ABSTRACT/ सारांश

1. Survey area ***सर्वेक्षण क्षेत्र***	:	Nizamabad District, Telangana जिला निजामाबाद, तेलंगाना
2. Geographical Extent ***भौगोलिक सीमा***	:	18°05' to 19° 05' North latitude *उत्तर अक्षांश* 77^0 04' to $78^0$37' East longitude *पूर्व देशांतर*
3. Agro- climatic Zone ***कृषि जलवायु क्षेत्र***	:	Southern Plateau hills Region (Zone -X) *दक्षिणी पठार पहाड़ी क्षेत्र (ज़ोन-X)*
4. Total area mapped ***कुल क्षेत्रफल मैप किया***	:	706084 ha *हेक्टेयर*
5. Kind of Survey ***सर्वेक्षण की प्रकार***	:	Soil Resource Mapping (SRM) using Remote Sensing & GIS Techniques मृदा संसाधन मानचित्रण (एस.आर.एम.), सुदूर संवेदन और भौगोलिक सूचना प्रणाली तकनीक का उपयोग से
6. Base Map ***आधार नक्शा***	: :	a) IRS-1D Geo-coded Satellite Imagery (1:50,000 Scale) आईआरएस -1 डी जिओ-कोड उपग्रह चित्रण (1: 50,000 स्केल) b) SOI Toposheets (1: 50,000 scale) सर्वे ऑफ इंडिया टोपोशीट (1: 50,000 पैमाने पर)
7. Scale of Mapping ***मानचित्रण के स्केल***	:	1: 50,000
8. Period of Survey ***सर्वेक्षण की अवधि***	:	2012-13

9. Distribution of area under different soil series association mapped मिट्टी श्रृंखला एसोसिएशन के तहत मैप किया क्षेत्र का वितरण

Sr. No.	Legend	Mapping Unit	Series Association	Area	% area
1	AL01	ALb2a1	Tarbiloli-Nizamsagar	919	0.13
2	BA01	BAi3a1	Gurjal-Gandhari	19451	2.75
3	BA02	BAi2a1	Sadashivnagar-Madegaon	35864	5.08
4	BA03	BAi3d1	Timmajiwadi-Gandhari	3865	0.55
5	BA04	BAr6d1	Bhumapalli-Timmajiwadi	5027	0.71
6	GR01	GRn8c1	Banaswada-Malkapur	16567	2.35
7	GR02	GRn8d1	Malkapur-Banaswada	2018	0.29
8	GR03	GRr6c1	Varni-Tanakalan	67185	9.52
9	GR04	GRr6d1	Tanakalan-Varni	13705	1.94
10	GR05	GRv4g1	Manchippa-Yellareddy	64108	9.08
11	GR06	GRv3g1	Yellareddy-Manchippa	59017	8.36
12	GR07	GRv3d1	Chimmrappally-Mortad	9588	1.36
13	GR08	GRv3a1	Mortad-Chimmrappally	92289	13.07
14	GR09	GRw2a1	Rampur-Ramlaxmipalli-Indalvai	244687	34.65
			Sub Total	**634290**	**89.83**
15		Misc.		71794	10.17
			Grand Total	**706084**	**100**

10. Distribution of area under different depth classes विभिन्न गहराई वर्गों के तहत क्षेत्र का वितरण

Sr. No.	Depth	Area(ha)	Area%
1	Very deep	281470	39.86
2	Moderately deep	111740	15.83
3	Shallow	156222	22.13
4	Very shallow	84858	12.02
5	Misc	71794	10.17
	Grand Total	**706084**	**100.00**

11. Distribution of area under different Erosion classes विभिन्न कटाव वर्गों के तहत क्षेत्र का वितरण

Sr. No.	Erosion	Area(ha)	Area%
1	None to slight water erosion	919	0.13
2	Slight to Moderate erosion	336976	47.72
3	Moderate water erosion	204595	28.98
4	Moderate to Severe erosion	86773	12.29
5	Severe water erosion	5027	0.71
6	Misc	71794	10.17
	Grand Total	**706084**	**100.00**

12. Distribution of area under different management classes विभिन्न प्रबंधन वर्गों के तहत क्षेत्र का वितरण

Sr. No.	Management	Area(ha)	Area%
1	Well managed(WB)	281470	39.86
2	Moderately managed(MB)	59017	8.36
3	Poorly managed(PB) to Moderately managed(MB)	101877	14.43
4	Poorly managed(PB)	168314	23.84

Sr. No.	Management	Area(ha)	Area%
5	Unmanaged(UB)	23612	3.34
6	Misc	71794	10.17
	Grand Total	**706084**	**100.00**

13. Distribution of area under different slope classes विभिन्न ढलान वर्गों के तहत क्षेत्र का वितरण

Sr. No.	Slope Classes	Area(ha)	Area%
1	Nearly level to very gently sloping	281470	39.86
2	Very gently sloping to gently sloping	184210	26.09
3	Gently sloping to moderately sloping	64108	9.08
4	Strongly sloping to moderately steep	85917	12.17
5	Steep to very steep	18585	2.63
6	Misc	71794	10.17
	Grand Total	**706084**	**100.00**

14. Distribution of area under different land use अलग भूमि उपयोग के तहत क्षेत्र का वितरण

Sr. No.	Land use	Area(ha)	Area%
1	Agriculture	393210	55.69
2	Forest	206877	29.30
3	Open scrub	34203	4.84
4	Misc	71794	10.17
	Grand Total	**706084**	**100.00**

15. Salient features मुख्य विशेषताएं:

- Major part of the area of district comes under Granite (80.61%) , it is followed by Basalt (9.09%) and Alluvium (0.13%).
- Survey area is dominated by Nearly level to very gently sloping (39.86%) followed by Very gently sloping to gently sloping lands (26.09%), Strongly sloping to moderately steep (12.17%), Gently sloping to moderately sloping (9.08%) and only 2.63% of land were steep to very steep sloping.
- Major area of this district is under agriculture which accounts 55.69%, forest (29.30%) and open scrubs land (4.84%) of the whole survey area.
- Soil depth class-wise overall- 39.86% area under very deep soils (which is followed by shallow (22.13 %), moderately deep (15.83%) and very shallow soils (12.02%).
- Land capability class II covering 34.78% area of district, it is followed by class VI land with 29.57% out of the total surveyed area. Nearly 13.07 % of area comes under land capability class III and class VII covered 4.57% of area.
- 34.65% of the area comes under moderate soil limitations (B-C) whereas 24.78% area comes under class very severe soil limitation (D), 18.15% area under class C, 9.37% area being qualified as class E and remaining 2.75% being qualified in class C-D.
- Most of the area of this district is under moderetly high runoff to high runoff potential (C-D) 39.73%, followed by high runoff potential (D) 36.90%, followed by moderetly high runoff (C) 13.07% and remaining qualified under moderately lower run-off potential to high run-off potential (B-C) which accounts 0.13% of the whole surveyed area. This indicates stability of land form and soil for sustainable agriculture development.
- Soils order are identified individual are Entisols (11) followed by Vertisols (4), Inceptisols (3) and Alfisols (1).
- Almost 47.72 % area of district is suffer from slight to moderate erosion (followed by moderate water erosion accounting for 28.98 %. Moderate to severe erosion accounting for 12.29% area, sever water erosion 0.71 and none to slight erosion 0.13%.

HOW TO USE SOIL RESOURCE MAPPING REPORT

This report embodies the results of the Soil Resource Mapping of Nizamabad district (Telangana) providing information on the geographical 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 grouping 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

Nizamabad district of Telangana is spread over an area of **7, 06,084 ha**. The district is covered by 18 SOI topographical sheets on the scale of 1: 50,000 which are used as base material along with satellite imageries which are useful for soil and land resource mapping for developing scientific land use plan at macro level.

Initially soil resource database is developed manually using visual interpretation of satellite imageries. The soil maps along with attributes of soil were converted into digital format using Geographic Information System (GIS).

Each soil mapping unit is marked by mapping unit i.e. **Alb2a1** (Alluvium; alluvial plain; 0-3% slope; agriculture land use; Soil Series Association , describing Tarbiloli dominant series in association with Nizamsagar. 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 to Chapter -4, Pedon description along with analytical data of representative soil is presented in Appendix I.

The mapping unit used in soil mapping represents the five levels of mapping i.e.Alb2a1 may be referred as follows:

AL	-	Alluvium	-	Landscape
b	-	Alluvium plain	-	Physiography
2	-	0-3%	-	Slope Class
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 information or clarification, if any, the contact may be established with:

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