Inventory of Soil Resource Mapping of East and West Imphal Districts, Manipur Using Remote Sensing Techniques

ABSTRACT

1.	**Survey Area**	:	Imphal district (East and West) Manipur except Ziribum sub division
2.	**Geographical Extent**	:	$93^0 46'$E to $94^0 08'$ E Longitudes $24^0 27'$ N to $25^0 04'$ N Latitudes
3.	**Agro Climatic Region**	:	Eastern Himalayan Region (II) as per planning Commission. (Khosla, 1989)
4.	**Total area Mapped**	:	86,536 ha.
5.	**Kind of Survey**	:	Soil resources mapping using remote sensing techniques.
6.	**Base map**	:	a) IRS-ID Geocoded Satellite Imagery (1: 50000) b) SOI Toposheet (1:50000)
7.	**Scale of Mapping**	:	1 : 50000
8.	**Period of Survey**	:	March' 2003

9. Distribution of Area under different Soil Series Association Mapped

Sl No.	Mapping Unit	Map Symbol	Name of Soil Series Association	Area (in ha)			%age
				East Imphal	West Imphal	Total	
1.	ALb1a1	1	Khabam – Kungla – Phobakchao	18832	15581	34413	39.8
2.	ALb1a2	2	Kungla – Khabam	345	5547	5892	6.8
3.	ALb2a1	3	Kadangbani – Phobakchao – Kungla	1044	3427	4471	5.2
4.	ALb3a1	4	Kadangbani – Nilakuti	1802	3199	5001	5.8
5.	ALe2a1	5	Phobakchao – Phairan	40	528	568	0.7
6.	ALg2a1	6	Phobakchao – Phairan – Semai	342	730	1072	1.2
7.	ALg2e1	7	Semai – Nilakuti	-	111	111	0.1
8.	ALj2a1	8	Kungla – Khabam	14	245	259	0.3
9.	SHf7c1	9	Longal- Maharabi	304	32	336	0.4
10.	SHf8d1	10	Maharabi- Longal	643	174	817	0.9
11.	SHf8d2	11	Tharung – Maharabi	1647	12	1659	1.9
12.	SHf9c1	12	Maharabi – Tharung	202	-	202	0.2
13.	SHf9d1	13	Tharung – Maharabi	7309	-	7309	8.4
14.	SHn6d1	14	Longal – Maharabi	198	67	265	0.3
15.	SHn7d1	15	Maharabi – Longal	490	1638	2128	2.5
16.	SHn7d2	16	Tharung – Maharabi	-	269	269	0.3
17.	SHo3d1	17	Manbi – Lamderb	236	324	560	0.6
18.	SHg4a1	18	Lamderb – Lezathong	1484	153	1637	1.9
19.	Misc		Habitation, Airport, River/Stream, Marshy lands etc.	6065	13502	19567	22.6
	Total			**40997**	**45539**	**86536**	**100.0**

10. Salient features

- The survey area is dominated by plain to nearly level land (46.6 %). The very steep to extremely steep (33-50 % & >50 %) of hilly / Mountainous terrain accounts for 8.7 % followed by moderately steep to steep slope (15-33 %) is 3.2 % and steep to very steep (25-50 %) slope occupies about 2.9 % area.

- Agricultural land occupies about 61.6 % followed by scrub land 15 %. Only about 0.60 % is under forest land.

- Most of the area is under very deep soil (58.5 %) followed by moderately deep to deep (10.9 %) and about 8 % area is under deep to very deep soil.

- About 51.7 % area is not affected or is slightly affected by water induced soil erosion and 14.7 % area seems to be affected moderate to severe soil erosion.

- Nearly 14.9 % area is found not suitable for crop production but appears to be suitable for afforestation and pasture development.

- About 54.12 % area is potentially good which can be used for variety of crop with suitable Agronomic practices.

- Only 8.62 % area is also potentially good for crop production with some sort limitation i.e. erosion

- About 51.8 % have moderate soil limitations for sustained use under irrigation.

- Most of the area comes under Inceptisol followed by Entisol and Alfisol.