

REPORT ON PRIORITIZATION OF SUB-WATERSHEDS IN THE MOREL (2D2A)  
SUB-CATCHMENT OF BANAS (2D2) CATCHMENT (RAJASTHAN)

A B S T R A C T

1. Survey Area : Morel sub-catchment (2D2A) of Banas Catchment (2D2); Jaipur, Dausa, Tonk and Sawai Madhopur Districts, Rajasthan State.
2. Location : 25° 54' to 27° 08' North latitudes and 75° 44' to 76° 59' East longitudes.
3. Total Area : 807,835 ha.
4. Period of Survey : December, 1997 to March, 1998.
5. Type of Survey : Rapid reconnaissance survey for priority delineation.
6. Base material : Survey of India Toposheets in the scale of 1:50,000.
7. Run off potential mapping units and their extents.

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S.No.	Mapping units	Area (in ha)	Percentage
1.	A1	2900	0.36
2.	A2	88290	10.92
3.	A3	67610	8.36
4.	A4	6000	0.74
5.	A5	58415	7.23
6.	A6	88715	10.97
7.	A7	4595	0.56
8.	A8	2625	0.32
9.	A9	15460	1.90
10.	A10	2050	0.25

S.No.	Mapping units	Area (in ha)	Percentage
11.	A11	1225	0.15
12.	A12	350	0.04
13.	A13	250	0.03
14.	A14	6175	0.75
15.	A15	1100	0.13
16.	A16	7255	0.80
17.	A17	8215	1.21
18.	A18	1770	0.22
19.	A19	47540	5.88
20.	A20	2475	0.30
21.	A21	18870	2.32
22.	A22	3685	0.46
23.	AE1	34465	4.26
24.	AE2	123760	15.31
25.	AE3	455	0.05
26.	AE4	5310	0.64
27.	C1	825	0.10
28.	C2	6135	0.76
29.	C3	6125	0.20
30.	C4	1015	0.12
31.	C5	7100	0.87
32.	E1	650	0.08
33.	E2	1140	0.14
34.	E3	750	0.09
35.	E4	4670	0.58
36.	E5	5175	0.64

S.No.	Mapping units	Area (in ha)	Percentage
37.	E6	5855	0.72
38.	E7	4050	0.50
39.	E8	24975	3.08
40.	E9	1090	0.13
41.	E10	7725	0.94
42.	E11	605	0.07
43.	E12	365	0.04
44.	E13	340	0.04
45.	E14	400	0.04
46.	E15	1825	0.27
47.	E16	325	0.04
48.	Q1	395	0.04
49.	Q2	8060	0.99
50.	Q3	9340	1.15
51.	Q4	10970	1.35
52.	Q5	5760	0.71
53.	Q6	895	0.11
54.	Q7	1540	0.19
55.	Q8	2125	0.26
56.	S1	1350	0.16
57.	S2	12305	1.51
58.	S3	1775	0.21
59.	S4	3375	0.41
60.	S5	2690	0.33
61.	S6	1505	0.17
62.	S7	19975	2.47

S.No.	Mapping units	Area (in ha)	Percentage
63.	S8	9725	1.20
64.	S9	200	0.02
65.	S12	1485	0.18
66.	S13	75	0.00
67.	S14	750	0.09
68.	S15	125	0.01
69.	S16	6575	0.81
70.	M-1	8720	1.08
71.	M-2	21820	2.70
<b>Grand Total</b>		<b>8,07,835</b>	<b>100,00</b>

8. Hydrologic Division of the Survey area.

(a) Water resource region	Ganga	--	2
(b) Basin	Chambal	--	2 D
(c) Catchment	Banas	--	2D2
(d) Sub-catchment	Morel	--	2D2A
(e) Watersheds	Six	--	2D2A1-6
(f) Subwatersheds	Two hundred Seven 207		

9. Distribution of area under different priorities

S.No.	Priority Category	Average potential runoff index range	Nos of sub-watersheds	Area (ha)	Percentage
1.	Very High	>70	12	47350	5.86
2.	High	66-70	60	229685	28.43
3.	Medium	61-65	107	429900	53.22
4.	Low	56-60	28	100900	12.49
5.	Very low	Below-56	Nil		
			207	807835	100%

10. Salient features

- (1) Nearly 34 per cent of the total area of Morel sub-catchment, Banas catchment falls under very high and high priority categories.
- (2) Physiographically, dominant land forms are: alluvial plain (53.8%) followed by alluvio-aeolian plain, (20.3%).
- (3) Nearly 65.86% of the reported area is under cultivation, 5.96% under forest, 24.40% under open scrub and grass land and remaining 3.78% area is under miscellaneous lands.
- (4) Nearly 83.45% of the surveyed area is under very deep soils.

- (5) Only 40.22% area is moderately to well managed whereas 22.65% area is under moderately managed, 6.65% under poorly to moderately managed, 5.89% under poorly managed and remaining area (20.81%) is under unmanaged condition.
- (6) Nearly 65% area is subjected to moderate to very severe erosion hazards.