

Appendix to chapter 4

Appendix 4.1

Appendix 4.1 contains tables showing the Expenditure on Forestry and Wild life in India at the State level.

Table 4.1 (A) shows the Planned and Non-planned Revenue Expenditure of the states of India on Forestry and Wild life from 1977 to 1999.

Table 4.1 (B) shows the Planned and Non-planned Capital Expenditure of the States of India on Forestry and Wild life from 1977 to 1999.

Table 4.1 (A) Statewise Revenue Expenditure on Forestry and Wild Life in India

(Rs. in Lakhs at current price)

Year	1977	1977	1977	1978	1978	1978	1979	1979	1979	1980	1980	1980
Sl.No	Plan	Non-plan	Total	Plan	Non-plan	Total	Plan	Non-plan	Total	Plan	Non-plan	Total
Name of State												
1Andhra Pradesh	167	1054	1221	266	1164	1430	113	1279	1392	161	1401	1562
2Assam	237	570	807	385	297	682	368	409	777	679	522	1201
3Bihar	254	536	790	372	566	938	310	709	1019	488	691	1179
4Gujarat	14	54	68	18	47	65	180	274	454	188	310	498
5Haryana	141	93	234	142	133	275	160	196	356	202	375	577
6Himachal Pradesh	337	455	792	424	425	849	428	501	929	422	675	1097
7Jammu & Kashmir	105	776	881	141	1206	1347	126	833	959	184	929	1113
8Karnataka	242	1089	1331	439	1204	1643	461	1617	2078	476	1697	2173
9Kerala	51	614	665	108	685	793	126	748	874	161	912	1073
10Madhya Pradesh	230	5811	6041	375	6225	6600	600	7820	8420	1083	7897	8980
11Maharashtra	115	2597	2712	132	2144	2276	173	2303	2476	118	2656	2774
12Manipur	80	20	100	123	22	145	92	35	127	82	41	123
13Meghalaya	54	95	149	58	43	101	81	66	147	86	91	177
14Nagaland	111	38	149	206	53	259	92	72	164	98	87	185
15Orissa	159	417	576	349	454	803	417	552	969	419	587	1006
16Punjab	221	145	366	201	188	389	215	197	412	321	208	529
17Rajasthan	138	647	785	2315	489	2804	281	784	1065	348	857	1205
18Sikkim	57	50	107	88	59	147	85	70	155	92	75	167
19Tamil Nadu	29	419	448	52	431	483	16	63	79	81	611	692
20Tripura	67	61	128	87	63	150	118	78	196	147	95	242
21Uttar Pradesh	384	451	835	483	483	966	649	596	1245	1032	482	1514
22West Bengal	138	451	589	260	541	801	317	607	924	413	602	1015
Total	3331	16443	19774	7024	16922	23946	5408	19809	25217	7281	21801	29082

Source: Reserve Bank of India and Planning Commission

Statewise Revenue Expenditure on Forestry and Wild Life in India (Rs. in Lakhs at current price)

Sl.No	Year Name of State	1981	1981	1981	1982	1982	1982	1983	1983	1983	1984	1984	1984	1985	1985	1985
		Plan	Non-plan	Total	Plan	Non-plan	Total	Plan	Non-plan	Total	Plan	Non-plan	Total	Plan	Non-plan	Total
1	Andhra Pradesh	314	1618	1932			0	617	1848	2465				1234	2446	3680
2	Assam	716	470	1186	858	709	1567	1171	903	2074						
3	Bihar	567	1120	1687	739	1267	2006	108	29	137				1288	1502	2790
4	Gujarat	198	336	534	261	382	643	299	466	765				428	714	1142
5	Haryana	408	323	731	381	266	647	603	252	855				1136	479	1615
6	Himachal Pradesh	504	650	1154	798	729	1527	809	799	1608						
7	Jammu & Kashmir	135	987	1122	211	940	1151	378	1228	1606						
8	Karnataka	4200	572	4772	697	2244	2941	939	2348	3287				1448	3522	4970
9	Kerala	148	1092	1240	163	1127	1290	373	1055	1428				912	1257	2169
10	Madhya Pradesh	889	9025	9914	1513	10685	12198	1847	12812	14659				2960	15547	18507
11	Maharashtra	2494	129	2623	494	3461	3955	870	3710	4580				2962	3407	6369
12	Manipur	94	43	137	97	50	147	145	71	216						
13	Meghalaya	85	240	325	115	522	637	114	341	455						
14	Nagaland	145	96	241	181	117	298	246	149	395						
15	Orissa	342	623	965	364	778	1142	705	797	1502				912	1035	1947
16	Punjab	378	182	560	527	206	733	766	217	983				870	260	1130
17	Rajasthan	521	1015	1536	431	1105	1536	674	1155	1829				879	1249	2128
18	Sikkim	105	79	184	115	89	204	145	119	264						
19	Tamil Nadu	203	669	872	284	710	994	296	826	1122				352	904	1256
20	Tripura	208	110	318	221	123	344	230	166	396						
21	Uttar Pradesh	1434	1502	2936	1313	1608	2921	1639	1885	3524				1876	2242	4118
22	West Bengal	520	771	1291	615	893	1508	789	960	1749				970	1295	2265
Total		14608	21652	36260	10378	28011	38389	13763	32136	45899	0			18227	35859	54086

Source: Reserve Bank of India and Planning Commission

Statewise Revenue Expenditure on Forestry and Wild Life in India (Rs. in Lakhs at current price)

Sl. No.	Year Name of State	1986	1986	1986	1987	1987	1987	1988	1988	1988	1989	1989	1989	1990	1990	1990
		Plan	Non-plan	Total	Plan	Non-plan	Total	Plan	Non-plan	Total	Plan	Non-plan	Total	Plan	Non-plan	Total

1 Andhra Pradesh	1630	2767	4397	1702	3650	5352	1467	3113	4580	1607	3274	4881	1737	3888	5625
2 Assam															
3 Bihar	1291	1690	2981	1291	1699	2990	1653	1812	3465	1883	2397	4280	2757	2981	5738
4 Gujarat	1025	815	1840	1089	934	2023	1393	1259	2652	589	1586	2175	627	1802	2429
5 Haryana	1254	407	1661	1254	407	1661	1447	567	2014	1719	1298	3017	3407	680	4087
6 Himachal Pradesh															
Jammu &															
Kashmir															
8 Karnataka	1701	3706	5407	1769	4389	6158	1751	4623	6374	2195	5306	7501	2596	5332	7928
9 Kerala	1277	1473	2750	1250	1339	2589	1284	1299	2583	1142	1391	2533	1426	1668	3094
10 Madhya Pradesh	3889	17428	21317	4172	19021	23193	4119	20966	25085	3575	20004	23579	3593	20253	23846
11 Maharastra	1246	5899	7145	1398	6292	7690	1901	7733	9634	1901	7733	9634	2144	9789	11933
12 Manipur															
13 Meghalaya															
14 Nagaland															
15 Orissa	1278	1224	2502	2127	1359	3486	2051	1483	3534	2288	1495	3783	2862	1583	4445
16 Punjab	952	263	1215	1067	315	1382	1105	406	1511	1003	541	1544	514	797	1311
17 Rajasthan	1434	1259	2693	2617	1583	4200	1850	1625	3475	1930	1807	3737	3025	2067	5092
18 Sikkim															
19 Tamil Nadu	411	977	1388	1148	1083	2231	637	1164	1801	959	1373	2332	1008	1934	2942
20 Tripura															
21 Uttar Pradesh	2637	2322	4959	3187	2632	5819	4059	2846	6905	4563	3822	8385	5920	3973	9893
22 West Bengal	1106	1431	2537	1189	1624	2813	1503	1930	3433	1933	2438	4371	2352	3004	5356
Total	21131	41661	62792	25260	46327	71587	26220	50826	77046	27287	54465	81752	33968	59751	93719

Source: Reserve Bank of India and Planning Commission

Statewise Revenue Expenditure on Forestry and Wild Life in India (Rs. in Lakhs at current price)

Sl.No.	Year Name of State	1996	1996	1996	1997	1997	1997	1998	1998	1998	1999	1999	1999
		Plan	Non-plan	Total	Plan	Non-plan	Total	Plan	Non-plan	Total	Plan	Non-plan	Total
	Andhra												
1	Pradesh	5867	7213	13080	8523	7945	16468	10317	8452	18769	10622	10047	20669
2	Assam												
3	Bihar	6738	221	6959	934	5300	6234	2298	7868	10166	7233	9575	16808
4	Gujarat	696	6837	7533	1002	7931	8933	1240	10379	11619	1747	8851	10598
5	Haryana	3716	1388	5104	3505	1792	5297	4115	2442	6557	4469	2081	6550
	Himachal												
6	Pradesh												
	Jammu&												
7	Kashmir												
8	Karnataka	5234	11477	16711	8696	11833	20529	14937	13716	28653	14836	15470	30306
9	Kerala	2543	6161	8704	2928	5029	7957	5740	6373	12113	8335	7649	15984
	Madhya												
10	Pradesh	8136	40191	48327	8479	40824	49303	11014	54313	65327	14148	47123	61271
11	Maharashtra	9396	18872	28268	9360	19926	29286	9368	19918	29286	12250	23925	36175
12	Manipur												
13	Meghalaya												
14	Nagaland												
15	Orissa	2150	3499	5649	1715	3675	5390	4009	5159	9168	3372	4578	7950
16	Punjab	961	912	1873	540	1594	2134	5772	2107	7879	7185	1824	9009
17	Rajasthan	3115	4336	7451	3590	4665	8255	5146	6507	11653	6726	6471	13197
18	Sikkim												
19	Tamil Nadu	1793	3636	5429	1973	4173	6146	3245	5261	8506	2989	5555	8544
20	Tripura												
21	Uttar Pradesh	5884	6987	12871	4858	11610	16468	5692	12709	18401	7446	15156	22602
22	West Bengal	5076	5077	10153	3292	6454	9746	4114	10383	14497	7981	8637	16618
	Total	61305	116807	2E+05	59395	132751	192146	87007	165587	3E+05	1E+05	166942	276281

Table 4.1 (B) Statewise Capital Expenditure on Forestry and Wild Life in India
(Rs. in Lakhs at current price)

CAPITAL EXPENDITURE ON FORESTRY AND WILD LIFE

Sl.No.	Year	1977	1977	1977	1978	1978	1978	1979	1979	1979	1980	1980	1980
Name of State	Plan	Non-plan	Total	Plan	Non-plan	Total	Plan	Non-plan	Total	Plan	Non-plan	Total	
1 Andhra Pradesh				35		35	21		2	23			
2 Assam													
3 Bihar	24		24	15		15					26	26	
4 Gujarat	398	51	449	487	61	548	610	26	636	1037	19	1056	
5 Haryana													
6 Himachal Pradesh	87		87	25		25	45		45	30		30	
7 Jammu & Kashmir	13		13	17		17	9		9	6		6	
8 Karnataka	20		20	38	22	60	58		58	32		32	
9 Kerala	103		103	98		98	125		125	142		142	
10 Madhya Pradesh	109	3	112	147	78	225	248	428	676	369	120	489	
11 Maharastra	261	4	265	493	5	498	191	19	210	153	13	166	
12 Manipur													
13 Meghalaya		-5	-5										
14 Nagaland											63	63	
15 Orissa	31	284	315	47		47	46		46	64		64	
16 Punjab	9		9										
17 Rajasthan													
18 Sikkim		16	16		50	50					31	31	
19 Tamil Nadu	278	6	284	493	5	498	509	17	526	596		596	
20 Tripura													
21 Uttar Pradesh	92		92	-5	-1	-6	-1	-1	-2				
22 West Bengal	25		25	25	-1	24	35		35	50		50	
Total	1450	359	1809	1915	219	2134	1896	491	2387	2505	246	2751	

Source: Reserve Bank of India and Planning Commission

CAPITAL EXPENDITURE ON FORESTRY AND WILD LIFE(Rs. In Lakhs at current price)

Sl.No.	Year	1981	1981	1981	1982	1982	1982	1983	1983	1983	1984	1984	1984	1985	1985	1985
Name of State		Non-Plan	plan	Total	Non-Plan	plan	Total	Non-Plan	plan	Total	Non-Plan	plan	Total	Non-Plan	plan	Total
1	Andhra Pradesh													278		278
2	Assam															
3	Bihar	5		5				2		2				549		549
4	Gujarat	1286	27	1313	1699	48	1747	1981	68	2049				2211	83	2294
5	Haryana															
6	Himachal Pradesh	43		43	64		64	64		64						
7	Jammu & Kashmir	24	402	426	25		25									
8	Karnataka	50		50	56		56	110		110				30	15	45
9	Kerala	152	14	166	137		137	231		231				379		379
10	Madhya Pradesh	114		114	205	3	208	276	2	278				57	17	74
11	Maharashtra	658		658	892		892	795		795				828	36	864
12	Manipur															
13	Meghalaya				5		5	6		6						
14	Nagaland															
15	Orissa	66		66	58		58	37		37				65	405	470
16	Punjab				2		2	20		20				9		9
17	Rajasthan	3		3	2		2							12		12
18	Sikkim															
19	Tamil Nadu	748	34	782	1310	26	1336	1594	23	1617				1433	14	1447
20	Tripura															
21	Uttar Pradesh					-3	-3	30	-1	29					18	18
22	West Bengal	40		40	20		20							25		25
	Total	3189	477	3666	4475	74	4549	5146	92	5238	0	0	0	5876	588	6464

Source: Reserve Bank of India and Planning Commission

CAPITAL EXPENDITURE ON FORESTRY AND WILD LIFE(Rs. In Lakhs at current price)

Sl.No.	Year	1986	1986	1986	1987	1987	1987	1988	1988	1988	1989	1989	1989	1990	1990	1990
Name of State		Non-Plan	plan	Total	Non-Plan	plan	Total	Non-Plan	plan	Total	Non-Plan	plan	Total	Non-Plan	plan	Total
1	Andhra Pradesh	367		367	273		273	258		258	136		136	100		100

2 Assam															
3 Bihar	50		50	215		215	56		56	537		537	50		50
4 Gujarat	2117	310	2427	2266	229	2495	2811	322	3133	3522	366	3888	3285	1929	5214
5 Haryana															
6 Himachal Pradesh															
7 Jammu & Kashmir															
8 Karnataka	18		18	79		79	82		82	12		12	68		68
9 Kerala	53		53	84		84	86		86	261		261	340		340
10 Madhya Pradesh	42	2	44	57	11	68	579	583	1162	869	47	916	1413	15	1428
11 Maharashtra	1086	40	1126	1237	26	1263	1975	36	2011	2031	31	2062	1577	38	1615
12 Manipur															
13 Meghalaya															
14 Nagaland															
15 Orissa	171	208	379	149	811	960	252	-681	-429	239	337	576	456	-335	121
16 Punjab	15		15	11		11	11		11						
17 Rajasthan	4		4	3		3	7		7	-1		-1	5		5
18 Sikkim															
19 Tamil Nadu	1570	4	1574	1667	3	1670	1883	2	1885	2103	2	2105	2247	2	2249
20 Tripura															
21 Uttar Pradesh		10	10		22	22		21	21		113	113		140	140
22 West Bengal	25		25	30		30	20		20				25		25
Total	5518	574	6092	6071	1102	7173	8020	283	8303	9709	896	10605	9566	1789	11355

Source: Reserve Bank of India and Planning Commission

CAPITAL EXPENDITURE ON FORESTRY AND WILD LIFE(Rs. In Lakhs at current price)

Sl.No.	Year	1991	1991	1991	1992	1992	1992	1993	1993	1993	1994	1994	1994	1995	1995	1995
Name of State	Plan	Non-plan	Total	Plan	Non-plan	Total	Plan	Non-plan	Total	Plan	Non-plan	Total	Plan	Non-plan	Total	
1 Andhra Pradesh	90		90	395		395	328		328	140	2	142	20		20	
2 Assam																
3 Bihar	50		50	50		50										
4 Gujarat	4819	794	5613	5206	706	5912	4818	618	5436	5302	596	5898	6904	522	7426	

8Karnataka	177	177	189	189	125	125	54		54			
9Kerala	659	659	560	560	600	600	665	50	715			
10Madhya Pradesh	2048	2048	1949	1949	3208	3208	2259		2259			
11Maharashtra	3240	3240	2097	2097	2076	2076	2192		2192			
12Manipur												
13Meghalaya												
14Nagaland												
15Orissa	1674	1674	194	972	1166	227	227	1607	-9	1598		
16Punjab												
17Rajasthan	6105	6105	6114	6114	7206	7206	10884		10884			
18Sikkim												
19Tamil Nadu	3642	3642	5208	5208	10024	10024	9055		9055			
20Tripura												
21Uttar Pradesh	100	9	109	-760	15	-745	-2	-2	-2	-2		
22West Bengal												
Total	28760	462	29222	29476	1183	30659	40106	542	40648	45344	427	45771

Source: Reserve Bank of India and Planning Commission

Appendix 4.2

The appendix gives the format for costs incurred by State Forest Corporations for Timber extraction.

Table 4.2 (A) Total Expenses: and disaggregated accounts

Main expenses	1999-2000 Actual expenses		2000-2001 Revised estimates	
	Funds in Rs lakhs.	% expenses of total	Funds in Rs lakhs.	% expenses of total
Royalty	71149.42	59.45	5073.155	48.16
Administrative costs	2042.363	17.06	2386.726	22.66
Expenses for production	2720.824	22.73	2978.635	28.28
Sale and distribution expenses	91.883	0.76	94.447	0.90
Management Expenses				
Forest Development and expenses on other schemes				
Total	11974.490	100	10532.963	100

From the above table we get that production overhead expense covers about 22 to 28 % of the total expenses in the Forest Corporation of Uttaranchal.

The other set of tables available deals with the all the expenses incurred by the Forest Corporation for production and distribution up to forest gates.

Table 4.2 (B) Transportation costs up to forest gate.

Actual expenses incurred for production and transportation of Timber by the Uttaranchal Forest Corporation in the year 1999-2000.

(Unit: Rupees lakhs)

<i>Description</i>	<i>Unit of measurement</i>	<i>Quantity</i>	<i>Rate</i>	<i>Amount</i>	<i>Percentage of total expense</i>
1.Head loads					
<i>1.1 Conifers</i>	<i>Meter cubes</i>	<i>78779</i>	<i>415.36</i>	<i>327.215</i>	
<i>1.2 Sal</i>	<i>Meter cubes</i>	<i>61679</i>	<i>154.21</i>	<i>95.116</i>	
<i>1.3 Eucalyptus</i>	<i>Meter cubes</i>	<i>58526</i>	<i>9.98</i>	<i>5.840</i>	
Total		198984		428.171	36.01
2.Carried by animals (Conifers)	<i>Meter cubes</i>	<i>32258</i>	<i>190.84</i>	<i>61.560</i>	
Total		<i>32258</i>	<i>190.84</i>	<i>61.560</i>	5.17
3.Rope ways transport Conifers	<i>Meter cubes</i>	<i>2420</i>	<i>30.25</i>	<i>0.732</i>	
Total		<i>2420</i>		<i>0.732</i>	0.061
4. Canal transport of Conifers	<i>Meter cubes</i>	<i>10852</i>	<i>85.98</i>	<i>9.331</i>	
Total		<i>10852</i>		<i>9.331</i>	0.78
5.Road construction	<i>Meter cubes</i>	<i>290</i>	<i>99.66</i>	<i>0.289</i>	
Total		<i>290</i>		<i>0.289</i>	0.02
6.River transport	<i>Meter cubes</i>				
Total					
7.Road transport	<i>Meter cubes</i>				
Truck transport					
7.1 Conifers	<i>Meter cubes</i>	<i>48505</i>	<i>294.87</i>	<i>143.026</i>	
7.2 Sal	<i>Meter cubes</i>	<i>125990</i>	<i>210.14</i>	<i>264.761</i>	
7.3 Eucalyptus	<i>Meter cubes</i>	<i>109109</i>	<i>128.77</i>	<i>141.525</i>	
7.4 Fuel wood	<i>Meter cubes</i>	<i>99982</i>	<i>97.99</i>	<i>97.969</i>	
7.5 Roots	<i>Not specified</i>	<i>101867</i>	<i>37.11</i>	<i>37.805</i>	
7.6 Coal	<i>Quintals</i>	<i>6.412</i>	<i>59.64</i>	<i>3.824</i>	
7.7 Bamboo	<i>Bundles</i>	<i>108</i>	<i>14.81</i>	<i>0.016</i>	
7.8 Bhabar Grass	<i>Bundle</i>				
7.9 Fuel wood transferred to Depot	<i>Meter cubes</i>				
Total		485567.4		688.926	57.94
Total of transport costs.				<i>1189.009</i>	100

Source: Uttaranchal Forest Corporation.

Appendix 4.3

Case Study by Phillip Thomas (1996) “Collection and Marketing of Non-timber Forest Products by the Kerala Girijans”, Ed. M P Shiva, Centre for Minor forest products Dehra Dun. This case study brings out the components of private cost involved in NTFP collection and provides an estimate of the percentage of private costs to total value of NTFP evaluated at forest gate prices.

The study looks into the tribal community of Girijans in trichur and some neighboring districts in Kerala. The Girijans are a tribal group in the Trichur district of Kerala and almost 80% of the total population is member of the Girijan Service Co-Operative Society (GSCS), which mainly engages itself in NTFP collection.

The total Forest area in Trichur according to Forest Survey of India report (1999) is 880 sq. km. The collection of NTFP is done through the GSCS as well as individuals in Thrichur, however it is dominated by the GSCS.

As a measure of Opportunity cost it was surveyed that 60% of the community men owned less than 1 acre of agricultural land however the agricultural wages for the district is as high as Rs. 67.5 (Agricultural wages in India, 1994-95). While 68% of the people were engaged in agricultural work only 32% were engage in collection of NTFP. However it was also noted that 84% of the people has more than one subsidiary occupation. The collectors are said to spend around 57% of the days in a year for effective collection of NTFP that amounts to 208 days while a total of 267 days could be considered for collection. The average distance that the collectors had to walk is about 11.2 kms.

The study points out that the average income of the tribals who collect NTFP only is in the range of Rs. 8035 to Rs. 3836. Which gives us a rough average of Rs. 5935.5. And given that these people spend only about 267 days in collection the average daily wage comes out to be Rs. 22.23 for the days in which the person is engaged in NTFP collection while the rest of the days he may earn nothing or may earn something provided he has a

subsidiary occupation. The number of people having such occupation is 84%. And that is the reason why the average income of the households in Girijan community comes to be Rs. 7491. But for 16% people the per capita income per day will be as low as Rs. 16.23. We can easily find out that it differs markedly from the per day wage in agriculture which is Rs. 67.5. So for Kerala at least multiplying the man days spent in NTFP collection with the agricultural wages will inflate the collection costs by 315% at the maximum and 203% in the minimum. We obtained about 50% of total revenue from NTFP as labour charges and we can say that the actual figures will be much lower than that. For India we used an average wage of about Rs. 42.88 and if we take the average wage for NTFP collectors in Kerala at Rs. 19.23 we will get 22.46% of collection charges that can be attributed to labour.

This was just a rough estimate to show the divergence between the agricultural wages and the estimated wages for the NTFP collectors. The wages paid is definitely low and such an argument is reinforced by looking at the fact that in Kerala the tribals have to walk around 11 kms. on an average to collect NTFP. But again the NTFPs for which revenue data is available are very small in number as compared to the 117 items (including medicinal herbs and non-medicinal NTFPs) collected only in the Trichur district of Kerala.