

Report on Detailed Soil Survey and Land Use of 5F2C3m2, 5F2C3p1, 5F2C3q1, 5F2C3q2, 5F2C3r2 and 5F2C3s2 Microwatersheds, Sabarmati Catchment, District Sabarkantha, Gujarat, and District Dungarpur, Rajasthan.

A B S T R A C T

1. **Surveyed Area:** 5F2C3m2, 5F2C3p1, 5F2C3q1, 5F2C3q2, 5F2C3r2 and 5F2C3s2 Microwatersheds of Sabarmati Catchment, Districts Sabarkantha, Gujarat and District Dungarpur, Rajasthan.
2. **Location:** The microwatersheds lie between 23°28' to 23° 36' N Latitude and 73°28' to 73°42' E Longitude.
3. **Total Surveyed Area:** 16,655 ha.
4. **Number of Villages:** 51
5. **Type of Survey:** Detailed Soil Survey.
6. **Period of Survey:** December, 2012 to March, 2013 and May, 2013 to July, 2013
7. **Agro-climatic Zone:** 13 (Gujarat Plains & hill Region)
8. **Base map:** Google Map (1:7000)

9. Distribution of Soil Series and their Extent of Area

Sl. No	Series Name	No. of Mapping Units	Total Area (ha)	Percentage (%)
1.	Borsad	2	1378	8.3
2.	Lakhanpur	3	828	5.0
3.	Liliamba	2	450	2.7
4.	Nelsuris	3	604	3.6
5.	Phulpur	4	8382	50.3
6.	Sudhiya	3	1311	7.9
7.	Waghpur	1	390	2.3
8.	Wakota	2	2377	14.3
9.	Misc.	-	935	5.6
Total		20	16655	100.0

10. Area under different Soil Depth with percentage

Soil depth class	Area (ha)	Percentage (%)
Shallow	9693	58.2
Moderately deep	828	5.0
Deep	450	2.7
Very deep	4749	28.5
Misc.	935	5.6
Total	16655	100.0

11. Area under different Erosion Classes with their percentage

Erosion	Area (ha)	Percentage (%)
None to slight	4823	29.0
Moderate	1972	11.8
Severe	8925	53.6
Misc.	935	5.6
Total	16665	100.0

12. Area under various Land Capability Classes & their percentage

S. No	Land capability class	Area (ha)	Percentage (%)
1.	II e-1	3600	21.6
2.	II es-1	1223	7.3
3.	IIIe-1	221	1.3
4.	IIIes-1	155	0.9
5.	IIIes-2	611	3.7
6.	IIIes-3	217	1.3
7.	IV es-1	162	1.0
8.	IV es-2	961	5.8
9.	VI es-1	2558	15.4
10.	Forest	6012	36.1
	Misc.	935	5.6
	Total	16655	100.0

Salient Points:

- Out of the total surveyed area of 16,655 ha, 9,693 ha (58.2%) is occupied by shallow soils, followed by 4,749 ha (28.5%) by very deep and 1,278 ha (7.7%) by moderately deep to deep soils.
- Around 8,382 ha (50.3%) area falls under strong to steep slopes (hilly area), 2,414 ha (14.5%) is under undulating terrain and the remaining 4,924 ha (29.6%) is under very gently sloping topography.
- Area suffers from severe erosion covering 8,925 ha (53.6%) area, needs immediate attention for soil conservation measures.