

Inventory of Soil Resource Mapping of Banka District, Bihar State using Remote Sensing and GIS Technique.

ABSTRACT

- 1. Surveyed Area** : Banka district, Bihar State

- 2. Location** :
a) Latitude 24° 32' to 25° 30' N.
b) Longitude 86° 30' to 87° 10' E.

- 3. Agroclimatic Region** : Middle Gangetic Plain
(Zone – IV as per planning commission)

- 4. Total Area of the District** : 3,05,621 ha.

- 5. Kind of Survey** : Soil Resource Mapping using Remote Sensing Techniques.

- 6. Base Map** :
A) IRS-IB Geocoded Satellite Imagery (1:50,000)
B) Survey of India Topographical maps on 1:50,000 scale.

- 7. Scale of Mapping** : **1:50,000**

- 8. Period of Survey** : June, 2008 to December, 2009.

9. Soil Series Association mapped and their respective area

S.No	Mapping Unit	Soil Association	Area (ha)	%age
1	ALb1a1	Ghorghat , Gurba	8089	2.6
2	ALb1a2	Khankita, Saidpur, Sarupchak	22563	7.4
3	ALb1a3	Saidpur, Amadih, Fatehpur	1086	0.4
4	ALb2a1	Murhan, Garsara, Banstikar	2354	0.8
5	ALb2a2	Ghorghat, Kumrel	28738	9.4
6	ALb2a3	Garsara, Sarupchak, Berma	27014	8.8
7	ALb2a4	Ghorghat, Berma, Sarupchak	26894	8.8
8	ALb2b1	Ghogha, Banstikar, Tetri	67	0.0
9	ALg2a1	Jitarpur, Sarupchak	11206	3.7
10	GGn6c1	Janmohammadpur, Harankur, Shahkund	4985	1.6
11	GGn7c1	Shahkund, Janmohammadpur	5739	1.9
12	GGr5d1	Jagaria, Kasri, Rakhatola	7343	2.4
13	GGr7d1	Shahkund, Janmohammadpur	838	0.3
14	GGv2a1	Wadala, Tetaria, Tulsibaran	6510	2.1
15	GGv3a1	Mangra, Karipathar	27908	9.1
16	GGv3a2	Dhawatahr, Bhadriya, Ghormara	4717	1.5
17	GGv3c1	Kaithkura, Bhurbhuri	1576	0.5
18	GGv3d1	Kaithfura, Ghoramara, Bhurbhuri	6636	2.2
19	GGw3a1	Bhitiya, Chengakher	38856	12.7
20	GGw3a2	Amatari, Bhitiya, Chengakher	13377	4.4
21	GGx3a1	Shibshankarpur, Pirauta, Ramjanipur	1742	0.6
22	GGz4a1	Gorakojhi, Bhadriya, Katoriya	28760	9.4
23	GGz4c1	Saliya, Palaniya, Bhadriya	16842	5.5
	H	Habitation	2218	0.7
	W	Waterbody	9563	3.1
G. Total			305621	100.0

HOW TO USE THE SOIL SURVEY REPORT

The report embodies the results of the Soil Resource Mapping of Banka district, Bihar providing information on the geological setting of the district, such as location, extent, physiographic relief, drainage, climate, geology, natural vegetation, agriculture, land use and soils.

The report contains other information on Interpretative groupings of soils such as land capability classes, land irrigability classes, soil suitability grouping and hydrological grouping and also recommendation for crops, horticulture development; forest forage and grassland development; water harvesting, water storage and water management that are essential for soil and land resource management. The genesis and classification of the soils are also discussed in Chapter 5.

Banka district of Bihar is spread over an area of 3,05,621 ha. The district is covered by 10 Topographical sheets on the scale of 1:50,000 which are used as base material along with satellite imageries.

Each soil mapping units is marked by mapping unit i.e. ALb1a1 (Alluvium, alluvial plain, 0-1% slope; agriculture land use; soil series Association, describing Ghorghat as dominant series in association with Gurba series). Each soil association is restricted to a maximum of three soil series.

For the use of the soil resource report, first locate the area of your interest on the map and note down the soil mapping units. Permanent features such as road, stream, lakes and village habitation etc. shown on the map, help to locate the area of interest on the map. For the detailed information on soil mapping unit in respect of soil series of the area of interest, its extent, present and proposed land uses, reference may be made or Chapter 4, appendix I and II.

The mapping unit used in soil mapping represents the five levels of mapping i.e. ALb1a1 may be referred as follows;

AL	-	Alluvium	-	Landscape
b	-	Alluvial plain	-	Physiography
1	-	0-1%	-	Slope
a	-	Agriculture land	-	Land use
1	-	Association of soil series with erosion and management soil unit.		

Any comment and suggestion on the report would be welcome. For further clarification and explanation, communication may be made to:

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