

Report on Detailed Soil Survey and Land Use of 5E2A2c1, 5E2A2c6, 5E2A2d1, 5E2A2d2, 5E2A2f1, 5E2A2f2, 5E2A2f5, 5E2A2f7, 5E2A2g1, 5E2A2g2, & 5E2A2g3 Micro Watersheds, Mahi-Anas Subcatchment of 5E2 Catchments (Kadana dam to Jakham confluence), Tehsil Bagidora, District-Banswara, Rajasthan.

A B S T R A C T

1. **Surveyed Area:** 5E2A2c1, 5E2A2c6, 5E2A2d1, 5E2A2d2, 5E2A2f1, 5E2A2f2, 5E2A2f5, 5E2A2f7, 5E2A2g1, 5E2A2g2, & 5E2A2g3 Micro Watersheds, Mahi-Anas Sub catchment of 5E2 Catchment of 5E2 Catchments (Kadana dam to Jakham confluence), Tehsil- Bagidora, District-Banswara, Rajasthan.
2. **Location:** The microwatersheds lies between 23°19' to 23° 28' N Latitude and 73°59' to 74°13' E Longitude.
3. **Total Surveyed Area:** 8,873 ha.
4. **Number of Villages:** 56
5. **Type of Survey:** Detailed Soil Survey.
6. **Period of Survey:** April 2012 to May 2012
7. **Agro-climatic Zone:** 13 (Gujarat Plains & hill Region)
8. **Base map:**
 1. Cadastral maps (16": 1 mile scale)
 2. SOI Toposheet (1:50,000 scale)
 3. True Image (1:7,000 scale)

9. Distribution of Soil Series and their Extent of Area

Sl. No	Series Name	No. of Mapping Units	Total Area (ha)	Percentage (%)
1	Dhanarpatia	3	951	10.7
2	Latipura	2	1400	15.8
3	Liliamba	2	873	9.8
4	Mahudi	5	2309	26.0
5	Phulpur	4	2290	25.9
6	Wakota	2	277	3.1
	Misc Area	-	773	8.7
Total		18	8873	100.0

10. Area under different Soil Depth with percentage

Soil depth class	Area (ha)	Percentage
Shallow	4599	51.8
Moderately deep	951	10.7
Deep	873	9.8
Very deep	1677	18.9
Misc.	773	8.7
Total	8873	100.0%

11. Area under different Erosion Classes with their percentage

Erosion	Area (ha)	Percentage (%)
None to slight	1762	19.9
Moderate	2427	27.4
Severe	3911	44.1
Misc.	773	8.7
Total	8873	100.0%

12. Area under various Land Capability Classes & their percentage

Sl. No	Land capability class	Area (ha)	Percentage (%)
1.	II-1	1004	11.3
2.	IIs-1	673	7.6
3.	IIIs-1	85	1.0
4.	IIIes-1	788	8.9
5.	IVes-1	860	9.7
6.	IVes-2	91	1.0
7.	IVes-3	779	8.8
8.	VIes-1	1464	16.5
9.	VIes-2	66	0.7
10.	VIIes-1	418	4.7
11	Forest	1872	21.1
Misc.		773	8.7
Total		8873	100.0

Salient Points:

- Out of the total surveyed area of 8,873 ha, 4,599 ha (51.8%) is occupied by shallow soils, 951 ha (10.7%) by moderately deep and 2,550 ha (28.7%) by deep to very deep soils. Shallow to moderately deep soils have root zone limitations constitute 62.6% of total surveyed area.
- Around 2,290 ha (25.8%) area falls under strong to steep slopes (hilly area). 4,048 ha (45.6%) is under undulating terrain and the remaining 4,255 ha (47.9%) is under nearly level to very gently sloping topography.
- Area suffers from severe erosion covering 3,911 ha (44.1%) area, needs immediate attention for soil conservation measures.
- Nearly 4,599 ha lands having shallow soil depth, out of which 2,290 ha (25.8%) suited only for afforestation/farm forestry require forestry management practices, where as 2,309 ha pasture based cropping system.
- About 2,250 ha lands having deep to very deep soils suited for cereal/ orchard based cropping system.