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3.3(B) AS IDENTIFIED BY SAWANT COMMITTEE
SOUTH GOA

Sl. No.	Taluka	Village	Survey No.	Area in ha.
1	2	3	4	5
1	Canacona	Loliem	214(p), 328/2, 328/3, 246/1	235.56
2		Poinguinim	259/1, 258/4, 260/1, 113/0, 2/1, 41/1, 269/1, 270/1, 165/1, 156/1, 191(p)	385.29
3		Gaondongrem	168/1, 166/1, 153/1, 154/1, 155/1, 158/1	170.74
4		Cola	27(p), 106, 111(p), 148(p), 125 to 130(p), 60/2, 34(p)	91.40
5		Agonda	63(p), 73(p), 74(p)	15.00
6	Salcete	Raia	297(p), 334(p), 201(p), 200(p), 397(p), 363(p), 364(p), 362(p), 398(p), 400(p), 401(p)	25.00
7		Loutolim	165(p), 166(p), 154(p), 160(p), 167(p), 193(p), 194(p), 201(p), 202(p)	26.00
8		Curtorim	232/3 & adjoining area	5.00
9		Verna	65(p), 88(p), 64(p)	5.00
10		Camurlim	N. A.	5.00

(cont.)

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1	2	3	4	6
11		Zanodem	10(p),11(p),13(p),14(p)	100.00
12		Pirla	6(p),9(p),38/1,39/1, 43(p), 44(p)	110.00
13		Sulcorna	15(p),16(p),17(p),27(p), 28(p),4(p)	125.00
14		Ambaulim	N. A.	5.00
15		Xeldem	10(p)	10.00
16		Sirvoi	86(p),87(p), 88(p),89(p), 147(p),148(p),149(p)	150.00
17	Quepem	Malcornem	46(p),47(p), 48(p),39(p), 82(p),83(p)	150.00
18		Xic Xelvona	1(p),32(p), 33(p)	8.00
19		Xelvona	26(p),28(p)	8.00
20		Naquerim	N.A.	50.00
21		Nagvem	N.A.	10.00
22		Assolda	45(p),46(p)	5.00
23		Odar	14(p),36(p)	4.00
24		Undorna	17(p)	20.00
25		Padi	22(p),25(p), 26(p),27(p)	40.00
26		Paroda/Mulem	N.A.	150.00
27	Quedem	30(p)	- 2.00	

(cont.)

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1	2	3	4	5
28		Maina	16/1	7.00
29		Rivona	107 & 108	50.00
30		Neturlim	146(p)21(p), 105(p)	15.00
31		Colomba	48(p),57(p),68(p),144(p)	60.00
32		Curdi	39(p),29(p)	60.00
33		Ugem	39,82(p),68	135.00
34	Sanguem	Ugem	Not available	50.00
35		Bati	28(p),61	22.00
36		Patiem	11(p)	20.00
37		Cumbari	18(p)	20.00
38		Villiena	11(p)	25.00
39		Cormonem	Not available	15.00
40		Bati	Not available	20.00
41		Naiquinim	1	15.00
42		Rumbrem	9(p),10(p)	40.00
43		Codli	41(p)	30.00
44		Netorlim	21,105	10.00
45		Verlem	14(p),18(p) 19(p),22(p)	100.00
46		Tudou	5, 6, 19	16.00.

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1	2	3	4	5
47	MARMAGAO	Potrem	31,32,34	10.00
48		Curpem	5(p)	10.00
49		Sancoale	69(p),54(p)	20.00
50		Grande Island & St. George Island		40.00
			Total	2728.99

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3.3(C)

NEW PRIVATE FOREST AREAS IDENTIFIED BY THE
KARAPURKAR COMMITTEE
NORTH GOA

Sr. no.	Taluka	Village	Survey Nos.	Area(ha.)	Remarks
1	Tiswadi	Siridao	41	0.43	All survey numbers are contiguous & taken together form a compact forest block. Some clearance has taken place in coconut plantations in part of the area adjacent to the tar road.
			42	9.02	
			43	2.28	
			44	1.77	
			48	2.27	
			49	11.63	
			50	4.28	
			51	3.64	
			53	2.58	
			54	4.02	
			55	2.51	
		Telaulim	99\0	46.19	All Survey Numbers consist of forest blocks.
		106/1	99.01		
		98\0	23.53		
		97\6	0.07		
		97\5	2.1		
		97\4	1.51		
		97\3	0.83		
		97\2	1.00		
		97\1	14.21		
		107\2	0.26		
			188.71		
		Curca	25	6.16	
			41	18.20	
			44	13.76	
				38.12	
		Neura-o-Piqueno	23(part)	29.00	Part of the sy. no. consists of natural vegetation & the res area bears sparse cashew plantation.

(cont.)

Sl. no.	Taluka	Village	Survey Nos.	Area(ha.)	Remarks	
		Morambi-o-Grande	256	5.20	All sy. nos. taken together form compact forest block except some lower areas along the roadside being utilised for residential purposes.	
			257	4.73		
			232	4.21		
			230	4.33		
			229	13.37		
			258	0.60		
			259	5.15		
			231	6.11		
			227	2.48		
			225	0.72		
			224	7.80		
		226	3.27			
				56.98		
			Chimbel	40/1	48.44	
				40/0	5.62	
	42/2	45.29				
			99.35			
	Batim	18\1	19.56			
	Azossim	34\0	42			
		8\1	30.00			
			72.00			
2	Bardez	Nachinola	71	51.98	All sy. nos. together form compact forest blocks	
			72	12.02		
			75	6.13		
			78	4.62		
			80	2.16		
			67\11	1.02		
				77.93		
			Pomburpa	82(part)	24.49	All sy. nos. combined together form compact forest blocks.
				74	10.67	
				71	9.45	
				54	14.26	
				33	10.88	
				35	0.41	
				29	20.16	
	40	5.88				

cont

Sr. no.	Taluka	Village	Survey Nos.	Area(ha.)	Remarks
			50 61 15 27	6.26 4.12 4.84 9.15 120.57	
		Xelpem Damedem Acoi Cunchelim	M A U P S A M U N I C I P A L I T Y PTS No. 44, 45, 47 48, 49, 64, 65 & 66 10, 11, 14, 33, 35, 55, 57, 58, 73, 74, 75, 76, 77, 78, 79, 80, 81, 102, 103	28.00 102.64	<p>The Committee observed that part of the forest area has been cleared for construction of road for the purpose of developing the same into residential colony. <u>The same is required to be stopped forthwith.</u></p> <p>Lower slopes and the plain land down below are having plantation crop and paddy fields & a few mundkarial houses.</p> <p>Upper slopes of the dongar consist of natural vegetation while the lower parts are already developed. Developer area can be separated from the natural forest by carrying out detailed ground survey.</p>
		Siolim	190/0 222/0 225/0 298/0 297/0 245/1	22.12 55.2 13.77 5.14 8.01 9.18 113.42	All sy. nos. combined together form compact forest blocks.
		Assagao	160/1 66/1 115/1 198/1 110/1	13.61 9.94 13.23 22.45 54.35	All sy. nos. taken together form compact blocks of forestry nature.

Sr. no.	Taluka	Village	Survey Nos.	Area	Remarks
			131/1 159/1 145/1 144/1 100/1 99/1	24.28 11.68 49.52 28.1 18.45 18.47 264.08	
3	Ponda	Cuncolem	92\2 14\2	13.27 9.1 22.37	
		Shiroda	557\1 605\1	17.58 6.88 24.46	
		Usgao	224\1	21.74	
		Querim	157\1 158\1 159\1 161\1 162\1 162\2 163\2	8.08 3.37 11.77 9.56 1.52 2.44 1.52 38.26	These sy. no. form compact forest blocks.
4	Sattari	Keri	24\2 93 89	10.00 10.00 10.00 30.00	
		Ansolem	2\1 (p) 6\1 (p) 1\2	12.47 16.5 9.9 38.87	
		Naguem	7\2	14.4	
		Saleli	73\2(p)	241.4	
		Veluz	75\1	15.66	
		Dhavem	37\1	10.16	
		Poriem	91\1	8.16	
5	Pernem	Korgao	808\0	22.36	
		Pernem	119 (p)	8.00	
				1716.66	

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NEW PRIVATE FOREST AREAS IDENTIFIED BY THE
KARAPURKAR COMMITTEE
SOUTH GOA

Sl. no.	Taluka	Village	Survey Nos.	Area(ha.)	Remarks
6	Sanguem	Sigonem	2	5.92	
			3	5.74	
				11.6	
		Rivona	126	5.59	
			127	10.28	
			141(p)	20.00	
				35.87	
		Sangod	18\1	21.66	
		Agalote	62\1	9.02	
		Colem	36\0	16.16	
Piliem	17\1	2.41			
	18\1	1.45			
	19\1	9.80			
	20\1	19.68			
		33.34			
Sacordem	29/1	25			
Dharbandora	208/1	42.36	The area consists of forest growth on the upper slope. There is a small patch down below which has cashew plantation.		
7	Quepem	Sulcorna	12(p)	10.00	
8	Canacona	Loliem	253 to 258	20	Part of the area is abandoned paddy fields, only small area is cultivated. Rest all consists of natural forest.
9	Salcette	Raia	361	54.145	
		Curtorim	186, 187	7.26	
10	Mormugao	Sancoale	55(p) & 56(p)	15.00	Contiguous with forests

301.41

GRAND TOTAL

2018.07

3.3 E REFERENCES RECEIVED BY THE EXPERT COMMITTEE AND REPORT THEREON

The previous and the present Expert Committee received following references about private areas for carrying out site inspection and to report position thereof

1. Property No. 69/4 at Penhe de France belonging to Tata Housing Development Company.
2. Lease No. 42/56 of Kunda Garse in village Tudou of Sanguem Taluka.
3. Property at Sy. No.23 of Neura-o- Pequeno belonging to Shyam Kamat of Sterling Abode.

Sawant Committee received the first reference quoted above in connection with Writ Petition No. 273/97 filed by Goa Foundation in the High Court of Bombay, Goa Bench. The Committee carried out site inspection and submitted report on 22.4.98 which was forwarded to the Hon'ble Court vide CF letter No. 10/421/FD/97/325/23 dated 23.4.98. The said area was identified as private forest being contiguous to forest in adjoining survey numbers.

As regards lease No.42/56 Kunda Gharse in Village Tudou of Sanguem Taluka is concerned, the present committee has noted that the Survey No.5, 6 and 19 totaling about 16 ha, which fall in the aforesaid lease are already identified as private forest by the Sawant Committee. Regarding survey and delineation of actual forest area from the said lease, the committee felt that this is required to be done for all the survey numbers identified by the committee after government decides to engage teams consisting of surveyors etc of Forest Department for this specific purpose. The committee on going through the records have also noted that renewal application for the lease had been rejected by the State Government and thereafter appeal filed by the lessee under MMRD Act has also been turned down by the Department of Mines, Government of India. In view of this, there may not be any urgency as such to survey and delineate the private forest area which can be done together with other private survey number identified and listed as above in the Report.

The committee inspected the property at Sy. No.23 of Neura-o-Pequeno. It is observed that past area of the sy. no. is covered with natural forest growth while rest is having cashew trees growing sparsely over the area. Forest area from the said sy.no. can be delineated by carrying out actual ground survey.

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3.4 PLANTATIONS

3.4.1 PLANTATIONS BELONGING TO GOVERNMENT ON 'GOVERNMENT FOREST LANDS'

Sr. No.	Species	Area in Ha.
1	Teak	9507
2	Eucalyptus	5204
3	Bamboo	223
4	Cashew	11196
5	Rubber	851
6	Acrocarpus	226
7	Casuarina	768
TOTAL		27975

Source: Forest Department: Goa Forests 'A Statistical Report' - 1999

3.4.2 (A) SOCIAL FORESTRY PLANTATION ON COMUNIDAD LAND
NORTH GOA DIVISION

Sr.No	Taluka	Village/City	Survey No.	Area in ha.
1	Bardez	Nanodora	4-part,5,6,7, part 89 part	600.00 Ha.
		Revora	90,91,92,93	
		Shirsaim	83 part, 84, 113 part,	
		Assonora	114 part, 176	
		Pirna	12,15,16,10 & 25	
		Saligao	91,93,94,100, 102/1-A,2,	
		Saligao	111 & 102	
		Pirna	3,4,175,194(part)195,196	
		Anjuna	132/1, 154/1	
		Anjuna	169/1	
		Verna	296/0 & 308/0	
		Assagao	496	
		Assagao	357/1	
		Maina-Siolim	62/1, 65/0	
		Assagao	198 & 160-Part	
		Assagao	67,68,99,100,110-Part	
		Nerul	106/0 & 107/0	
Reis Magos	110,115,130-Part			
Calangute	91/1 & 95/1			
Sangolda	26/3,88/1,91/1,93/0			
Assagao	29/1			
Pilerna	94/15,94/16,94/17,24/1 & 86/6			
Sangolda	130/1,132/1,144/4, 160/1			
		81/1, 84/1	2.00 Ha.	
2	Bicholim	Keri	1/0 & 111	40.00 Ha.
		Keri	75,93	20.00 Ha.
		Parra	30/0 & 34/0	30.00 Ha.
		Parra	36/0,212/1,213/1 & 214	30.00 Ha.
		Keri	27/1,29/1,30/1,49/1,74/1	30.00 Ha.
		Verla	60/0 & 92/1	14.00 Ha.
		Verla	71/0 & 79/1	24.00 Ha.
		Verla	63	9.00 Ha.
		Parra	25/0 & 29/1	21.00 Ha.
		Verla	79/1, 92/2	28.00 Ha.

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1	2	3	4	5
3	Ponda	Usgao	201,216,226,227	300.00 Ha.
		Nirankal	22,3,13	100.00 Ha.
		Usgao	296/0 & 308/0	105.00 Ha.
		Codar	63	98.00 Ha.
		Usgao	296/0 & 308/0	25.00 Ha.
		Olaulim	5/0 & 8/1	3.10 Ha.
		Undir Bandora	99/1, 101	16.00 Ha.
TOTAL				1931.10 Ha.

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3.4.2 (B) SOCIAL FORESTRY PLANTATION ON COMUNIDAD LAND
SOUTH GOA DIVISION

Sr.No	Taluka	Village/City	Survey No.	Area in ha.
1	Canacona	Poinguinim	113 & 131/1	155.00 Ha.
2	Quepem	Cuncolim	54/0	103.00 Ha.
		Fatorpa	17/1	30.00 Ha.
		Cusmone	53	60.00 Ha.
		Fatorpa	21	25.00 Ha.
		Kakoda	50/2,56/1,57/2,171/1	35.00 Ha.
		Kakoda	165/1,167/1,170/1	45.00 Ha.
		Molcorene	24/1	23.00 Ha.
		Cotombi	85/0	5.00 Ha.
		Dicarpal	27/0	17.00 Ha.
		Adnem	35/1,36/1,37/1 & 38/1	20.00 Ha.
		Quitai	35/1,36/1,46/1,47/1 & 57/1(Part)	50.00 Ha.
		Cotombi	73	2.00 Ha.
		Cusmone	53	30.00 Ha.
		Cusmone	53/1	21.00 Ha.
		Avedem	8/13,32/3	3.45 Ha.
3	Salcette	Margao	Chalta No.14 P.T.Sheet No.177	5.00 Ha.
		Malangini	425/1 & 426/1	40.00 Ha.
		Cuncolim	339/1	14.00 Ha.
		Cuncolim		30.00 Ha.
		Curtorim	274/1	37.00 Ha.
		Curtorim	91/1,125/1,126/1,134/1 & 130/1	37.00 Ha.
		Cuncolim	339 & 338	30.00 Ha.
		Curtorim	230/3	35.00 Ha.
		Curtorim	279/1	17.00 Ha.
		Curtorim	275/1	13.5 Ha.
		Panzorconim	75/1	9.5 Ha.
		Sarzora	84/1	8.00 Ha.
		Sarzora	27/1 & 28/1	56.00 Ha.
		Sarzora	211/1, 212/1 & 26/1	98.00 Ha.
		Cuncolim	74/1	6.00 Ha.
		Naquerim	49/0, 81/0	38.00 Ha.

(cont.)

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1	2	3	4	5
		Assoldem Sarzora	1/3 & 40/1 28/1	10.19 Ha. 27.00 Ha.
4	Sanguem	Rivona	185/1	56.00 Ha.
TOTAL				1191.64 Ha.

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1/5
A

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3.4.3 (A)

CANAL BANK PLANTATION (NORTH GOA)

Sr.No.	Taluka	Village/City	Area in R.kms.
1		4	5
1	Bicholim	Keri	5.00 R.Kms.
		Keri	60.00 R.Kms.
		Keri	118.00 R.Kms.
		Keri	36.00 R.Kms.
	Pernem	Dodamarg	130.00 R.Kms
		Tirali - Dodamarg	130.00 R.Kms
		Tirali - Dodamarg	27.8 R.Kms
		TOTAL or say	506.8 R. Kms. 2.53 sq. kms.

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3.4.3 (B)

**ROAD SIDE PLANTATION
(NORTH GOA)**

Sr.No	Taluka	Village/City	Area in R. kms
1	2	3	4
1	Bardez	Kasarwada/Mapusa Mapusa Mapusa Pervorim Mapusa	20.00 R.Kms. 60.00 R.Kms. 50.00 R.Kms. 20.00 R.Kms. 13.20 R.Kms.
2	Bicholim	Naveli-Sanquelim Navelim to Amona Sirdona Sirdona	15.00 Ha. 24.00 R.Kms. 15.00 R.Kms. 15.00 R.Kms.
3	Pernem	Patradevi Patradevi Pernem Dhargal Sal-Kasarpal	50.00 R.Kms 37.00 R.Kms 20.00 R.Kms 20.00 R.Kms 31.6 R.Kms
4	Sattari	Honda to Morlem Morlem	7.5 Ha 12.00 R.Kms
		TOTAL or say	395.80 R. kms. 22.50 Ha. 2.20 sq. kms.

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3.4.3 (D)

OTHER PLANTATIONS
(NORTH GOA)

Sr.No	Taluka	Village/City	Area in Ha.
1	2	3	4
1	Bardez	Chapora	15.00 Ha.
2	Bicholim	Sanquelim Sirgao	0.5 Ha. 8.5 Ha.
3	Tiswadi	Bambolim	1.5 Ha.
TOTAL or say			25.50 Ha. 0.26 sq. kms.

3.4.3(E)

TOURISM PLANTATION
(NORTH GOA)

Sr.No	Taluka	Village/City	Area in ha/R.Kms..
1	2	3	5
1	Bardez	Candolim Vagator Anjuna Calangute	1.2 Ha. 1.5 Ha. 5.00 Ha.
2	Pernem	Sal-Kolpe	40.00 R.Kms.
3	Ponda	Farmagudi	7.00 Ha.
TOTAL or say			14.70 Ha. 40.00 R. kms. 0.35 sq. kms.

3.4.3(F)

CANAL BANK PLANTATION (SOUTH GOA)

Sr.No.	Taluka	Village/City	Area in R.kms.
1	2	3	4
1	Quepem	Quepem	100.00 R.Kms.
		Cotombi	1.00 R.Kms.
		Assolda	15.00 R.Kms.
		Assolda	2.00 R.Kms.
		Goval	15.00 R.Kms.
		Accomol	39.00 R.Kms.
		Sheldem	20.00 R.Kms.
		Kortali	11.00 R.Kms.
		Cotombi	13.00 R.Kms.
		Kakoda	6.00 R.Kms.
		Kumarwada	11.00 R.Kms.
		Assolda	10.00 R.Kms.
		Kakoda	10.00 R.Kms.
		Quepem	8.00 R.Kms.
		Ambaulim	18.00 R.Kms.
		Demani	5.00 R.Kms.
		Amona	15.00 R.Kms.
		Avedem	17.00 R.Kms.
		Cotombi	10.00 R.Kms.
		Sheldem	21.00 Ha.

(Cont.)

Sr.No.	Taluka	Village/City	Area in R.kms.
1	2	3	4
	Quepem	Sheldem	5.5 R.Kms.
		Gudi	33.00 R.Kms.
		Assolda	40.00 R.Kms.
		Mullem	34.00 R.Kms.
		Curchorem	4.00 R.Kms.
		Demane /	12.00 R.Kms.
		Dandiwadi	13.5 R.Kms.
		Catorli	27.5 R.Kms.
2	Salcette	St. Jose Areal	48.00 R.Kms.
or say			543.50 R. kms. 21.00 Ha. 2.62 sq. kms. 0.21 sq. kms.

TOTAL 2.83 sq. kms.

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3.4.3 (G)

ROAD SIDE PLANTATION
(SOUTH GOA)

Sr.No.	Taluka	Village/City	Area in R.kms.
1	2	3	4
1	Quepem	Assolda	1.5 R.Kms.
		Assolda	10.00 R.Kms
		Cotombi	12.00 R.Kms.
		Assolda	16.5 R.Kms
TOTAL or say			40 R. kms. 0.2 sq. kms.

3.4.3 (H)

SEA SHORE PLANTATION
(SOUTH GOA)

Sr.No.	Taluka	Village/City	Area in R.kms.
1	2	3	4
1	Salcette	Benaulim	10.00 R.Kms.
2	Mormugao	Baina	0.5 Ha.
or say			10.00 R. kms. 0.5 Ha. 0.05 sq. kms. 0.005 sq. kms.

3.4.3 (I)

RAILWAY PLANTATION
(SOUTH GOA)

Sr.No.	Taluka	Village/City	Area in R.kms.
1			5
1	Salcette	St. Jose de Areal	10.00 R.Kms.
2		Chandor	11.00 R.Kms.
TOTAL or say			21.00 Kms. 0.105 sq. kms.

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3.4.4

PLANTATIONS ON DEVALAYA LANDS
(SOUTH GOA)

Sr.No.	Taluka	Village/City	Area in R.kms.
1	2	3	4
1	Quepem	Paroda	100.00 Ha.
		Ambaulim	100.00 Ha.
		Paroda	200.00 Ha.
		Paroda	100.00 Ha.
		Talwada	44.00 Ha.
		Paroda	7.00 Ha.
		Mullem	2.90 Ha.
		Paroda	7.50 Ha.
		Paroda	8.00 Ha.
		Paroda	35.00 Ha.
		Paroda	25.00 Ha.
		Mullem	20.38 Ha.
		TOTAL or say	649.78 6.50 sq.kms.

3.4.5 PLANTATIONS BELONGING TO PRIVATE PERSONS

Sr. No.	Taluka	Coconut	Arecanut	Cashew	Miscellaneous	Total
1	Tiswadi	1697	4	4118	143	5962
2	Bardez	2932	2	6259	29	9222
3	Pernem	1567	1	8011	0	9579
4	Bicholim	1477	64	7419	45	9005
5	Satari	863	322	9294	4	10483
6	Ponda	2410	907	3234	349	6900
7	Sanguem	2892	75	6578	10	9555
8	Canacona	1642	35	3035	0	4712
9	Quepem	2077	37	2339	0	4453
10	Salcete	6015	-	1695	0	7710
11	Mormugao	1216	3	322	0	1541
TOTAL		24788	1450	52304	580	79122

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3.5 MANGROVE FORESTS IN STATE OF GOA.

Mangroves are the tidal forests, which are found along the estuaries, backwaters and creeks. This is one of the highly productive ecosystems, which is rich in the biodiversity. The State of Goa is situated along the central west coast of India. The Mandovi, Zuari estuaries, along the Cumbarjua Canal is the largest estuarine complex with maximum mangrove area covered. There are seven estuaries like Terekhol, Chapora, Mandovi, Zuari with interconnecting Cumbarjua canal, Sal, Talpona and Galgibag. Physical data of these estuaries is shown in the following table

Estuary	Estuarine or Riverine area (in ha)	Mangrove Area (in ha)	Mangrove(%)
Terekhol	390.0	30	8.6
Chapora	711.0	100	14.0
Mandovi	5564.0	700	12.6
Zuari	5790.0	900	15.5
Cumbarjua canal	375.0	200	53.3
Sal	302.0	30	9.9
Talpona	40.0	20	25.0
Galgibag	26.0	20	76.9
Total	131574.0	2000	15.1

Mangrove forests of Goa mostly are either the Government property or the private ownership. Untawale et al (1980) estimated about 2000 ha of mangroves in Goa (Table 1). This had some limitations, since all the minor creeks and backwaters were not included. An effort was made by Research Division of Forest Department in Goa to assess the mangrove areas in different Talukas part of which may be falling in rivulet/estuaries and part on the private sy. Nos located all along the same. As per this

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estimation total area estimate for the mangrove is other than those which are under the control of Forest Department inform of plantations and those falling in Chorao Sanctuary comes out to be 2905 ha. Details are as under:

List of Private Mangrove Growth in Goa

Sr. No.	Taluka	Location	Approximate area in ha.
1	Salcete	Loutolim	350.00 ha
2	-do-	Assolna	100.00 ha
3	-do-	Chinchinim	360.00 ha
4	Ponda	Shiroda	330.00 ha
5	-do-	Borim	530.00 ha
6	Tiswadi	Santan	150.00 ha
7	-do-	Chorao	150.00 ha
8	-do-	Goa Velha	5.00 ha
9	Bicholim	Sirigao	107.00 ha
10	-do-	Mulgao	22.00 ha
11	Bardez	Salvador-do-Mundo	100.00 ha
12	Bardez	Siolim	45.00 ha
13	-do-	Revora	12.00 ha
14	-do-	Ecoxim	50.00 ha
15	-do-	Tivim	50.00 ha
16	Pernem	Pernem	124.00 ha
17	Mormogoa	Quelocim	400.00 ha
		Total	2905.00 ha

Mangrove plantation:

Since 1985 Forest Department of Goa Government has taken up large scale mangrove plantation programme along the open intertidal mudbanks of the estuaries. According to the Forest Department records from 1991 to 2002 almost 1078.30 ha of mangrove plantation has been undertaken as per details given below:

Details of Mangrove Plantation raised by Forest Department, Goa

Taluka	Location	Area(ha)	
Tiswadi	Chorao-Dhavji	48.80	
	Kumbharjua Canal	35.20	
	Ribandner	10.00	
	Diwar-Old Goa	12.00	
	Gandalim-Old Goa	05.00	111.00
Barde	Mapusa river	24.00	
	Chorao		
	Mapusa-Ekoshi	100.00	
	Mapusa river	84.80	
	Camurlim-Colvale	50.00	
	Camurlim	50.00	
	Camurlim-Vagali	12.00	
Pernem	Colvale	61.50	382.30
	Terekhol Estuary	50.00	
	Terekhol	40.00	
	Vaidongor-Tuyem	12.00	102.00
Bicholim	Amona-Betki	30.00	30.00
Ponda	Borim-Shiroda	40.00	
	Mankem-Shiroda	48.50	
	Zuari River at Madkai	26.00	
	Madkai	40.00	
	Vazan gall-Panchwadi	20.00	
	Betki	42.00	
	Panchwadi	20.00	
	Amlai-Panchwadi	20.00	
	Borim	12.00	268.00
Salcete	Rasaim	45.00	
	Zuari River	30.00	
	Zuari Estuary	100.00	175.00
	Poinguinim	10.00	010.00
GRAND TOTAL			1078.30

Total mangrove cover of Goa.

From the above, total mangrove area works out as follows:

1. Mangrove cover on private land	2905.00 ha
2. Mangrove plantation	1078.30 ha
3. Dr Salim Ali Sanctuary, Chorao	<u>178.00 ha</u>
Grand total	4161.30 ha

From the above, it may follow that the present estimates of mangrove forest cover in State of Goa show manifold increase in their coverage. Since mangrove are protected spp. as notified by the State Government, they would require complete protection for which detailed field survey Talukawise and detailed survey nos. etc plotwise are required. This is a voluminous job requiring extra manpower and resources such as boat, surveyors etc. The committee understands that Research Division of Forest Department are entrusted with the responsibility to protect the naturally occurring mangrove and propagate mangrove plantations in the State and in recent past they have undertaken detailed survey along the estuaries from Penha-de-France upto Aldona covering Pomburpa, Ecoxim, Mapusa, Moira etc and from Cortalim to Borim. It is therefore, suggested that they may do the extensive survey at all other places to give a complete detailed information about the status of Mangroves in the State.

DEGRADED FOREST AREAS

3.6 (A) FOREST LANDS CLEARED FOR MINING PURPOSE

Sr.No.	Name of the project	Diverted Area(Ha)	Buffer Area(Ha)
1	2	3	4
1	Diversion of mining areas 43.31 Ha. 16 mining concessions Approved under Forest Conservation Act, 1980	43.3100	
2	Diversion of 32.7270 ha. of forest land for renewal of deemed mining lease No.7 of 1950 in South Goa District.	32.7270	20.1764
3	Diversion of 72.2289 ha. of forest land for renewal of deemed mining lease No.31 of 1954 in favour of M/s Chowgule of Vasco in South Goa District.	72.2289	40.2289
4	Diversion of 33.2470 Ha. of forest land for renewal of mining lease bearing T.C. No.2/1951 of M/s M.S.Talaulikar & Sons Pvt. Ltd. North Goa District.	33.2470	
5	Diversion of 88.60 ha. of forest land for renewal of deemed mining lease No.88 of 1952 granted to M/s Sociedade De Fomento industries Ltd.	88.6000	28.6000
6	Diversion of 15.0769 ha. of forest land for renewal of deemed mining lease No.21/54 in favour of M/s V.M.Salgaonkar & Bros. Ltd. in North Goa District.	15.0769	

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1	2	3	4
7	Diversion of 16.47 ha. of forest land for renewal of deemed mining lease No.44/1956 in favour of M/s V.M. Salgaonkar & Bros. Ltd. in North Goa District.	16.4709	-
8	Renewal of deemed mining lease No.83 of 1952 in favour of M/s V.M.Salgaonkar & Bros Ltd. of Vasco.	54.2000	-
9	Renewal of deemed mining lease No.29 of 1954 of M/s V.M.Salgaonkar & Bros Ltd. of Vasco.	11.3125	-
10	Diversion of 78.85 ha. of forest land for renewal of deemed mining lease No.19 of 1952 in favour of M/s V.M. Salgaonkar & Co., in North Goa District of Goa.	72.8500	53.1500
11	Diversion of 4.44 ha. of forest land at Potrem Village of Sanguem Taluka of M/s Chowgule & Co.,	4.4400	-
12	Diversion of 43.3608 Ha. of forest land for renewal of deemed mining lease No. 26/57 in favour of M/s Chowgule & Co., Ltd. in North Goa District.	43.3608	32.0308
13	Diversion of 57.970 Ha. of forest land for renewal of mining lease bearing T.C. No.23/53 in favour of M/s Emco Goa Pvt. Ltd.	57.9700	6.514

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2	3	4
Diversion of 34.1710 Ha. of forest land for renewal of mining lease bearing T.C. No.39 of 1956 of M/s V.M. Salgaonkar & Bros. Ltd. in North Goa District.	34.1710	20.6060
Renewal of mining lease in respect of T.C. No.84/53 M/S Damodar Mangalji & Co., Pvt. Ltd.	46.7900	28.1498
Renewal of mining lease in respect of T.C. No.46/56 M/s Damodar Mangalji & Co., Pvt. Ltd.	28.1513	17.5367
Renewal of mining lease in respect of 17of T.C. No.1949 of Shri Atmaram T. C. Palondkar of Margao.	44.6900	39.3164
Renewal of mining lease in respect of T.C. No.40/54 of M/s Dempo, Panaji.	51.0000	49.4150
Renewal of mining lease in respect of T.C. No.35/52 M/s V.S. Dempo Panaji.	64.7500	50.3236
Renewal of mining lease in respect of T.C. No. 6/57 of Shri Atchut V.S. Velingkar of Mardol Goa.	16.5600	5.2500
Renewal of mining lease in respect of T.C. No.3/51 of M/s V.S. Dempo, Panaji.	84.6175	67.2285
Renewal of mining lease in respect of T.C. No.40/57 of M/s Chowgule & Co., Pvt. Ltd. Vasco da Gama.	57.9600	18.9800

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1	2	3	4
23	Renewal of mining lease in respect of T.C. No. 42/57 of M/s Chowgule & Co., Pvt. Ltd. Vasco da Gama.	45.1600	18.2952
24	Renewal of mining lease in respect of T.C. No. 26/60 of M/s Damodar Mangalji & Co., Pvt. Ltd. Panaji.	23.4000	22.4000
25	Cutting of trees in excess road of mining in Vichundrem village of Sanguem Taluka.	-	-
26	Renewal of Mining lease in respect of T.C. No. 55/53 of Shri Zacaria Antao, Betalbatim, Salcete.	31.3425	8.78800
27	Renewal of Mining lease No. 67/52 of Shri A.V.S.Velingkar	36.3800	20.9920
Total		1110.8100	547.0000

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FOREST LANDS CLEARED FOR DEVELOPMENT PURPOSE

Sr.No.	Name of the project	Area (Ha.)
1	2	3
1	Release of 90 ha. of forest land in Nagahari, Goa for construction of 220 KV transmission line (interstate)	90.0000
2	Release of 1 ha. forest land for construction of 110 KV DC line (Tower) from Ponda to Tivim in North Goa District.	1.000
3	Release of 1950 sq.,ts. of forest land in compartment No.12-B Usgaon Block of North Goa Div. for Geometric improvement of NH-4 A between KM114/00 to 116/00 (Tisks by pass)	0.1900
4	Widening of curves with constructions of Nallah in Onha-Valpoi S.H. in between ch.50/2 to 50/6	0.0900
5	Proposal for dereservation of Reserved forest at km.99/800 to Anmod section)	50.9600
6	Construction of road from Shirshirem to Sidhanath Temple in Ponda Taluka (Phase)	0.3600
7	Tourist cottages at Keri Jambul (Surla) in Sattari Taluka.	
8	Proposal for diversion of 3.404 ha. of forest land at village Chandel in Pernem Taluka in North Goa District for construction of right bank main canal of Tillari irrigation project from 700 KM to 10.100 KM.	3.4000

(cont.)

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1	2	3
9	Diversion of 23.80 ha. of forest land for 220 kv D/C Tower line tapping from the existing 220 KV D/C Tower line from Nagzare (Karnataka to Ponda Goa) at Dharbandora to Xyldem)	23.8000
10	Land Acquisition of 1400 mm dia. P.S.C. Pipe line across at Sirvoi Hillock Vasheli Dongor in Quepem Taluka.	2.5000
11	Deforestation in mining concession No.3 of 1952.	1.0000
12	Release of 4920 sq.mt. of forest land for construction of approach road to minor bridge at km 53/600 of N.H.17 (Panaji -Karnataka border Section)	0.4900
13	Diversion of 8.7 ha. forest land for construction of Chapoli Minor or irrigation project in South Goa Division.	8.7000
14	Diversion of 0.4 ha. of forest land for construction of primary school building at Devrem under Vichundrem Sanguem.	0.4000
15	Approach roads to Minor Bridge at km.67/10 N.H. (Panaji - FD Goa Karwar Border Section)	0.9600
16	Diversion of forest land for 220 KV D/C Tower line from Dharbondora to Xeldem.	21.0700
17	Diversion of forest land for non -forest use (Approach road) at km. 94/400 NH 4 A (Belgaum to Panaji)	0.8800

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1	2	3
18	Transfer of 150 sq.kq mt of forest land to NH to FDR works of at km 85/500 in retaining wall Mallem village of Sanguem Taluka.	0.0100
19	Diversion of forest area for widening of curve at km. 14.65 on State Highway No.7 in Sanvordem village of Sanguem Taluka.	0.2273
20	Diversion of 19.496 sq,mts. of forest land for 15 MLD Regional water supply scheme at Chandel in Pernem Taluka.	1.9495
21	Diversion of 36 Ha. of Forest lands for Konkan Railway.	36.7000
Total		225.00

CONCLUSIONS OF THE REPORT AND RECOMMENDATIONS

CONCLUSIONS:

The methodology adopted by the committee was to rely on Government records (forest as well as Revenue records), and to make the field visit to the areas to ascertain the factual position. However, some NGO's had come forward in helping to locate such areas in field. The involvement of actual owners of the property in respect of areas identified as private forest, could not be done due to cumbersome procedure of serving upon them a notice to be forwarded with the details and awaiting for their response etc and then waiting up a date. It was also anticipated that some of them due to apprehension of their areas being identified as forest by the committee, may try to put a hindrance in the field visit etc thereby stalling the committee's task.

The committee did certainly feel handicapped due to non-availability of high resolution satellite/aerial borne remote sensing data of recent origin as this would have made the task of the committee simpler in identifying and locating the isolated pockets of forests/vegetation areas outside the hold of Forest Department and then carrying out extensive ground truthing based on the same. The committee has, therefore, planned field inspection based on the local knowledge of the chairperson and other members of the committee as well as on the information provided by the forest executive. Detailed land survey of private forest area as well as khazan lands and mangrove vegetation could not be carried out due to lack of resources specially the skilled manpower such as surveyors etc. Moreover, this would have been very time-consuming exercise due to widely scattered nature of such areas throughout the length and breadth of the State.

Although adequate care has been taken to enlist the correct survey details etc by consulting the village map as well as form 1 & XIV obtained

Land Survey Directorate, the possibility of committing some mistakes in matching the survey numbers with ground locations, could not be ruled

The same, however would be subject to correction at the time of a detailed field survey proposed for actual delineation/mapping of the areas identified on a suitable base map.

Due to forgoing reasons, it is also likely that some remote and secluded areas especially under private/revenue department ownership might have escaped the notice of the committee. There has been no deliberate attempt on the part of committee to not include any area, which meet the criteria laid down for the identification as being forest.

COMMENDATIONS:

The Committee have tried to identify and locate as much areas that fulfilled the basic criteria. However, due to its very nature, the exercise could never be termed as complete in all respects and, therefore, still there could be a possibility of identifying some more areas in subsequent surveys. In the opinion of the Committee, this exercise may continue for some more time so as to give full effect to Hon'ble Supreme Court's decision.


The Sawant Committee in its final report has recommended constitution of a Working Force for ground survey so as to delineate the actual extent of forests and the survey numbers identified by the committee especially private areas and khazan lands for mangrove. As far as forest areas under the control of Government are concerned, they have been completely surveyed and mapped by the Department. They shall, therefore, remain safeguarded both in Government records as well as on the ground. The job of surveying these areas could be done taking help of the total station now available with the Working Plan Division of the Forest Department as also forming two teams headed by the surveyors for each of North/South

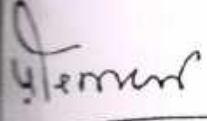
Districts. The Government/Department will have to especially earmark the additional funds for this purpose. If services of the Departmental Surveyors and field staff are employed for this purpose, it would not entail any monetary expenditure on account of salary/wage component and expenditure only on transport and TA-DA will have to be incurred.


The ultimate objective behind this exercise was to give effect to the orders of the Hon'ble Supreme court in extending the applicability of Forest Conservation Act to all such areas, which are identified by the State Level Expert Committee as forests. While the government forest areas within the control of Department are protected by way of regulation, those lying outside will have to be afforded protection by notifying the same through Government Gazette. Since private forest areas cannot be brought within the purview of I.F.A. and the issues like right to property are involved, Government may explore any other legal provisions/possibilities for doing the same. As earlier stated, mutation of private forest areas in Revenue records can only be done by the Revenue Department, Government may, therefore, decide the modalities of doing the same.

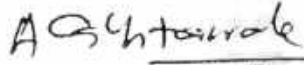
As stated earlier, committee did anticipate problems in involving the affected people in carrying out the entire exercise of identifying the forest land. Even in case of Savant Committee and now the present Committee, the affected people whose lands have been identified have not been notified of the same. To make them informed about the same and also to make them aware about the implications of the same, it would be imperative for the government to decide on the modalities of the same. The Committee, on their own, have not ventured into this aspect as it was not covered in the term of References of the committee and due to the fact that the committee did apprehend some hindrance in this regard.

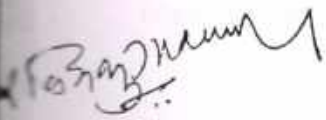
Keeping in view the preservation and conservation of Goa Forest, which is part of Western Ghats, the Committee recommends to draw proper guidelines to create awareness among the local community for the protection of Forests. Although the Hon'ble Supreme Court has not totally banned the forest felling, it has directed the concerned Departments, to regulate the felling through proper management plans.

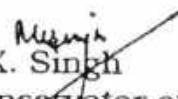

Dr. Hemant Karapurkar
Chairman



A.K. Wahal
Conservator of forests
Member


Shri. Anil Walavalkar
Engineer, Mapusa.
Member


Dr. A.G. Untawale,
Member.


Prabhugaonkar,
Journalist
Member


R.K. Singh
Dy. Conservator of
Forests
(South) Member


Dr. P. Devraj
Dy. Conservator of
Forests
(North) Member

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SUMMARY

Based on the data collected/compiled by the Sawant as well as present Committee the position in respect of forest area in the State of Goa emerges as under:-

	Area in Sq. km.	
1. Forest land under control of Government including plantation on the forest land		1223.73
2. Forests on revenue land		0.80
3. Private forests		
a) As identified by Sawant Committee		
i) North Goa	19.60	
ii) South Goa	27.29	46.89
b) As identified by Karapurkar Committee		
i) North Goa	17.17	
ii) South Goa	3.01	20.18
4. Government plantations on non-forest land		
a) Comunidade land		31.23
b) Devalaya land		6.50
c) Road side		2.40
d) Canal bank		0.72
e) Others		0.80
5. Mangrove forests		41.61
		<hr/>
Total		1364.39
		<hr/> <hr/>

The Sawant committee did also compile data on private plantations of non-forestry spp to the extent of 791 sq.km . of which 523 sq km are cashew plantations on private Plantations on private holdings. If we add these figures with that above then the total vegetation area in the state of Goa works out to be 2155 sq. kms which is 58.2% of the total geographical area of the State. The State in this sense is highly privileged to have such a large percentage cover of greenery which help in providing luxuriant evergreen coverage which adds to the beauty of the landscape , and are good source of water flow through its rivers, clean and pollution free environment for the ecological and well being of the people concerned(both government as well as people) to help maintain this green cover for prosperity and welfare of the people of the state and to avoid the desertification.

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ORDER

The Government of Goa, hereby constitutes an Expert Committee consisting of the following: -

- | | |
|--|------------|
| 1. Dr. Hemant Karapurkar, | Chairman |
| 2. Conservator of Forests, | Member |
| 3. Shri Anil Walavalkar, Engineer, Mapusa, | Member |
| 4. Dr. A.G. Untawale, N.I.O., | Member |
| 5. Shri R. V. Prabhugaonkar, Journalist, | Member |
| 6. Dy. Conservator of Forests (South) | Member |
| 7. Dy. Conservator of Forests (North) | Member-Sy. |

The terms of reference of the Committee are as follows :-

1. To demarcate and to delimit and or otherwise suggest measures, by a proper land survey all those private properties having natural forest standing thereon.
2. To mutate all such identified areas in the land records to show the classification as 'forests'.

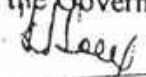
The criteria/guidelines for the identification of the above properties will be as follows: -

1. 75% of the composition should be forestry species.
2. The area should be contiguous to the Govt. forest and if in isolation, should be more than 2 Ha - 10 ha per cent as per
3. Canopy density should not be less than 0.4

The Committee shall give a hearing to the affected persons if it feels necessary to do so.

The committee shall give its findings within a period of six months from the date of its constitution.

By order and in the name
Of the Governor of Goa


(Richard D. Souza)
Additional Secretary (Forests)

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ANNEXURE II

MEETINGS HELD BY STATE LEVEL EXPERT COMMITTEE

Sr. No.	Date
1	10/10/2000
2	22/02/2001
3	17/01/2002
4	07/02/2002
5	25/02/2002
6	07/03/2002
7	26/03/2002
8	16/10/2002
9	21/10/2002
10	31/10/2002
11	07/11/2002
12	04/12/2002
13	05/12/2002
14	09/12/2002
15	10/12/2002
16	11/12/2002
17	12/12/2002
18	13/12/2002