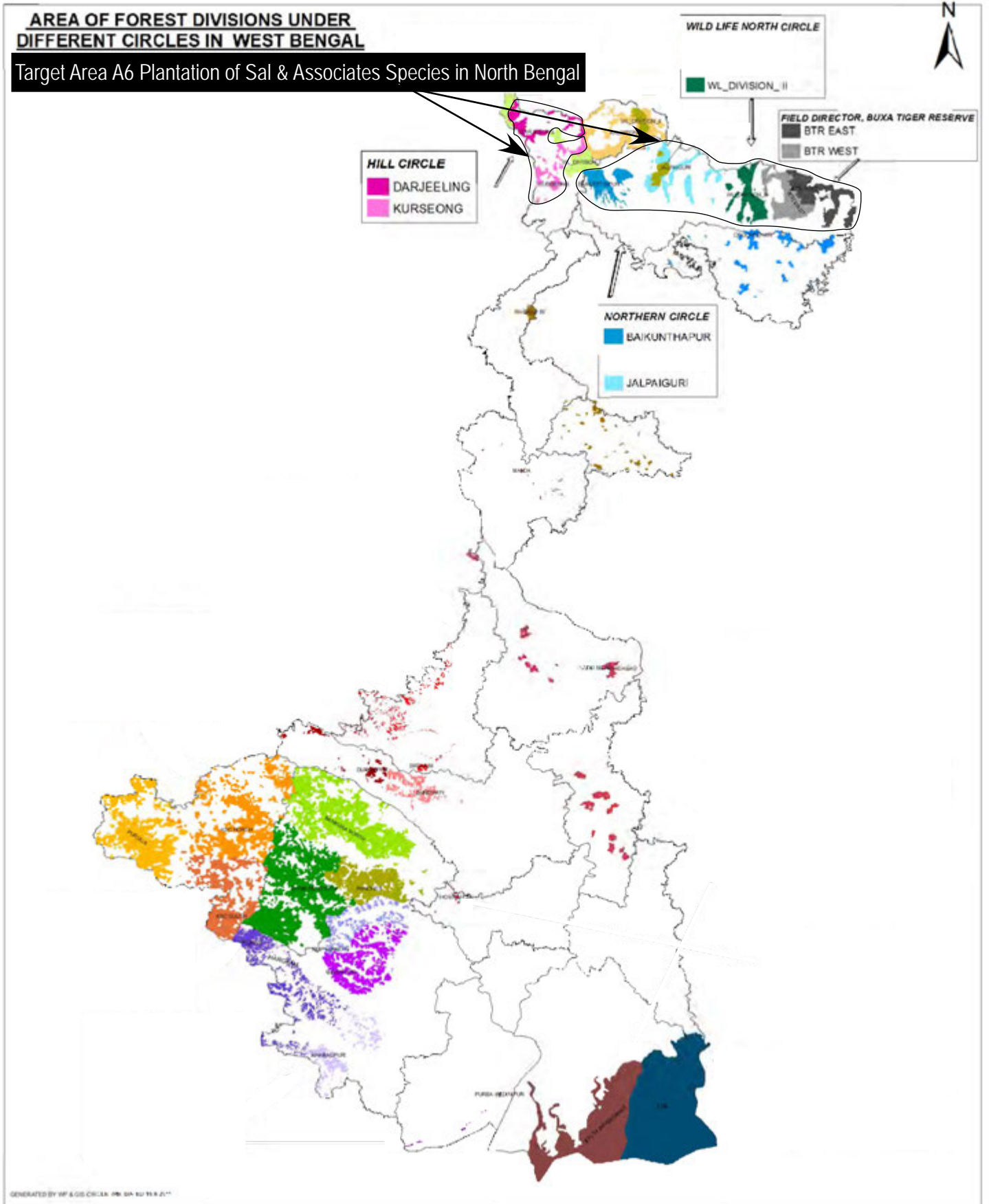


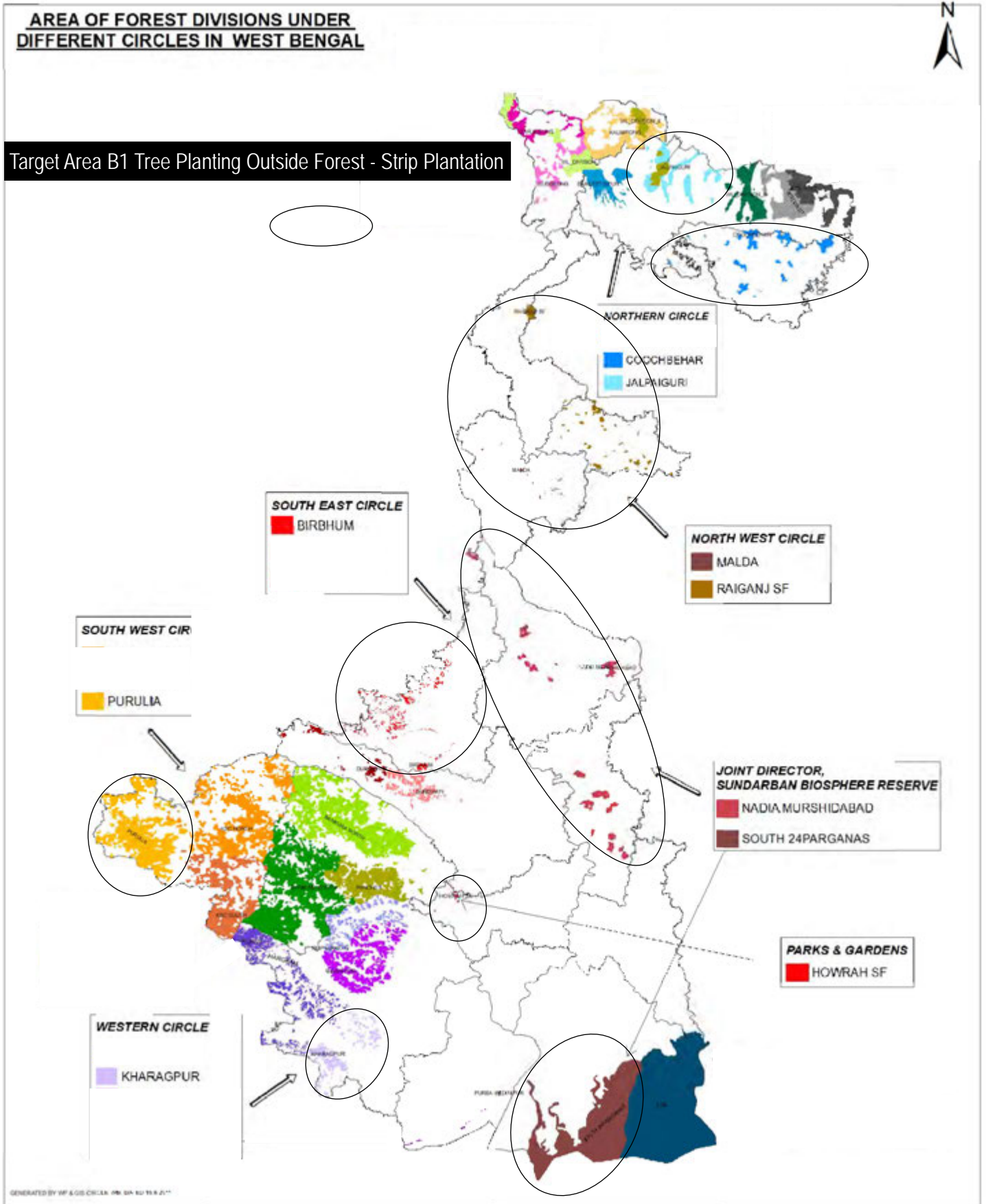
Target Area A4 Enrichment of Degraded Forests (South West Bengal)



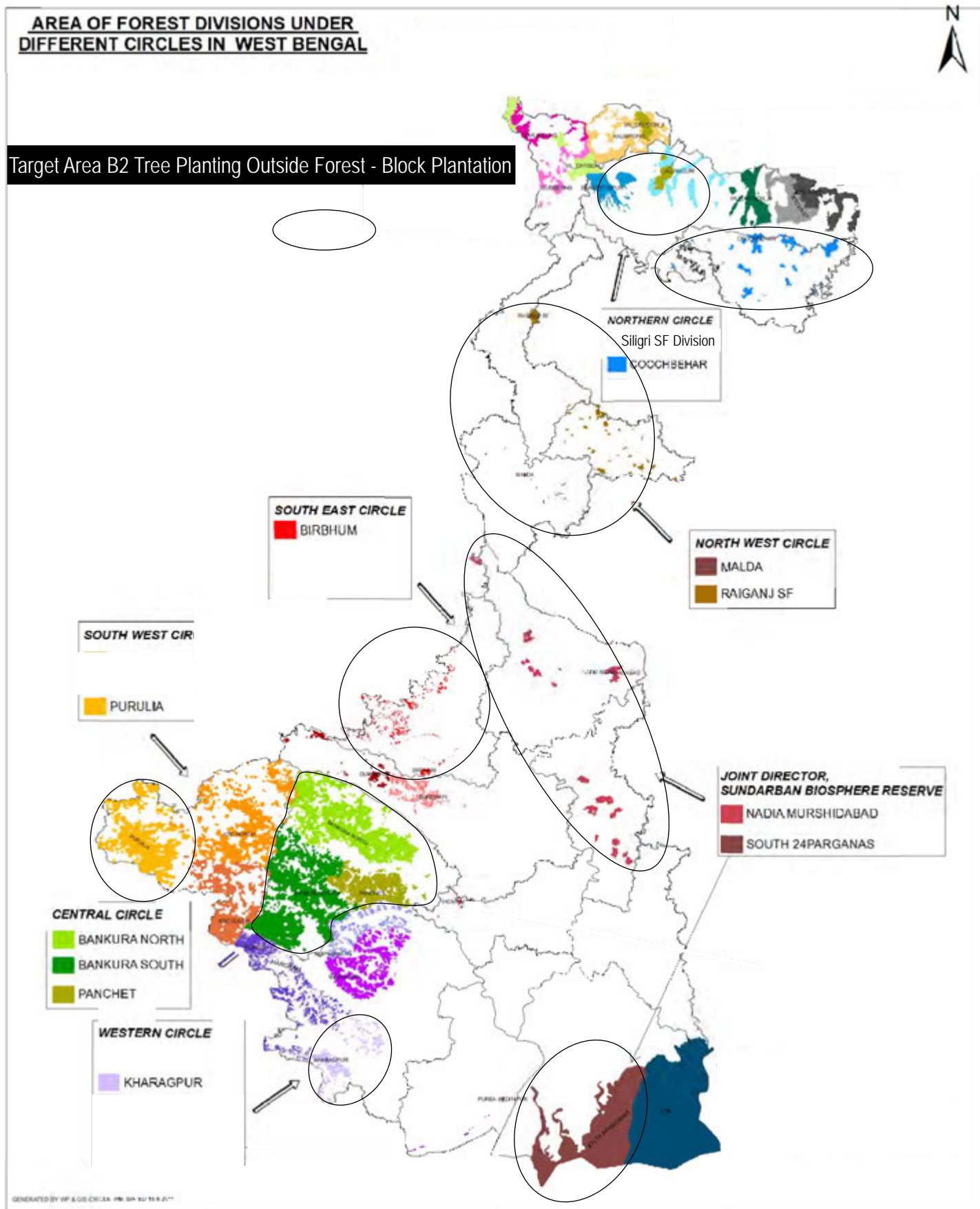




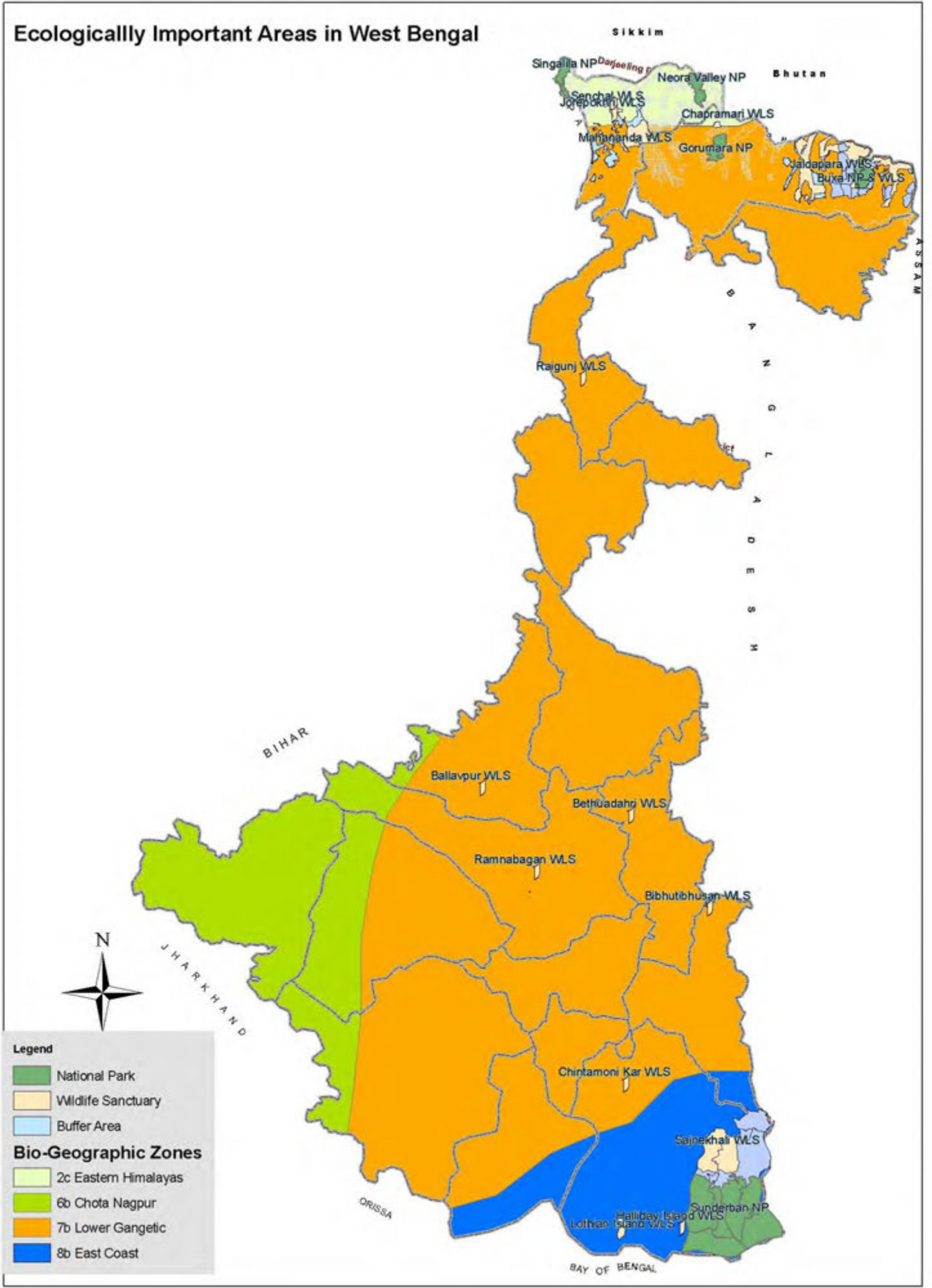






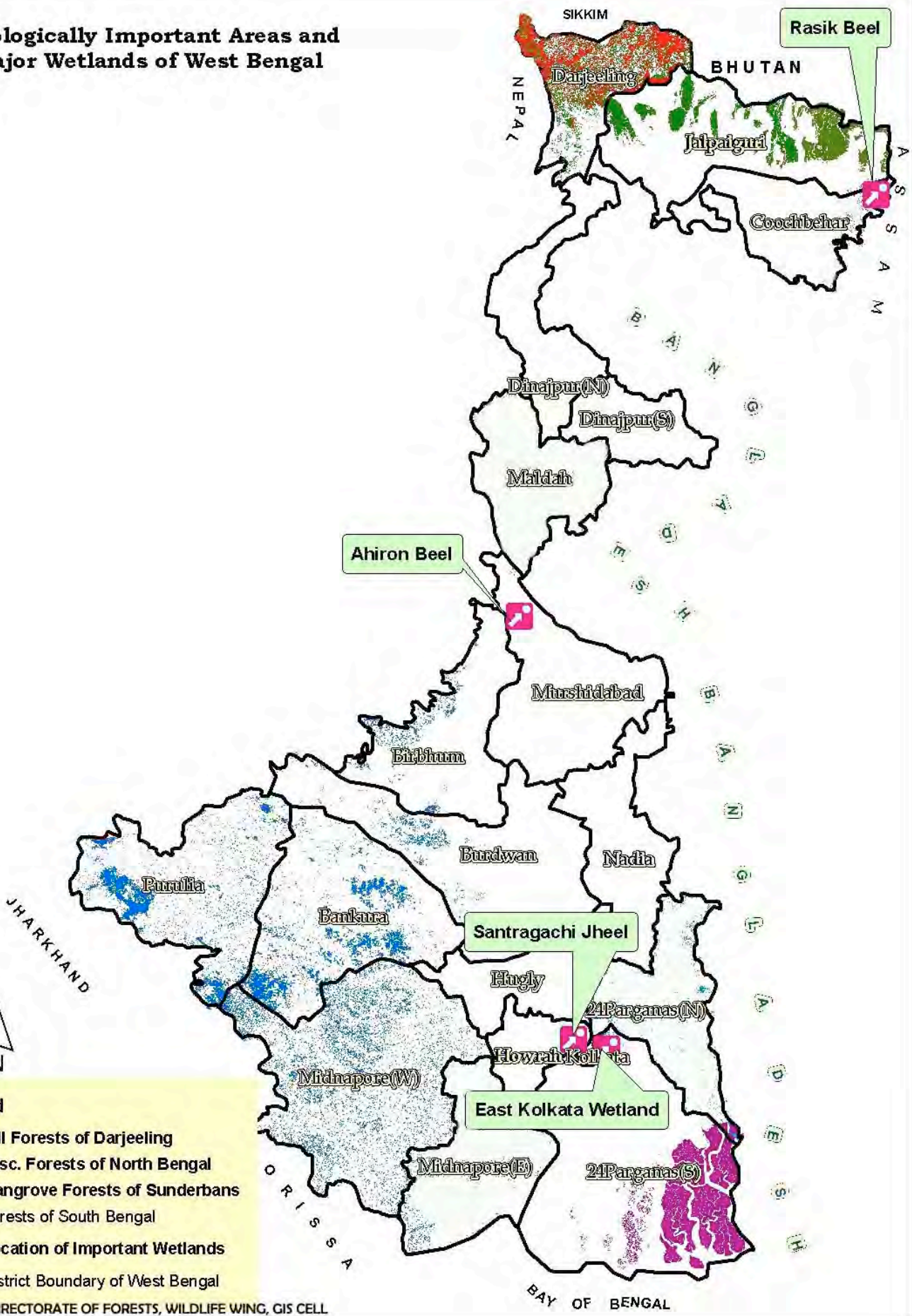


# Ecologically Important Areas in West Bengal





# Ecologically Important Areas and Major Wetlands of West Bengal

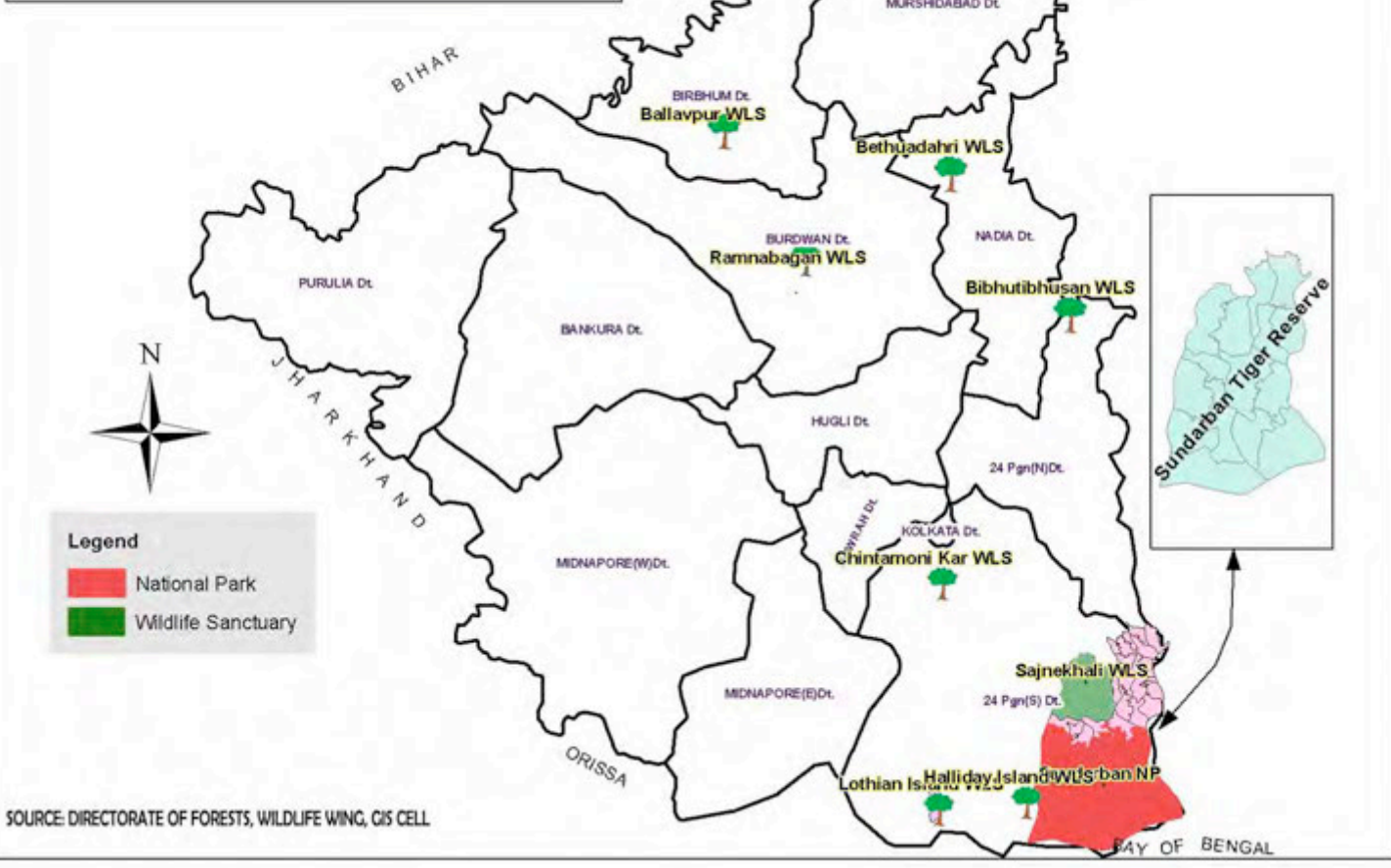


## Legend

- Hill Forests of Darjeeling
- Misc. Forests of North Bengal
- Mangrove Forests of Sunderbans
- Forests of South Bengal
- Location of Important Wetlands
- District Boundary of West Bengal

SOURCE: DIRECTORATE OF FORESTS, WILDLIFE WING, GIS CELL

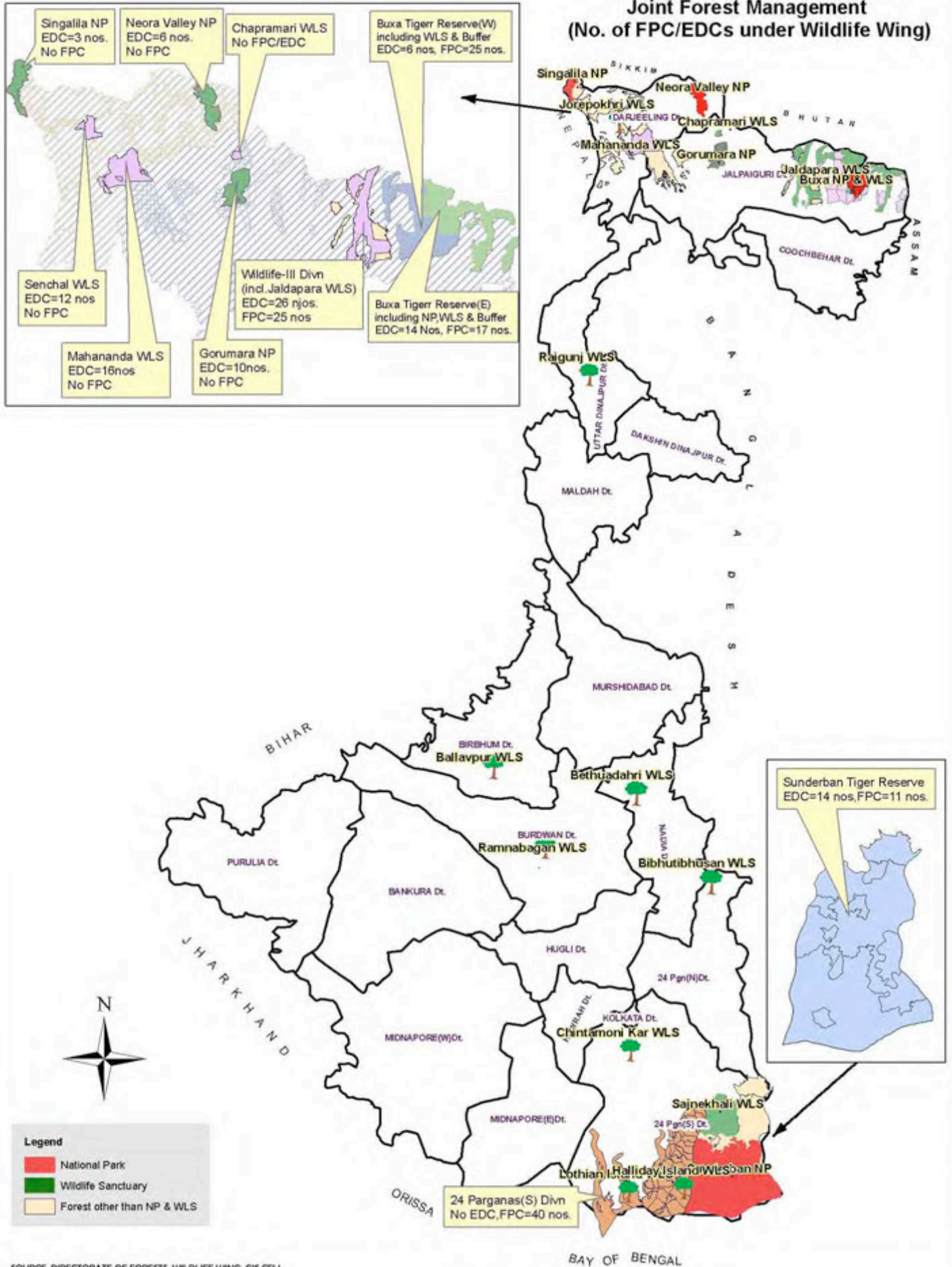
**Protected Areas of West Bengal  
(National Park, Wildlife Sanctuary,  
Tiger Reserve & Elephant Reserve)**



SOURCE: DIRECTORATE OF FORESTS, WILDLIFE WING, GIS CELL



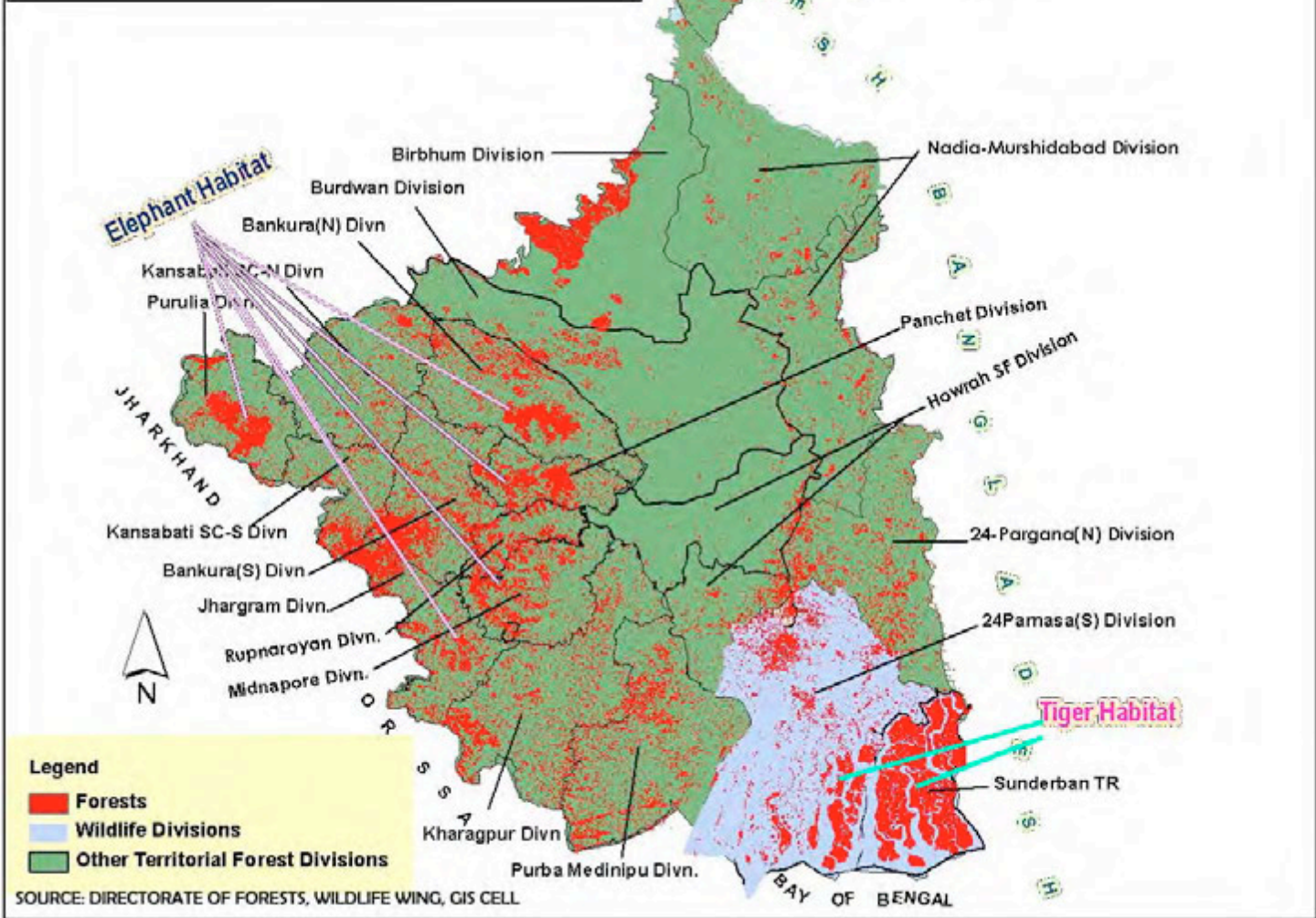
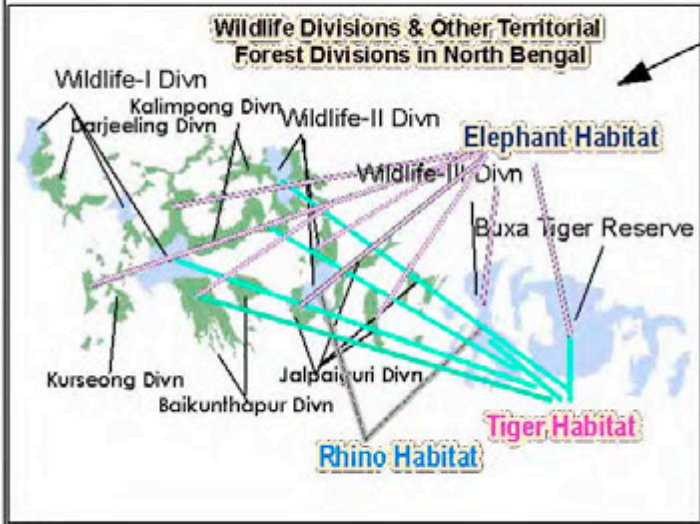
## Joint Forest Management (No. of FPC/EDCs under Wildlife Wing)

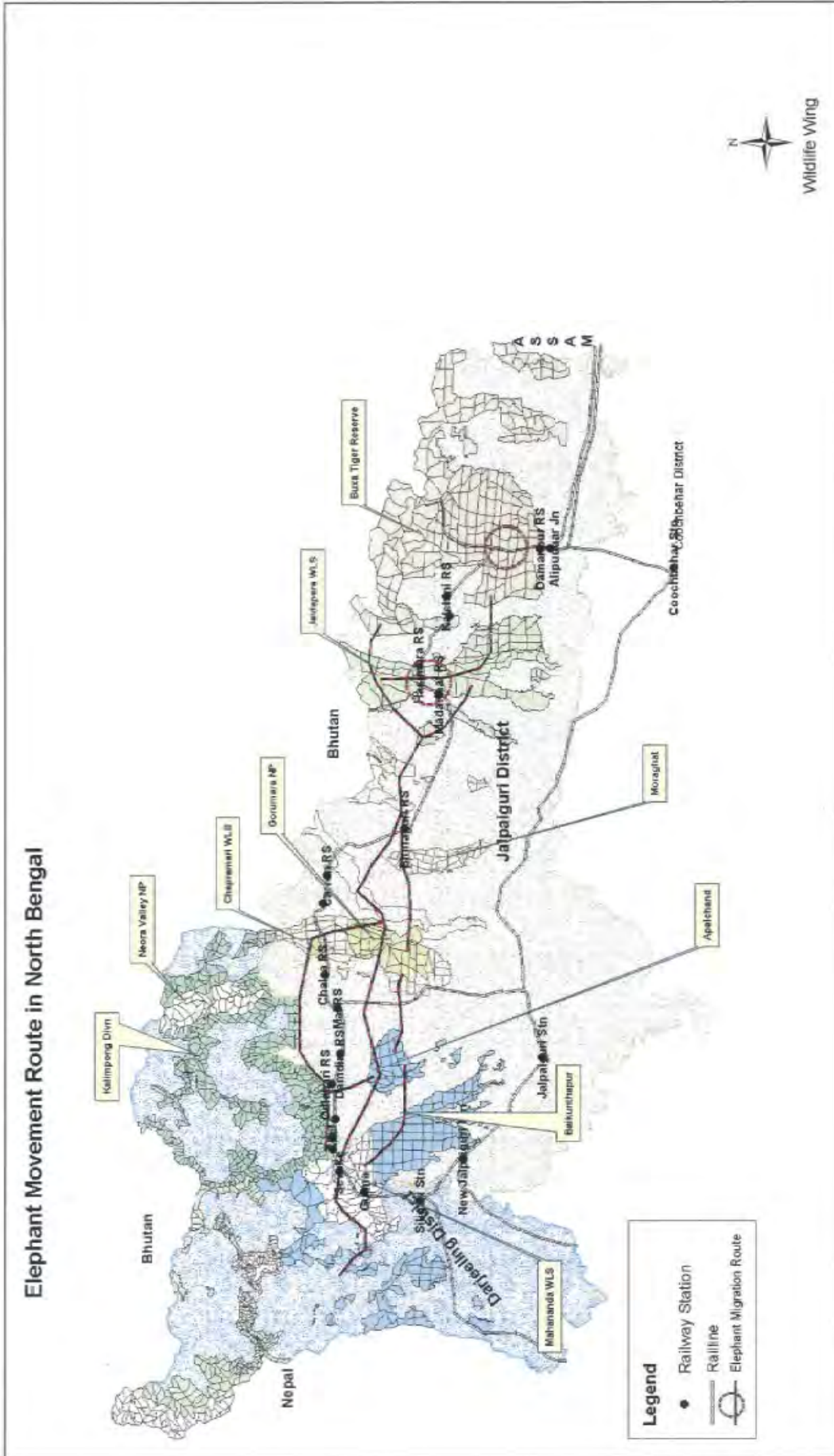


SOURCE: DIRECTORATE OF FORESTS, WILDLIFE WING, GIS CELL



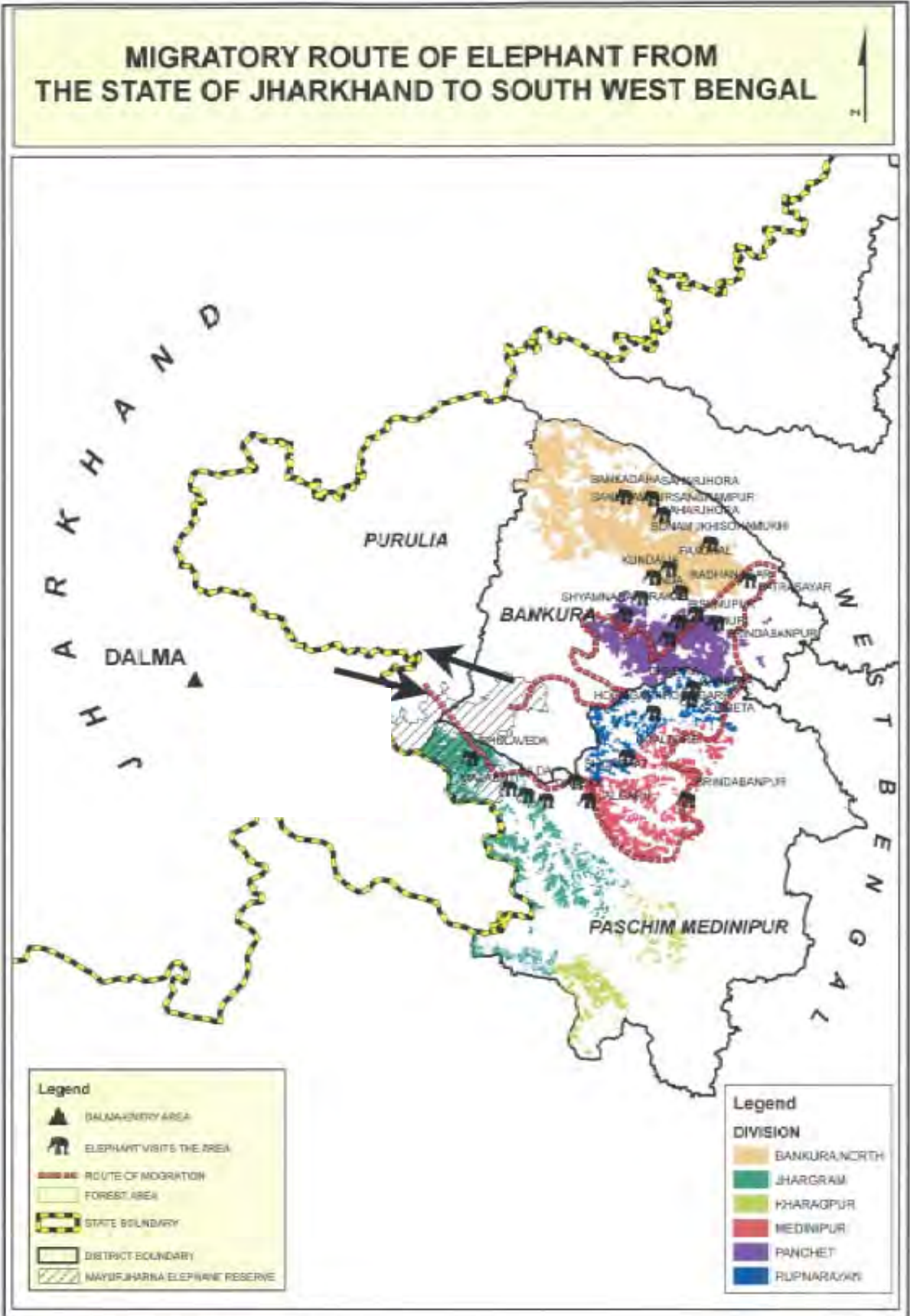
# Distribution of Key Species in Wildlife Divisions & Other Territorial Forest Divisions of West Bengal



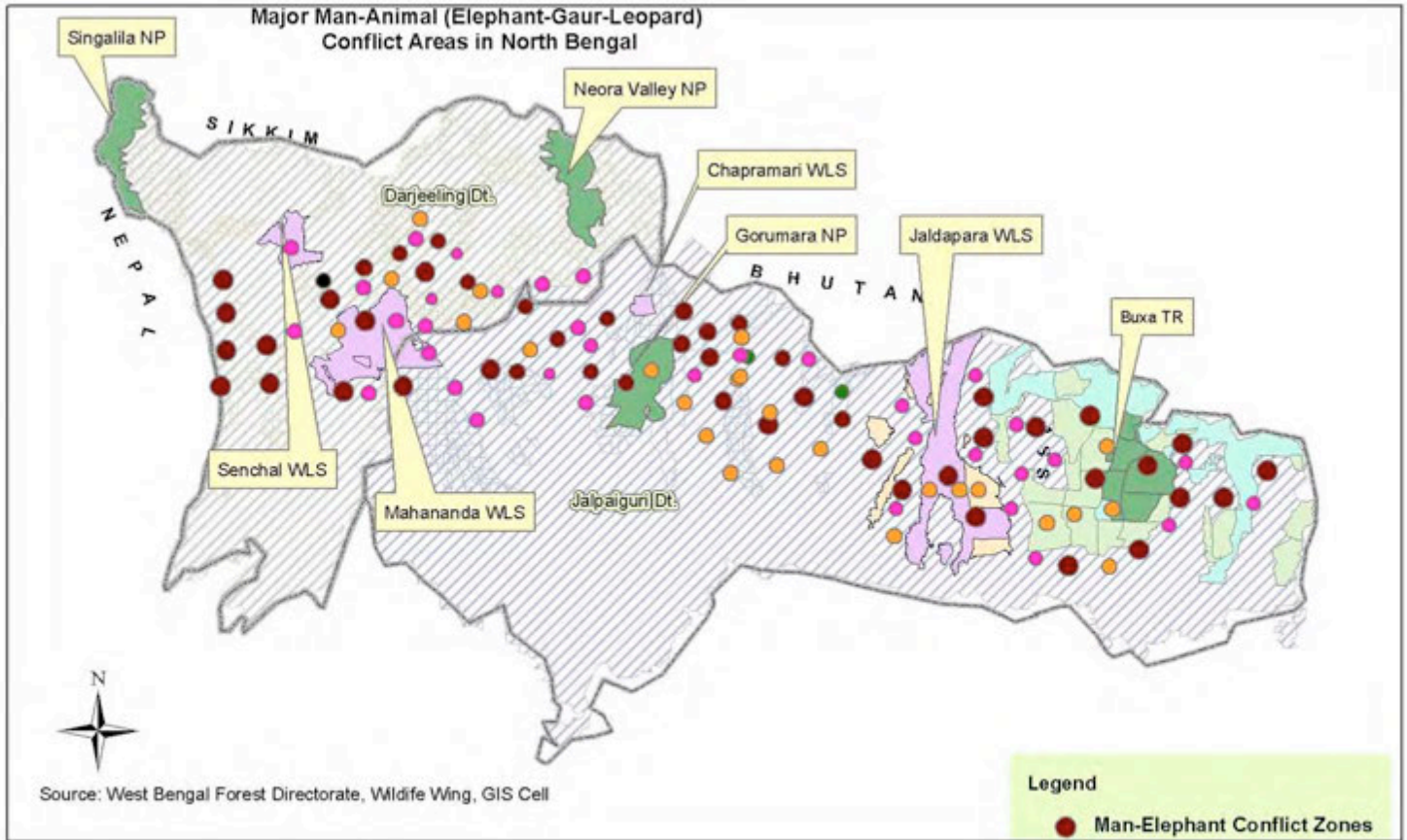


(Source) Wildlife Wing, WBFD (2011)

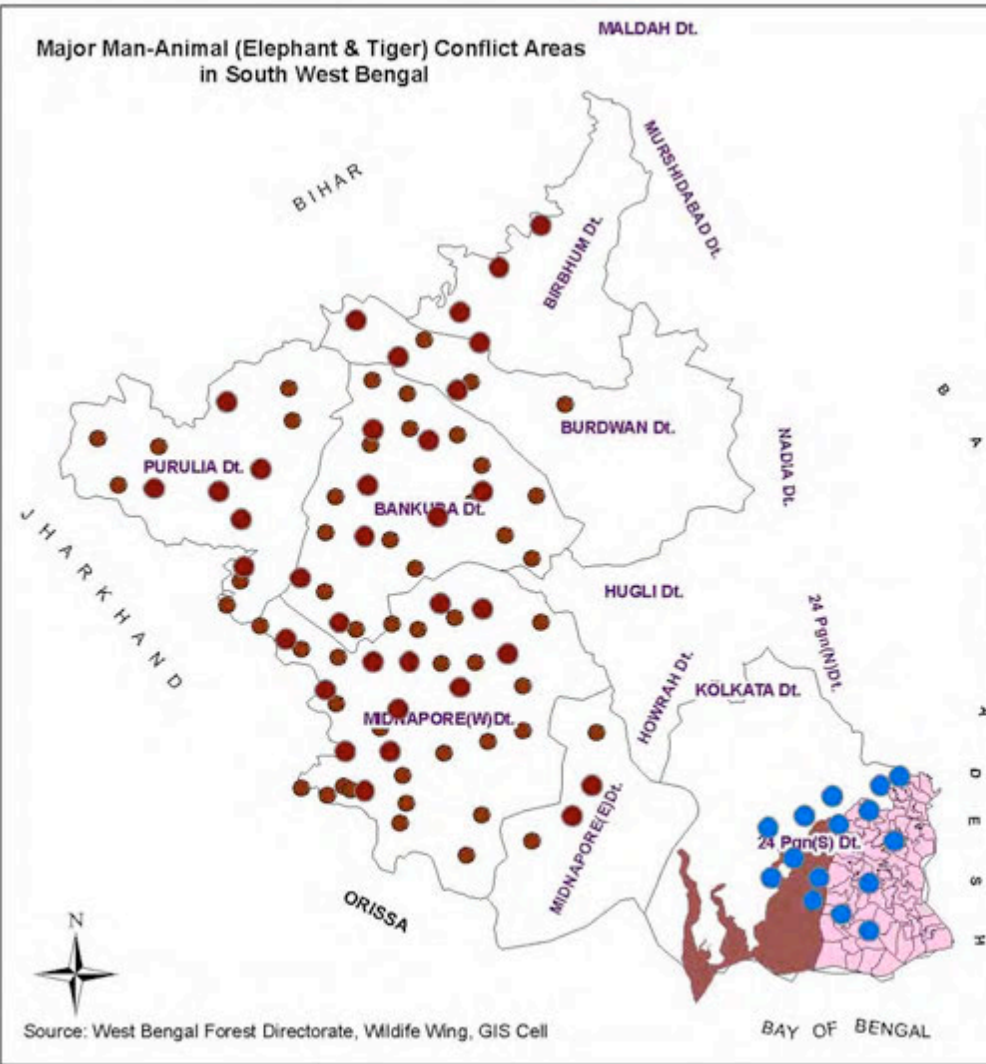




(Source) Wildlife Wing, WBFD (2011)

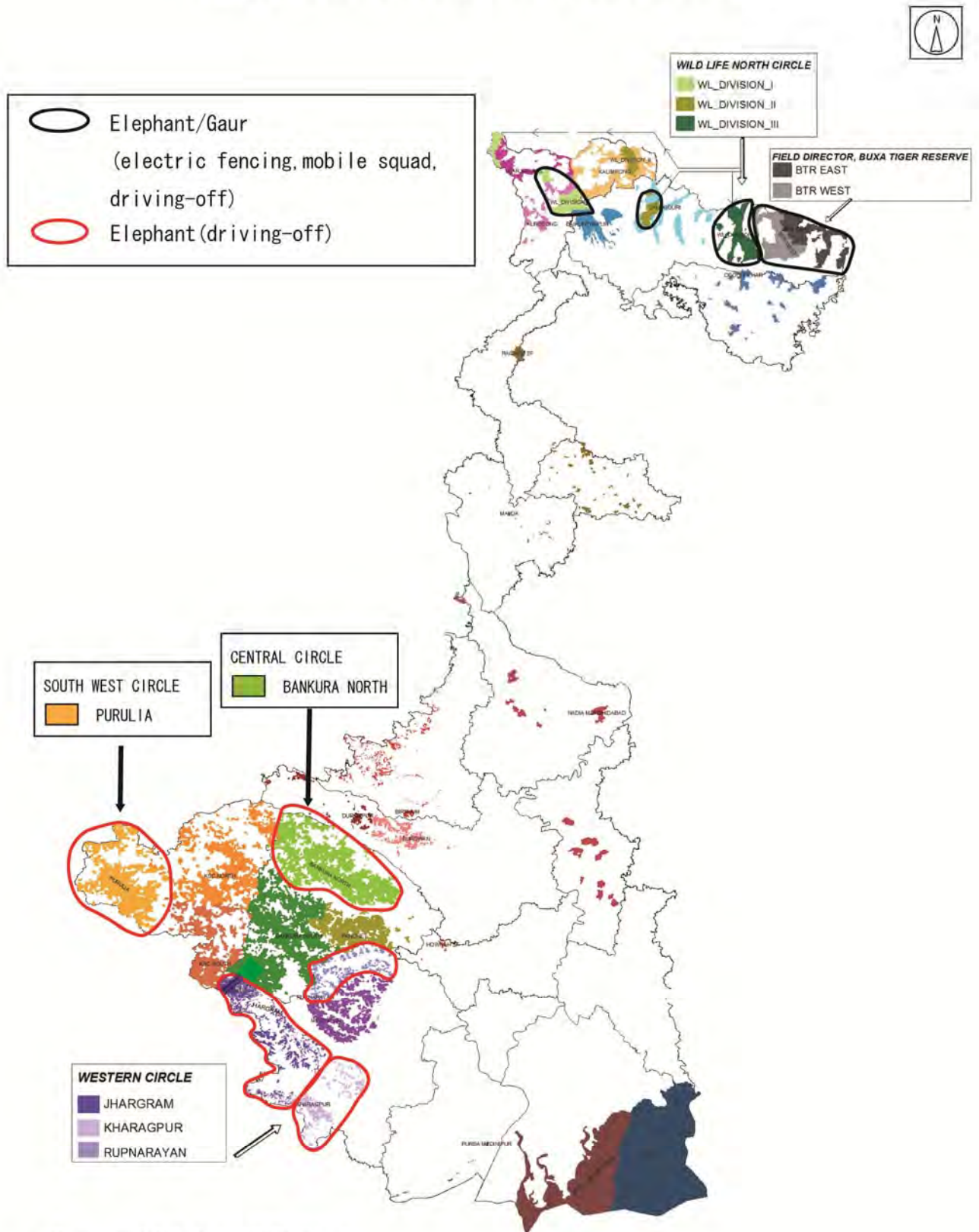


- Legend**
- Man-Elephant Conflict Zones
  - Man-Tiger Conflict Zone
  - Man-Leopard Conflict Zone
  - Man-Bison Conflict Zone



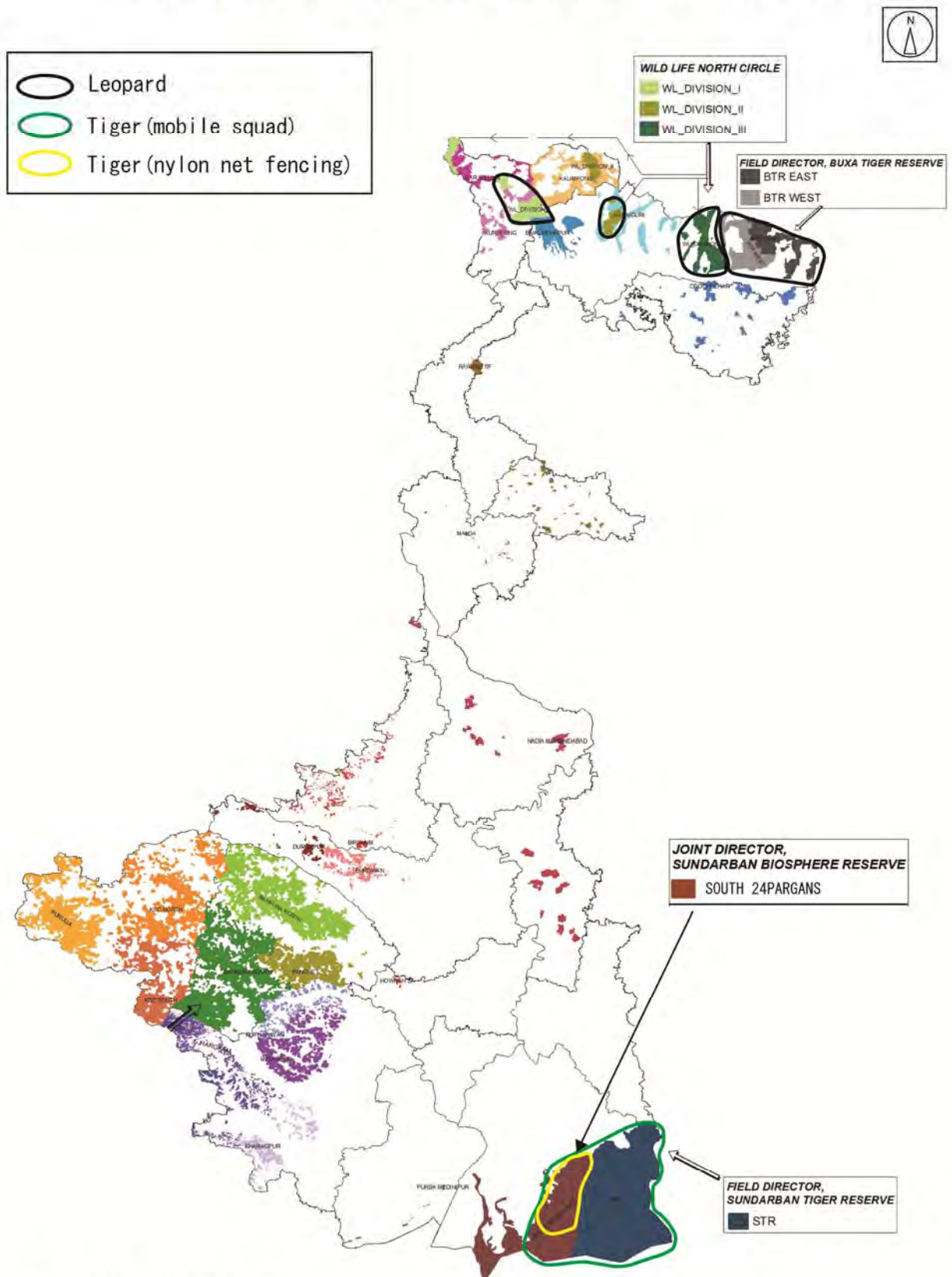


# Target Areas for Elephant Conflict Mitigation



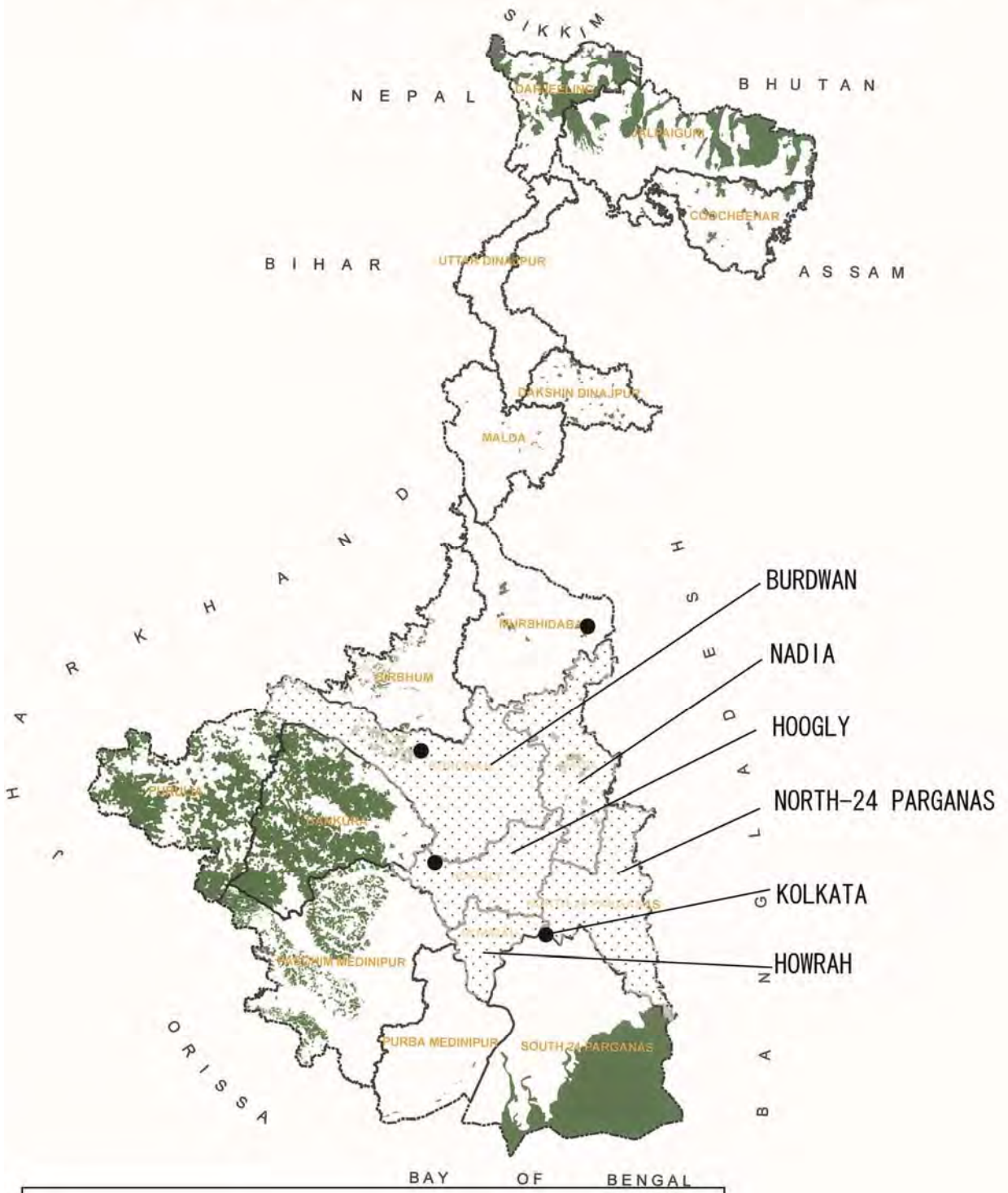
(Base map) GIS Cell, WBED (2011)

# Target Areas for Tiger and Leopard Conflict Mitigation







(Base map) GIS Cell, WBED (2011)

# Target Areas for Smaller Animal Conflict Mitigation



## Legend for Features

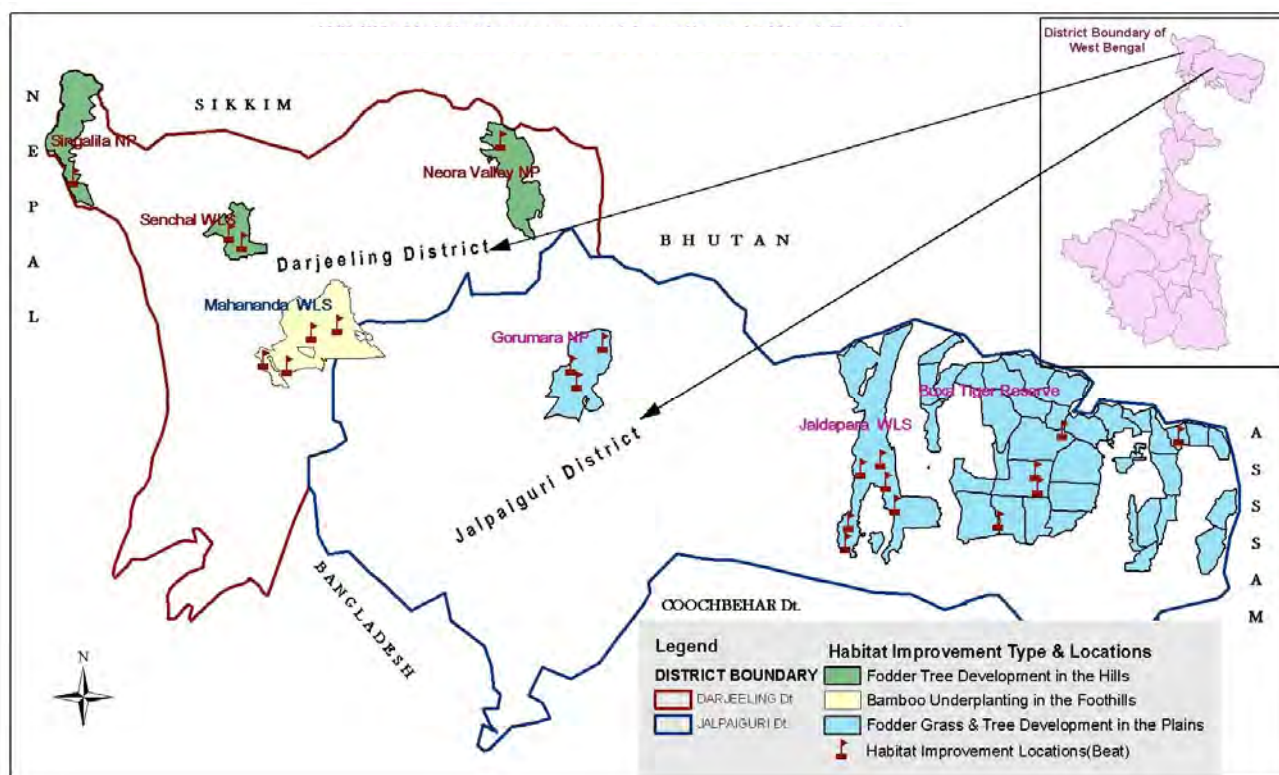
	DISTRICT BOUNDARY		TARGET DISTRICTS
	FOREST AREAS		DIVISIONS

(Base map) GIS Cell, Wbfd (2011)





## Proposed Locations of Habitat Improvement in West Bengal



(Base map) GIS Cell, Wbfd (2011)

Type of Work	Protected Area	Division	Range	Beat	
1. Grass and fodder tree plantation in the plains	Buxa TR	Buxa TR East	Hatipota	Chuniajhora	
			Kumargram	Newlands	
		Buxa TR West	East Damanpur	SRVK	
			West RVK	CRVK	
	Jaldapara WS	Wildlife III	Jaldapara East	Jaldapara	Malangi
				Sissamara	
			Jaldapara West	Hollong	Moiradanga
				Kunjanagar	
	Garumara NP	Wildlife II	Garumara South	Garumara	Dhupjhora
Garumara North			Khunia		
2. Bamboo under-planting in Mahananda	Mahananda WS	Wildlife I	Sukna	Mahanadi	Koklong
				Mahananda North	Gulma
			3. Fodder tree plantation after bamboo removal in the hills		Neora valley NP
Senchal WS	Wildlife I	Senchal West	Catchment Block	Rambi	
		Senchal East			
Singhalila NP	Wildlife I	Singhalila South	Gairibas		



Annexure 6

List of NGOs

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## Annexure 6 List of NGO

### A. Bankura

Name of Organization	Address	Contact Number	Main Activities
1 Jyoti Pratibandhi Punarbasan Kendra	Bankura	-	-
2 Kenduadihi Bikash Society	Gobindanagar, Bankura	03242-241805	-
3 Vivekananda Adibasi Kalyan Samity	Chamtagora, Kamalpur, Chhatna Block	03242-274202	-
4 Kamalpur Society for Movement & Action for Rural Development	Kamalpur, Bankura	03242-274286	-
5 Charbedia Rural Economic & Area Development Society	Charbedia, Layekpur, Simlapal	03243-262362	-
6 Chak Durgadas Rishi Arabinda Rural Welfare Organisation	Dundar Raipur, Bankura	-	-
7 Shamayita Math	Ranbahal, Amarkanan, Bankura	03241-265202 / 03241-265201	-
8 Bankura Institute	Pratapbaga, Bankura	03242-253965	-
9 Siberbandh Adibasi Mahila Unnayan Samity.	Siberbandh Kchdihi, Sonamukhi	-	-
10 Padmaja Naidy Arogyabas	Nabajibanpur, Bankura	-	-
11 Ramkrishna Mission	Joyrambati, Bankura	-	-
12 Prabuddha Bharati Sishu Tirtha (Short Stay Home)	Bishnupur	-	-
13 Association for Social & Health Advancement	Hareswarmela Bankura	03242-257305	-
14 Ashar Ao	Barjora, Bankura	-	-
15 Hijaldihi Vivekananda Seva Samity	Hijaldihi, Joypur Bankura	03244-247315	-
16 Simdal Vivekananda Seva Samity	Kotulpur, Bankura	-	-
17 Mallabhum Mahila Kalyan Samity	Cinema Road, Bankura	-	-
18 Gandhi Vichar Parishad	Schooldanga, Bankura	-	-
19 Bhadul Community Welfare Organisation	Bhadul, Bankura	-	-
20 Sister Nivedita Kalyan Samity	Bisinda, Gangajalghati, Bankura	03241-220062	-
21 Socio Economic Development Programme	Ranibandh, Bankura	03243-250287	-
22 Barabari Netaji Seva Sangha	Hirbandh, Bankura	-	-
23 SWAD (Society for Advance Development)	Khatra, Bankura	-	-
24 Mallabhum Social & Family Welfare Association	Bishnupur (Near Music College), Bankura	-	-
25 Paschim Banga Kustha Kalyan Parishad	Gouripur, Bankura	-	-
26 Bankura Zilla Saririk Pratibandhi Kalyan Samiaty	Chhandar, Beliatore, Bankura	03241-259242	-

Name of Organization	Address	Contact Number	Main Activities
27 Sri Ramkrishna Vivekananda Society	Sarenga, Bankura	-	-
28 Gramin Pratibandhi Unnayan Samity	Malliyanganj, Hirbandh, Bankura	-	-
29 Paschim Banga Rajya Pratibandhi Sammilani, C/O Bankura Institute	Schooldanga, Bankura	-	-
30 Sara Bankura Pratibandhi Welfare Organisation	Bhairabpur, Amarkanan, Bankura	-	-
31 Society for up-liftment of Rural Youth & Artisals.	Mathpara, Schooldanga, Bankura	03242-254309	-
32 'Sumangalam' Kharikauli Home	P.O. Morrar (Bishnupur), Bankura	-	-
33 Bankura State Welfare Home	P.O. & Dist.- Bankura	-	-
34 Byom Sankar Sonamukhi Welfare Home	P.O. Sonamukhi, Dist.- Bankura	-	-
35 Bankura Blind Sammilani School	Lokepur, Bankura	-	-
36 Dr. Sailendranath Mukherjee, Muk-O-Badhir Memorial School	Kotulpur, Bankura	-	-
37 Joyrambati Destitute Home	Joyrambati, Bankura	-	-
38 Sister Nivedita Kalyan Samity	Saltora, Bankura	-	-
39 Society for Women Advanced Development	Khatra, Bankura	-	-
40 Barabari Netaji Seva Sangha	Hatirampur, Hirbandh, Bankura	-	-
41 Liberal Association for Movement of People (LAMP)	Subhankar Sarani, Bankura	-	-
42 Sanghati Mission	Patpur, Bankura	-	-
43 Association for Social & Health Advancement	Jogipara, Bankura	-	-
42 Mallabhum Social & Family Welfare Association	Bishnupur, Bankura	-	-
43 Gramin Pratibandhi Unnayan Samity	Hirbandh, Bankura	-	-
44 Indian Red Cross Society	Bankura	-	-
45 Khayerboni Gram Unnayan Samity	Khayerboni, P.O. Kanchanpur, Dist- Bankura	-	-
46 Centre for Women Development Studies	Vill & P.O. Jhilimili, Dist-Bankura	-	-
47 Chndidas Vidyapiath Chhatna working Women Hostel	Chhatna, Bankura	-	-
48 Naribikash Sangha	Jhilimili, Bankura	-	-
49 Kamalpur Adibasi Mahila Unnayan Samity	Chhatna, Bankura	-	-
50 Purulia Nirmal Seva Sangha	Chhatna, Bankura	-	-

B. Barddhaman

	Name of Organization	Address	Contact Number	Main Activities
1	Dr. Chatterjee's Village welfare Society	Komarpur Hattala, P.O.-Nirol, Ketugram-I no. Block, Katwa Subdivision, District-Burdwan, W.B., PIN-713140,	03453 273241	-
2	LAMP's Action for Comprehensive Development and Rehabilitation of Leprosy-sufferers	-	-	-
3	Nutanhat Development Society	Vill & Post-Jhilu Dist. Burdwan	-	-
4	West Bengal Voluntary Health Association	-	-	-
5	Akabpur Sammelani	P.O. Nadanghat, Dist.- Burdwan, Pin.713 515	(03454)260 250 / 260 343	-
6	Kulai New Agragami Yuba Sangha	Vill- Kulai, P.O. Kulai, Dist. Burdwan, Pin-713143	(03453)256469	-
7	The Durgapur Citizens • Development Centre (DCDC)	BDN-Arrah, Durgapur, Dist. Burdwan, Pin. 713212	(0343)2533061 /5352	-
8	Uchitpur Nabin Sangha	Vill. Uchitpur, P.O. Sanktia, Burdwan, Pin 713408	(03451)210154	-
9	Durgapur Indira Pragati Society	Gopalmath, Kamala Kutir, P.O: Oyaria Burdwan 713 345	-	-
10	Ambika Kalna Development Society	Vill. Purba Shahapur, P.O. Purba Satgachia via Kalna, Dist. Burdwan 712512	-	-
11	Asansol Anandam	St.Vincent School Campus, S.B.Gorai Road, Asansol, West Bengal	-	-
12	Dr. Sailendra Nath Mukherjee Muka Badhir Vidyalaya	P.O.Jorthan, Distt.Burdwan, West Bengal	-	-
13	Society for Mental Health Care	P.O. & Vill.Khajurdhi, Via Katwa, Distt.Burdwan-713518, West Bengal	-	-
14	Central Scheduled Castes & Tribal Welfare Association	4 no., Sankaripurkur(Nichu Colony), P.O.-Sripally, Dist.-Burdwan, West Bengal	-	-
15	HOPE (Handicapped Oreintation Programme & Education)	H.F.C. Township, Durgapore-713212, West Bengal	-	-
16	Society for Welfare of the Handicapped Persons	32, School Road, Durgapur-713204, West Bengal	-	-
17	Saririk Pratibandhi Unnayan Samiti	5, Indian Type Hostel, Tagore Avenue, Durgapur, West Bengal - 713204	-	-

C. Darjiling

	Name of Organization	Address	Contact Number	Main Activities
1	A TREE	Dr. B.L. Dixit Road PO Kalimpong Near Jubliee School-734301	+91 354 2257713	-
2	Environment Protection Society	St. Paul's School, Darjeeling	-	-
3	Project S.E.R.V.E	WWF-India, Darjeeling Gymkhana Club Complex Darjeeling 734101	+91 354 2254881	-
4	Friends For Trees Forum	"BARDAAN", Krishna Nagar Mirik	+91 9832374385	-
5	FORCE	Red Cross Building, Darjeeling 734101	-	-
6	PRERNA	Darjeeling Ladenla Road 42 Ladenla Road Hayden Hall Complex Darjeeling 734 101	+91 354 2255894	-
7	PAHAR	22, Chowrasta, Darjeeling 734 101	-	-
8	Anugyalaya DDSSS	Bishops House, Darjeeling	+91 354 2254929	-
9	KRIPA	Bhotay Busty Road Darjeeling 734 101	+91 354 2254292	-
10	Nari Vikas Sangathan	S.U.M.I. Hostel, Kalimpong, Darjeeling	-	-
11	HAYDEN HALL	42 Ladenla Road,	0354 2253228	-
12	CHAI Project	9, coochbehar Road Darjeeling	+91 9933161228	-
13	JAWAHAR GRAM SUDHAR SAMITY	Darjeeling 734 101	-	-
14	ASTHA	Nepali Girls Social Service Society,Darjeeling	-	-
15	Earth Group	Darjeeling Gymkhana Club Complex, Darjeeling 734 101	-	-
16	DISHA	K.D. Pradhan Road, Kalimpong	-	-
17	Nepali Girls Social Service Society	Darjeeling 734 101	-	-
18	Darjeeling SPARSH	15 Ladenla Road,	+91 98320 72130	-
19	Centre for Mountain Dynamics	S.U.M.I. Hostel, Kalimpong 734 301 Darjeeling	-	-
20	Environment Protection Society,	St. Paul's School, Darjeeling	-	-
21	NEPA	Mirik Press, Mirik Bazar,	+91 9832345180	-
22	COSMOS	Darjeeling	-	-

D. Murshidabad

Name of Organization	Address	Contact Number	Main Activities
1. Churches Auxiliary for Social Action	79/2/A Madhupur , Berhampore - Murshidabad	03482 263610	-
2. Students Health Home,	20, Bimal Singha Road Berhampore - Murshidabad	03482 254107	-
3. Paschim Banga Vigyan Mancha	51, S.N. Bhattacharya Road, Berhampore - Murshidabad	03482 259961	-
4. District Centre for Rehabilitation of Persons With Disabilities,	Berhampore - Murshidabad	-	-
5. Murshidabad Samaj Kalyan Samity Panchanantala	Berhampore - Murshidabad	03482 257256	-
6. Murshidabad Institute of Social Welfare, Education and Rehabilitation	73/1, Pilkhana Raod, Berhampore - Murshidabad	03482 256272	-
7. Mirzapur Naba Bharat Mission	95/2, Madhupur Road, Berhampore - Murshidaba	03482 254171 03482 262052	-
8. Satavisha Social Welfare Society,	Aminabazar P.O. Dahapara, Murshidabad.	03483 253504	-
9. Palsa Pally Unnyan Samity	Gorora, Nabagram, Murshidabad - 742184	03483 270122 270072 (fax)	-
10. Association for Social & Health Advancement (ASHA)	BE-135, Sector 1, Salt Lake, Calcutta - 700064	033-23595475	-
11. Suprava Panchashila Mihala Uddyog Samity	Station Raod Berhampore – Murshidabad	03482 261801	-
12. Sevabrata, Sargachi	Murshidabad	03482 232212	-
13. Indian Red Cross Society	47/1, Red Cross Road, Berhampore – Murshidabad	3482 256733	-
14. Society for Peoples' Awareness (SPAN)	Vivekananda Palli, Chuapur Berhampore – Murshidabad	03482 256761	-
15. Khudiram Pathagar	Gorabazar, Berhampore – Murshidabad	03482 261051	-
16. St. John Ambulance Brigade, Murshidabad Division	55, Mechuabazar Road, Berhampore	03482 254152	-
17. Terre des homes	-	-	-
18. J. Ramaswamy Jagriti	Village- Katna, Kandi	03484 222247	-
19. Hatimul Islam	Kallol, Hariharpara.	03482-230298	-

E. North 24-Parganas

	Name of Organization	Address	Contact Number	Main Activities
1	Anandamayee Seva Samiti	(Garden Reach) P145, Mudaiali Road, Kolkata-24	2493-0640 2469-1319 9433502582 9339262207 9831334713 9831334773	Crowd regulation, Lost & found etc. at Kachuberia
2	Bajrang Parishad	201/B, M.G. Road, Kolkata-7	2268-3301 9339730015 9831178111	Lost & found
3	Barabazar Jamadar Sangha	197, Rabindra Sarani, Kolkata-7	2269-7923 9433967132 9431479986	Temple, Sea Beach, Pilgrim Shed Duty
4	Bharat Sevashram Sangha	211, Rashbehari Avenue Kolkata-19	2440-5178 9432069699	Nodal Voluntary Org. Crowd regulation, First Aid etc.
5	Boys Scout of Bengal	12, Waterloo Srteet, Kolkata-1	2637-4516 9038040476	Life Saving & First Aid
6	Citizen Volunteer Force	12A, Netai Babu Lane, Kolkata-12	2241-8521 9433505949	First Aid & Medicine Distribution
7	Dadhichi Parishad 2	P7, Kalakar Srteet. Kolkata-7	248-0558 9830238005 9331032177	Jetty manning, Seva Sibir & Medical
8	Homeopathic Welfare & Relief Society	1/A, Ramnarayan Motilal Lane, Kolkata-14	2227-0938 9339435761 9432606226	Homeopathic Medical Camp
9	Indian Red Cross Society	27, Belvedere Road Kolkata-27	2479-1064 9874359943	Medical Camp, Ambulance Stretcher, pilgrim guide, shed,
10	Khiddirpore Seva Samity	14, Dr. Sudhir Basu Road, Khlddirpore, Kolkata-26	9874852073	Bathing Ghat Duty watching pilgrim Shed & anti-fouling
11	Kishore Bahani	Rudra Nagar, P.S.-Sagar	953210242893	Guide to pilgrim & anti-fouling
12	Lake Friends	Rabindra Sarabar, Kolkata-29	2425-2211 2466-9630 9874274518 9051212081	Life Saving
13	R. W. A. C. (Relief Welfare Ambulance Corporation)	9/1A, A.J.C. Bose Road, Kolkata-17	2287-2239 9331990388 9231557643	Free Medical Treatment
14	Royal Life Saving Society	158/A, Ahiritola Street, Kolkata-5	2218-8282 9433008282	Life Saving Unit, Rescue & Medical
15	St. John Ambulance	Brigade 5, Govt. Place, North, Kolkata-1	2248-5277 9433340785 9830136969 9339992220	First Aid/Emergency Casualty
16	Veer Abhimanyu Sporting Club	138, Cotton Street, Kolkata-7	9007000104 9836511294	Disposal of dead body

Name of Organization	Address	Contact Number	Main Activities
17 W.B.D.M.S. Association	21, Sahitya Parishad Street Kolkata-6	2555-8459 2570-7111 9831126147 9432071371	Homeopathic free treatment
18 Lokenath Mission	23/2, Roybagan Srteet Near Scotishchurch School Kolkata-6	2675-4451 9432291724	First Aid & Shelter to the Pilgrims
19 Aarya United Squad	24, Tallygunge Circular Road, Kolkata-31	2665-3113 9830997248	To be tagged with S.P. South 24 Parganas
20 Antarjatik Loknath Bramhachari Sevashram	10, Sovaram Bask Street, Kolkata-7	2860-0583 9231133603 9874601804	Medical Camp
21 Akhil Bharatia Pragatisil Sultanpur Samaj	4, Raja Woodmount St. Kolkata-1	2243-1141 9339721218 9830010409	Shelter
22 Bangiya Adarsha Bikash Samity	61/A, Beniatala Srteet, Kolkata-5	2543-3781 2528-4657 9830540392 9339737932 9163062492	Fire prevention & Fire fighting
23 Bengal Chemist & Druggist Association	10, Bonfield Lane, Kolkata-1	2242-8944 2210-4537 2243-3603(F) 9734306161 9433052125	Free Medical Treatment Outdoor Treatment
24 Bharat Relief Society	42, Zakaria Srteet, Kolkata-73	2234-2670 2235-9952 9831669988 933603105	Medical Treatment with Mobile Medical Service
25 Burabazar Bapari Sangha	16, Jamunalal Bazar Srteet, Kolkata-7	2218-4836 9433042528	Free food shelter tea tiffin
26 Burabazar Civil Defence Club	25, Maharshi Debendra Road Kolkata-7	2259-7673/7696 9231678521 9831844567	Jetty Ghat Duty Announcement
27 Calcutta Kanyakubja Sabha	150B, Aheritola Srteet, Kolkata-5	2269-1118 2860-3057 9331030502	Seva Sibir
28 Calcutta Vastra Veybsayi Seva Samity	11B, Armenian Street, 1st floor, Kolkata-1	033-6569-3668 9830089990 9831026075	Service to the Pilgrims
29 Chemaguri Shri Ramkrishna Sevadal	Chemaguri, Sagar, South 24 Parganas	9733703284 9002808447	Jetty Ghat Pilgrim Duty
30 Chetna Parishad	218B, Jumalal Bajaj St., Kolkata-7	9831076953	Free food, Shelter etc.
31 Cotton Street Young Boys Club	115, Cotton Street, Kolkata-7	9830475172 903626062	Religious & Social Purpose Free food, Shelter



Name of Organization	Address	Contact Number	Main Activities
32 Deprive People	309, B.B. Ganguly St. Kolkata-12	2488-1725 9433492124 9874416460	First Aid Treatment, Allopathy, Mela Guide
33 Dindukhi Lalbaba Asram	3, Palghat Lane, Belurmath, Howrah	2654-3942	Service to the Pilgrims, Monks, Saints
34 Doctor's Youth Council	228, Bankim Sarani, Jyanga South Math P.O.-Deshbandhunagar Baguihati, Kolkata-59	2351-0771 9433517985 9231765535 9433377799	Medical Treatment Homeopathy
35 Doshar Vhishya Sangha	13/1, Goalloli Lane, Kolkata-13	2664-9236 9339733722	Services to the Pilgrims
36 Ganga Sagar Brahma Sonatan Sevashram	Vill+P.O.-Ganga Sagar, South 24 Parganas, Pin-743606	9231997281 9635142973	Various Medical facilities
37 Howrah Bhartiya Sahu Samaj	17/2/1, Asu Bose Lane 9, Bellilious Road, Howrah-1	9831410607 830080849 9748391142	Free food, Medicine, Shelter etc.
38 Indian Pharmaceutical Association	Bengal Branch 22B, Panchanantala Road, Kolkata-29	2544-4251 9874447811 9433177829 9748674625 9433223847	Health & Medical Services
39 Indian Health & Welfare Mission	11/4, Bijaygarah, Jadavpur Universiy, Kolkata-32	9239321080	Free woolen cloth, Dry food, Medicines
40 Indian Life Saving Society	Rabindra Sarabar, Kolkata-29	2466-5359 2435-6651 9933094164 9433111977	Life saving job
41 Indian National Trade Union,	Congress Laxmikanta Basu Bhavan, Thakurpukur Bazar, Kolkata-63	2453-1722 2497-2056 9433602284	Service to the Pilgrims
42 International Nathyogi Sevashram Maha Sangha	8B, Kreck Lane, Kolkata-14	9749372204 9339729209	Yogsadhana & Medical treatments
43 ISKCON, Mayapur,	Nadia, Pin-74313	03472245241/ 245415 9434951739 9475110217 93472245415	Free food, Night Shelter, Medical Aid for Pilgrims
44 Kalpataru Jagaram Sangh	3A, Nayapatti Road, Kolkata-55	2579-4441 2529-77801	Aurvedic Treatment, Voluntery Sevice, Distribution of books, Vadu, Cassettes etc.
45 Krishna Kumar Chatterjee Memorial Association (K.K.C.M.A.)	10/3A, Nepal Bhattacharya Street, Kolkata-26	2463-6842 9836031533 9836031559	Pilgrim shed duty between road no. 4&5
46 Lakshmikantapur Health Awareness Society	Lakshmikantapur, Bijoygunge Bazar, Mandirbazar, Diamond Harbour, South 24 Parganas	953174-277348 9834615551 9434615551	Homeopathic & Biochemic Medical Service

Name of Organization	Address	Contact Number	Main Activities
47 Mahanam Sevak Sangha	VIP Road, Raghunathpur Kolkata-59	2500-6466 9832203794 9831935478 9830051901	Medical Camp
48 Manab Seva Samity (Howrah)	Vivek Vivar, Block-H, 493/C/A GT Road South, Howrah	2638-0020 2643-0300 9331062924 9748374648	Seva Camp
49 Nagrik Sasthasangha	8, Sovaram Bask Srteet, Kolkata-7	2274-4324/0296 2219-4747 9433037377	Medical Service
50 National Institute of Homeopathy (an autonomous organisation under Ministry H & FW, GOI)	Block-GE, Sector-III, Salt Lake, Kolkata-106	2237-0970/0969 9433392105	Homeopathic Free treatment
51 Paschimbanga Bhojpuri Parishad	24C, Rabindra Sarani, Kolkata-73	2237-2648 2237-7292 9339747136	Camp for the Pilgrims for Food, Shelter& Medical
52 Paschimbanga Non Gazetted Police Karmachari Samity	Howrah, 438 GT Road, Shibpur, Police Line Howrah, 711102	2661-0261 9433709555	Medical treatment Homeopathic
53 Pragatishil Homeopathic Chikitsak Samity	79/3A, AJC Bose Road, olkata-14	2490-7516 9836369989	Homeopathic Free treatment
54 Ramkrishna Mission Seva Prathistan	99, Sarat Bose Road, Kolkata-26	2475-3636 /37/38/39 9433485767	Medical Service, temporary Hospital round the clock
55 Ramkrishnapur Rani Rashmani Seva Sangha	Vill+P.O. Ramkrishnapur Kulpi, South 24 Parganas Pin 743351	953174-320109 9732667821	Medical Camp
56 Relief Welfare Ambulance Corporation (RWAC)	9/1 A, AJC Bose Road, Kolkata-17	2287-2239 9331990388	Free Medical Camp
57 Sagar Block Congress Sevalal	104E, Dr. Lalmohan Bhattacharya Road, Rudranagar, Sagar South 24 Parganas	2437-1521 9836053529	Bathing Ghat
57 Sagar Block Congress Sevalal	104E, Dr. Lalmohan Bhattacharya Road, Rudranagar, Sagar South 24 Parganas	2437-1521 9836053529	Bathing Ghat
58 Sagar Congress Sevalal	Rudranagar, South 24 Parganas	8016452961 9143049002	Anti-fouling & Fire fighting
59 Sagar Thana Sevalal	Rudranagar, Sagar, South 24 Parganas	953210-212054 9732701510 9635574179	Temple duty
60 Sankalp	Room No. 1G, 16, Mangoe Lane. Kolkata-1	2248-0542 09452651049 09007107933	Food, Shelter, Medical Attendance
61 Sant Sova-Ma Sevashram	Sant Kutir, Andul, Mouri, Churamonipara, P.S.-Domjur, Howrah-711302	9433094576 9051182428	First Aid
62 Satya Sai Seva Organisation	163, AJC Bose Road, Kolkata-14	2249-2558	Removal of Night Soil & Sanitation

Name of Organization	Address	Contact Number	Main Activities
63 Shree Pustikar Seva Samity	203/1, MG Road, (3rd floor), Parakh Khofi, Kolkata-7	2274-1942 2259-6246 9433475309 9681012500	Voluntary Services to the Pilgrim
64 Sree Shivshkati Seva Samity	19, Panchu Dhobani Lane, (Singhee Bagan) Kolkata-7	2273-7445 9831015202 9831858871	Free shelter, Free food etc.
65 Shree Shyam Prem Mondal	(Kathgola) Calcutta 2, Jorabagan Street, Kolkata-8	2259-5106 9830229375 9830137311	Free shelter, Food to the Pilgrims, Lost & found, Ambulance
66 South 24 Parganas Press Club	(NAB), Alipore, Kolkata-27	9433503960 32926960	Medical facility for the Pilgrims
67 Shree Rani Satiji Prachar Samity	20B, Raja Brojendra Narayan Street, Kolkata-70	2270-3227 9830096437 9830399453	Free distribution of different food items drinking water etc.
68 Shri Shri Nigamannanda Charitable Dispensary	Assam Bangiya Sarswat Math, P.O. Halisahar North 24 Parganas 743134	25858167	Medical Assistance
69 Subho Prayash	53/52, R. N. Guha Road, Kolkata-28	2251-5081 9433081125	Awareness
70 Sundarban Mahila Seva Samity	Rudranagar, Sagar, South 24 Parganas	953210-242893	Temple Duty
71 Sundarban Rural Medical Doctor's Welfare Association	Harishpur, Gosaba, South 24 Parganas	9836711608 9830618994	Medical facility
72 Sundarban Seva Samity	Rudranagar, Sagar, South 24 Parganas	953210-242893	Temple Duty
73 Tagore Society for Rural Development Sargar Project	46B, Arabindo Sarani, Kolkata-5	9800391613 9433379948	First Aid & Social Service
74 Thakur Balak Brahmachari Educational & Cultural Society	142, Ahiritola Street, Kolkata-5	2530-4807 9433322004	First Aid
75 Thakur Shri Shri SamirBrahmachari Sangha	199, Talpukur Road, South Kodalia, New Barrackpore, olkata-131	9903950597	Free Medical & Relief Camp, Ambulance
76 Udasin Panchayat Barha Akhra Shri Shri Joydev Lalbaba Ashram	Bandel, Vill+P.O. Manushpur, Bandel, Chinsurah, Hooghly, Pin-712123	2631-7750 9883398258	Homeopathy & Alopthy, First Aid & Outdoor
77 West Bengal Pradesh	Trinamul Congress Sevadal (Sagar Branch) 36G, Topsis Road, Kolkata-100	2345-5050/5151 9339033102	Seva Camp
78 Vedalok Samaj Trust	1/2, Sankar Ghosh Lane, Kolkata-6	9903148282	Homeopathy & Alopthy, First Aid & Outdoor
79 Amader Perana	Vill + P.O.-Kamalpur Sagar, Pin-743373	9748579430 9007542676	Safeguarding women
80 Arya Samaj Howrah Trust	38/3, Khetramohan Mitra lane Salkia, Howrah, 711106	26653113 9331847791 9830121992	Free food, Lodging, Medical Aid
81 Kolkata Sri Kaiika Devi Seva Samity	6, Clive Row, Kolkata-1	2273-0730 9831007979	Seva

Name of Organization	Address	Contact Number	Main Activities
82 Kamdevpur Rural Development Society	P.S.-Magrahat, Pin-743601	9339767983 9732585890	Medical Treatment
83 Gramin Chikitsak Samity	Bishalakshitala, Puratan Bazar, Baruipur, South 24 Parganas Kolkata-144	9433566390 9332540517	Medical
84 Mozilpur Multipurpose Human Progressive Society	Vill-Mozilpur, P.O. Joynagar	9433703757	Medical (CMOH)
85 Tagore Society for Rural Development	14, Kshudiram Bose Raod, Kolkata-6	-	Medical (CMOH)
86 Kolkata Bastra Babsayee Seva Samity	P4, New How Building Nandaram Market Kolkata-	9331017469 9831174466	Free services to the Pilgrims
87 Banglar Human Rights	238, Brahmapur Road, Kolkata-96	-	Health & Medical Services
88 Ganga Sagar Ananda Ashram	Vill+P.O.-Ganga Sagar, Kolkata Office-32, S.N. Roy Road, Kolkata-38	2403-7945 9836535797 9874787673	Medical Camp
89 Sri Jagannath Dev Seva Samity	Shibmandir Rickshaw Stand Chemaguri	9732781921	Free Shelter, Food
90 SHIS	Flat No. A-1/14, 4th floor, New town East Enclave Kolkata-156	03218271034	Water Ambulance
91 Hariyana Charitable Society	Hariyana Bhavan, 40A, Vivekananda Road, Kolkata-7	2269-1189 9433041523 9831011454 9830163855 9432213268	Seva Camp
92 Swami Debananda Ashram Debsangha Charitable trust	Nivedita Pally, Sri Pally, Burdwan-713103	033-24379705 9832200101	Medical Camp
93 Sri Sremat Brhamachari	Jugaibhai Charitable Trust Bhanderhati, Hooghly,	03213213173 9830835597	Medical Assistant
94 Calcutta Sri Kalikadevi Seva Samity	-	9830030003 9831007979 9333094767	Free Food & Shelter
95 Sri Sri Ramkrishna Chaitanya Mission	-	9800004463 9831271845	OPD & Pilgrim Shed Duty Wheel Chair Service
96 Hindu Satkar Samity	-	9831570102 9163705335	Disposal of Dead Body
97 Vishwa Hindu Parishad	-	9830169353	-

Annexure 7

Environmental Check List

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Environmental Checklist: 3. Hydropower Stations, Dams and Reservoirs (1)

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
1 Permits and Explanation	(1) EIA and Environmental Permits	(a) Have EIA reports been already prepared in official process? (b) Have EIA reports been approved by authorities of the host country's government? (c) Have EIA reports been unconditionally approved? If conditions are imposed on the approval of EIA reports, are the conditions satisfied? (d) In addition to the above approvals, have other required environmental permits been obtained from the appropriate regulatory authorities of the host country's government?	(a) No (b) NA (c) NA (d) No	Same as Checklist 17: Forestry.
	(2) Explanation to the Local Stakeholders	(a) Have contents of the project and the potential impacts been adequately explained to the Local stakeholders based on appropriate procedures, including information disclosure? Is understanding obtained from the Local stakeholders? (b) Have the comment from the stakeholders (such as local residents) been reflected to the project design?	(a) Yes (b) Yes	
2 Pollution Control	(3) Examination of Alternatives	(a) Have alternative plans of the project been examined with social and environmental considerations?	(a) No	Same as Checklist 17: Forestry.
	(1) Water Quality	(a) Does the water quality of dam pond/reservoir comply with the country's ambient water quality standards? Is there a possibility that proliferation of phytoplankton and zooplankton will occur? (b) Does the quality of water discharged from the dam pond/reservoir comply with the country's ambient water quality standards? (c) Are adequate measures, such as clearance of woody vegetation from the inundation zone prior to flooding planned to prevent water quality degradation in the dam pond/reservoir? (d) Is there a possibility that reduced the river flow downstream will cause water quality degradation resulting in areas that do not comply with the country's ambient water quality standards? (e) Is the discharge of water from the lower portion of the dam pond/reservoir (the water temperature of the lower portion is generally lower than the water temperature of the upper portion) planned by considering the impacts to downstream areas?	(a) Yes/No (b) Yes (c) Yes (d) No (e) No	(a) It is anticipated that the water quality of the reservoirs will not degrade as others already existing due to natural eutrophication and bio-degradation of natural substances. Serious proliferation of planktons is not anticipated to occur since local people know how to maintain the water quality through their local knowledge and experience. (b) Water stored in the reservoirs is used by multi-purposes or recharges the ground water but not being discharged. (c) Reservoirs are constructed in the areas of little woody vegetation. (d) Reservoirs do not prevent the river flow since they are not constructed along rivers. Erosion control dams are constructed along gullies that do not have the water flow in most of the year. (e) Reservoirs are not planned for discharging water to rivers.
	(2) Wastes	(a) Are earth and sand generated by excavation properly treated and disposed of in accordance with the country's regulations?	(a) Yes	(a) Earth and soil generated are utilized to embank reservoirs, level waste lands and construct roads.
3 Natural Environment	(1) Protected Areas	(a) Is the project site located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the project will affect the protected areas?	(a) No	(a) However, many villages are located adjacent to Protected Forest, Reserve Forest, Wildlife Sanctuary and National Parks in the case of forest villages.

Environmental Checklist: 3. Hydropower Stations, Dams and Reservoirs (2)

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
	(2) Ecosystem	<p>(a) Does the project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g., coral reefs, mangroves, or tidal flats)?</p> <p>(b) Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions?</p> <p>(c) Is there a possibility that the project will adversely affect downstream aquatic organisms, animals, plants, and ecosystems? Are adequate protection measures taken to reduce the impacts on the ecosystem?</p> <p>(d) Is there a possibility that installation of structures, such as dams will block the movement of the migratory fish species (such as salmon, trout and eel those move between rivers and sea for spawning)? Are adequate measures taken to reduce the impacts on these species?</p>	<p>(a) Yes</p> <p>(b) Yes</p> <p>(c) No</p> <p>(d) No</p>	<p>(a) However, it may be located near such habitats.</p> <p>(b) However, it may be located near such habitats.</p> <p>(c) Reservoirs are not constructed along rivers. Earthen/rock checks are constructed to prevent soil erosion and restore soil and water along gullies, which will contribute to recovering the original ecosystem in the area.</p> <p>(d) Reservoirs and erosion control dams are not constructed along rivers that may have such migratory fishes.</p>
	(3) Hydrology	<p>(a) Is there a possibility that hydrologic changes due to the installation of structures, such as weirs will adversely affect the surface and groundwater flows (especially in "run of the river generation" projects)?</p>	<p>(a) No</p>	<p>(a) Reservoirs and erosion control dams are constructed to harvest and recharge water and prevent soil erosion. To ensure it, embankments of reservoirs are stabilized by vegetative covers. Thus, it is anticipated that the installation will rather contribute to increasing the surface and ground water in the area.</p>
	(4) Topography and Geology	<p>(a) Is there a possibility that reductions in sediment loads downstream due to settling of suspended particles in the reservoir will cause impacts, such as scouring of the downstream riverbeds and soil erosion? Is there a possibility that sedimentation of the reservoir will cause loss of the storage capacity, water logging upstream, and formation of sediment deposits at the reservoir entrance? Are the possibilities of the impacts studied, and adequate prevention measures taken?</p> <p>(b) Is there a possibility that the project will cause a large-scale alteration of the topographic features and geologic structures in the surrounding areas (especially in run of the river generation projects and geothermal power generation projects)?</p>	<p>(a) No</p> <p>(b) No</p>	<p>(a) Reservoirs are not constructed along rivers. Earthen/rock checks are constructed to prevent soil erosion and restore soil and water along gullies. Sedimentation deposits in the reservoirs are removed regularly to maintain the capacity.</p> <p>(b) However, although the scale is small, it is expected that the project will recover the original topographic features in the area by preventing soil erosion and restoring soil along gullies.</p>

Environmental Checklist: 3. Hydropower Stations, Dams and Reservoirs (3)

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
4 Social Environment	(1) Resettlement	<p>(a) Is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement?</p> <p>(b) Is adequate explanation on compensation and resettlement assistance given to affected people prior to resettlement?</p> <p>(c) Is the resettlement plan, including compensation with full replacement costs, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement?</p> <p>(d) Are the compensations going to be paid prior to the resettlement?</p> <p>(e) Are the compensation policies prepared in document?</p> <p>(f) Does the resettlement plan pay particular attention to vulnerable groups or people, including women, children, the elderly, people below the poverty line, ethnic minorities, and indigenous peoples?</p> <p>(g) Are agreements with the affected people obtained prior to resettlement?</p> <p>(h) Is the organizational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan?</p> <p>(i) Are any plans developed to monitor the impacts of resettlement?</p> <p>(j) Is the grievance redress mechanism established?</p>	<p>(a) No</p> <p>(b) NA</p> <p>(c) No</p> <p>(d) NA</p> <p>(e) No</p> <p>(f) NA</p> <p>(g) NA</p> <p>(h) No</p> <p>(i) No</p> <p>(j) No</p>	<p>Same as Checklist 17: Forestry.</p>
	(2) Living and Livelihood	<p>(a) Is there any possibility that the project will adversely affect the living conditions of inhabitants? Are adequate measures considered to reduce the impacts, if necessary?</p> <p>(b) Is there any possibility that the project causes the change of land uses in the neighboring areas to affect adversely livelihood of local people?</p> <p>(c) Is there any possibility that the project facilities adversely affect the traffic systems?</p> <p>(d) Is there any possibility that diseases, including infectious diseases, such as HIV, will be brought due to the immigration of workers associated with the project? Are adequate considerations given to public health, if necessary?</p> <p>(e) Is the minimum flow required for maintaining downstream water uses secured?</p> <p>(f) Is there any possibility that reductions in water flow downstream or seawater intrusion will have impacts on downstream water and land uses?</p> <p>(g) Is there any possibility that water-borne or water-related diseases (e.g., schistosomiasis, malaria, filariasis) will be introduced?</p> <p>(h) Is there any possibility that fishery rights, water usage rights, and common usage rights, etc. would be restricted?</p>	<p>(a) No</p> <p>(b) No</p> <p>(c) No</p> <p>(d) No</p> <p>(e) No</p> <p>(f) No</p>	<p>(a) The project has been planned to alleviate the existing living conditions of local people with sanitation and domestic use of water.</p> <p>(b) The project has been planned to alleviate the livelihoods of local people. It may reduce expenditure for water and labour works of bringing water.</p> <p>(c) Reservoirs are constructed in the periphery of villages and farm areas under consensus among beneficiaries and villagers through the Micro Plan with JFM approach.</p> <p>(d) Construction works are made by villagers themselves through JFM.</p> <p>(e) Reservoirs are not constructed along rivers.</p> <p>(f) Reservoirs are not constructed along rivers.</p> <p>(g) Water borne diseases (diarrhoea, dysentery, jaundice, typhoid, malaria and gastro-intestinal problems) exist in the area before the project since there are many water bodies, such as ponds and reservoirs, in/around villages.</p> <p>(h) No such kind of rights exist since reservoirs are constructed not along rivers but gullies and in areas where local people do not use for such purposes.</p>



Environmental Checklist: 3. Hydropower Stations, Dams and Reservoirs (4)

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)	
4 Social Environment	(3) Heritage	(a) Is there a possibility that the project will damage the local archeological, historical, cultural, and religious heritage? Are adequate measures considered to protect these sites in accordance with the country's laws?	(a) No	(a) If such a heritage is identified, it will be adequately dealt with in consultation with the local communities and Department of Municipal Affairs which is entity to deal with ruins under the West Bengal Heritage Commissions Act (2001).	
	(4) Landscape	(a) Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken?	(a) No	(a) Small reservoirs are common structures in/around villages. Earthen/rock checks will rather improve the degraded landscape to the forest landscape.	
	(5) Ethnic Minorities and Indigenous Peoples	(a) Are considerations given to reduce impacts on the culture and lifestyle of ethnic minorities and indigenous peoples? (b) Are all of the rights of ethnic minorities and indigenous peoples in relation to land and resources to be respected?	(a) Yes (b) Yes	Same as Checklist 17: Forestry.	
	(6) Working Conditions	(a) Is the project proponent not violating any laws and ordinances associated with the working conditions of the country which the project proponent should observe in the project? (b) Are tangible safety considerations in place for individuals involved in the project, such as the installation of safety equipment which prevents industrial accidents, and management of hazardous materials? (c) Are intangible measures being planned and implemented for individuals involved in the project, such as the establishment of a safety and health program, and safety training (including traffic safety and public health) for workers etc.? (d) Are appropriate measures taken to ensure that security guards involved in the project not to violate safety of other individuals involved, or local residents?	(a) No (b) No (c) Yes (d) Yes	Same as Checklist 17: Forestry.	
	5 Others	(1) Impacts during Construction	(a) Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)? (b) If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce the impacts? (c) If construction activities adversely affect the social environment, are adequate measures considered to reduce the impacts?	(a) Yes (b) Yes (c) Yes	(a) The construction works are mainly made in the dry season so that soil erosion and runoff will not occur during the construction. Most of the works are made by manual labor and machine so that there is little impact on natural and social environment anticipated. (b) However, no adverse impact is anticipated. (c) However, no adverse impact is anticipated.
		(2) Accident Prevention Measures	(a) Is a warning system established to alert the inhabitants to water discharge from the dam?	(a) No	(a) No such a system is required for this kind of small reservoirs that are not planned for discharging water.

Environmental Checklist: 3. Hydropower Stations, Dams and Reservoirs (5)

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
5 Others	(3) Monitoring	(a) Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts? (b) What are the items, methods and frequencies of the monitoring program? (c) Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)? (d) Are any regulatory requirements pertaining to the monitoring report system identified, such as the format and frequency of reports from the proponent to the regulatory authorities?	(a) No (b) No (c) No (d) No	(a) It is not required by Indian legislations to monitor environmental/social impact if a project does not need EIA by EIA Notification (2006) of the Ministry of Environment & Forest. (b) Since the impact is anticipated minimum and manageable, a monitoring programme will not be established.
6 Note	Reference to Checklist of Other Sectors	(a) Where necessary, pertinent items described in the Forestry Projects checklist should also be checked (e.g., projects in the mountains including large areas of deforestation). (b) In the case of dams and reservoirs, such as irrigation, water supply, and industrial water purposes, where necessary, pertinent items described in the Agriculture and Water Supply checklists should also be checked. (c) Where necessary, pertinent items described in the Power Transmission and Distribution Lines checklist should also be checked (e.g., projects including installation of electric transmission lines and/or electric distribution facilities).	(a) Yes (b) Yes (c) NA	(a) Checked. (b) Checked. (c) No such component in the project.
	Note on Using Environmental Checklist	(a) If necessary, the impacts to transboundary or global issues should be confirmed (e.g., the project includes factors that may cause problems, such as transboundary waste treatment, acid rain, destruction of the ozone layer, or global warming).	(a) NA	(a) NA

- 1) Regarding the term "Country's Standards" mentioned in the above table, in the event that environmental standards in the country where the project is located diverge significantly from international standards, appropriate environmental considerations are requested to be made. In cases where local environmental regulations are yet to be established in some areas, considerations should be made based on comparisons with appropriate standards of other countries (including Japan's experience).
- 2) Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics of the project and the particular circumstances of the country and locality in which it is located.

Environmental Checklist: 7. Roads (1)

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
1 Permits and Explanation	(1) EIA and Environmental Permits	(a) Have EIA reports been already prepared in official process? (b) Have EIA reports been approved by authorities of the host country's government? (c) Have EIA reports been unconditionally approved? If conditions are imposed on the approval of EIA reports, are the conditions satisfied? (d) In addition to the above approvals, have other required environmental permits been obtained from the appropriate regulatory authorities of the host country's government?	(a) No (b) NA (c) NA (d) No	(a) } (b) } (c) } Same as Checklist 17: Forestry. (d) }
	(2) Explanation to the Local Stakeholders	(a) Have contents of the project and the potential impacts been adequately explained to the Local stakeholders based on appropriate procedures, including information disclosure? Is understanding obtained from the Local stakeholders? (b) Have the comment from the stakeholders (such as local residents) been reflected to the project design?	(a) Yes (b) Yes	Same as Checklist 17: Forestry.
	(3) Examination of Alternatives	(a) Have alternative plans of the project been examined with social and environmental considerations?	(a) No	Same as Checklist 17: Forestry.
2 Pollution Control	(1) Air Quality	(a) Is there a possibility that air pollutants emitted from the project related sources, such as vehicles traffic will affect ambient air quality? Does ambient air quality comply with the country's air quality standards? Are any mitigating measures taken? (b) Where industrial areas already exist near the route, is there a possibility that the project will make air pollution worse?	(a) No (b) No	(a) Roads constructed by the project will be used by villagers for their daily life and work. Main means used on the roads are motorbikes, bicycles, cow carts and by foot but not cars. Thus, it is not anticipated that the construction will affect the ambient air quality beyond the country's standard. (b) Due to the same reason, it is not anticipated that the construction will worsen the ambient air quality in nearby areas.
	(2) Water Quality	(a) Is there a possibility that soil runoff from the bare lands resulting from earthmoving activities, such as cutting and filling will cause water quality degradation in downstream water areas? (b) Is there a possibility that surface runoff from roads will contaminate water sources, such as groundwater? (c) Do effluents from various facilities, such as parking areas/service areas comply with the country's effluent standards and ambient water quality standards? Is there a possibility that the effluents will cause areas not to comply with the country's ambient water quality standards? (a) Are wastes generated from the project facilities, such as parking areas/service areas, properly treated and disposed of in accordance with the country's regulations?	(a) No (b) No (c) No	(a) The construction works are mainly made during the dry season. Soil erosion during the rain season can be prevented by the plantation of shrubs and grasses along roads. (b) Little contaminants from the roads are anticipated because of a small number of cars expected on the roads. (c) No such kind of facilities has been planned.
	(3) Wastes	(a) Are wastes generated from the project facilities, such as parking areas/service areas, properly treated and disposed of in accordance with the country's regulations?	(a) No	(a) No such kind of facilities has been planned.
	(4) Noise and Vibration	(a) Do noise and vibrations from the vehicle and train traffic comply with the country's standards?	(a) Yes	(a) Noise and vibrations are anticipated under the country's standard because of a small number of cars expected on the roads.

Environmental Checklist: 7. Roads (2)

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
3 Natural Environment	(1) Protected Areas	(a) Is the project site located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the project will affect the protected areas?  (b) Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions?  (c) If significant ecological impacts are anticipated, are adequate protection measures taken to reduce the impacts on the ecosystem?  (d) Are adequate protection measures taken to prevent impacts, such as disruption of migration routes, habitat fragmentation, and traffic accident of wildlife and livestock?  (e) Is there a possibility that installation of roads will cause impacts, such as destruction of forest, poaching, desertification, reduction in wetland areas, and disturbance of ecosystems due to introduction of exotic (non-native invasive) species and pests? Are adequate measures for preventing such impacts considered?  (f) In cases the project site is located at undeveloped areas, is there a possibility that the new development will result in extensive loss of natural environments?	(a) No (b) No (c) NA (d) No (e) No (f) NA	(a) However, many villages are located adjacent to Protected Forest, Reserve Forest, Wildlife Sanctuary and National Parks in the case of forest villages.  (a) However, it may be located near such habitats. (b) However, it may be located near such habitats. (c) No significant ecological impact is anticipated. (d) No such kind of impact is anticipated since most of the roads are constructed over the existing ones or inside villages. (e) No such kind of impact is anticipated since most of the roads are constructed over the existing ones or inside villages. (f) It is located in villages or farm areas.
	(2) Ecosystem			
	(3) Hydrology	(a) Is there a possibility that alteration of topographic features and installation of structures, such as tunnels will adversely affect surface water and groundwater flows?  (b) Is there any soft ground on the route that may cause slope failures or landslides? Are adequate measures considered to prevent slope failures or landslides, where needed?  (c) Is there a possibility that soil runoff will result from cut and fill areas, waste soil disposal sites, and borrow sites? Are adequate measures taken to prevent soil runoff?	(a) No	(a) No such kind of activities has been planned.
	(4) Topography and Geology	(a) Is there any soft ground on the route that may cause slope failures or landslides? Are adequate measures considered to prevent slope failures or landslides?  (b) Is there a possibility that civil works, such as cutting and filling will cause slope failures or landslides? Are adequate measures considered to prevent slope failures or landslides?  (c) Is there a possibility that soil runoff will result from cut and fill areas, waste soil disposal sites, and borrow sites? Are adequate measures taken to prevent soil runoff?	(a) No (b) No (c) No	(a) No such kind of impact is anticipated since most of the roads are constructed over the existing ones. (b) No such kind of impact is anticipated since most of the roads are constructed over the existing ones. (c) The construction works are mainly made during the dry season. Although the scale of such sites are very small, soil runoff during the rain season can be prevented by the plantation of shrubs and grasses along roads.

Environmental Checklist: 7. Roads (3)

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
4 Social Environment	(1) Resettlement	<p>(a) Is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement?</p> <p>(b) Is adequate explanation on compensation and resettlement assistance given to affected people prior to resettlement?</p> <p>(c) Is the resettlement plan, including compensation with full replacement costs, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement?</p> <p>(d) Are the compensations going to be paid prior to the resettlement?</p> <p>(e) Are the compensation policies prepared in document?</p> <p>(f) Does the resettlement plan pay particular attention to vulnerable groups or people, including women, children, the elderly, people below the poverty line, ethnic minorities, and indigenous peoples?</p> <p>(g) Are agreements with the affected people obtained prior to resettlement?</p> <p>(h) Is the organizational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan?</p> <p>(i) Are any plans developed to monitor the impacts of resettlement?</p> <p>(j) Is the grievance redress mechanism established?</p>	<p>(a) No (b) NA (c) No (d) NA (e) No (f) NA (g) NA (h) No (i) No (j) No</p>	<p>Same as Checklist 17: Forestry.</p>
	(2) Living and Livelihood	<p>(a) Where roads are newly installed, is there a possibility that the project will affect the existing means of transportation and the associated workers? Is there a possibility that the project will cause significant impacts, such as extensive alteration of existing land uses, changes in sources of livelihood, or unemployment? Are adequate measures considered for preventing these impacts?</p> <p>(b) Is there any possibility that the project will adversely affect the living conditions of the inhabitants other than the target population? Are adequate measures considered to reduce the impacts, if necessary?</p> <p>(c) Is there any possibility that diseases, including infectious diseases, such as HIV will be brought due to immigration of workers associated with the project? Are adequate considerations given to public health, if necessary?</p> <p>(d) Is there any possibility that the project will adversely affect road traffic in the surrounding areas (e.g., increase of traffic congestion and traffic accidents)?</p> <p>(e) Is there any possibility that roads will impede the movement of inhabitants?</p> <p>(f) Is there any possibility that structures associated with roads (such as bridges) will cause a sun shading and radio interference?</p>	<p>(a) No (b) No (c) No (d) No (e) No (f) No</p>	<p>(a) There is no adverse impact because the project creat job opportunities in villages and has been planned to alliviate the existing living conditions and livelihoods of local people according with the Micro Plan which is developed by FPC members using JFM approach.</p> <p>(b) The project will benefit the living conditions of local people even other than the target groups by improving movement adn convenience in wider areas.</p> <p>(c) Works are made by villegers themselves through JFM.</p> <p>(d) Main means used on the roads are motorbikes, bicycles, cow carts and by foot but not cars, which are not expected increasing significantly. Thus, it is not anticipated that the construction will affect the road traffic in the surroundings. If traffic is temporary disturbed during construction and maintenance, traffic controllers will be appointed from villagers.</p> <p>(e) The project has been planned to alliviate the existing living conditions and livelihoods of local people.</p> <p>(f) No such kind of structures in large scale has been planned.</p>

Environmental Checklist: 7. Roads (4)

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
4 Social Environment	(3) Heritage	(a) Is there a possibility that the project will damage the local archeological, historical, cultural, and religious heritage? Are adequate measures considered to protect these sites in accordance with the country's laws?	(a) No	(a) If such a heritage is identified, it will be adequately dealt with in consultation with the local communities and Department of Municipal Affairs which is entity to deal with ruins under the West Bengal Heritage Commissions Act (2001).
	(4) Landscape	(a) Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken?	(a) No	(a) There is no adverse impact because most of the roads are constructed over the existing ones or inside villages.
	(5) Ethnic Minorities and Indigenous Peoples	(a) Are considerations given to reduce impacts on the culture and lifestyle of ethnic minorities and indigenous peoples? (b) Are all of the rights of ethnic minorities and indigenous peoples in relation to land and resources to be respected?	(a) Yes (b) Yes	Same as Checklist 17: Forestry.
	(6) Working Conditions	(a) Is the project proponent not violating any laws and ordinances associated with the working conditions of the country which the project proponent should observe in the project? (b) Are tangible safety considerations in place for individuals involved in the project, such as the installation of safety equipment which prevents industrial accidents, and management of hazardous materials? (c) Are intangible measures being planned and implemented for individuals involved in the project, such as the establishment of a safety and health program, and safety training (including traffic safety and public health) for workers etc.? (d) Are appropriate measures being taken to ensure that security guards involved in the project not to violate safety of other individuals involved, or local residents?	(a) No (b) No (c) Yes (d) Yes	Same as Checklist 17: Forestry.
	(1) Impacts during Construction	(a) Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)? (b) If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce impacts? (c) If construction activities adversely affect the social environment, are adequate measures considered to reduce impacts?	(a) Yes (b) Yes (c) Yes	(a) The construction works are mainly made in the dry season so that soil erosion and runoff will not occur during the construction. Most of the works are made by manual labor and machine so that there is little impact on natural and social environment anticipated. (b) However, no adverse impact is anticipated. (c) However, no adverse impact is anticipated.
	(2) Monitoring	(a) Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts? (b) What are the items, methods and frequencies of the monitoring program? (c) Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)? (d) Are any regulatory requirements pertaining to the monitoring report system identified, such as the format and frequency of reports from the proponent to the regulatory authorities?	(a) No (b) No (c) No (d) No	(a) It is not required by Indian legislations to monitor environmental/social impact if a project does not need EIA by EIA Notification (2006) of the Ministry of Environment & Forest. (b) Since the impact is anticipated minimum and manageable, a monitoring programme will not be established.
5 Others				

**Environmental Checklist: 7. Roads (5)**

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
6 Note	Reference to Checklist of Other Sectors	(a) Where necessary, pertinent items described in the Forestry Projects checklist should also be checked (e.g., projects including large areas of deforestation). (b) Where necessary, pertinent items described in the Power Transmission and Distribution Lines checklist should also be checked (e.g., projects including installation of power transmission lines and/or electric distribution facilities).	(a) Yes (b) NA	(a) Checked. (b) NA
	Note on Using Environmental Checklist	(a) If necessary, the impacts to transboundary or global issues should be confirmed, if necessary (e.g., the project includes factors that may cause problems, such as transboundary waste treatment, acid rain, destruction of the ozone layer, or global warming).	(a) NA	(a) NA

1) Regarding the term "Country's Standards" mentioned in the above table, in the event that environmental standards in the country where the project is located diverge significantly from international standards, appropriate environmental considerations are required to be made.  
In cases where local environmental regulations are yet to be established in some areas, considerations should be made based on comparisons with appropriate standards of other countries (including Japan's experience).

2) Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics of the project and the particular circumstances of the country and locality in which it is located.

Environmental Checklist: 16. Agriculture, Irrigation and Livestock Industry (1)

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
1 Permits and Explanation	(1) EIA and Environmental Permits	(a) Have EIA reports been already prepared in official process? (b) Have EIA reports been approved by authorities of the host country's government? (c) Have EIA reports been unconditionally approved? If conditions are imposed on the approval of EIA reports, are the conditions satisfied? (d) In addition to the above approvals, have other required environmental permits been obtained from the appropriate regulatory authorities of the host country's government?	(a) No (b) NA (c) NA (d) No	Same as Checklist 17: Forestry.
		(a) Have contents of the project and the potential impacts been adequately explained to the Local stakeholders based on appropriate procedures, including information disclosure? Is understanding obtained from the Local stakeholders? (b) Have the comment from the stakeholders (such as local residents) been reflected to the project design?	(a) Yes (b) Yes	
		(a) Have alternative plans of the project been examined with social and environmental considerations?	(a) No	
2 Pollution Control	(1) Water Quality	(a) Are considerations given to water pollution of the surrounding water bodies, such as rivers and groundwater by effluents or leachates from agricultural lands? Are adequate use/disposal standards for fertilizers, agrochemicals, and livestock wastes established? Is a framework established to increase awareness of the standards among farmers? (b) Is a monitoring framework established for water pollution of rivers and groundwater?	(a) No (b) Yes	(a) Agriculture is beyond the project scope. However, the Forest Dept. will request the beneficiaries by developing irrigation channels to follow guidances on the usage of fertilizers and agrochemicals by the Agricultural Dept. Nature-derived arsenic and fluoride may be found in certain areas, causing health problem to people. Area identified for the contamination should be avoided from constructing wells. Before construction, water quality will be examined by panchayats to meet the drinking water specification set by the Bureau of Indian Standard. (b) Monitoring of water quality, including arsenic and fluoride, will be conducted by panchayats for one year of usage.
		(a) Are wastes properly treated and disposed of in accordance with the country's regulations? (a) Is there a possibility that impacts in irrigated lands, such as salinization of soils will result? (b) Are adequate measures taken to prevent soil contamination of irrigated lands by agrochemicals, heavy metals and other hazardous substances? (c) Are any agrochemicals management plans prepared? Are any usages or any implementation structures organized for proper use of the plans?	(a) No (b) Yes (c) No	
		(3) Soil Contamination	(a) No (b) Yes (c) No	



Environmental Checklist: 16. Agriculture, Irrigation and Livestock Industry (2)

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
2 Pollution Control	(4) Subsidence	(a) In the case of extraction of a large volume of groundwater, is there a possibility that the extraction of groundwater will cause subsidence?	(a) NA	(a) No such extraction in large scale has been planned. The source for Irrigation channels are mainly the surface water in the north of the state.
	(5) Odor	(a) Are there any odor sources? Is there a possibility that odor problems will occur to the inhabitants?	(a) No.	(a) No particular sources of odor are anticipated by the irrigation channels.
3 Natural Environment	(1) Protected Areas	(a) Is the project site or discharge area located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the project will affect the protected areas?	(a) No	(a) However, many villages are located adjacent to Protected Forest, Reserve Forest, Wildlife Sanctuary and National Park in the case of forest villages.
	(2) Ecosystem	(a) Does the project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g., coral reefs, mangroves, or tidal flats)? (b) Does the project site or discharge area encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions? (c) Is there a possibility that the project will result in the loss of breeding and feeding grounds for valuable wildlife? If they are lost, are there substitutes for the grounds near the original locations? (d) Is there a possibility that overgrazing will cause ecological degradation, such as impacts on wildlife habitats and desertification? (e) If significant ecological impacts are anticipated, are adequate protection measures taken to reduce the impacts on the ecosystem?	(a) Yes (b) Yes (c) No (d) No (e) NA	(a) However, it may be located near such habitats. (b) However, it may be located near such habitats. (c) No such impact is anticipated since most of the irrigation channels are constructed inside villages and farm lands. (d) Improving farm lands by the irrigation scheme may reduce impact on forest areas by cattle grazing. (e) No significant ecological impact is anticipated.
4 Social Environment	(1) Resettlement	(a) Is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement? (b) Is adequate explanation on compensation and resettlement assistance given to affected people prior to resettlement? (c) Is the resettlement plan, including compensation with full replacement costs, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement? (d) Is the compensation going to be paid prior to the resettlement? (e) Is the compensation policies prepared in document? (f) Does the resettlement plan pay particular attention to vulnerable groups or people, including women, children, the elderly, people below the poverty line, ethnic minorities, and indigenous peoples? (g) Are agreements with the affected people obtained prior to resettlement? (h) Is the organizational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan? (i) Are any plans developed to monitor the impacts of resettlement? (j) Is the grievance redress mechanism established?	(a) No (b) NA (c) No (d) NA (e) No (f) NA (g) NA (h) No (i) No (j) No	Same as Checklist 17: Forestry.

Environmental Checklist: 16. Agriculture, Irrigation and Livestock Industry (3)

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
4 Social Environment		<p>(a) Is there a possibility that the project will adversely affect the living conditions of inhabitants? Are adequate measures considered to reduce the impacts, if necessary?</p> <p>(b) Is proper allotment made for rights to agricultural land use? Is there a possibility that the allotment will result in inequitable distribution or usurpation of land and available resources?</p> <p>(c) Are proper allotments, such as water rights allotment in the project area made? Is there a possibility that the allotments will result in inequitable distribution or usurpation of water rights and available resources?</p> <p>(d) Is there a possibility that the amount of water used (surface water, groundwater) by the project will adversely affect the downstream fisheries and water uses?</p> <p>(e) Is there a possibility that water-borne or water-related diseases (e.g., schistosomiasis, malaria, filariasis) will be introduced? Is adequate consideration given to public health education, if necessary?</p>	<p>(a) No</p> <p>(b) NA</p> <p>(c) NA</p> <p>(d) No</p> <p>(e) No</p>	<p>(a) The project has been planned to alleviate the existing living conditions of local people according with the Micro Plan which is developed by FPC Members using JFM approach.</p> <p>(b) The allotment of rights for the land use is beyond the project scope. However, the Forest Dept. will request the local communities to ensure the allotment to be made fairly and impartially among the communities through JFMC meetings involving various stakeholders, such as Panchayati and local people.</p> <p>(c) The allotment of rights for the land use is beyond the project scope. However, the Forest Dept. will request the local communities to ensure the allotment to be made fairly and impartially among the communities through JFMC meetings with technical support from the Irrigation Dept. and stakeholders, such as Panchayati and local people according with the Tubewell and Lift Irrigation Act. Irrigation works will be initiated after clearance of permits under the West Bengal State Tubewell and Irrigation Act (1974).</p> <p>(d) No such impact is anticipated since the amount of usage will be of small quantum because the target group is small-scale farmers and don't carry out intensive cultivation.</p> <p>(e) Water borne diseases (diarrhoea, dysentery, Jaundice, typhoid, malaria and gastrointestinal problems) exist in the area before the project since there are many water bodies, such as ponds and reservoirs, in/around villages. The suitable irrigation scheme can avoid increment of the diseases.</p>
	(3) Heritage	(a) Is there a possibility that the project will damage the local archeological, historical, cultural, and religious heritage? Are adequate measures considered to protect these sites in accordance with the country's laws?	(a) No.	(a) If such a heritage is identified, it will be adequately dealt with in consultation with the local communities and Department of Municipal Affairs which is entity to deal with ruins under Heritage Commissions Acts.
	(4) Landscape	(a) Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken?	(a) No	(a) Illegation channels fit in well with the farm landscape as they are constructed under the ground surface.
	(5) Ethnic Minorities and Indigenous Peoples	(a) Are considerations given to reduce impacts on the culture and lifestyle of ethnic minorities and indigenous peoples? (b) Are all of the rights of ethnic minorities and indigenous peoples in relation to land and resources respected?	(a) Yes (b) Yes	(a) In the case of the fringe areas of scheduled tribes using forest resources for their life and schedule cast engaged in cultivation, it is considered that the distribution of benefit should be made with consensus among them under JFM approach. (b) The Indian Forest Act and the Forest Right Act secure the right of indigenous people. The acts are applied to target villages too.

Environmental Checklist: 16. Agriculture, Irrigation and Livestock Industry (4)

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
4 Social Environment	(6) Working Conditions	<p>(a) Is the project proponent not violating any laws and ordinances associated with the working conditions of the country which the project proponent should observe in the project?</p> <p>(b) Are tangible safety considerations in place for individuals involved in the project, such as the installation of safety equipment which prevents industrial accidents, and management of hazardous materials?</p> <p>(c) Are intangible measures being planned and implemented for individuals involved in the project, such as the establishment of a safety and health program, and safety training (including traffic safety and public health) for workers etc.?</p> <p>(d) Are appropriate measures taken to ensure that security guards involved in the project not to violate safety of other individuals involved, or local residents?</p>	<p>(a) No</p> <p>(b) No</p> <p>(c) Yes</p> <p>(d) Yes</p>	Same as Checklist 17: Forestry.
5 Others	(1) Impacts during Construction	<p>(a) Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)?</p> <p>(b) If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce impacts?</p> <p>(c) If construction activities adversely affect the social environment, are adequate measures considered to reduce impacts?</p>	<p>(a) Yes</p> <p>(b) Yes</p> <p>(c) Yes</p>	<p>(a) The construction works are mainly made in the dry season so that soil erosion and runoff will not occur during the construction. Most of the works are made by manual labor and machine so that there is little impact on natural and social environment anticipated.</p> <p>(b) However, no adverse impact is anticipated.</p> <p>(c) However, no adverse impact is anticipated.</p>
	(2) Monitoring	<p>(a) Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts?</p> <p>(b) What are the items, methods and frequencies of the monitoring program?</p> <p>(c) Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)?</p> <p>(d) Are any regulatory requirements pertaining to the monitoring report system identified, such as the format and frequency of reports from the proponent to the regulatory authorities?</p>	<p>(a) Yes</p> <p>(b) Yes</p> <p>(c) Yes</p> <p>(d) No</p>	<p>(a) Water quality of ground water for one year of usage of tube wells.</p> <p>(b) Arsenic, Fluoride, Coliform, Viable bacteria, etc. Water is collected from tube wells and examined by West Bengal Pollution Control Board twice a year.</p> <p>(c) The Forest Department will make arrangement with panchayats to have West Bengal Pollution Control Board examined the water quality.</p> <p>(d) However, the results of water examination will be reported to the Forest Dept. by panchayats..</p>
6 Note	Reference to Checklist of Other Sectors	<p>(a) Where necessary, pertinent items described in the Forestry checklist should also be checked.</p> <p>(b) For the projects including construction of large-scale weirs, reservoirs, and dams, where necessary, pertinent items described in the Hydropower, Dams and Reservoirs checklist should also be checked.</p>	<p>(a) Yes</p> <p>(b) Yes</p>	<p>(a) Checked.</p> <p>(b) Checked.</p>
	Note on Using Environmental Checklist	<p>(a) If necessary, the impacts to transboundary or global issues should be confirmed (e.g., the project includes factors that may cause problems, such as transboundary waste treatment, acid rain, destruction of the ozone layer, or global warming).</p>	<p>(a) NA</p>	NA

1) Regarding the term "Country's Standards" mentioned in the above table, in the event that environmental standards in the country where the project is located diverge significantly from international standards, appropriate environmental considerations are required to be made.

In cases where local environmental regulations are yet to be established in some areas, considerations should be made based on comparisons with appropriate standards of other countries (including Japan's experience)

2) Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics of the project and the particular circumstances of the country and locality in which the project is located.

Environmental Checklist: 17. Forestry (1)

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
1 Permits and Explanation	(1) EIA and Environmental Permits	(a) Have EIA reports been already prepared in official process? (b) Have EIA reports been approved by authorities of the host country's government? (c) Have EIA reports been unconditionally approved? If conditions are imposed on the approval of EIA reports, are the conditions satisfied? (d) In addition to the above approvals, have other required environmental permits been obtained from the appropriate regulatory authorities of the host country's government?	(a) NA (b) NA (c) NA (d) NA	(a) As per the Ministry of Environment and Forest (MoEF) Notification dated 14 September 2006, no Environmental Clearance (EC) is required for forestry project under 'Category 'B2' and will also not require an Environment Impact Assessment report. (b) NA (c) NA (d) No such permits are required.
	(2) Explanation to the Local Stakeholders	(a) Have contents of the project and the potential impacts been adequately explained to the Local stakeholders based on appropriate procedures, including information disclosure? Is understanding obtained from the Local stakeholders? (b) Have the comment from the stakeholders (such as local residents) been reflected to the project design?	(a) Yes (b) Yes	(a) The project has been planned with explanation to the local stakeholders, such as Panchayat institutions and JFMC members that are expected as the main target groups. (b) Local requirements have been considered and the project has been prepared accordingly.
	(3) Examination of Alternatives	(a) Have alternative plans of the project been examined with social and environmental considerations?	(a) No	(a) Alternative plans have not been examined because there is little adverse social and environmental impact anticipated by the project. On the other hand, the project will restore forests and improve grasslands with associated biodiversity through afforestation and habitat improvement. The project has been planned to improve local people's livelihoods and living conditions.
2 Pollution Control	(1) Air Quality	(a) Do air pollutants, such as dust, soot and dust, sulfur oxides (SOx), nitrogen oxides (NOx), and organic chemical substances emitted from various sources, such as logging operations, forest products manufacturing processes, and incinerators comply with the country's emission standards and ambient air quality standards? Are any mitigating measures taken?	(a) Yes	(a) No such kind of activities has been planned. Afforestation will contribute to sequestere Carbon, thereby reducing emissin of GHGs. The air quality in the area will be improved by afforestation and reforestation.
	(2) Water Quality	(a) Is there a possibility that the use of chemicals, such as fertilizers, and agrochemicals will cause water pollution? (b) Where facilities, such as forest products manufacturing facilities are installed, do effluents from the facilities comply with the country's effluent standards and ambient water quality standards?	(a) No (b) NA	(a) Organic fertilizers and agrochemicals, such as fertilizer and insecticide, are used in limited quantity at nurseries and at the time of planting, following the prescriptions. It is not likely to increase the pollutant level of the existing water bodies. (b) No such kind of facilities has been planned.
	(3) Wastes	(a) Are wastes properly treated and disposed of in accordance with the country's regulations?	(a) Yes	(a) Wastes produced by the project are almost bio-degradable in nature.
	(4) Soil Contamination	(a) Are adequate measures taken to prevent contamination of soil and groundwater by use of chemicals, such as agrochemicals? (b) Are any agrochemicals management plans prepared? Are any usages or any implementation structures organized for proper use of the plans?	(a) Yes (b) No	(a) Organic fertilizers and agrochemicals, such as fertilizer and insecticide, are used at nurseries and at the time of planting, following the instruction. However, because of the limited quantity and the degradation of agrochemicals, it is unlikely to increase the contamination level of soils. (b) The Forestry Nursery Manual of West Bengal (1994) states extreme care needed for applying insecticide following the instruction. Application of organic fertilizers are being facilitated by the Forest Dept.

Environmental Checklist: 17. Forestry (2)

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
3 Natural Environment	(1) Protected Areas	(a) Is the project site or discharge area located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the project will affect the protected areas?	(a) Yes (b) No	(a) National Parks, Wildlife Sanctuaries, Tiger Reserves and Elephant Reserves. It is not anticipated to affect these areas adversely but rather positively since the afforestation and grass management improve the current conditions of environment, ecosystem and biodiversity.
	(2) Ecosystem	(a) Does the project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g., coral reefs, mangroves, or tidal flats)?	(a) Yes (b) Yes (c) NA (d) NA (e) No (f) NA (g) No	(a) Tropical moist/dry deciduous forest, sub-tropical broadleaved forest, mangrove forest, etc. (b) Habitats for tiger, elephant, rhino, gaur, leopard, estuarine crocodile, etc. (c) No large scale-timber harvesting has been planned. (d) No large scale-timber harvesting has been planned. (e) Mono-culture plantation (Eucalyptus) is carried out in degraded areas, not in wildlife habitats to be conserved. There have been no substantial outbreaks of pests reported in mono-culture plantation in the state. (f) Significant adverse ecological impacts are not anticipated. All the effort to reduce the impacts will be made through the afforestation and habitat management. Rather there will be improvement in micro-climate particularly in the areas where afforestation will be taken up in clusters. (g) No such kind of activities is anticipated since local people, including FPCs/EDCs, are involved in the afforestation and the community support activities that benefits their livelihoods.
		(b) Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions?	(a) Is there a possibility that changes in localized micro-meteorological conditions, such as solar radiation, temperature, and humidity due to a large-scale timber harvesting will affect the surrounding vegetation? (c) Is there a possibility that a large-scale timber harvesting will result in loss of breeding and feeding grounds for wildlife? (e) In the case of reforestation projects, is there a possibility that mono-species plantations will adversely affect wildlife habitats? Is there a possibility that mono-species plantations will cause outbreaks of pests? (f) If significant ecological impacts are anticipated, are adequate protection measures taken to reduce the impacts on the ecosystem? (g) Isn't an illegal deforestation associated with the project being carried out, or is an acquisition of the forest certification by the project proponent being carried out?	(a) NA (b) NA
	(3) Hydrology	(a) Is there a possibility that alteration of rainwater runoff and runoff characteristics due to a large-scale timber harvesting and access road construction will cause impacts on the hydrology of the surrounding areas? (b) Is there a possibility that decreased water retention capacity due to deforestation will affect the existing drainage patterns of the forest?	(a) NA (b) NA	(a) No such kind of activities have been planned. All development activities are in minimum quantum and will not cause either hydrological imbalance or soil erosion. (b) Afforestation will rather increase the water retention capacity in the proposed sites. No existing drainage pattern will be changed.
	(4) Topography and Geology	(a) Is there a possibility that loss of forest stability due to timber harvesting will cause slope failures or landslides?	(a) NA	(a) No timber harvesting has been planned.
(5) Management of Abandoned Sites	(a) Are adequate restoration and revegetation plans considered for the harvested areas? In particular, are adequate measures taken to prevent soil runoff from the harvested areas? (b) Is a sustainable management system for the harvested areas established? (c) Are adequate financial provisions secured to manage the harvested areas?	(a) NA (b) NA (c) NA	(a) No timber harvesting has been planned. However, the Forest Dept usually conduct replantation at the harvested areas following working plans.	

Environmental Checklist: 17. Forestry (3)

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
4 Social Environment	(1) Resettlement	<p>(a) Is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement?</p> <p>(b) Is adequate explanation on compensation and resettlement assistance given to affected people prior to resettlement?</p> <p>(c) Is the resettlement plan, including compensation with full replacement costs, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement?</p> <p>(d) Is the compensation going to be paid prior to the resettlement?</p> <p>(e) Is the compensation policies prepared in document?</p> <p>(f) Does the resettlement plan pay particular attention to vulnerable groups or people, including women, children, the elderly, people below the poverty line, ethnic minorities, and indigenous peoples?</p> <p>(g) Are agreements with the affected people obtained prior to resettlement?</p> <p>(h) Is the organizational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan?</p> <p>(i) Are any plans developed to monitor the impacts of resettlement?</p> <p>(j) Is the grievance redress mechanism established?</p>	<p>(a) No</p> <p>(b) NA</p> <p>(c) No</p> <p>(d) NA</p> <p>(e) No</p> <p>(f) NA</p> <p>(g) NA</p> <p>(h) No</p> <p>(i) No</p> <p>(j) NA</p>	<p>The project does not have any feature of removing settlements from forest areas and protected areas, where no settlements are permitted basically, by afforestation and habitat improvement. As per the Forest Rights Act (2006), the process of eviction of villagers, who are regarded as encroachers, has not been taken place without finalization of the user right.</p> <p>Social forestry will be executed in strips and blocks on government, private and community lands where no settlements are established.</p>
	(2) Living and Livelihood	<p>(a) Is there a possibility that the project will adversely affect the living conditions of inhabitants? Are adequate measures considered to reduce the impacts, if necessary? Is particular attention paid to the inhabitants whose livelihoods are based on primary industries, such as farming, raising livestock, or hunting and gathering in the forests?</p> <p>(b) Are adequate measures taken to prevent illegal entry into the forestry resource areas from the outside through newly constructed access roads?</p> <p>(c) Is there a possibility that the forest right of common is obstructed?</p> <p>(d) Are considerations given to life of residents before implementation of project?</p>	<p>(a) No/Yes</p> <p>(b) NA</p> <p>(c) No</p> <p>(d) Yes</p>	<p>(a) The project has been planned to alleviate the existing living conditions of local people in the forest fringe by creating job opportunities and reducing dependency to the forest resources. Particular attention will be made for them by preparing the Micro Plan including Forest Dwellers Plan.</p> <p>(b) No new access roads have been planned.</p> <p>(c) The forest right of commons is observed in accordance to the Forest Right Act (2006).</p> <p>(d) The MicroPlan including Forest Dwellers Plan will be prepared to minimize and mitigate the project impact on their lives and to ensure benefit suitable to their cultures.</p>
	(3) Heritage	<p>(a) Is there a possibility that the project will damage the local archeological, historical, cultural, and religious heritage? Are adequate measures considered to protect these sites in accordance with the country's laws?</p>	<p>(a) No</p>	<p>(a) There are no such sites anticipated in the project site where are located in the recorded forests and the protected areas. If found, however, they will be adequately dealt with in consultation with the local communities and Department of Municipal Affairs which is entity to deal with ruins under the West Bengal Heritage Commissions Act (2001).</p>
	(4) Landscape	<p>(a) Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken?</p>	<p>(a) No</p>	<p>(a) The project will rather improve the degraded landscape to the forest landscape including reactivation of flora and fauna in degraded forest areas.</p>

Environmental Checklist: 17. Forestry (4)

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
4 Social Environment	(5) Ethnic Minorities and Indigenous Peoples	(a) Are considerations given to reduce impacts on the culture and lifestyle of ethnic minorities and indigenous peoples? (b) Are all of the rights of ethnic minorities and indigenous peoples in relation to land and resources respected?	(a) Yes (b) Yes	(a) Since many of residents on forest areas are tribes, the project will contribute to improving the surroundings of indigenous people. In the case of mixed culture (tribe and sch.caste, or several tribes in a village), concensus shall be made to select members, identify needs and share benefit among villagers. (b) The Indian Forest Act and the Forest Right Act secure the right of indigenous people. The acts are applied to target villages too.
	(6) Working Conditions	(a) Is the project proponent not violating any laws and ordinances associated with the working conditions of the country which the project proponent should observe in the project? (b) Are tangible safety considerations in place for individuals involved in the project, such as the installation of safety equipment which prevents industrial accidents, and management of hazardous materials? (c) Are intangible measures being planned and implemented for individuals involved in the project, such as the establishment of a safety and health program, and safety training (including traffic safety and public health) for workers etc.? (d) Are appropriate measures taken to ensure that security guards involved in the project not to violate safety of other individuals involved, or local residents?	(a) No (b) No (c) Yes (d) Yes	(a) The Forest Dept. observes the provisions of the Minimum Wages Act (1948) and the Plantations Labour Act (1951). (b) Such equipment and management measures are not generally required for work in the component. (c) General care and instruction are made for labours by the Forest Dept. Compensation for any injury, accident or casualty is payable to the labourers as per the provisions of the Workmen's Compensation Act (1923). (d) The security guards are selected from residents and a security network are set up if need arises.
5 Others	(1) Impacts during Construction	(a) Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)? (b) If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce impacts? (c) If construction activities adversely affect the social environment, are adequate measures considered to reduce impacts?	(a) Yes (b) Yes (c) Yes	(a) Most of works for the afforestation and habitat management are made by manual labor and machine so that there is little impact anticipated on natural and social environment. (b) However, no adverse impact is anticipated. (c) However, no adverse impact is anticipated.
	(2) Monitoring	(a) Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts? (b) What are the items, methods and frequencies of the monitoring program? (c) Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)? (d) Are any regulatory requirements pertaining to the monitoring report system identified, such as the format and frequency of reports from the proponent to the regulatory authorities?	(a) No (b) NA (c) NA (d) NA	(a) It is not required by Indian legislations to monitor environmental/social impact if a project does not need EIA by EIA Notification (2006) of the Ministry of Environment & Forest. (b) The Forest Dept. has its own monitoring unit for afforestation and all forestry works but not for environmental/social impact. (c) Since the impact is anticipated minimum and manageable, a monitoring programme will not be established.



**Environmental Checklist: 17. Forestry (5)**

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
6 Note	Reference to Checklist of Other Sectors	(a) Where necessary, pertinent items described in the Agriculture checklist should also be checked.	(a) Yes	(a) Checked.
	Note on Using Environmental Checklist	(a) If necessary, the impacts to transboundary or global issues should be confirmed (e.g., the project includes factors that may cause problems, such as transboundary waste treatment, acid rain, destruction of the ozone layer, or global warming).	(a) NA	(a) NA

1) Regarding the term "Country's Standards" mentioned in the above table, in the event that environmental standards in the country where the project is located diverge significantly from international standards appropriate environmental considerations are required to be made.

In cases where local environmental regulations are yet to be established in some areas, considerations should be made based on comparisons with appropriate standards of other countries (including Japan's experience).

2) Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics of the project and the particular circumstances of the country and locality in which the project is located.

Environmental Checklist: 19. Other Infrastructure Projects (1)

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
1 Permits and Explanation	(1) EIA and Environmental Permits	(a) Have EIA reports been already prepared in official process? (b) Have EIA reports been approved by authorities of the host country's government? (c) Have EIA reports been unconditionally approved? If conditions are imposed on the approval of EIA reports, are the conditions satisfied? (d) In addition to the above approvals, have other required environmental permits been obtained from the appropriate regulatory authorities of the host country's government?	(a) No (b) NA (c) NA (d) No	Same as Checklist 17: Forestry.
	(2) Explanation to the Local Stakeholders	(a) Have contents of the project and the potential impacts been adequately explained to the Local stakeholders based on appropriate procedures, including information disclosure? Is understanding obtained from the Local stakeholders? (b) Have the comment from the stakeholders (such as local residents) been reflected to the project design?	(a) Yes (b) Yes	Same as Checklist 17: Forestry.
	(3) Examination of Alternatives	(a) Have alternative plans of the project been examined with social and environmental considerations?	(a) No	Same as Checklist 17: Forestry.
2 Pollution Control	(1) Air Quality	(a) Do air pollutants, (such as sulfur oxides (SOx), nitrogen oxides (NOx), and soot and dust) emitted from the proposed infrastructure facilities and ancillary facilities comply with the country's emission standards and ambient air quality standards? Are any mitigating measures taken? (b) Are electric and heat source at accommodation used fuel which emission factor is low?	(a) No (b) No	(a) Buildings proposed by the project, such as staff quarters, offices and camps, will be used for general daily life and office work. Thus, it is not anticipated that the buildings will emit the air pollutants that exceed the country's standards. (b) Both electric power and biofuel will be used for operation of the buildings. Solar power will be employed for such facilities as offices and community buildings.
	(2) Water Quality	(a) Do effluents or leachates from various facilities, such as infrastructure facilities and the ancillary facilities comply with the country's effluent standards and ambient water quality standards?	(a) Yes	(a) Waste water from the buildings is treated in the septic tanks in accordance to the national regulations: the Water (Prevention & Control of Pollution) Act 1974.
	(3) Wastes	(a) Are wastes from the infrastructure facilities and ancillary facilities properly treated and disposed of in accordance with the country's regulations?	(a) Yes	(a) Wastes and garbages from the buildings are treated properly in accordance to the national regulations: the Municipal Solid Wastes (Management and Handling) Rules 2000 and the Coastal Regulation Zone Act 1991 (wherever applicable).
	(4) Soil Contamination	(a) Are adequate measures taken to prevent contamination of soil and groundwater by the effluents or leachates from the infrastructure facilities and the ancillary facilities?	(a) Yes	Due to the above treatments for the effluents an wastes, no soil contamination is anticipated around the buildings.
	(5) Noise and Vibration	(a) Do noise and vibrations comply with the country's standards?	(a) Yes	(a) Little noise and vibration is anticipated since the buildings are used for general daily life and office work. Generator sets for electricity are kept in separate chambers for muffling the noise.
	(6) Subsidence	(a) In the case of extraction of a large volume of groundwater, is there a possibility that the extraction of groundwater will cause subsidence?	(a) No	(a) Although ground water may be used for drinking and daily use for some buildings in remote areas, no such extraction in large scale has been planned.
	(7) Odor	(a) Are there any odor sources? Are adequate odor control measures taken?	(a) No	(a) No particular sources of odor are anticipated from the buildings.

Environmental Checklist: 19. Other Infrastructure Projects (2)

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
3 Natural Environment	(1) Protected Areas	(a) Is the project site or discharge area located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the project will affect the protected areas?	(a) No.	(a) However, many villages are located adjacent to Protected Forest, Reserve Forest, Wildlife Sanctuary and National Park in the case of forest villages.
	(2) Ecosystem	(a) Does the project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g., coral reefs, mangroves, or tidal flats)? (b) Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions? (c) Is there a possibility that changes in localized micro-meteorological conditions, such as solar radiation, temperature, and humidity due to a large-scale timber harvesting will affect the surrounding vegetation? (d) Is there a possibility that the amount of water (e.g., surface water, groundwater) used by the project will adversely affect aquatic environments, such as rivers? Are adequate measures taken to reduce the impacts on aquatic environments, such as aquatic organisms?	(a) No (b) No (c) No (d) No	(a) However, it may be located near such habitats. (b) However, it may be located near such habitats. (c) No such kind of impact is anticipated since no timber harvesting is involved in construction of the buildings except for clearing bushes and grasses before it. (d) No such kind of impact is anticipated since much water is not required for construction and operation of the buildings.
	(3) Hydrology	(a) Is there a possibility that hydrologic changes due to the project will adversely affect surface water and groundwater flows?	(a) No	(a) The location of buildings is determined in consideration of the surface water not to affect the local hydrology.
	(4) Topography and Geology	(a) Is there a possibility the project will cause large-scale alteration of the topographic features and geologic structures in the project site and surrounding areas? (a) Is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement? (b) Is adequate explanation on compensation and resettlement assistance given to affected people prior to resettlement? (c) Is the resettlement plan, including compensation with full replacement costs, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement? (d) Is the compensations going to be paid prior to the resettlement? (e) Is the compensation policies prepared in document? (f) Does the resettlement plan pay particular attention to vulnerable groups or people, including women, children, the elderly, people below the poverty line, ethnic minorities, and indigenous peoples? (g) Are agreements with the affected people obtained prior to resettlement? (h) Is the organizational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan? (i) Are any plans developed to monitor the impacts of resettlement? (j) Is the grievance redress mechanism established?	(a) No (a) No (b) NA (c) No (d) NA (e) No (f) NA (g) NA (h) No (i) No (j) No	(a) The construction of buildings does not cause such large-scale alteration of the topography and geology.  Same as Checklist 17: Forestry.
4 Social Environment	(1) Resettlement			

Environmental Checklist: 19. Other Infrastructure Projects (3)

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
4 Social Environment	(2) Living and Livelihood	(a) Is there a possibility that the project will adversely affect the living conditions of inhabitants? Are adequate measures considered to reduce the impacts, if necessary?	(a) No	a) The project has been planned to alleviate the existing living conditions of local people according with the Micro Plan which is developed by FPC Members using JFM approach.
	(3) Heritage	(a) Is there a possibility that the project will damage the local archeological, historical, cultural, and religious heritage? Are adequate measures considered to protect these sites in accordance with the country's laws?	(a) No	(a) If such a heritage is identified, it will be adequately dealt with in consultation with the local communities and Department of Municipal Affairs which is entity to deal with ruins under Heritage Commissions Acts.
	(4) Landscape	(a) Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken? (b) Is there a possibility that landscape is spoiled by construction of high-rise buildings such as huge hotels?	(a) No (b) No	(a) Buildings are designed with local taste and painted with natural color to fit in the surroundings. (b) Buildings planned by the project are two stories in maximum, which are well below tree lines. Two stories are added onto the Headquarters building, which will not change the town landscape substantially.
	(5) Ethnic Minorities and Indigenous Peoples	(a) Are considerations given to reduce impacts on the culture and lifestyle of ethnic minorities and indigenous peoples? (b) Are all of the rights of ethnic minorities and indigenous peoples in relation to land and resources respected?	(a) Yes (b) Yes	Same as Checklist 17: Forestry. (It is applied to only school buildings to be constructed in villages.)
	(6) Working Conditions	(a) Is the project proponent not violating any laws and ordinances associated with the working conditions of the country which the project proponent should observe in the project? (b) Are tangible safety considerations in place for individuals involved in the project, such as the installation of safety equipment which prevents industrial accidents, and management of hazardous materials? (c) Are intangible measures being planned and implemented for individuals involved in the project, such as the establishment of a safety and health program, and safety training (including traffic safety and public health) for workers etc.? (d) Are appropriate measures taken to ensure that security guards involved in the project not to violate safety of other individuals involved, or local residents?	(a) No (b) Yes (c) Yes (d) Yes	(a) The Forest Dept. observes the provisions of the Minimum Wages Act (1948) and the Plantations Labour Act (1951). (b) Such safety considerations will be obliged to the contractor through the tender documents. (c) Such safety measures will be obliged to the contractor through the tender documents. Compensation for any injury, accident or casualty is payable to the labourers as per the provisions of the Workmen's Compensation Act (1923). (d) The security guards are selected from residents and a security network are set up if need arises.

**Environmental Checklist: 19. Other Infrastructure Projects (4)**

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
5 Others	(1) Impacts during Construction	<p>(a) Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)?</p> <p>(b) If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce impacts?</p> <p>(c) If construction activities adversely affect the social environment, are adequate measures considered to reduce impacts?</p>	<p>(a) Yes</p> <p>(b) Yes</p> <p>(c) Yes</p>	<p>(a) During the construction and extension of the departmental buildings in Kolkata, Siliiguri and Salt Lake, it is anticipated that noise, vibration and dust are induced to some extent. Normal mitigation measures are to be taken by limiting construction time, setting noise-reduction panels, using low-noise/vibration machines and watering the surroundings. Turbid water and solid wastes are also generated and to be properly treated and disposed to the designated sites. The constructors are guided to obey the rules of the West Bengal Pollution Control Board and the relevant legislation: the Environmental (Protection) Act (1986), the Air (Prevention &amp; Control of Pollution) Act (1981), the Water (Prevention &amp; Control of Pollution) Act (1974) and the Noise Pollution (Regulation &amp; Control) Amendment Act (2002).</p> <p>For other offices, quarters and schools, it is anticipated that there will be little substantial impact on the surroundings as they are located in less populated areas, such as the Forest Dept. land and remote villages.</p> <p>(b) For the offices and quarters in forest areas, critical breeding areas, habitats and (c) However, no adverse impact is anticipated.</p>
	(2) Monitoring	<p>(a) Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts?</p> <p>(b) What are the items, methods and frequencies of the monitoring program?</p> <p>(c) Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)?</p> <p>(d) Are any regulatory requirements pertaining to the monitoring report system identified, such as the format and frequency of reports from the proponent to the regulatory authorities?</p>	<p>(a) Yes</p> <p>(b) Yes</p> <p>(c) Yes</p> <p>(d) No</p>	<p>(a) Air and other pollution during construction of larger office buildings.</p> <p>(b) The quantity and level of PM, SPM, NOx, SOx, CO, noise and vibration are measured with specific instrument in regular basis. The conditions of treatment and disposal of turbid water and solid waste are monitored by experts at the same frequency.</p> <p>(c) The Forest Department will make the contractor to conduct the monitoring as an obligation put in the tender documents.</p> <p>(d) No such a reporting system is required since the monitoring is not made in accordance with EIA Notification (2006). The consultancy will report the monitoring results to the Forest Department regularly.</p>
6 Note	Reference to Checklist of Other Sectors	<p>(a) Where necessary, pertinent items described in the Roads, Railways and Bridges checklist should also be checked (e.g., projects including access roads to the infrastructure facilities).</p> <p>(b) For projects, such as installation of telecommunication cables, power line towers, and submarine cables, where necessary, pertinent items described in the Power Transmission and Distribution Lines checklists should also be checked.</p>	<p>(a) Yes</p> <p>(b) No</p>	<p>(a) Checked.</p> <p>(b) NA</p>
	Note on Using Environmental Checklist	<p>(a) If necessary, the impacts to transboundary or global issues should be confirmed (e.g., the project includes factors that may cause problems, such as transboundary waste treatment, acid rain, destruction of the ozone layer, or global warming).</p>	<p>(a) NA</p>	<p>(a) NA</p>

1) Regarding the term "Country's Standards" mentioned in the above table, in the event that environmental standards in the country where the project is located diverge significantly from international standards, appropriate environmental considerations are required to be made.

In cases where local environmental regulations are yet to be established in some areas, considerations should be made based on comparisons with appropriate standards of other countries (including Japan's experience).

2) Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics of the project and the particular circumstances of the country and locality in which the project is located.

## Annexure 8

## JFM/EDC Resolutions and Notification

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- 1 JFM Resolution (South Bengal)
- 2 JFM Resolution (North Bengal)
- 3 JFM Resolution (North Plain)
- 4 EDC Resolution
- 5 Notification No. 2204-For/D/1/6M-7/93

**GOVERNMENT OF WEST BENGAL  
FOREST DEPARTMENT  
FOREST BRANCH**

**No. 5971-For**

**Dated 3.10.2008**

**RESOLUTION**

Whereas the National Forest Policy, 1988 envisages it as one of the essentials of forest management that the forest communities should be motivated to identify themselves with the development and protection of forests from which they derive benefits. National Forest Policy 1988 also recognises the symbiotic relationship between the tribal people and forests, and implores to associate the tribal people closely in the protection, regeneration and development of forests.

Whereas the National Forest Policy, 1988 envisages people's involvement in the development and protection of forests and whereas the requirements of fuelwood, fodder and small timber such as house-building material, of the tribals and other villagers living in and near the forests, are to be treated as first charge on forest produce.

And whereas "The Scheduled Tribes And Other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006" also recognises the responsibility and authority of tribals in conservation of biodiversity and maintenance of ecological balance and thereby strengthening the conservation regime of forests.

And whereas State of West Bengal has been the pioneer in development of Joint Forest management which has now been acknowledged as tool for management of forest resources universally and implemented successfully in the different states of the country.

And whereas, the Forest Department has taken up a massive programme for resuscitation of the degraded forests of the State as a whole for converting the areas into productive forests.

And whereas, active participation and involvement of local people are vital for generation, maintenance and protection of aforesaid forests/ plantations and successful implementation of the program.

In supersession of all previous resolutions in this regard , the Governor has been pleased to decide that Joint Forest Management Committees shall be constituted for the purpose of development of degraded forests and forests prone to forces of degradation in districts of South West Bengal, namely, Purba Medinipur, Paschim Medinipur, Bankura, Purulia, Burdwan and Birbhum, North 24 Parganas, South 24 Parganas and direct that the composition, duties and functions, the usufructuary benefits and restrictive measure pertaining to such Joint Forest Protection Management Committees shall be follows:

**1. COMPOSITION**

i. The Divisional Forest Officer in consultation with "Bon-Bhumi Sanskar Sthayec Samiti" of concerned Panchayat Samiti shall select beneficiaries for constitution of the

Joint Forest Management Committees(s), within their jurisdiction and within the frameworks of this resolution.

ii. The beneficiaries ordinarily shall be economically backward people living in the vicinity of the forest concerned. Every, family living in the vicinity of the forests shall, however, have the option of becoming a members of the Joint Forest Management Committee, if such family including the female members is interested in the work of protection.

ii. There shall be normally a joint membership for each household (i.e. if husband is a member, wife automatically becomes a member and vice versa). Either of the two can exercise rights to represent household at any point.

iii. Constitution of the Joint Forest Management Committee including the Executive Committee will be approved by the Divisional Forest Officer concerned on recommendation of the “Bon-O-Bhumi Sanskar Sthayee Samiti” of the concerned Panchayat Samiti

iv. The concerned Gram Panchayat(s) shall extend necessary support and help to such committees (s) to ensure their smooth and proper functioning.

## **2. EXECUTIVE COMMITTEE**

i. Each Joint Forest Management Committees shall have an Executive Committees to carry out the various activities assigned to the Committee.

ii. The composition of the Executive Committee shall be as follows:

a. Karmadhakhya or any member of the “Bon-O-Bhumi Sanskar Sthayee Samiti” of the Local Panchayat Samiti as may be nominated by the Karmadhakhya  
.....Member

b. Gram Pradhan or any member of local Gram Panchayat(s) as may be nominated by the Pradhan.....Member

c. Elected representative of the beneficiaries ..... Member  
(Three number of members of the JFMC subject to the condition that at least one member will be women and tribal)

d. Concerned Beat Officer or his nominee in the rank of Head Forest Guard/Forest Guard/Ban Majdur/Ban Shramik .....Member Secretary

e. One Head Forest Guard/Forest Guard/ Ban Majdur/ Ban Shramik to be nominated by concerned range Officer.....Member

The members of the Executive Committee shall elect the President in each meeting.



- iii. The Member Secretary shall convene the meetings of the Executive Committee as well as Joint Forest Management Committee, as per agreed procedure.
- iv. The representatives of the beneficiaries to the Executive Committee shall be elected in each year in Annual General Meeting of the Committee, where the concerned Range Officer will be the observer.
- v. No member of the Executive Committee shall be elected or nominated for more than three years in succession.
- vi. The “Bon-O-Bhumi Sanskar Sthayee Samiti” of the respective Zilla Parishad will monitor, supervise and review functions of the Joint Forest Management Committees.
- vii. In order to ensure better coordination among the JFMCs and further consolidation of JFM practices, Coordination Committees of the JFMCs shall be constituted both at Beat & Range level. The composition and function of such coordination committees shall follow guideline to be prescribed by Principal Chief Conservator of Forests.

### **3. DUTIES OF EXECUTIVE COMMITTEE**

- i. The Executive committee of Joint Forest Management Committee shall maintain a register showing the necessary particulars of beneficiaries who are members of the committee, i.e. name, father's name, address, age, number of family members, name of nominee, etc nomination forms duly filled in and approved by the Executive committee should be pasted in the Register. Such Register is also to be maintained in the concerned Range Office of the Forest Department for permanent record.
- ii. The Executive committee of Joint Forest Management Committee shall maintain a “Minute Book” wherein proceedings of the meeting of the Executive Committee held from time to time as well as the proceedings of the Annual General Meeting of the Joint Forest Management Committee will be recorded under the signature of the President of the Committee and such Minute duly attested by the member secretary shall be sent to concerned Range Officer for record.
- iii. The Executive committee of Joint Forest Management Committee shall hold an Annual General Meeting once in very year where activities of Committee as well as details of distribution of usufructuary benefits are to be discussed, besides electing representatives of the beneficiaries to the Executive Committee.
- vi. The Executive committee shall meet at least once every two months and discuss issues related to ongoing forestry works, preparation and implementation of microplan and other emergent works etc.

### **4. FUNCTIONS OF JOINT FOREST MANAGEMENT COMMITTEE/ EXECUTIVE COMMITTEE**

**A**

- i. To ensure protection of forest (s)/ plantation(s)/wildlife through members of the committee.
- ii. To protect the said forest(s)/plantation(s) with the member of the Committee.
- iii. To inform forest personnel or any person or persons attempting trespass and willfully or maliciously, damaging the said forest(s) / plantation(s)/Wildlife or committing theft thereon.
- iv. To prevent such trespass, encroachment, grazing, fire, poaching, theft or damage.
- v. To apprehend or assist the forest personnel in apprehension of such person or persons committing any of the offence mentioned above.

**B**

- i. To ensure smooth and timely execution of all forestry and fringe area development works taken up in the area by extending necessary help to the officials of Forest Department.
- ii. To involve every member of the Committee in the matter of protection of forests(s)/plantations(s)/wildlife as well as other duties assigned to the Committee.
- iii. To assist the concerned Forest Officials in the matter of selection/engaging of labourers required for forestry worked.

**C**

- i. To ensure smooth harvesting of the forest produce by the Forest Department.
- ii. To assist the concerned Forest Official in proper distribution of the earmarked portion of the net sale proceeds among the members of the Committee (as per list maintained by Sthayee Samiti).
- iii. To ensure that usufructuary rights allowed by the Govt, is not in any way misused by any of the members and forest/plantation sites are kept free from any encroachment whatsoever.

**D**

- i. To prevent any activities in contravention of the provisions of Indian Forest Act, of 1927 and any Acts and Rules made there under and the Wildlife (Protection) Act, 1972 as amended from time to time.
- ii. To report about activities of particular member which are found prejudicial and detrimental to the interest of a particular plantation and or/forest wildlife to the concerned Beat Officer/Range Officer which may result in cancellation of membership of the erring member.

iii. To assist the Forest Officials to take action or proceed under Indian Forest Act 1972 and the Wildlife (Protection) Act 1972 and any Acts and Rules made there under, against the offenders, including may erring members of the Committee found to be violating the Act or damaging the forest/plantation/wildlife.

## **5. USUFRUCTUARY BENEFITS**

i. The members will have to protect the forest and wildlife for at least 5 years to be eligible for sharing of usufructs under this programme.

ii. The members shall be entitled to collect following items free of royalty without causing any damage to forest.

a) Fallen twigs, grass, fruits (excluding cashew), flowers, mushroom, seeds, leaves and intercrops raised by JFMCs subject to any restriction imposed from time to time, Provided however such collection will be not allowed in Protected Areas.

b) Medicinal plants will be permitted to be collected by the JFMC members free strictly on the basis of approved micro-plans, except in Protected Areas.

c) Member of the JFMC will receive 25% of net sale proceeds of firewood and poles, which are harvested during coppice felling coupe operations, thinning and cultural operations. The poles for the purpose of this order will be under 90 cm, gbh for all species except Teak. For Teak upper limit of gbh is 60 cm.

iii. Entire Sal seeds as collected shall have to be deposited with the West Bengal Tribal Development Cooperative Corporation Ltd., through the local LAMPS (where LAMPS are functioning) and LAMPS will pay the members, in approved tariff, against their individual collection.

iv. The concerned forest official will distribute to the eligible members their proportionate share of the usufructs from the harvesting after satisfactory performance of functions detailed herein before.

v. The usufruct sharing will be subject to restrictions imposed from time to time on account of Silvicultural and Management requirements and from preservation of wildlife point of view.

## **6. TERMINATION OF MEMBERSHIP DISSOLUTION OF COMMITTEE APPEALS ETC**

i. Failure to comply with any of the conditions laid down hereinbefore as well as contravention of provisions of the Indian Forest Act of 1972 Wildlife (Protection) Act or Acts and / or Rules made there under, may entail cancellation of individual membership and or/dissolution of the Executive/Joint Forest Management Committee, as the case may be by the Officers of the Forest Department as state below in (ii) and (iii) below.

ii. The concerned Divisional Forest Officer shall be entitled to take appropriate action even dissolution of any Executive/Joint Forest Management Committee on the grounds stated above, on the recommendation of the Bon-O-Bhumi Sanskar Sthayee Samiti, Panchayat Samiti.

iii. The concerned Range Officer may be authorized by the Divisional Forest Officer to take proper action, even termination of an individual membership, on the above mentioned grounds, on the recommendation of the Executive Committee of Joint Forest management Committee.

iv. Appeal against any such penal action by the Range Officer may be preferred to the concerned Divisional forest Officer through local Panchayat Samiti.

v. Appeal, against any such penal action by the Division Forest Officer may be preferred to the concerned Circle Conservator of Forests through the concerned Panchayat Samiti and the Zilla Parishad, whose decision shall be final.

#### **ORDER**

Ordered that the Resolution be published in the Calcutta Gazette and copy sent to all concerned.

By order of the Governor

*Sd.*

( Smt. Shila Nag IAS)  
Joint Secretary to the  
Government of West Bengal

No. 5971/1-For.

Date:03.10.2008

Copy forwarded to the Managing Director, Basumati Corporation Ltd., 166, B.B. Ganguli Street, Kolkata- 12.

He is requested to publish it in the Kolkata Gazette for greater interest. 25 copies of the Gazette Notification may kindly be sent to this Department

  
Joint Secretary to the Government of West Bengal

No. 5971/2(6)-For. Dt. 03.10.2008

Copy forwarded for information to the :

13. P.C.C.F, (WL), West Bengal & C.W.L.W.
- ✓14. P.C.C.F., West Bengal.  
- All concerned may be informed accordingly.
15. Accountant General (A&E), West Bengal.
16. Finance Department of this Government.
17. Sabhadhipati .....
- .....
- .....
18. P.S. to M.I.C., Forests Department.

  
Joint Secretary to the Government of West Bengal

No. 5971/3-For. Date 03.10.2008.

Copy forwarded for information to the Secretary to the Govt. of India, Ministry of Environment & Forests , National Wasteland Development Board, C.G.O. Complex, Lodhi Road, New Delhi- 110 003.

Joint Secretary to the Government of West Bengal

**GOVERNMENT OF WEST BENGAL  
FOREST DEPARTMENT  
FOREST BRANCH**

**No. 5970-For**

**Dated 3.10.2008**

**RESOLUTION**

Whereas the National Forest Policy, 1988 envisages it as one of the essentials of forest management that the forest communities should be motivated to identify themselves with the development and protection of forests from which they derive benefits. National Forest Policy 1988 also recognises the symbiotic relationship between the tribal people and forests, and implores to associate the tribal people closely in the protection, regeneration and development of forests.

Whereas the National Forest Policy, 1988 envisages people's involvement in the development and protection of forests and whereas the requirements of fuelwood, fodder and small timber such as house-building material, of the tribals and other villagers living in and near the forests, are to be treated as first charge on forest produce.

And whereas "The Scheduled Tribes And Other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006" also recognises the responsibility and authority of tribals in conservation of biodiversity and maintenance of ecological balance and thereby strengthening the conservation regime of forests.

And whereas State of West Bengal has been the pioneer in development of Joint Forest management which has now been acknowledged as tool for management of forest resources universally and implemented successfully in the different states of the country.

And whereas, the Forest Department has taken up a massive programme for resuscitation of the degraded forests of the State as a whole for converting the areas into productive forests.

And whereas, active participation and involvement of local people are vital for generation, maintenance and protection of aforesaid forests/ plantations and successful implementation of the program.

In supersession of this department's resolution No.2757-For Dated: 17<sup>th</sup> August 2004, the Governor has been pleased to decide that Joint Forest Management Committees shall be constituted for the purpose of development of degraded forests and forests prone to forces of degradation in Darjeeling Gorkha Hill Council Areas, and direct that the composition, duties and functions, the usufructuary benefits and restrictive measure pertaining to such Joint Forest Management Committees shall be follows:

**1. COMPOSITION**

i. The Divisional Forest Officer / Divisional Manager, W.B. Forest Dev. Corporation Ltd. In consultation with the people living in the fringe areas of the forests shall select

beneficiaries for constitution of the Joint Forest Management Committee (s), within their jurisdictions and within the framework of this resolution.

ii. The beneficiaries ordinarily shall be economically backward people living in the vicinity of the forest concerned. Every, family living in the vicinity of the forests shall, however, have the option of becoming a members of the Joint Forest Management Committee, if such family including the female members is interested in the work of protection.

ii. There shall be normally a joint membership for each household (i.e. if husband is a member, wife automatically becomes a member and vice versa). Either of the two can exercise rights to represent household at any point.

iii. Constitution of the Forest Protection Committee including Executive Committee will be approved by the Divisional Forest Officer/Divisional Manager, W.B Forest Development Corporation Ltd. Concerned in consultation with the councilor in whose jurisdiction the JFMC area falls.

iv. The concerned Councilor(s) shall extend necessary support and help to such committees (s) to ensure their smooth and proper functioning.

## **2. EXECUTIVE COMMITTEE**

i. Each Joint Forest Management Committees shall have an Executive Committees to carry out the various activities assigned to the Committee.

ii. The composition of the Executive Committee shall be as follows:

a. Local Councilor of the D.G.H.C or his authorised representative.....Member

b. Elected representative of the beneficiaries ..... Member  
(Three number of members of the JFMC subject to the condition that at least one member will be women and a tribal)

c. Concerned Beat Officer/ Dy. Range Member ..... Member Secretary

d. One Head Forest Guard/ Forest Guard/ Forest Worker/ Ban Majdur/ Ban Sramik/ Nigam Shramik to be nominated by concerned Range Officer/ Range Manager.....Member

The members of the Executive Committee shall elect the President in each meeting.

iii. The Range Officer/Range Manager in whose jurisdiction the JFMC occurs will monitor, supervise and review functions of the Joint Forest Management Committees.



iv. The Member Secretary shall convene the meetings of the Executive Committee as well as Joint Forest Management Committee, as per agreed procedure.

v. The representatives of the beneficiaries to the Executive Committee shall be elected in each year in Annual General Meeting of the Committee, where the concerned Range Officer will be the observer.

vi. No member of the Executive Committee shall be elected or nominated for more than three years in succession.

vii. In order to ensure better coordination among the JFMCs and further consolidation of JFM practices, Coordination Committees of the JFMCs shall be constituted both at Beat & Range level. The composition and function of such coordination committees shall follow guideline to be prescribed by Principal Chief Conservator of Forests.

### **3. DUTIES OF EXECUTIVE COMMITTEE**

i. The Executive committee of Joint Forest Management Committee shall maintain a register showing the necessary particulars of beneficiaries who are members of the committee, i.e. name, father's name, address, age, number of family members, name of nominee, etc nomination forms duly filled in and approved by the Executive committee should be pasted in the Register. Such Register is also to be maintained in the concerned Range Office of the Forest Department for permanent record.

ii. The Executive committee of Joint Forest Management Committee shall maintain a "Minute Book" wherein proceedings of the meeting of the Executive Committee held from time to time as well as the proceedings of the Annual General Meeting of the Joint Forest Management Committee will be recorded under the signature of the President of the Committee and such Minute duly attested by the member secretary shall be sent to concerned Range Officer for record.

iii. The Executive committee of Joint Forest Management Committee shall hold an Annual General Meeting once in very year where activities of Committee as well as details of distribution of usufructuary benefits are to be discussed, besides electing representatives of the beneficiaries to the Executive Committee.

vi. The Executive committee shall meet at least once every two months and discuss issues related to ongoing forestry works, preparation and implementation of microplan and other emergent works etc.

### **4. FUNCTIONS OF JOINT FOREST MANAGEMENT COMMITTEE/ EXECUTIVE COMMITTEE**

**A**

i. To ensure protection of forest (s)/ plantation(s)/wildlife through members of the committee.

- ii. To protect the said forest(s)/plantation(s) with the member of the Committee.
- iii. To inform forest personnel or any person or persons attempting trespass and willfully or maliciously, damaging the said forest(s) / plantation(s)/Wildlife or committing theft thereon.
- iv. To prevent such trespass, encroachment, grazing, fire, poaching, theft or damage.
- v. To apprehend or assist the forest personnel in apprehension of such person or persons committing any of the offence mentioned above.

**B**

- i. To ensure smooth and timely execution of all forestry and fringe area development works taken up in the area by extending necessary help to the officials of Forest Department.
- ii. To involve every member of the Committee in the matter of protection of forests(s)/plantations(s)/wildlife as well as other duties assigned to the Committee.
- iii. To assist the concerned Forest Officials in the matter of selection/engaging of labourers required for forestry work.

**C**

- i. To ensure smooth harvesting of the forest produce by the Forest Department.
- ii. To assist the concerned Forest Official in proper distribution of the earmarked portion of the net sale proceeds among the members of the Committee (as per list maintained by Sthayee Samiti).
- iii. To ensure that usufructuary rights allowed by the Govt, is not in any way misused by any of the members and forest/plantation sites are kept free from any encroachment whatsoever.

**D**

- i. To prevent any activities in contravention of the provisions of Indian Forest Act, of 1927 and any Acts and Rules made there under and the Wildlife (Protection) Act, 1972 as amended from time to time.
- ii. To report about activities of particular member which are found prejudicial and detrimental to the interest of a particular plantation and or/forest wildlife to the concerned Beat Officer/Range Officer which may result in cancellation of membership of the erring member.
- iii. To assist the Forest Officials to take action or proceed under Indian Forest Act 1972 and the Wildlife (Protection) Act 1972 and any Acts and Rules made there under, against

the offenders, including may erring members of the Committee found to be violating the Act or damaging the forest/plantation/wildlife.

#### **5. USUFRUCTUARY BENEFITS**

i. The members will have to protect the forest and wildlife for at least 5 years to be eligible for sharing of usufructs under this programme.

ii. The members shall be entitled to collect following items free of royalty without causing any damage to forest.

a) Fallen twigs, grass, fruits (excluding cashew), flowers, mushroom, seeds, leaves and intercrops raised by JFMCs subject to any restriction imposed from time to time, Provided however such collection will be not allowed in the Protected Areas.

b) Medicinal plants will be permitted to be collected by the JFMC members free strictly on the basis of approved micro-plans, except in in the Protected Areas.

c) Members of the JFMC will receive 25% of net sale proceeds of firewood and poles, which are harvested during thinning and cultural operations. The poles for the purpose of this order will be under 90 cm, gbh. For all species expect Teak. For Teak upper limited of gbh is 60 cm.

d) Members of the JFMC will receive 15% of net sale proceeds of timber, which are harvested at the time of final felling. Share of JFMCs would be equally allocated to all the JFMCs in Forest Division proportionate to the strength of their members.

iii. Entire Sal seeds as collected shall have to be deposited with the West Bengal Tribal Development Cooperative Corporation Ltd., through the local LAMPS (where LAMPS are functioning) and LAMPS will pay the members, in approved tariff, against their individual collection.

iv. The concerned forest official will distribute to the eligible members their proportionate share of the usufructs from the harvesting after satisfactory performance of functions detailed herein before.

v. The usufruct sharing will be subject to restrictions imposed from time to time on account of Silvicultural and Management requirements and from preservation of wildlife point of view.

#### **6. TERMINATION OF MEMBERSHIP DISSOLUTION OF COMMITTEE APPEALS ETC**

1. Failure to comply with any of the conditions laid down hereinbefore as well as contravention of provisions of the Indian Forest Act of 1972 Wildlife (Protection) Act or Acts and / or Rules made there under, may entail cancellation of individual membership

and or/dissolution of the Executive/Joint Forest Management Committee, as the case may be by the Officers of the Forest Department as state below in (ii) and (iii) below.

ii. The concerned Divisional Forest Officer shall be entitled to take appropriate action even dissolution of any Executive/Joint Forest Management Committee on the grounds stated above, on the recommendation of the Bon-O-Bhumi Sanskar Sthayee Samiti, Panchayat Samiti.

iii. The concerned Range Officer may be authorized by the Divisional Forest Officer to take proper action, even termination of an individual membership, on the above mentioned grounds, on the recommendation of the Executive Committee of Joint Forest management Committee.

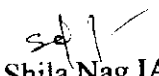
iv. Appeal against any such penal action by the Range Officer may be preferred to the concerned Divisional forest Officer through local Panchayat Samiti.

v. Appeal, against any such penal action by the Division Forest Officer may be preferred to the concerned Circle Conservator of Forests through the concerned Panchayat Samiti and the Zilla Parishad, whose decision shall be final.

### **ORDER**

Ordered that the Resolution be published in the Calcutta Gazette and copy sent to all concerned.

By order of the Governor

  
( Smt Shila Nag IAS)  
Joint Secretary to the  
Government of West Bengal

No. 5970/1-For.

Date:03.10.2008

Copy forwarded to the Managing Director, Basumati Corporation Ltd., 166, B.B. Ganguli Street, Kolkata- 12.


He is requested to publish it in the Kolkata Gazette for greater interest. 25 copies of the Gazette Notification may kindly be sent to this Department

  
Joint Secretary to the Government of West Bengal

No. 5970/2(6)-For. Dt. 03.10.2008

Copy forwarded for information to the :

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- ✓ 2. P.C.C.F., West Bengal.  
- All concerned may be informed accordingly.
3. Accountant General (A&E), West Bengal.
4. Finance Department of this Government.
5. Sabhadhipati .....
6. P.S. to M.I.C., Forests Department.

  
Joint Secretary to the Government of West Bengal

No. 5970/3-For. Date 03.10.2008.

Copy forwarded for information to the Secretary to the Govt. of India, Ministry of Environment & Forests , National Wasteland Development Board, C.G.O. Complex, Lodhi Road, New Delhi- 110 003.

Joint Secretary to the Government of West Bengal

**GOVERNMENT OF WEST BENGAL  
FOREST DEPARTMENT  
FOREST BRANCH**

**No. 5969-For**

**Dated 3.10.2008**

**RESOLUTION**

Whereas the National Forest Policy, 1988 envisages it as one of the essentials of forest management that the forest communities should be motivated to identify themselves with the development and protection of forests from which they derive benefits. National Forest Policy 1988 also recognises the symbiotic relationship between the tribal people and forests, and implores to associate the tribal people closely in the protection, regeneration and development of forests.

Whereas the National Forest Policy, 1988 envisages people's involvement in the development and protection of forests and whereas the requirements of fuelwood, fodder and small timber such as house-building material, of the tribals and other villagers living in and near the forests, are to be treated as first charge on forest produce.

And whereas "The Scheduled Tribes And Other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006" also recognises the responsibility and authority of tribals in conservation of biodiversity and maintenance of ecological balance and thereby strengthening the conservation regime of forests.

And whereas State of West Bengal has been the pioneer in development of Joint Forest management which has now been acknowledged as tool for management of forest resources universally and implemented successfully in the different states of the country.

And whereas, the Forest Department has taken up a massive programme for resuscitation of the degraded forests of the State as a whole for converting the areas into productive forests.

And whereas, active participation and involvement of local people are vital for generation, maintenance and protection of aforesaid forests/ plantations and successful implementation of the program.

In supersession of this department's resolution No.2340-For dated 14<sup>th</sup> July 2004, 2731-For dated 16<sup>th</sup> August 2004 and 2756-For Dated 17<sup>th</sup> August 2004, the Governor has been pleased to decide that Joint Forest Management Committees shall be constituted for the purpose of development of degraded forests and forests prone to forces of degradation in the districts of Jalpaiguri, Coochbehar, Darjeeling (excluding areas under Darjeeling Gorkha Hill Council), Malda, Murshidabad, Nadia, Uttar Dinajpur, Dakhin Dinajpur, Hooghly and direct that the composition, duties and functions, the usufructuary benefits and restrictive measure pertaining to such Joint Forest Management Committees shall be as following.

## 1. COMPOSITION

- i. The Divisional Forest Officer in consultation with “Bon-Bhumi Sanskar Sthayee Samiti” of concerned Panchayat Samiti shall select beneficiaries for constitution of the Joint Forest Management Committees(s), within their jurisdiction and within the frameworks of this resolution.
- ii. The beneficiaries ordinarily shall be economically backward people living in the vicinity of the forest concerned. Every family living in the vicinity of the forests shall, however, have the option of becoming a member of the Joint Forest Management Committee, if such family including the female members is interested in the work of protection.
- iii. There shall be normally a joint membership for each household (i.e. if husband is a member, wife automatically becomes a member and vice versa). Either of the two can exercise rights to represent household at any point.
- iii. Constitution of the Joint Forest Management Committee including the Executive Committee will be approved by the Divisional Forest Officer concerned on recommendation of the “Bon-O-Bhumi Sanskar Sthayee Samiti” of the concerned Panchayat Samiti.
- iv. The concerned Gram Panchayat(s) shall extend necessary support and help to such committees (s) to ensure their smooth and proper functioning.

## 2. EXECUTIVE COMMITTEE

- i. Each Joint Forest Management Committees shall have an Executive Committees to carry out the various activities assigned to the Committee.
- ii. The composition of the Executive Committee shall be as follows:
  - a. Sabhapati or any member of the “Bon-O-Bhumi Sanskar Sthayee Samiti” of the Local Panchayat Samiti as may be nominated by the Sabhapati .....Member.
  - b. Gram Pradhan or any member of local Gram Panchayat(s) as may be nominated by the Pradhan/Chairman of the Municipality or any councillor of the Local Municipality as nominated by the Chairman of the said Municipality.....Member
  - c. Elected representative of the beneficiaries ..... Member  
(Three number of members of the FPC subject to the condition that at least one member will be women and tribal)
  - d. Concerned Beat Officer or his nominee in the rank of Head Forest Guard/Forest Guard/Ban Majdur/Ban Shramik .....Member Secretary
  - e. One Head.Forest Guard/Forest Guard/ Ban Majdur/ Ban Shramik to be nominated by concerned Range Officer.....Member



The members of the Executive Committee shall elect the President in each meeting.

iii. The “Bon-O-Bhumi Sanskar Sthayee Samiti” of the respective Zilla Parishad will monitor, supervise and review functions of the Joint Forest Management Committees.

iv. The Member Secretary shall convene the meetings of the Executive Committee as well as Joint Forest Management Committee, as per agreed procedure.

v. The representatives of the beneficiaries to the Executive Committee shall be elected in each year in Annual General Meeting of the Committee, where the concerned Range Officer will be the observer.

vi. No member of the Executive Committee shall be elected or nominated for more than three years in succession.

vii. In order to ensure better coordination among the JFMCs and further consolidation of JFM practices, Coordination Committees of the JFMCs shall be constituted both at Beat & Range level. The composition and function of such coordination committees shall follow guideline to be prescribed by Principal Chief Conservator of Forests.

### **3. DUTIES OF EXECUTIVE COMMITTEE**

i. The Executive committee of Joint Forest Management Committee shall maintain a register showing the necessary particulars of beneficiaries who are members of the committee, i.e. name, father's name, address, age, number of family members, name of nominee, etc nomination forms duly filled in and approved by the Executive committee should be pasted in the Register. Such Register is also to be maintained in the concerned Range Office of the Forest Department for permanent record.

ii. The Executive committee of Joint Forest Management Committee shall maintain a “Minute Book” wherein proceedings of the meeting of the Executive Committee held from time to time as well as the proceedings of the Annual General Meeting of the Joint Forest Management Committee will be recorded under the signature of the President of the Committee and such Minute duly attested by the member secretary shall be sent to concerned Range Officer for record.

iii. The Executive committee of Joint Forest Management Committee shall hold an Annual General Meeting once in very year where activities of Committee as well as details of distribution of usufructuary benefits are to be discussed, besides electing representatives of the beneficiaries to the Executive Committee.

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#### **4. FUNCTIONS OF JOINT FOREST MANAGEMENT COMMITTEE/ EXECUTIVE COMMITTEE**

##### **A**

- i. To ensure protection of forest (s)/ plantation(s)/wildlife through members of the committee.
- ii. To protect the said forest(s)/plantation(s) with the member of the Committee.
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- v. To apprehend or assist the forest personnel in apprehension of such person or persons committing any of the offence mentioned above.

##### **B**

- i. To ensure smooth and timely execution of all forestry and fringe area development works taken up in the area by extending necessary help to the officials of Forest Department.
- ii. To involve every member of the Committee in the matter of protection of forests(s)/plantations(s)/wildlife as well as other duties assigned to the Committee.
- iii. To assist the concerned Forest Officials in the matter of selection/engaging of labourers required for forestry worked.

##### **C**

- i. To ensure smooth harvesting of the forest produce by the Forest Department.
- ii. To assist the concerned Forest Official in proper distribution of the earmarked portion of the net sale proceeds among the members of the Committee (as per list maintained by Sthayee Samiti).
- iii. To ensure that usufructuary rights allowed by the Govt, is not in any way misused by any of the members and forest/plantation sites are kept free from any encroachment whatsoever.

##### **D**

- i. To prevent any activities in contravention of the provisions of Indian Forest Act, of 1927 and any Acts and Rules made there under and the Wildlife (Protection) Act, 1972 as amended from time to time.

ii. To report about activities of particular member which are found prejudicial and detrimental to the interest of a particular plantation and or/forest wildlife to the concerned Beat Officer/Range Officer which may result in cancellation of membership of the erring member.

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i. The members will have to protect the forest and wildlife for at least 5 years to be eligible for sharing of usufructs under this programme.

ii. The members shall be entitled to collect following items free of royalty without causing any damage to forest.

a) Fallen twigs, grass, fruits (excluding cashew), flowers, mushroom, seeds, leaves and intercrops raised by JFMCs subject to any restriction imposed from time to time, Provided however such collection will be not allowed in Protected Areas

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c) Members of the JFMC will receive 25% of net sale proceeds of firewood and poles, which are harvested during thinning and cultural operations. The poles for the purpose of this order will be under 90 cm, gbh. For all species expect Teak. For Teak upper limited of gbh is 60 cm.

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iv. The concerned forest official will distribute to the eligible members their proportionate share of the usufructs from the harvesting after satisfactory performance of functions detailed herein before.

v. The usufruct sharing will be subject to restrictions imposed from time to time on account of Silvicultural and Management requirements and from preservation of wildlife point of view.

## **6. TERMINATION OF MEMBERSHIP DISSOLUTION OF COMMITTEE APPEALS ETC**

i. Failure to comply with any of the conditions laid down hereinbefore as well as contravention of provisions of the Indian Forest Act of 1972 Wildlife (Protection) Act or Acts and / or Rules made there under, may entail cancellation of individual membership and or/dissolution of the Executive/Joint Forest Management Committee, as the case may be by the Officers of the Forest Department as state below in (ii) and (iii) below.

ii. The concerned Divisional Forest Officer shall be entitled to take appropriate action even dissolution of any Executive/Joint Forest Management Committee on the grounds stated above, on the recommendation of the Bon-O-Bhumi Sanskar Sthayee Samiti, Panchayat Samiti.

iii. The concerned Range Officer may be authorized by the Divisional Forest Officer to take proper action, even termination of an individual membership, on the above mentioned grounds, on the recommendation of the Executive Committee of Joint Forest management Committee.


iv. Appeal against any such penal action by the Range Officer may be preferred to the concerned Divisional forest Officer through local Panchayat Samiti.

v. Appeal, against any such penal action by the Division Forest Officer may be preferred to the concerned Circle Conservator of Forests through the concerned Panchayat Samiti and the Zilla Parishad, whose decision shall be final.

### **ORDER**

Ordered that the Resolution be published in the Calcutta Gazette and copy sent to all concerned.

By order of the Governor

  
( Smt. Shila Nag, IAS)  
Joint Secretary to the  
Government of West Bengal

No. 5969/1-For.

Date:03.10.2008

Copy forwarded to the Managing Director, Basumati Corporation Ltd., 166, B.B. Ganguli Street, Kolkata- 12.

He is requested to publish it in the Kolkata Gazette for greater interest. 25 copies of the Gazette Notification may kindly be sent to this Department

Joint Secretary to the Government of West Bengal

No. 5969/2(6)-For. Dt. 03.10.2008

Copy forwarded for information to the :

7. P.C.C.F, (WL), West Bengal & C.W.L.W.
- ✓ 8. P.C.C.F., West Bengal.  
- All concerned may be informed accordingly.
9. Accountant General (A&E), West Bengal.
10. Finance Department of this Government.
11. Sabhadhipati .....
12. P.S. to M.I.C., Forests Department.

Joint Secretary to the Government of West Bengal

No. 5969/3-For. Date 03.10.2008.

Copy forwarded for information to the Secretary to the Govt. of India, Ministry of Environment & Forests , National Wasteland Development Board, C.G.O. Complex, Lodhi Road, New Delhi 110 003.

Joint Secretary to the Government of West Bengal

**Resolution No. 3841 – For/d/11M – 7/95****Dated 26<sup>th</sup> June, 1996 on EDC**

Whereas the Forest Department have taken up a massive programme of wildlife conservation and management in the State and established a number of wildlife protected areas, i.e. sanctuaries and national parks, for this purpose

And whereas successful implementation of the programme is dependent to a large extent on active participation and involvement of the local people.

Now therefore, the Governor is pleased to decide that Eco-Development Committee ( EDC ) shall be constituted for the purpose of protection and development of wildlife protected areas ( sanctuaries and national parks ) and members activities, subject to observance of the conditions provided in this Resolution.

The composition, duties and functions, the usufructory benefits and restrictive measures pertaining to such committees shall be as follows: -

**1. COMPOSITION**

- (i) The Divisional Forest Officer/ Officer in charge of the protected area therein ( after referred to as forest officer ), in consultation with the " Bon-O-Bhumi Sanaskar Sthayee Samiti" of the concerned Panchayat Samiti, Shall select members for constitution of the EDC within the framework of this Resolution.
- (ii) The members shall ordinarily be economically backward people living in the vicinity of the protected area concerned. Every family living in the vicinity of the protected area shall, however has the option of becoming a member of the EDC if such family including the female members' are interested in the work of protection.
- (iii) There shall normally be a joint membership of each household ( i.e. husband becoming member, wife automatically becomes a member or vice versa ). Either of the two can exercise the right to represent the household at any time Annual General Meeting.
- (iv) Constitution of the EDC will be approved by the Forest Officer on recommendation of the "Bon-O-Bhumi Sanskar Samiti" of the concerned Panchayat Samiti.
- (v) The concerned Gram Panchayat(s) shall provide necessary support and help to such Committee(s) to ensure their smooth and proper functioning.
- (vi) The "Bon-O-Bhumi Sanskar Samiti" of the respective Zilla Parisad will monitor, supervise and review function of the EDC.
- (vii) Each EDC shall have an Executive Committee to carry out the various activities assigned to the Committee.
- (viii) The composition of the Executive Committee shall be as follows: -
  - (a) Sabhapati of any member of the "Bon-O-Bhumi Sanskar Samiti" of the local panchayat Samiti as may be nominated by the Sabhapati .....Member.
  - (b) Pradhan or any member of local Gram Panchayat may be nominated by the pradhan(s).....Member.

- (c) Elected representatives from amongst the members, not exceeding 10% of total membership – subject it minimum number of 6 and maximum of 11. Not less than 30% of the elected members shall be women ..... Member.
- (d) Concerned Beat Officer ..... Member Convenor
- (ix) The members of the Executive Committee shall elect a Secretary from amongst the elected members, who will function as joint Convenor.
- (x) If any inclusion or change in the EDC/ Executive Committee is necessitated, after initial constitution, the Executive Committee shall make suitable recommendation to the Forest Officer duly endorsed by the "Bon-O-Bhumi Sanskar Samiti" of local Panchayat Samiti, for approval.
- (xi) The Beat officer, as Member-Convenor, and the Secretary shall convene the meeting of the Executive Committee, Annual general Meeting and other meeting of the EDC;
- (xii) Quorum for each meeting of the Executive Committee shall be 50% of the elected members and the for Annual General Meeting, 30% of ordinary members.
- (xiii) A chair-person shall be elected for every meeting of the EDC

**FUNCTION**

- (i) The Secretary of the EDC shall maintain a Register Showing necessary particulars of the members of the EDC, e.g. name, father's / spouse's name, address, age number of family members name of the nominee, etc. The nomination forms duly filled in and approved by the Executive Committee should be pasted in the Register, Such Register are also to be maintained in the concerned Range Officers of the Forest Department for permanent record;
- (ii) The Secretary of the EDC shall maintain a "Minutes Book" wherein proceedings of the meeting of the Executive Committee held from time to time as well as the proceedings of the Annual General Meeting of the EDC will be recorded under the signature of the Member – Convenor and Joint Convenor.
- (iii) The EDC shall hold an Annual General Meeting once every year where activities of the EDC as well as details of distribution of usufructory and eco-development benefit are to be discussed besides electing representatives of the members to the Executives Committee. Concerned Range Officer shall be the observer in this meeting
- (iv) Every EDC shall/ will have an account in bank/post office maintaining a common fund by deposits from the members and/or other source. The fund will be operation jointly by the Bear Officer and the Secretary as per written resolution of the Executive Committees. Receipts and withdrawals from this Account shall be presented in every Annual General Meeting for approval.

## **2. DUTIES**

- A.** (i) To ensure protection of the forest and wildlife inside the forest and those straying outside, through members of the EDC jointly with Forest Department staff.
- (ii) To inform forest personnel about any person or persons attempting trespass and wilfully or maliciously damaging the side forest(s) and/or wildlife therein
- (iii) To prevent such trespass, encroachment, grazing, fire, poaching, theft of damage jointly with Forest Deptt. Staff;
- (iv) To approach or assist the forest in apprehension of such person(s) committing any of the offences mentioned above.
- B.** (i) To assist Forest Deptt. Staff in smooth and timely execution of all Forestry works taken up in area protected by the EDC.
- (ii) To involve every member of the EDC in the matter of protection of forest and wildlife as well as other duties assigned to the EDC
- (iii) To assist the concerned forest officials and the Panchayat in the matter of selecting/engaging labourers required for forestry works.
- C.** (i) To ensure implementation of eco-development programme so that the members of the EDC get maximum benefit
- (ii) To ensure that eco-development funds provided by Govt. and usufructory benefits by Govt. are not in any way misused by any of the members(s) & forest / Plantation sites are kept free from any encroachment whatsoever;
- D.** (i) To prevent any action in contravention of provision of the Indian Forest Act, 1927 and the Wildlife (Protection) Act, 1972 as amended from time to time;
- (ii) To report about activities of a particular member which are found prejudicial and detrimental to the interest of forest / wildlife, to the concerned Beat Officer/ Range Officer which may result in cancellation of membership of the erring member;
- (iii) To assist the forest officials to take action under Indian Forest Act, 1927, the Wildlife (Protection) ACT, 1972 and the Rule made thereunder, against the offender, including any erring member of the EDC.

### **Eco-development activities:**

- (i) Microplans in respect of eco-development activities will be drawn up in a participatory manner prior to commencement of the activities, involving the Range officer and Beat Officer of the Forest Department and the members of the EDC. Need-based and site specific work programme, out of a basket of options, will be chosen within specific monetary limits, both for community and individual benefit, for implementation. Every selected eco-development activity shall have direct or indirect linkage or relation with conservation of biodiversity and such linkage/relation id to be mentioned against each selected activity in the microplan.
- (ii) Protection provided to the wildlife protected area against theft, grazing, fire, etc. will be considered as the involvement and contribution of the EDC. The forest officer may not release fund



- village eco-development, unless he is satisfied that contribution by the EDC., as stipulated above has been fulfilled.
- (iii) Members of the EDC shall share a percentage of investment for every village eco-development work in cash. Labour and/or physical resources. Agreed cost sharing arrangement will be incorporated in the microplan.
  - (iv) The microplan will be signed by Range Officer on behalf of the Forest Dept. and the Secretary on behalf of the EDC.

## **5. USUFRUCTUARY BENEFITES**

### **A. From Wildlife Protected Area :-**

- (i) Upon satisfaction of the State Govt. that collection and removal of certain items of forest products from identified zone(s) of a protected area is necessary for the improvement and management of wildlife therein, the Chief Wildlife Warden may grant permission for such collection and remove; Members of the EDC shall be eligibility for getting in equal proportion such forest products free of royalty but on payment of collection cost, when collected by Govt. agency, as follows ..... for teak and 90 cm., b.h.g.
  - (a) 25% share of poles ( upto 60 cm. B.h.g./for other species) obtained from drift and overwood removal
  - (b) 100% share of firewood (obtain form drift and overwood removal) thatch/amlisho/other grass ( obtained from firelines and fire prone zones) specified non-edible fruits, pods, flowers, seeds decorative fungus and leaves;
- (ii) The members of the E D C will have to protected and manage the protected area to the satisfaction of the forest officer for a minimum period of one year to become eligible for 25% share Govt. receipts on account of tourist and transport entry and photography and such other related activities in the protected area.;
- (iii) Usufruct sharing, as mentioned above, will be subject to restrictions imposed from time to time on wildlife management and other related consideration.

### **B. From Non- forest Area :-**

- (i) Produces obtains from plantations raised on public lands as village eco-development activity will be share as follows :-
  - (a) 100% share of intercrop to identified members of E D C who raise the crop(s)
  - (b) 100% share of thinning produce & firewood obtained from final harvest to each member of EDC in equal proportion,
  - (c) The forest officer shall deduct the cost of re-afforestation from the sale value of final harvest to timber and poles for deposit in the EDC fund. Balance amount will be distributed to each member of the EDC in equal proportion
- (ii) Goods services generated by community benefits oriented village eco-development activities will be enjoyed by each member of the EDC in equal proportion. Those generated by individuals benefit

oriented eco-development activities will be enjoyed by the individual concerned

**TERMINATION OF MEMBERSHIP, DISSOLUTION OF E.D.C. APPEAL, etc**

- (i) failure to comply with of the conditions laid down hereinbefore as well as contravention of provisions of the Indian Forest Act, 1927, Wildlife (Protection) Act, 1972 or any Rules made thereunder, may entail cancellation of individual membership and/or dissolution of the Executive Committee/or the E.D.C., as the case may be, by the officer of the Forest Department as stated in (ii) and (iii) below
- (ii) The Forest Officer shall be entitled to take appropriate action including dissolution of any Executive Committee/ E.D.C. of the grounds stated above, on the recommendation of the "Bon-O-Bhumi Sanskar Samiti" of the Panchayat Samiti concerned;
- (iii) The concerned Range Officer may be authorized by the forest officer to take proper action including termination of an individual's membership on the above mentioned grounds on the recommendation of the Executive Committee of the E.D.C.
- (iv) Appeal against any such penal action by the range Officer may be preferred to the forest officer through the local Panchayat Samiti;
- (v) Appeal against any such penal action of the forest may be preferred to the concerned Circle Conservator of Forest or the Chief Conservator of Forests, as the case any be, through the concerned Panchayat Samiti and Zilla Parishad, whose decision shall be final

**ORDER**

Order that the Resolution be published in the Calcutta Gazette and copy sent to all concerned

By order of the Governor  
Sd/- ( S. M. Chaki )  
Dy. Secy. to the Govt. of West Bengal

**Government of West Bengal**  
**FOREST DEPARTMENT**  
**FOREST BRANCH**

**No.:** 2204-For/D/1/6M-7/93

Dated, Calcutta the 12th May, 1995

**From :** Officer on Special Duty and Ex-officio Dy. Secy. to the Govt. of West Bengal

**To :** The Principal Chief Conservator of Forests, West Bengal

**Sub :** Management and Transfer of strip plantations.

**Ref :** Chief Conservator of Forest, Social Forestry, West Bengal's Memo No. 57/SFW/ 2M-22, dated 17.01.1995.

In continuation of this Department's G.O. No. 7354-For., Dated 02.08.1994 on the subject noted above, the undersigned is directed by order of the Governor to say that the Governor is further pleased to direct that the contents in Para 4(13)(ii) of this department Notification No. 2914-For, dated 22.07.1986 may be substituted as stated below :-

The beneficiary village shall be identified by the Bhumi Sanskar Sthayee Samity as are situated nearest to the roadsides, canal bank, river bank, etc. The individual beneficiaries shall be selected by an executive committee of the beneficiary village, the composition of which shall be as follows:

- (a) Sabhapati or any member of the Bon-O-Bhumi Sanskar Sthayee Samity as may be nominated by the Sabhadhipati. .... Member
- (b) Gram Pradhan or any member of local Gram Panchayet(s) as may be nominated by the Pradhan(s). .... Member
- (c) Elected representatives of the beneficiaries (not exceeding 6) .... Member
- (d) Concerned Beat Officer ..... Member Secretary

The members of the executive committee shall elect the President in each meeting.

The above Committee while selecting individual beneficiaries shall give preference to economically backward people and members of Scheduled Caste and Scheduled Tribes Communities.

The Strip plantation may be divided into sectors for allotment to the beneficiaries (individual/family/groups) for protection and maintenance of such plantation, keeping the number of trees the same as far as practicable in each sector.

2. Suitable instructions may be communicated to the concerned Chief Conservator of Forests, Conservator of Forests and Divisional Forest Officers.

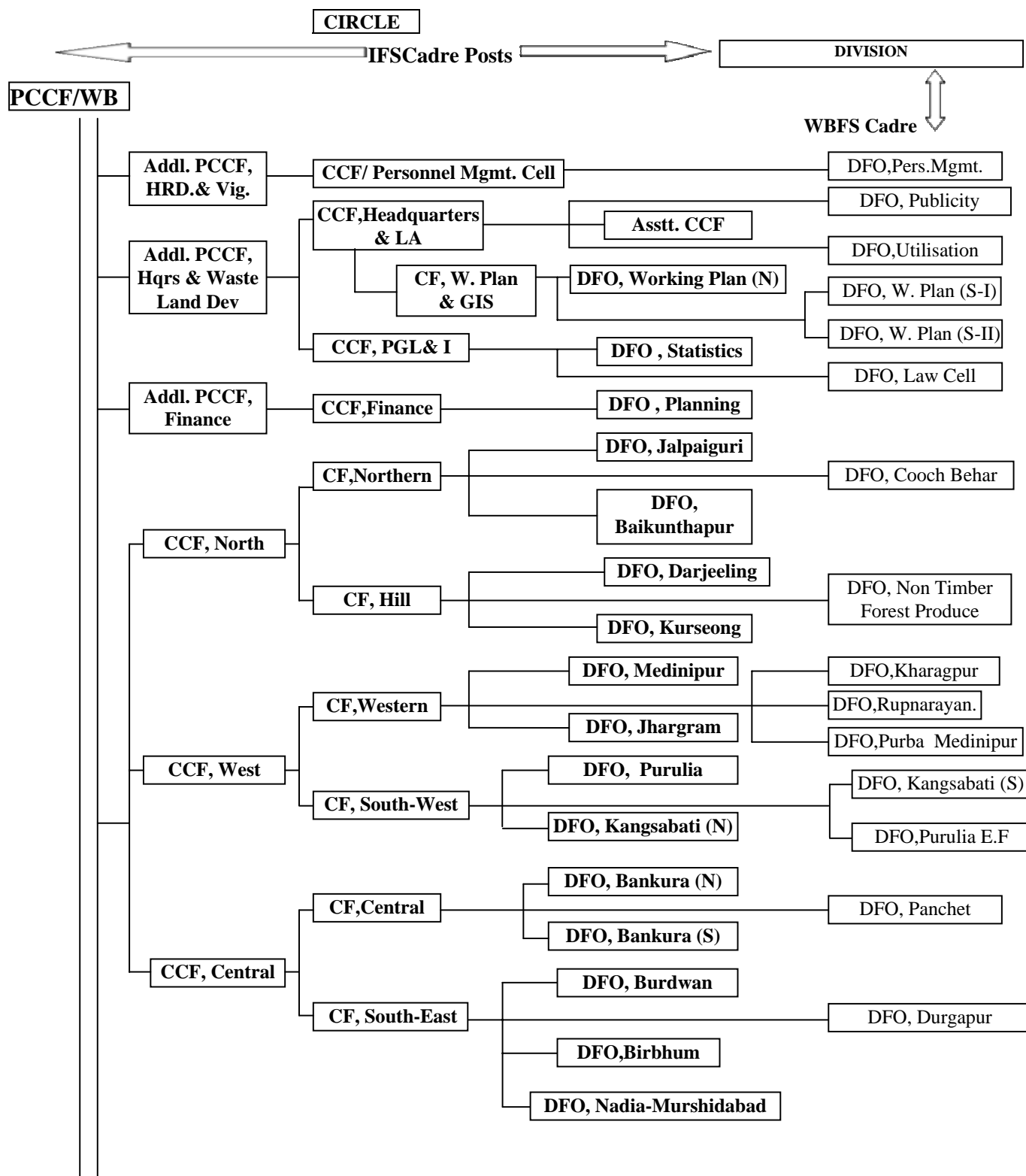
Sd/—  
( **S. M. Chaki** )  
O.S.D. and Ex-Officio  
Dy. Secy. to the Govt. of West Bengal

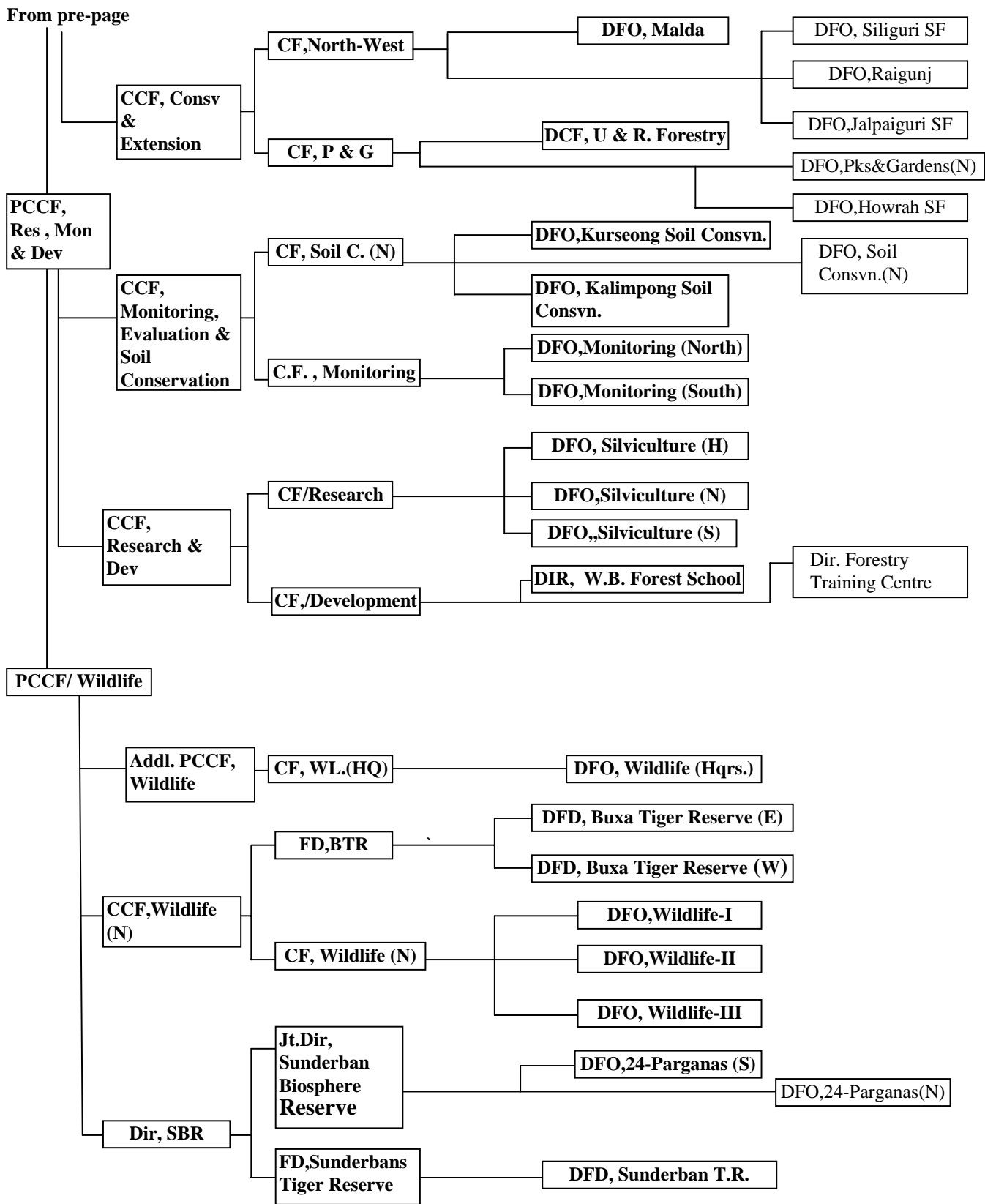
Annexure 9 Forest Organization in West Bengal

## Forest Organization in West Bengal

The present administrative set up of the Forest Directorate of the State stands as follows: -

### Organizational Structure of Forest Directorate





Source: West Bengal State Forest Report 2009-2010

**IFS CADRE STRENGTH IN WEST BENGAL**

1.	<b>Senior posts under the State Government</b>	<b>71</b>
	Principal Chief Conservator of Forests & HoFF	1
	Principal Chief Conservator of Forests (Wildlife and Bio-diversity Conservation)	1
	Additional Principal Chief Conservator of Forests (Wildlife and Bio-diversity Conservation)	1
	Additional PCCF (Human Resource & Development & Vigilance)	1
	Additional PCCF (Headquarters))	1
	Additional PCCF (Finance)	1
	Chief Conservator of Forests (West)	1
	Chief Conservator of Forests, (Central)	1
	Chief Conservator of Forests (Conservation & Extension)	1
	Chief Conservator of Forests, Wildlife (North)	1
	Chief Conservator of Forests (North)	1
	Director (Sunderbans Biosphere Reserve)	1
	Chief Conservator of Forests (Research & Development)	1
	Chief Conservator of Forests (Monitoring, Evaluation & Soil Conservation)	1
	Chief Conservator of Forests (Headquarters) & Nodal Officer, Forest Conservation Act.	1
	Chief Conservator of Forests (Finance)	1
	Chief Conservator of Forests, Personnel Management Cell	1
	Chief Conservator of Forests, Public Grievance, Law & Information.	1
	Conservator of Forests (Territorial Circles, namely North, South, West & East)	4
	Conservator of Forests, Wildlife (North)	1
	Conservator of Forests, Wildlife (Headquarters)	1
	Field Director (Buxa Tiger Reserve)	1
	Field Director (Sunderbans Tiger Reserve)	1
	Joint Director (Sunderbans Biosphere Reserve)	1
	Conservator of Forests, North-West	1
	Conservator of Forests, South-East	1
	Conservator of Forests, Research	1
	Conservator of Forests, Development	1
	Conservator of Forests, Working Plan & GIS	1
	Conservator of Forests, Monitoring and Evaluation	1
	Conservator of Forests, Soil Conservation (North)	1
	Conservator of Forests, South-West	1
	Conservator of Forests, Urban & Recreation Forestry	1
	Divisional Forest Officer (Territorial Divisions namely Baikunthapur, Bankura (North), Bankura (South), Birbhum, Burdwan, Cooch Behar, Darjeeling, Jalpaiguri, Kurseong, Malda, Medinipur, Jhargram, Nadia-Murshidabad, 24-Parganas (South) and Purulia.	15
	Divisional Forest Officer, Soil Conservation (Kurseong & Kalimpong)	2
	Divisional Forest Officer, Working Plan	1
	Divisional Forest Officer, Silviculture	3
	Divisional Forest Officer, Monitoring (North)	1
	Divisional Forest Officer, Monitoring (South)	1
	Divisional Forest Officer, Planning	1
	Divisional Forest Officer, Statistics	1
	Asstt. Chief Conservator of Forests	1
	Divisional Forest Officer, Wildlife	4
	Deputy Field Director (Buxa Tiger Reserve – East)	1

	Deputy Field Director (Buxa Tiger Reserve – West)	1
	Deputy Field Director (Sunderbans Tiger Reserve)	1
	Director (West Bengal Forest School)	1
	Deputy Conservator of Forests, (Urban & Recreational Forestry)	1
		<b>71</b>
2.	Central Deputation Reserve[ @ 20% of 1 above]	14
3.	State Deputation Reserve [@ 25% of 1 above]	17
4.	Training Reserve [@ 3.5% of 1 above]	2
5.	Leave Reserve & Junior Posts Reserve [@ 16.5% of Item 1 above].	11
6.	Posts to be filled up by promotion [Under Rule 8 of IFS (Recruitment) Rules,1966 not exceeding 33 1/3 of items 1,2,3 & 4 above]	
7.	Post to be filled by Direct Recruitment (Items 1+2+3+4+6-5)	81
	<b>Total Authorized Strength</b>	<b>115</b>

Source: West Bengal State Forest Report 2009-2010

### WBFS Cadre Strength in West Bengal

A	Senior Duty Post (D.F.O. / Dy. C.F. )	23
B	Junior Duty Post (A.D.F.O.)	87
C	Deputy Reserve Post 10% of Total ( A + B )	11
D	Leave Reserve & Training Reserve 5% of total ( A+ B )	5
	<b>Total Post :</b>	<b>126</b>

Source: West Bengal State Forest Report 2009-2010

### CATEGORY WISE NUMBER OF SANCTIONED POSTS AND ACTUAL NUMBER OF PERSONNEL IN THE DIRECTORATE OF FORESTS AS ON 31.03.2010

Sl. No.	Category of Posts	Sanctioned Strength (Nos.)	Personnel in Position (Nos.)
1	2	3	4
01.	Indian Forest Service	115	108
02.	West Bengal Forest Service	126	83
03.	Administrative Officer	1	1
	<b>Sub-total</b>	<b>242</b>	<b>192</b>
04.	Accountant	2	2
05.	Asstt. Statistician	1	1
06.	Basic Grade Typist	7	7
07.	Computing Supervisor	2	2
08.	Computer	7	5
09.	Grade-I Typist	6	6
10.	Head Clerk-I	6	6
11.	Head Clerk-II	2	2
12.	Lower Division Clerk (Directorate Cadre)	26	21
13.	Statistician	1	0
14.	Supervisory Grade Typist	2	2
15.	Upper Division Clerk (Directorate Cadre)	26	26
	<b>Sub-total</b>	<b>88</b>	<b>80</b>
16.	Accountant:CF Level:	8	3
	DFO.Level (UDC)	53	36
17.	Agriculture Extension Officer	2	-
18.	Asstt. Foreman (Mech.)	4	-



<b>Sl. No.</b>	<b>Category of Posts</b>	<b>Sanctioned Strength (Nos.)</b>	<b>Personnel in Position (Nos.)</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
19.	Asstt. Saw Doctor	5	3
20.	Attendent	1	-
21.	Asstt. Soil Chemist	1	1
22.	Band Saw Operator	10	3
23.	Basic Grade/Grade-I/Supervisory Typist	30	19
24.	Bearer	3	3
25.	Boatman	102	76
26.	Boiler Driver	3	2
27.	Boiler Fireman	3	-
28.	Bungalow Chowkidar	88	53
29.	Bengali Translator	1	1
30.	Cashaub	1	-
31.	Chowkidar	2	1
32.	Cleaner/Truck Cleaner	31	21
33.	Cook	4	-
34.	Cook-cum-Bearer	2	2
35.	Crane Operator	3	3
36.	Cross-cut-Operator	6	4
37.	C.T.Mobile Medical Unit	1	-
38.	Chairman	8	-
39.	Compounder	1	1
40.	Dakwalla	105	78
41.	Darwan	36	27
42.	Deputy Ranger/Forester	1277	939
43.	Draftsman/Head Draftsman	35	16
44.	Driver/Touring Vehicle/Truck Driver	144	108
45.	Driver-cum-Mechanic	3	-
46.	Duftary	13	11
47.	Duplicating Operator	1	1
48.	Electrician	1	1
49.	Engine Driver	9	7
50.	Electric Workman	6	6
51.	ECG Technician	1	-
52.	Fitter	2	1
53.	Forest Guard	2444	1664
54.	Forest Ranger	580	402
55.	Forest Watcher	13	7
56.	Forest Worker	17	6
57.	G.D.A. (Medical Unit)	2	2
58.	Gate Operator/Head Gate Operator	5	3
59.	Grass Cutter	36	15
60.	Game Watcher	2	2
61.	Game Guard	4	-
62.	Head Clerk (Regional Cadre)	56	34
63.	Head Forest Guard	231	128
64.	Installation Guard	12	2
65.	Kiln Supervisor	1	1
66.	Klin Operator	3	1
67.	Laskar	17	13
68.	Latheman	1	1
69.	Lower Division Clerk/Clerk Typist/Jr.Asstt. (Regional Cadre)	326	181
70.	Laboratory Assistant	3	2
71.	Laboratory Attendant	1	1
72.	Mahut	25	16

Sl. No.	Category of Posts	Sanctioned Strength (Nos.)	Personnel in Position (Nos.)
1	2	3	4
73.	Majhi	44	36
74.	Mali	151	116
75.	Medical Officer	2	1
76.	Mosalchi	1	1
77.	Muharrir Grade-I, Grade-II	2	2
78.	Museum Darwan	1	-
79.	Night Guard	11	10
80.	Night Watchman	5	3
81.	Nurse	2	-
82.	Oil Man-greaser	9	-
83.	Orderly/Peon	572	511
84.	Orchid Cultivator	1	-
85.	Office Supdt.	1	1
86.	Pharmacist	2	-
87.	Power Saw Doctor	6	3
88.	Pump Driver	1	-
89.	Rd. Roller Driver	3	-
90.	Record Supplier	2	2
91.	Renepont Operator	2	-
92.	Road Roller Cleaner	3	2
93.	Road Roller Mate	3	1
94.	Research Officer	1	-
95.	Reopeway Motor Driver	7	5
96.	Road Khalasi	3	-
97.	Saw Doctor	1	-
98.	Serang	7	7
99.	Skilled Mazdoor	29	25
100.	Station Helper	10	10
101.	Stenographer	48	46
102.	Sub-Station Operator	2	-
103.	Sweeper	51	33
104.	Sukhani	5	4
105.	Tractor Driver	1	1
106.	Tractor Mate	5	-
107.	Taxidermist	1	-
108.	Ticket Seller	1	1
109.	Technical Asstt.	1	1
110.	Tractor Mount Roller Driver	3	1
111.	Unskilled Mazdoor	52	6
112.	Upper Division Clerk/ Sr. Assistant	273	235
113.	Veterinary Officer	1	-
114.	Veterinary Surgeon	1	1
115.	Watcher	45	16
116.	X-Ray Assistant	1	1
117.	Zamadar	2	2
<b>Sub-total</b>		<b>11,376</b>	<b>9,210</b>
<b>PARKS &amp; GARDENS WING</b>			
118.	Garden Supervisor	22	10
119.	Head Uddyan Rakshi	30	23
120.	Horticulture Officer	4	2
121.	Senior Horticulture Officer	2	-
122.	Senior Mali	70	39
123.	Supdt. Horticulture Officer	1	-
124.	Uddyan Rakshi	120	95
125.	Uddyan Shramik	280	194
<b>Sub-total</b>		<b>529</b>	<b>363</b>

Sl. No.	Category of Posts	Sanctioned Strength (Nos.)	Personnel in Position (Nos.)
1	2	3	4
<b>LLOYD BOTANIC GARDEN :</b>			
126.	Black Smith	1	-
127.	Carpenter	1	1
128.	CT	1	1
129.	Darwan	6	4
130.	Head Mali	1	-
131.	Herbarium Cleaner	4	-
132.	Horticulture Officer	1	-
133.	Junior Mali	1	1
134.	Label Writer	1	-
135.	Man Mazdoor	11	10
136.	Night Guard	1	-
137.	Orchid Supervisor	1	1
138.	Orderly	1	1
139.	Plant Collector	2	-
140.	Peon	1	1
141.	Sardar	1	1
142.	Senior Mali	1	1
143.	Store Keeper	1	1
144.	Sweeper	2	-
145.	UDC	1	1
146.	Women Mazdoor	25	12
<b>Sub-total</b>		<b>65</b>	<b>36</b>
<b>GRAND TOTAL :</b>		<b>12300</b>	<b>9881</b>

Source: West Bengal State Forest Report 2009-2010

### Supernumerary Posts

Bana Majdoor	1193
Bana Shramik	3025

Source: West Bengal State Forest Report 2009-2010

### Administrative Units under Forest Directorate

	Circle	Division	Range	Beat
Territorial	7	22	243	509
Wildlife	5	9	86	142
Social Forestry	1	7	52	72
Soil Conservation	1	3	22	39
Functional	4	17	68	--
<b>Total :</b>	<b>18</b>	<b>58</b>	<b>471</b>	<b>762</b>

Source: West Bengal State Forest Report 2009-2010

### NO. OF RANGE AND NO. OF BEAT UNDER DIRECTORATE OF FORESTS

Sl. No.	Name of Division	Total No. of Range	Total No. of Beat
1	Asstt. Chief Conservator of Forests, West Bengal.	2	--
2	Divisional Forest Officer, P.M.C., West Bengal.	--	--
3	Divisional Forest Officer, Law Cell, West Bengal.	--	--
4	Dy. Conservator of Forests, Planning	--	--
5	Dy. Conservator of Forests, Statistics	--	--
6	Divisional Forest Officer, Utilisation	4	--
7	Dy. Conservator of Forests, Jalpaiguri	13	27
8	Divisional Forest Officer, Cooch Behar	11	16
9	Dy. Conservator of Forests, Baikunthapur	15	20

Sl. No.	Name of Division	Total No. of Range	Total No. of Beat
10	Divisional Forest Officer, Jalpaiguri Social Forestry	7	13
11	Dy. Conservator of Forests, Darjeeling	11	25
12	Dy. Conservator of Forests, Kurseong	10	24
13	Divisional Forest Officer, N.T.F.P.	6	9
14	Dy. Conservator of Forests, Midnapore	15	29
15	Dy. Conservator of Forests, Jhargram	19	42
16	Divisional Forest Officer, Kharagpur	11	24
17	Divisional Forest Officer, Rupnarayan	10	19
18	Divisional Forest Officer, Panchet	10	21
19	Dy. Conservator of Forests, Bankura (S)	15	38
20	Dy. Conservator of Forests, Bankura (N)	14	34
21	Dy. Conservator of Forests, Malda	8	16
22	Divisional Forest Officer, Parks & Gardens (N)	5	--
23	Divisional Forest Officer, Siliguri Social Forestry	6	12
24	Divisional Forest Officer, Raiganj	9	17
25	Divisional Forest Officer, Publicity	2	--
26	Divisional Forest Officer, Howrah	6	11
27	Dy. Conservator of Forests, Birbhum	10	22
28	Dy. Conservator of Forests, U.R.F.	10	--
29	Dy. Conservator of Forests, Burdwan	8	21
30	Dy. Conservator of Forests, Kurseong Soil Cons.	7	12
31	Dy. Conservator of Forests, Kalimpong Soil Cons.	8	14
32	Divisional Forest Officer, Soil Cons.(North), Jalpaiguri	7	13
33	Dy. Conservator of Forests, Purulia	13	24
34	Dy. Conservator of Forests, Kangsabati (North)	9	18
35	Divisional Forest Officer, Purulia E.F.	7	19
36	Divisional Forest Officer, Kangsabati (South)	10	18
37	Dy. Conservator of Forests, Silviculture (N)	5	--
38	Dy. Conservator of Forests, Silviculture (S)	7	--
39	Dy. Conservator of Forests, Silviculture (H)	7	--
40	Divisional Forest Officer, Purba-Medinipur	7	16
41	Director, West Bengal Forest School	1	--
42	Director, Forestry Training Center	1	--
43	Dy. Conservator of Forests, Working Plan (N)	9	--
44	Divisional Forest Officer, Working Plan (S-I)	6	--
45	Divisional Forest Officer, Working Plan (S-II)	6	--
46	Dy. Conservator of Forests, Monitoring (N)	8	--
47	Dy. Conservator of Forests, Monitoring (S)	8	--
48	Dy. Field Director, Buxa Tiger Reserve (E)	11	22
49	Dy. Field Director, Buxa Tiger Reserve (W)	11	24
50	Dy. Conservator of Forests, Wildlife-I	11	22
51	Dy. Conservator of Forests, Wildlife-II	11	10
52	Dy. Conservator of Forests, Wildlife-III	14	27
53	Dy. Conservator of Forests, Wildlife (Hqrs.)	8	--
54	Divisional Forest Officer, 24-Parganas (N)	7	12
55	Dy. Conservator of Forests, 24-Parganas (S)	10	23
56	Dy. Conservator of Forests, Nadia Murshidabad	9	22
57	Dy. Field Director, Sunderbans Tiger Reserve	10	14
58	Divisional Forest Officer, Durgapur	6	12
<b>TOTAL :</b>		<b>471</b>	<b>762</b>

Source: West Bengal State Forest Report 2009-2010

Annexure 10      List of Required Number of GIS/RS  
Related Hardware and Software

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**Annexure 10 : List of Required GIS/RS Related Hardware and Software**

Sl. No.	Item Description	Suggested Brand	GIS CENTRE, TRAINING CENTRE & SUB-LIMIT			DIVISION LEVEL			RANGE LEVEL			COST @ DIVISION			COST @ RANGE											
			Reqt at Location A1 (1 unit)	Existing at Ananya Bhavan	Actual Reqt at A1	Reqt at Location A2 (1 unit)	Reqt at each B Sub-Unit	Number of B Unit	Existing at Bkash Bhavan	Actual Reqt at B	Total Quantity Reqt.	Price (Rs.)	GIS Total Cost (Rs)	Reqt at Division level - C	Number of C Units	Existing equipment	Total Reqt at C	Unit Price (Rs.)	Division Total Cost (Rs)	Reqt at each Range (D)	Number of D Units	Existing equipment	Total Reqt at D	Unit Price (Rs.)	Range Total Cost (Rs)	Grand Total (Rs)
	<b>SOFTWARE</b>																									
1	Arc GIS Desktop ver. 10 (r. 2 modules)	ESRI		1																						
2	Arc View ver. 10	ESRI	4	3	1		2	2	1	3	4	200,000	800,000													800,000
3	ERDAS Professional ver.10	ERDAS	2	1	1		1	2	1	2	350,000	700,000														700,000
5	Office Software	Microsoft	10		10	20	2	2	4	34	16,000	544,000	656,000	1	41	41	41	16,000	656,000							1,200,000
6	<b>Web-based Integrated Forest Management System</b>	Customised									20,000,000	20,000,000														20,000,000
	<b>HARDWARE &amp; EQUIPMENTS</b>																									
7	Computers (with Intel i3, 4 GB RAM)	HP / Dell	10	1	9		1	2	1	1	10	30,000	300,000	2	41	41	82	30,000	2,460,000							2,760,000
8	Computers (with 2 GB RAM) with UPS	HP / Dell		6			20	3	2	1	5	27,000	675,000													675,000
9	Light Tracing table (0.8x1m)	Local made			1			1	2	2	3	10,000	30,000													30,000
10	A0 Scanner	HP		1				1	2	2	2	750,000	1,500,000													1,500,000
11	A3 Scanner	HP																								
12	A4 Scanner	HP																								
13	A1 Colour Plotters	HP	2		2		1	2	1	1	3	350,000	1,050,000													1,050,000
14	A3 Colour Deskjet Printer	HP	2		2		1	2	1	2	4	10,000	40,000													40,000
15	A4 BW Laser Printers	HP	2		2		1	2	2	2	4	24,000	96,000													96,000
16	A4 Colour Laser Printers	HP										200,000	200,000	1	41	41	41	24,000	984,000							984,000
17	LAN connectivity upgrade		10		10		20					200,000	2,000,000													2,000,000
18	WiFi card for PCs										20	1,000	20,000													20,000
19	Large LCD Screen										1	35,000	35,000													35,000
20	LAN connectivity (length in feet)		50		50		30	2	60	2	200	2,000	2,000													2,200
21	Server (Data & Application)		1		1		1	2	1	2	200,000	400,000														400,000
22	Internet Connectivity (1st year)						4	2	2	6	6	6,000	36,000	2	41	41	82	6,000	492,000							528,000
23	GPS handset with Data	Garmin					2	2	4	4	4	30,000	120,000	1	41	41	41	30,000	1,230,000		329		329	30,000	9,870,000	11,220,000
	<b>OTHERS</b>																									
24	Furniture for new Set-up (Lumpsum)		500,000		500,000	200,000	2	100,000	400,000			1,100,000	1,100,000	1	41	41	41	5,000	205,000							1,305,000
25	Electricals (incl. AC) for new Set-up (Lumpsum)		500,000		500,000	100,000	2	100,000	100,000			800,000	800,000	1	41	41	41	10,000	410,000							1,210,000
26	1st Time Data Entry (MS & GIS) Outsourced		4,90,800		4,90,800	200,000	2	400,000	400,000			5,340,800	5,340,800													5,340,800
	<b>Total:</b>											<b>33,683,000</b>	<b>33,683,000</b>						<b>6,437,000</b>	<b>6,437,000</b>					<b>9,870,000</b>	<b>50,000,000</b>

Annexure 11

List of Afforestation Model

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Annexure 11 List of Afforestation Model

Afforestation Model	Objective	Target Figure (ha)	Forest Division	Cost (Rs/ha) (Base Cost, Adv. & Creation Works)		Density (/ha)	Species	Harvesting (year)	Method of regeneration	Seedling	characteristic of planting area (wet/dry, soil nutrient etc)	Benefit for dwellers etc	Target survival rate (1 <sup>st</sup> yr, 5 <sup>th</sup> yr, 5 <sup>th</sup> yr)
				Labour	Material								
<b>A Afforestation of Degraded Forest Land in Recorded Forest Area</b>													
A1 Planting with High Yielding Eucalyptus clones in South West Bengal	Production of industrial pulpwood	450	8 Forest Divisions: Medinipur, Kharagpur, Rupnarayan, Panchet, Bankra N., Bankra S., Burdwan, Durgapur	16,440	3,560	1,600	High yielding Hybrid clones of Eucalyptus	8	Re-plantation	QPM	Red lateritic soil, deep reddish-yellow loamy to clayey soil low in organic matter and available minerals. Hot dry summer, moderate winter, rainfall-900 to 1500mm spread over 150 to 180 days. Where soil condition is not favourable for any other tree species except eucalyptus shall be selected preferentially for this model	Revenue from sales of timber	90/85/80
A2 Plantation of Sal & Associate Species in South Bengal	Production of mining timber like Poles, Posts, Cogging sleepers and production of timber, small timber, firewood and NTFPs like Myrobalans, Nuts, and other edibles	3,430	12 Forest Divisions: Medinipur, Rupnarayan, Kharagpur, Jhargram, Panchet, Bankra N., Bankra S., Burdwan, Durgapur, Purulia, Kangaswati N., Kangaswati S.	22,800	12,300	1,600	Shorea robusta (50%) with associates like Pterocarpus marsupium, Ougenia oojimensis Dalbergia latifolia, Symplocos racemosa, Madhuka latifolia, Terminalia bellerica, T. chebula, Anogeissus latifolia, Schleicheria oleosa, Azadirachta indica, Phyllanthus emblica, Madhuka latifolia, Pterocarpus marsupium etc.	40	Re-plantation	QPM	Red lateritic soil- deep reddish-yellow loamy to clayey soil together with Alluvium of Damodar, Kangsabati, Ajoy, Rupnarain rivers. Well drained, low in organic matter and also in K and P. Hot dry summer, moderate winter, rainfall- 900 to 1500 mm spread over 150 to 180 days	Revenue from sales of timber, Sal leaves and other NTFP from misc. spp.	90/85/75
A3 Quick growing & small timber spp. plantation in South Bengal	Production of pulpwood, small wood, firewood and some NTFPs	6,000	14 Forest Divisions: Medinipur, Rupnarayan, Kharagpur, Jhargram, Panchet, Bankra N., Bankra S., Burdwan, Durgapur, Purulia, Kangaswati N., Kangaswati S., Nadia- Murshidabad, Birbhum	16,440	4,160	1,600	Acacia auriculiformis, Eucalyptus tereticornis, Terminalia arjuna, T. bellerica, T. chebula, Anogeissus latifolia, Sapindus laurifolius, Schleicheria oleosa, Azadirachta indica, Phyllanthus emblica, Madhuka latifolia, Pterocarpus marsupium etc.	50	Re-plantation	QPM	Red lateritic soil- deep reddish-yellow loamy to clayey soil together with Gneiss gravelly soil- undulating topography with low soil depth, poor capacity for rain water retention, prone to severe soil erosion. Hot dry summer, moderate winter, rainfall-900 to 1500 mm spread over 150 to 180 days	Revenue from sales of timber, firewood, NTFP	85/80/75
A4 Enrichment of Degraded forests of South West Bengal	Production of poles, posts cogging sleepers to make the demand of coal mining companies in the public sector and production of small timber and firewood for local communities	7,500	13 Forest Divisions: Medinipur, Rupnarayan, Kharagpur, Jhargram, Panchet, Bankra N., Bankra S., Burdwan, Durgapur, Purulia, Kangaswati N., Kangaswati S., Birbhum	3,120	1,380	-	Shorea robusta	15-20	Coppice	-	Red lateritic soil- deep reddish-yellow loamy to clayey soil and Alluvium of Damodar, Kangsabati, Ajoy, Rupnarain rivers together with Gneiss gravelly soil- undulating topography with low soil depth, poor capacity for rain water retention, prone to severe soil erosion	Revenue from sales of timber, NTFP(Sal leaves), cutted shoots from MSC.	
A5 MISC Plantation in North Bengal	Production of industrial wood for meeting the requirements of wood based industries like plywood, veneering, saw mills and also to meet the demand of timber for construction. Small wood, poles and firewood production will also be augmented	1,050	9 Forest Divisions: Kurseong, Darjeeling, Baikunthapur, Jalpaiguri, Wildlife-III, BTR East, BTR West, Malda, Raigaunj	18,360	4,040	1,600	Schinus molle wallichii, Michelia champaca, Amoora wallichii, Gamelia arborea, Cedrela toona, Terminalia tomentosa, T. myriocarpa, T. myriocarpa, Chukrasia tabularis, Kaifolia pinnata, Cinnamomum cecidodaphne etc. Sites prone to water logging may be planted with Bischofia javanica, Terminalia arjuna etc.	60	Re-plantation	QPM	Alluvial plains of Teesta, Torsha, Mahananda. Deep to moderate alluvial deposit of coarse to fine loamy texture with problems of water logging and Terai soil of the Himalayan foot hills having moderately deep alluvium deposit, faces severe flood hazards	Revenue from sales of timber, NTFP from misc. spp.	85/80/75

NB: Harvesting period in this table is given as indication. Final felling should be done as per prescription of Working Plan



Annexure 11 List of Afforestation Model

Afforestation Model	Objective	Tagret Figure (ha)	Forest Division	Cost (Rs/ha) (Base Cost, Adv. & Creation Works)		Density (/ha)	Species	Harvesting (year)	Method of regeneration	Seedling	characteristic of planting area (wet/dry, soil nutrient etc)	Benefit for dwellers etc	Target survival rate (1 <sup>st</sup> , yr, 5 <sup>th</sup> , yr, 5 <sup>th</sup> , yr)
				Labour	Material								
A6 Sal & associate Plantation in North Bengal	Production of quality construction timber by using endemic species like Sal (Shorea robusta) mainly and other associates like Pokasai (Terminalia crenulata), Panisaj (Terminalia myriocarpa) etc. and mixed hard wood timber for plywood / saw mills and veneering industries. This will also augment production of small timber, poles, posts and firewood	540	7 Forest Divisions; Darjeeling, Kurseong, Baikunthapur, Jalpaiguri, Wildlife-III, BTR East, BTR West	18,840	4,160	1,600	Shorea robusta (50%) with associates like Schima walllichii, Symplocos racemosa, Chukrassia tabularis, Cedrela toona, Gmelina arborea, Amoora rohituka, Amoora wallichii, Terminalia myriocarpa, Terminalia crenulata, Chukrassia tabularis etc	60	Re-plantation	QPM	idem: Miscellaneous Working Circle under the working plan prescriptions	Revenue from sales of timber, Sal leaves and other NITPP from misc. spp.	85/80/75
<b>B Social Forestry in non recorded forest area</b>													
B1 Strip Plantation	Increasing green cover through tree farming in land outside forests. Under the Project, the land owned by government or communities shall be targeted for the plantation area. Individual land, however, is out of the target	1,400	11 Forest Divisions; Kharagpore, Nadia-Murshidabad, Howrah, Birbhum, Purulia Extn Forestry Div., 24 Pargana N., Rai gauni, Malda, Siliguri SF Division, Jalpaiguri SF Division, Coochbihar	27,600	4,300	1,600	(South)Eucalyptus tereticornis, Acacia auriculiformis, Dalbergia sissoo, Cassia siamea, Terminalia arjuna, etc. / (North) Chukrassia tabularis, Albizzia lebbek, Anthocephalus cadamba, Dalbergia sissoo, Cassia siamea etc. / (Central) Eucalyptus tereticornis, Dalbergia sissoo, Cassia siamea, Anthocephalus cadamba, Cassia fistula etc.	15-20	Re-plantation	Field nursery	Forest area will be selected by considering location of land, land availability and flexibility of Forest Department. These non forest lands shall be community or governmental land and private land is out of scope.	Revenue from sales of timber, Collect grass, fuel, fodder from the plantation including produce obtained through mechanical thinning	80/70/65
B2 Block Plantation		1,400	12 Forest Divisions; Kharagpore, Birbhum, Nadia-Murshidabad, Purulia Extn Forestry Div., 24 Pargana N., Rai gauni, Malda, Coochbihar, Panchet, Bankra N., Bankra S., Siliguri SF Division	27,600	4,300	1,600			Re-plantation	Field nursery			80/75/70

NB: Harvesting period in this table is given as indication. Final felling should be done as per prescription of Working Plan

Annexure 12

Proposed Components and  
Activities of the Project

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**Proposed Components and Activities of the Project**

Component	Sub-C	S-S-C	Project Activities Proposed by WBFD	Target	Unit	Proponent / Owner	Executer / Contractor / Supplier	Procurement Method	Operation & Maintenance
<b>1.</b>	<b>Afforestation and Allied Works</b>								
	1.A	Afforestation of Degraded Forest Land in Recorded Forest Area							
		1.A1	Plantation of High Yielding Eucalyptus hybrid clones in South West Bengal (Districts to be covered are Paschim Medinipore, Bankura, Burdwan)	450	ha	PMU	DFU	Direct Undertaking	DFO / JFMC
		1.A2	Plantation of Sal and Associate in South Bengal (Districts to be covered are Paschim Medinipore, Bankura, Burdwan, Purulia)	3,430	ha	PMU	DFU	Direct Undertaking	DFO / JFMC
		1.A3	Plantation of Quick Growing Small Limber, Fuel & Fodder Species (Districts to be covered are Paschim Medinipore, Bankura, Bankura, Purulia, Nadia, Murshidabad, Birbhum)	6,000	ha	PMU	DFU	Direct Undertaking	DFO / JFMC
		1.A4	Enrichment of Degraded Forests of South West Bengal through coppice regeneration (Districts to be covered are Paschim Medinipore, Bankura, Burdwan, Purulia, Birbhum)	7,500	ha	PMU	DFU	Direct Undertaking	DFO / JFMC
		1.A5	Economic Plantation of Miscellaneous Species In North Bengal	1,050	ha	PMU	DFU	Direct Undertaking	DFO / JFMC
		1.A6	Plantation of Sal and Associates Species In North Bengal (Districts to be covered are Darjeeling, Jalpaiguri)	540	ha	PMU	DFU	Direct Undertaking	DFO / JFMC
	1.B	Tree Planting Outside Forest Area (Social Forestry)							
		1.B1	Strip Plantation in Road side/Canal side/Railway side	1,400	ha	PMU	DFU	Direct Undertaking	DFO / Panchayat / Land Owner
		1.B2	Block Plantation In non-forest land	1,400	ha	PMU	DFU	Direct Undertaking	DFO / Panchayat / Land Owner
	1.C	Soil & Moisture Conservation in Forestry Treatment Areas							
		1.C1	Plantation of High Yielding Eucalyptus hybrid clones in South West Bengal	450	ha	PMU	DFU	Direct Undertaking	DFO / JFMC
		1.C2	Plantation of Sal and Associate in South Bengal	3,430	ha	PMU	DFU	Direct Undertaking	DFO / JFMC
		1.C3	Plantation of Quick Growing Small Limber, Fuel & Fodder Species	6,000	ha	PMU	DFU	Direct Undertaking	DFO / JFMC
		1.C4	Enrichment of Degraded Forests of South West Bengal through coppice regeneration	7,500	ha	PMU	DFU	Direct Undertaking	DFO / JFMC
	1.D	Production of Quality Planting material							
		1.D1	Capital cost of setting up Hi-tech Central Nursery (20 new Modern (hi-te	20	unit	PMU	PMU/Supplier	Purchase of equipments through open tender /quotation	DFO
		1.D2	Capacity expansion of existing Hi-tech Central Nursery (20 expansions of existing Modern Nurseries)	20	places	PMU	PMU/Supplier	Purchase of equipments through open tender /quotation	DFO
		1.D3	Prodcn. of 1 yr old qty clone @2000/ha	900,000	seedling	DFU	DFU	Direct Undertaking	DFO
		1.D4	Prodcn of 1 yr old glyly seedling@ 2000/ha	22,040,000	seedling	DFU	DFU	Direct Undertaking	DFO
<b>2.</b>	<b>Biodiversity Conservation</b>								
	2.A	Habitat Management							
		2.A1	Grassland restoration and fodder tree planting in PAs in the north Bengal (Districts to be covered are Gorumara NP (VII), Jaldapara WS (VIII), Bux)	300	ha	PMU	DFU	Direct Undertaking	DFO / EDC
		2.A2	Bamboo under-planting in Mahananda WS (Districts to be covered is Mahananda WS)	90	ha	PMU	DFU	Direct Undertaking	DFO / EDC
		2.A3	Fodder tree planting after removal of maling bamboo in PAs in the hills (Districts to be covered is Singhalia NP (VI), Se	75	ha	PMU	DFU	Direct Undertaking	DFO / EDC
	2.B	Man-Animal conflict mitigation							
		2.B1	Elephant (gaur) in the north and south-west Bengal			PMU	Supplier	LCB	DFO / EDC
		2.B2	Leopard in the north Bengal (WI, WII, WIII, BTR-W, BTR-E)			PMU	Supplier	LCB	DFO / EDC
		2.B3	Tiger in Sunderbans (24 Parganas-S, STR)			PMU	Supplier	LCB	DFO / EDC
		2.B4	Smaller animals in the central Bengal Kolkata (HGs), Howrah, Nadia-Murshidab			PMU	Supplier	LCB	DFO / NGO
	2.C	Research							
		2.C1	Inventory and status survey for butterflies in the north Bengal			PMU	Contractor	LCB	FD / CWW
		2.C2	Status survey of gaur and leopard in the north Bengal foot hills			PMU	Contractor	LCB	FD / CWW
		2.C3	Habitat management and impact assessment			PMU	Contractor	LCB	FD / CWW
		2.C4	Man-animal conflict and mitigation measures			PMU	Contractor	LCB	FD / CWW
		2.C5	Socio-economic survey for local societies in forest fringe areas			PMU	Contractor	LCB	FD / CWW
<b>3.</b>	<b>Community Development</b>								
	3.A	Meeting		600	FPC	PMU/DFU	DFU/Contractor	Direct Undertaking	
	3.B	Microplan		600	FPC	PMU/DFU	DFU/Contractor	Direct Undertaking	
	3.C	Income Generation Activities		1200	SHG	PMU	DFU	Direct Undertaking	
	3.D	Community Development Infrastructure Development for JFMC		600	FPC	PMU	Contractor	LCB	DFO / JFMC
<b>4.</b>	<b>Institutional Capacity Development</b>								
	4.A	Base line survey of the state's forest resources at the start of project							
		4.A1	Base line survey of the Forest growing stock, soil & water quality, NTFP Working plan Circle, M.F.P. Div & Research Circle and soil nutrient in about 2 lac ha forest area covered under the Forest Protection Committee	200,000	ha	PMU	Contractor	Open Tender	
		4.A2	Base line survey of the Socio-economic Conditions of the target population by NGO/Govt.Agencies over about 2 lacs ha forest area covered under the Forest Protection Committee	200,000	ha	PMU	Contractor	Open Tender	
	4.B	Training & Capacity Building of Project Implementing Officials, Field & Office Staffs and Other Stakeholders							
		4.B1	Package-I for Senior Officers			PMU	PMU	Direct Undertaking by collaboration with Forelon	
		4.B2	Package-II for Middle and junior level officers			PMU	PMU	Direct Undertaking by collaboration with Indian Institute	
		4.B3	Package III- For Junior level Officers and FRs			PMU	PMU	Direct Undertaking by collaboration with Indian Institute	
		4.B4	Package-IV Frontline staff and FPC/EDC/SHG			PMU	PMU	Direct Undertaking by collaboration with Indian Institute	
	4.C	Infrastructure development for TPOF (Social forestry), training, research, GIS, forest protection etc including Building, Equipment & Vehicle							
		4.C1	Construction of Administrative Buildings			PMU	Contractor	LCB	FD
		4.C2	Equipment for GIS/MIS Pilot Project			PMU	Supplier	LCB	FD / DFO
		4.C3	Purchase of Vehicles including motorbikes for better mobility of staff and officers			PMU	Supplier	LCB	FD / DFO
		4.C4	Miscellaneous management inputs			PMU	PMU/Supplier	Direct Undertaking /Purchase of equipments through open tender /quotation	
	4.D	Forestry Research Activities							
		4.D1	Research work in Tree Improvement programme (Tree breeding)			PMU	Contractor	LCB	
		4.D2	Field Research on Nursery and Plantation techniques and plantation models to improve productivity			PMU	Contractor	LCB	
	4.E	Mid-term Monitoring & Evaluation including periodic biodiversity & community development studies				PMU	Contractor	LCB	
	4.F	End-term Monitoring and Evaluation				PMU	Contractor	LCB	

Annexure 13

Implementation Schedule

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# Tentative Implementation Schedule

ITEM	Year	Fiscal Year											
		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		
	Fiscal Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		
	Month	1	2	3	4	5	6	7	8	9	10	11	12
	Project Phase	Preliminary Phase			Implementation Phase			Consolidation Phase					
Conclusion of Loan Agreement													
Effectiveness of Loan Agreement													
Loan Period													
Project Period													
<b>I. PREPARATORY WORKS</b>	<b>Work Items</b>												
<b>1. Selection and Appointment of Consultants</b>													
<b>2. Institutional Arrangement</b>													
2.1 Establishment of High Power Committee (HPC)													
2.2 Establishment of Project Management Unit (PMU) Social Mode													
2.3 Establishment of District Advisory Committee (DAC)													
2.4 Consolidation of Legal System for Institutionalization of HPC, PMU, DAC													
2.5 Deployment of staff from Forest Dept. to PMU													
2.6 Recruitment of contractual staff from the open market to PMU/DMU													
<b>3. Selection of Target Villages</b>													
3.1 Preparation of site selection criteria (FPC, EDC)													
3.2 Selection of possible area													
3.3 Selection of target villages													
3.4 Finalization of target villages													
<b>4. Customization of Standard Management Manual</b>													
4.1 Standard management manual for JFM													
4.2 Standard management manual for TPOF by Pancayat													
4.3 Standard management manual for EDC													
4.4 Standard management manual for SHG													
4.5 Standard management manual for NGO													
<b>5. Preparation of Programme and Tender Documents</b>													
5.1 For Base line Survey													
5.2 For Training & Capacity Building													
5.3 For Mid-term Monitoring & Evaluation													
5.4 For End-term Monitoring and Evaluation													
<b>6. Preparation of Detailed Design and Tender Documents</b>													
6.1 Facilities and Equipment for Biodiversity Conservation													
6.2 Buildings and Equipment & Vehicle for Institutional Capacity Development													
<b>II. IMPLEMENTATION OF COMPONENTS</b>	<b>Component</b>												
<b>1. Afforestation and Allied Works</b>	1.												
1.1 Afforestation of Degraded Forest Land	1.A												
(1) Site Demarcation, survey and mapping (FPC)													
1) Site demarcation in the field													
2) Ground Survey and Mapping													
(2) Advance Soil Works and Creation Works													
1) Initial Cleaning (within 1st week of April)													

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Fiscal Year	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Month										
Project Phase	Preliminary Phase			Implementation Phase			Consolidation Phase			
<b>ITEM</b>										
2) Alignment & Staking										
3) Digging Pits (0.6x 0.45/2 x 0.45 x 0.45 cu.m (1600 Nos)										
4) Pit filling										
5) Transplanting including Carriage of seedling (latest by last week of June)										
6) Inspection Path										
Maintenance of Plantation-Weeding, Cleaning, Mulching, Infilling Forking and Hand Weeding etc.										
(3) 1st Cleaning including Casualty Replacement & application of fertilizer (within July)										
2) 2nd Cleaning & Mulching (within August)										
3) 3rd Cleaning (within 1st week of October)										
4) 4th Cleaning (within December)										
5) Watch & Ward including Fire & Grazing Control (From July to March)										
6) Watering during dry season (February - March)										
(4) 1st Year Maintenance										
1) 1st Cleaning including Casualty Replacement & application of fertilizer (within July)										
2) 2nd Cleaning & Mulching (within August)										
3) 3rd Cleaning (within 1st week of October)										
4) Watch & Ward including Fire & Grazing Control (From July to March)										
5) Watering during dry season (February - March)										
(5) 2nd Year Maintenance										
1) 1st Cleaning including Casualty Replacement & application of fertilizer (within July)										
2) 2nd Cleaning & Mulching (within August)										
3) Watch & Ward including Fire & Grazing Control (From July to March) & regular Maintenance of sal & Misc. line.										
4) Watering during dry season (February - March)										
(6) 3rd Year Maintenance										
1) 1st Cleaning including Casualty Replacement & application of fertilizer (within July)										
2) 2nd Cleaning & Mulching (within August)										
3) Watch & Ward including Fire & Grazing Control (From July to March) & regular Maintenance of sal & Misc. line.										
4) Watering during dry season (February - March)										
1.2 Tree Planting Outside Forest Area (Social Forestry)										
(1) Formulation of Beneficially Committee (BC)										
(2) Site Demarcation, survey and mapping (SF)										
1) Site demarcation in the field										
2) Ground Survey and Mapping										
(3) Soil work-pit digging/frenching etc										
(4) Planting										
(5) Mulching/infilling etc										
(6) Maintenance										
1) Maintenance-1										
2) Maintenance-2										
3) Maintenance-3										
1.3 Soil & Moisture Conservation in Forestry Treatment Areas										
1.C										

ITEM	Project Phase	Year																			
		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		FY 2017		FY 2018		FY 2019		FY 2020	
		Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month	Month
1.4 Production of Quality Planting Material	1.D																				
(1) Capital cost of setting up Hi-Tech Central Nursery	1.D1																				
(2) Capacity expansion of existing Hi-Tech Central Nursery	1.D2																				
(3) Prodn. of 1 yr old qty done @2000/ha	1.D3																				
(4) Prodn. of 1 yr old gilly seedling@ 2000/ha	1.D4																				
<b>2. Biodiversity Conservation</b>	2																				
2.1 Habitat Management	2.A																				
(1) Grassland restoration and fodder tree planting in PAs in the north Bengal	2.A1																				
1) Advance Work and Creation and Fencing																					
2) Maintenance																					
(2) Bamboo under-planting in Mahananda WS	2.A2																				
1) Advance Work and Creation and Fencing																					
2) Maintenance																					
(3) Fodder tree planting after removal of maling bamboo in PAs in the hills	2.A3																				
1) Advance Work and Creation and Fencing																					
2) Maintenance																					
2.2 Man-Animal conflict mitigation	2.B																				
(1) Tender and Evaluation for procurement of Equipment																					
(2) Procurement of equipment																					
(3) Implementation of Elephant (gaur) in the north and south-west Bengal	2.B1																				
(4) Implementation of Leopard in the north Bengal	2.B2																				
(5) Implementation of Tiger in Sunderbans	2.B3																				
(6) Implementation of Smaller animals in the central Bengal	2.B4																				
2.3 Research	2.C																				
(1) Selection of Research item and preparation of Tender Documents																					
(2) Selection of Research Firm by Open Tender																					
(3) Inventory and status survey for butterflies in the north Bengal	2.C1																				
(4) Status survey of gaur and leopard in the north Bengal foot hills	2.C2																				
(5) Study of tiger ecology for conservation	2.C3																				
(6) Study of elephant ecology for management	2.C4																				
(7) Impact assessment for habitat management	2.C5																				
<b>3. Community Development</b>	3.																				
Selection of NGOs/institution																					
3.1 Meeting	3.A																				
(1) General Meeting about Microplanning																					
(2) Meeting with women, landless, SC/ST.																					
(3) Participatory Survey (Baseline data collection)																					
(4) Meeting for Contribution																					

ITEM	Year	2011			2012			2013			2014			2015			2016			2017			2018			2019			2020			
		Fiscal Year	FY 2011			FY 2012			FY 2013			FY 2014			FY 2015			FY 2016			FY 2017			FY 2018			FY 2019			FY 2020		
			Month	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2
<b>3.2 Microplan</b>																																
(1) Formation of PRA Team																																
(2) Implementation of PRA																																
(3) Meeting for Micro-Planning																																
<b>3.3 Income Generation Activities</b>																																
(1) Selection of SHG																																
(2) Mobilization of SHGs																																
(3) Technical and managerial Training to SHG Members																																
(4) Support for marketing and value addition																																
<b>3.4 Community Infrastructure Development for JFMC</b>																																
<b>4. Institutional Capacity Development</b>																																
<b>4.1 Base line survey of the state's forest resources at the start of project</b>																																
(1) Selection of Survey Firm by Open Tender																																
(2) Implementation of Base line survey of the Forest growing stock																																
(3) Implementation of Base line survey of the Socio-economic Conditions																																
<b>4.2 Training &amp; Capacity Building of Project Implementing Officials, Field &amp; Office Staffs and Other Stakeholders</b>																																
(1) Selection of execution Institution / Firm by Open Tender																																
(2) Implementation of Package- I for Senior Officers																																
(3) Implementation of Package- II for Middle and junior level officers																																
(4) Implementation of Package III- For Junior level Officers and FRs																																
(5) Implementation of Package- IV Frontline staff and FPC/EDC/SHG																																
<b>4.3 Infrastructure Development for Social forestry, training, research, GIS, forest protection etc including Building, Equipment &amp; Vehicle</b>																																
(1) Selection of Contractor/Supplier by Open Tender																																
(3) Construction of Administrative Buildings																																
(4) Equipment for GIS/MIS Pilot Project																																
(5) Purchase of Vehicles including motorbikes for better mobility of staff and officers																																
(6) Miscellaneous management inputs																																
<b>4.4 Forestry Research Activities</b>																																
(1) Selection of execution Institution / Firm by Open Tender																																
(2) Research work in Tree Improvement programme (Tree breeding)																																
(3) Field Research on Nursery and Plantation techniques and plantation models to improve productivity																																
<b>4.5 Mid-term Monitoring &amp; Evaluation including periodic biodiversity &amp; community development studies</b>																																
(4.6) End-term Monitoring and Evaluation																																
<b>III. Consulting Services</b>																																



Annexure 14

Man-Animal Conflicts Data

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## Annexure 14 Man-Animal Conflicts Data

**Average Annual Number of Damages for Man-animal Conflict in Division  
from 2007/08 to 2010/11**

Division	Person killed/ injured (No.)	Livestok killed/ injured (No.)	Hut damaged (No.)	Crop damaged (Ha)
Wildlife-I	2.3	1.3	52.5	124.0
Wildlife-II	219.5	6.8	97.3	17.3
Wildlife-III	13.0	109.5	563.5	190.7
Buxa Tiger Reserve	17.0	14.5	253.5	139.5
Buxa Tiger Reserve	11.3	9.5	179.0	414.4
Jalpaiguri	6.3	55.5	451.0	59.1
Baikunthapur	15.3	16.3	343.3	172.0
Cooch Behar	8.0	1.0	2.5	1.0
Kurseong	18.5	10.5	536.0	168.9
Darjeeling	0.3	0.0	0.0	0.0
Kalimpong	0.3	0.0	0.0	0.0
Rupnarayan	3.8	1.0	109.0	219.2
Kharagpur	14.5	2.3	540.0	606.7
Jhargram	9.3	0.0	235.0	201.2
Medinipur	3.5	2.0	147.0	300.9
Purba Medinipur	1.3	0.0	0.0	0.0
Bankura (North)	16.8	1.0	309.5	708.3
Bankura (South)	2.8	0.8	7.5	25.5
Panchet	3.8	8.3	46.0	186.0
Kangsabati (North)	8.0	0.0	3.3	9.6
Kangsabati (South)	1.8	0.0	10.0	42.9
Purulia	12.0	2.3	156.3	265.3
Burdwan	4.5	0.3	50.3	4.3
Birbhum	2.5	0.0	6.5	7.8
Durgapur	0.5	0.0	3.0	0.0
Howrah SF	0.0	0.0	0.0	0.0
Nadia-Murshidabad	0.0	0.0	0.0	0.0
Malda	0.0	0.0	0.0	0.0
Raiganj SF	0.0	0.0	0.0	0.0
Sundarban Tiger Reserve	6.5	13.0	0.0	0.0
24-Parganas (South)	4.0	0.5	0.0	0.0
24-Parganas (North)	6.0	0.0	0.0	0.0
<b>Total</b>	<b>412.8</b>	<b>256.0</b>	<b>4,101.8</b>	<b>3,864.5</b>

(Note) Most of the incidents are derived from elephants but thoes in STR and 24-Parganas (South) are by tigers.  
The figures include backlog cleared during the year.

(Source) Wildlife Wing Data Bank 2011 (WBFD)

**Average Annual Payment of Ex-gratia Relief for Man-animal Conflict in Division  
from 2007/08 to 2010/11**

Division	Person killed/ injured (Rs.)	Crop damaged (Rs.)	Hut damaged (Rs.)	Livestok killed/ injured (Rs.)	Total (Rs)
Wildlife-I	53,167	133,350	88,663	1,726	276,906
Wildlife-II	2,952,533	99,555	121,288	5,084	3,178,459
Wildlife-III	396,243	309,447	347,749	56,642	1,110,080
Buxa Tiger Reserve	363,625	424,088	134,788	5,513	928,013
Buxa Tiger Reserve	443,803	485,150	100,475	4,475	1,033,903
Jalpaiguri	25,000	401,793	694,313	28,270	1,149,375
Baikunthapur	586,173	647,287	307,125	16,550	1,557,134
Cooch Behar	240,516	5,700	5,525	0	251,741
Kurseong	594,195	868,662	504,649	6,075	1,973,581
Darjeeling	2,500	0	0	0	2,500
Kalimpong	0	0	0	0	0
Rupnarayan	220,155	1,482,379	106,613	1,563	1,810,709
Kharagpur	400,684	2,677,274	577,518	3,275	3,658,750
Jhargram	377,903	588,027	315,820	0	1,281,750
Medinipur	255,150	918,883	143,925	1,400	1,319,358
Purba Medinipur	0	0	0	0	0
Bankura (North)	460,165	2,929,997	339,838	1,250	3,731,250
Bankura (South)	165,188	166,523	4,706	450	336,867
Panchet	181,203	1,248,810	35,338	3,163	1,468,513
Kangsabati (North)	72,131	19,353	2,000	0	93,483
Kangsabati (South)	107,483	172,553	8,000	0	288,036
Purulia	520,750	1,706,000	224,690	0	2,451,440
Burdwan	133,051	189,672	51,005	175	373,903
Birbhum	56,133	45,194	3,000	0	104,327
Durgapur	27,609	0	3,375	0	30,984
Howrah SF	0	0	0	0	0
Nadia-Murshidabad	0	0	0	0	0
Malda	0	0	0	0	0
Raiganj SF	0	0	0	0	0
Sundarban Tiger	225,000	0	0	2,438	227,438
24-Parganas (South)*	62,500	0	0	625	63,125
24-Parganas (North)	0	0	0	0	0
<b>Total</b>	<b>8,922,858</b>	<b>15,519,694</b>	<b>4,120,399</b>	<b>138,672</b>	<b>28,701,623</b>

(Note) Most of the incidents are derived from elephants but thoes in STR and 24-Parganas (South) are by tigers.

The figures include backlog cleared during the year.

(Source) Wildlife Wing Data Bank 2011 (WBFD)

Annexure 15

Monitoring Form

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**"West Bengal Integrated Forestry Development and Biodiversity Conservation Project"**  
**Monitoring Sheet for Mobilization and Microplanning.**

As of 30-Sep-14

No.	District	Name of community	Reference No.	Step 1 Mobilization*1		Step 2 Microplanning						(6)	(7)
				Date of introduction of the Project to Targets Communities	Participants List and Agreement of Commencement	(1)	(2)	(3)	(4)	(5)			
(Sample)	Coochbihar			2014/3/14		2014/3/28	2014/4/4	2014/4/18	2014/4/21	2014/4/22-2014/5/2	2014/5/2		
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

"West Bengal Integrated Forestry Development and Biodiversity Conservation Project"  
Monitoring Sheet for Mobilization and Microplanning,

		Step 3 Preparation of Subprojects (8)			Step 4 Implementation of Subprojects (9), (10), (11)			As of 30-Sep-14	
No.	Duration of Procurement and Preparation Period for Commencement	Preparation of subproject	Date of Commencement	Date of Monitoring	Adjustment of the progress	Date of Completion	Completion of Subproject with Evaluation		
								(8)	(9)
(Sample)	2014/5/3-2/14/5/31	*Material List *Bidding Documents *Necessary Survey *Detailed Design *Contract Agreement	2014/6/1	2014/7/1 2014/8/1	*Monitoring Report of Subproject including FDDP *Rescheduling	01-Jun-14	*Completion Report with Evaluation *Handover		
1									
2									
3									
4									
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6									
7									
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