

Report on Detailed Soil Survey and Land Use of 5F2C3t1, 5F2C3u1, 5F2C3u2, 5F2C3w1 and 5F2C3w2 Microwatersheds of Sabarmati Catchment, District - Dungarpur, Rajasthan.

A B S T R A C T

1. **Surveyed Area** : 5F2C3t1, 5F2C3u1, 5F2C3u2, 5F2C3w1 and 5F2C3w2 Microwatersheds of Sabarmati Catchment, District- Dungarpur, Rajasthan.
2. **Location** : The micro watersheds lie between
Latitude: 23°33' to 23°43' N,
Longitude: 73°39' to 73°49' E,
3. **Total Surveyed Area** : 15,999 ha.
4. **Number of Villages** : 43
5. **Type of Survey** : Detailed Soil Survey.
6. **Period of Survey** : May 2013 to July2013.
7. **Agro-climatic Zone** : 8 (Central Plateau & Hill Region)
8. **Base map** : 1. SOI toposheet (1:50,000)
2. True image (1:7,000)

9. Distribution of Soil Series and their Extent of Area

Sl. No	Series Name	No. of Mapping Units	Total Area (ha)	Percentage (%)
1	Lakhanpur	4	524	3.3
2	Latipura	2	650	4.1
3	Liliamba	2	361	2.2
4	Phulpur	4	9875	61.7
5	Rangela	1	714	4.5
6	Sudhiya	3	1987	12.4
7	Sura	2	501	3.1
8	Wakota	2	817	5.1
	Misc.	-	570	3.6
	Total	20	15999	100.0

10. Area under different Soil Depth with percentage

Soil depth class	Area (ha)	Percentage (%)
Shallow (10-25cm)	11862	74.1
Moderately deep (25-50cm)	524	3.3
Deep (50-100cm)	862	5.3
Very deep (>100cm)	2181	13.7
Misc.	570	3.6
Total	15999	100.0

11. Area under different Erosion Classes with their percentage

Erosion	Area (ha)	Percentage (%)
None to slight	2499	15.6
Moderate	1112	7.0
Severe	11818	73.8
Misc.	570	3.6
Total	15999	100.0

12. Area under various Land Capability Classes & their percentage

S. No	Land Capability Class	Area (ha)	Percentage (%)
1.	II-1	772	4.8
2.	Ile-1	515	3.2
3.	Ile-2	1134	7.1
4.	Ile-3	425	2.7
5.	Illes-1	78	0.5
6.	Illes-2	677	4.2
7.	IVes-1	369	2.3
8.	IVes-2	1574	9.8
9.	Vles-1	3871	24.2
10.	Vles-2	970	6.1
11.	Forest	5044	31.5
12.	Misc.	570	3.6
Total.		15999	100.0

13. Area under different slope classes & their percentage

S. No.	Slope Class	Area (ha)	Percentage (%)
	Nearly level	772	4.8
1.	Very Gently (1-3%) slope	2152	13.5
2.	Gently (3-5%) slope	1056	6.6
3.	Moderately (5 -10%) slope	1574	9.8
4.	Strongly sloping (10-15%) slope	3871	24.2
	Moderately steep slope(15-25)	2333	14.6
5.	Very steep (25-33%) slope	3671	22.9
6.	Misc.	570	3.6
	Total	15999	100.0

Salient Points:

- Out of the total surveyed area of 15,999 ha, 11,862 ha (74.1%) is occupied by shallow soils, 524 ha (3.3%) by moderately deep soils, 862 ha (5.3%) by deep soils and 2181 ha (13.7%) by very deep soils.
- Around 9875 ha (61.7%) area falls under strongly sloping to very steep slopes (hilly area).2630 ha (16.4%) is under gently to moderate slope and the remaining 2924 ha (18.3%) is under nearly level to very gently sloping topography.
- Area suffers from severe erosion covering 11,818 ha (73.8%) area, needs immediate attention for soil conservation measures for sustainable agriculture development.