

## **A B S T R A C T**

1. **Survey area:** Taluka- Jamjodhpur, District- Jamnagar, Gujarat under RADP
2. **Geographical Location:** Longitude 69°.57' to 70°.69' E,  
Latitude 22°.15' to 22°.35' N
3. **Total Surveyed Area:** 29076 ha.
4. **Number of Micro watersheds:** 48
5. **Number of Villages:** 21
6. **Base map:** 1. High resolution satellite imageries on 1:12500 Scales.  
2. Cadastral maps on 1:4000 Scales.
7. **Kind of Survey:** Detailed Soil Survey using Remote Sensing Techniques.
8. **Period of Survey:** June 2014 to July 2014  
December 2014 to April-2015
9. **Agro-climatic Zone:** North Saurashtra Zone (NSZ) –VI

**10. Area under different Soil series with percentage**

Sl. No	Series Name	No. of Mapping Units	Total Area (ha)	Percentage (%)
1.	Bamithiya	6	2342	8.05
2.	Drafa	4	2073	7.13
3.	Gangini	2	5052	17.38
4.	Jamjodhpur	6	4402	15.14
5.	Sukhpur	5	1520	5.23
6.	Padarva	2	1151	3.96
7.	Semore	3	960	3.30
8.	Timidi	8	8611	29.62
9.	Verad	3	2042	7.02
10.	Misc.		923	3.17
	<b>Total</b>	<b>39</b>	<b>29076</b>	<b>100.00</b>

**11. Area under different Soil Depth with percentage**

Soil depth class	Area (ha)	Percentage (%)
Shallow (10-25cm)	11547	39.71
Moderately deep (25-50cm)	10684	36.74
Deep (50-100cm)	5922	20.37
Misc.	923	3.17
<b>Total</b>	<b>29076</b>	<b>100.00</b>

## 12. Area under different Erosion Classes with their percentage

<b>Erosion</b>	<b>Area (ha)</b>	<b>Percentage (%)</b>
None to slight	3408	11.72
Moderate	16278	55.99
Severe	8467	29.12
Misc.	923	3.17
<b>Total</b>	<b>29076</b>	<b>100.00</b>

## 13. Area under various Land Capability Classes & with percentage

<b>S. No</b>	<b>Land Capability Unit</b>	<b>Area (ha)</b>	<b>Percentage (%)</b>
1.	IIs-1	1825	6.28
2.	IIIs-1	1583	5.44
3.	IIIes-1	3404	11.71
4.	IIIes-2	693	2.38
5.	IIIes-3	6207	21.35
6.	IIIes-4	2845	9.78
7.	IVes-1	883	3.04
8.	IVes-2	2246	7.73
9.	IVes-3	49	0.17
10.	VIes-1	1151	3.96
11.	VIes-2	2215	7.62
12.	VIIes-1	2507	8.62
13.	VIIes-2	2545	8.75
	Misc.	923	3.17
<b>Total.</b>		<b>29076</b>	<b>100</b>

#### 14. Area under different slope classes & their percentage

S. No.	Slope Class	Area (ha)	Percentage (%)
1.	Very Gently (1-3%) slope	13902	47.81
2.	Gently (3-5%) slope	7507	25.82
3.	Moderately (5 -10%) slope	541	1.86
4.	Strongly steep (10-15%) slope	1151	3.96
5.	Moderately steep (15-25%) slope	2507	8.62
6.	Steep (25-33%) slope	2545	8.75
5.	Misc.	923	3.17
	<b>Total</b>	<b>29063</b>	<b>100.00</b>

#### Salient Points:

- Out of the total surveyed area of 29076 ha, 11547 ha (39.73%) is occupied by shallow soils, 10684 ha (36.76%) by moderately deep soils and 5922 ha (20.38%) by deep soils.
- Around 6203 ha (21.35%) area falls under strongly steep to steep slopes (hilly area). 8050 ha (27.70%) is under gently slope to moderately slope and the remaining 13887 ha (47.78%) is under very gently sloping topography.
- Area suffers from severe erosion covering 8467ha (29.12%) area, needs immediate attention for soil conservation measures.
- Apart 3178 ha land are having capability class-IV marginally suited for agriculture but suited for Agri-silvipostural farming system.
- Apart 14732 ha land have been placed in capability class-III are moderately good land for agriculture but suited for Agri-silvipostural farming system.

## HOW TO USE SOIL SURVEY REPORT

The present report furnishes a detailed account of various characteristics of the surveyed area like physiography, relief, geology, climate, natural vegetation and the soils. Detailed description of the soil series recognized in the area and interpretation of different soil mapping units for various applied aspects of agricultural development such as land use plans, soil and water management, soil conservation plan, identification of new area for afforestation, engineering application, eco-restoration have been given in different chapters. Different problems of the area have been depicted and corrective measures are also suggested.

In order to use the report, the user may locate the area of the interest on the soil map appended with the report. On the map, each soil mapping unit has been delineated and represented by symbolic expression that deals with technical description. The abbreviated symbol of mapping unit given information about the name of soil series, soil depth, soil texture, slope gradient, erosion status, land surface features like gravelliness, stoniness and rockiness.

On the soil map, each soil mapping unit is marked by a symbolic expression, viz., (TM3hB2)

- TM- is the abbreviated name for the soil series, Timidi.
- 3 - Indicates depth of the soil i.e. moderately deep soils (depth class).
- h Represents soil texture i.e. clay loam (textural class)
- B - Symbolizes for the soil slope class, say slope 1-3% (slope class).
- 2 - Represents soil erosion, moderately erosion (erosion class)

For multipurpose interpretation of the mapping units, user can refer to the “Guide to Soil Mapping Units” (Appendix-1) where in the entire soil mapping units have been listed with their description under micro-watershed and their interpretative groupings. This table provides comprehensive information on important soil and land characteristics and their potential uses.

The table on series-wise (Table 6) and Village wise (Table 7) provide data on distribution of area under different soil depths, slopes and erosion phases and is useful to obtain information on soil and land characteristics.

The table on series-wise (Table 9) and Village wise (Table 10) distribution of area under different land capability units read with chapter on “Land capability Classification” is useful for obtaining information on the potential, problems and conservation treatment needs of the survey area.

The detailed information on soil series, profile description and other soil characteristics, reference can be made to *Chapter 4* “Soils of the Area” and Appendix – II. Micro-watershed and village wise mapping unit list is given in Appendix-III; Analytical method is described in Appendix-IV. The Glossary of scientific terms used in this report is given in Appendix-V; the symbols used in the report are also illustrated in Appendix-VI.

The recommendations in this report are brief, suggestive and broad in nature for systematic watershed management planning.

Any comments and suggestion on this report are welcome. For any other details and clarification, contact or correspondence may be established with: -

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