REPORT ON PRIORITIZATION OF SUBWATERSHEDS IN 5F2 (LEFT BANK OF SABARMATI UP TO HATHMATI) CATCHMENT (NON R.V.P.) , AHMEDABAD, GANDHINAGAR, KHEDA, PANCHMAHAL AND SABARKANTHA DISTRICTS OF GUJARAT , DUNGARPUR AND UDAIPUR DISTRICTS OF RAJASTHAN.

ABSTRACT

1.	Survey area	Sabarmati River Basin (Left Bank of, Sabarmati up to Hathmati Catchment..)
2.	Location	N. Latitude 23° -18' N to 23° -55'N E Longitude 72° - 15'E to 73° -50' E
3.	Agroclimatic Region	13 (Gujarat plains and hill region)
4.	Total Surveyed area	13,96,290 ha.
5.	Type of Survey	Rapid Reconnaissance survey for Priority Delineation.
6.	Period of Survey	April,1995 to June, 1997.
7.	Base Material	Survey of India topographical maps on 1 : 50,000 scale

8. Hydrological Divisions : (As per watershed Atlas of India, 1990)

WRR	:	'5'	:	Water Resources Region (" All Rivers flowing in to Arabian Sea except 1".)
Basin	:	'5F'	:	Sabarmati River Basin
Catchment	:	'5F2'	:	Left Bank of Sabarmati River Basin up to HathmatiCatchment

Sr.No.	Subcatchment	Watershed Code	Stream Name	No. Of Subwatersheds	Area in ha.	%
1.	5F2A	5F2A1	Navidia	21	93,674	6.7
	Mostly ephemeral	A2	Alang	20	87,551	6.3
2.	5F2B	5F2B1	L.Shedhi-Vatrak	21	74,720	5.4
	Shedhi-Mohar	B2	Shedhi	16	51,625	3.7
		B3	Shedhi	16	49,917	3.6
		B4	Mohar	21	67,427	4.8
		B5	Mohar	18	57,865	4.1
3.	5F2C	5F2C1	Vatrak ✓	16	46,103	3.3
		C2	Vatrak ✓	17	50,813	3.6
		C3	Vatrak ✓	38	1,18,156	8.5
		C4	✓Majam	35	99,609	7.1
		C5	Khari ✓	33	1,11,401	8.0
		C6	Meshwa	24	85,731	6.1
		C7	Meshwa	34	91,157	6.5
4.	5F2D	5F2D1	L.Bank	12	51,517	3.7
		D2	Drainage	7	25,515	1.8
		D3	Hathmati ✓	14	44,615	3.2
		D4	Ghuvai Hathmati ✓	17	52,365	3.8
		D5	Hathmati ✓	28	78,266	5.6
		D6	L.B.Direct	22	58,263	4.2
		Total No. of Subwatersheds		430	13,96,290	100.0

10. Grading of subwatersheds in to priority categories of Sabarmati Basin :

Priority Categories Grading	Sediment Yield Index	No.of Sub-watersheds	Area in ha.	Percentage %
Very High	1200 and above	22	57796	4.1
High	1100-1199	21	64194	4.6
Medium	1000-1099	63	184522	13.2
Low	900-999	58	179944	12.9
Very Low	below 900	266	909834	65.2
	TOTAL	430	13,96,290	100.0

11. Geographical extent of different erosion intensity mapping units.

Sr.No.	Mapping Units	Weightage Value	Delivery Ratio	Area in ha.	% of the total Area
1.	A1	16	0.65	23387	1.7
2.	A2	17	0.67	10695	0.8
3.	A3	16	0.66	34493	2.5
4.	A4	13	0.58	158010	11.3
5.	A5	13	0.57	8480	0.6
6.	A6	12	0.54	60589	4.3
7.	A7	12	0.55	372081	26.6
8.	A8	14	0.61	34795	2.5
9.	A10	13	0.59	9067	0.6
10.	A11	17	0.68	33655	2.4
11.	A12	12	0.56	96950	6.9
12.	A14	14	0.61	1855	0.1
13.	A15	14	0.62	55	0.004
14.	A16	13	0.57	8165	0.6
15.	B1	19	0.80	260	0.02
16.	B2	15	0.64	947	0.1
17.	B3	15	0.64	5440	0.4
18.	B4	16	0.67	3679	0.3
19.	B5	15	0.64	15817	1.1
20.	B6	15	0.63	7518	0.5
21.	B7	18	0.71	18200	1.3
22.	C1	18	0.80	30805	2.2
23.	C2	14	0.70	19780	1.4

Sr.No.	Mapping Units	Weightage Value	Delivery Ratio	Area in ha.	%
24.	C3	14	0.61	2487	0.3
25.	C4	14	0.62	6423	0.5
26.	C6	15	0.64	1932	0.1
27.	CA1	9	0.36	43441	3.1
28.	E1	15	0.65	475	0.03
29.	E2	14	0.61	17644	1.3
30.	E3	13	0.59	2697	0.2
31.	G1	16	0.75	5150	0.4
32.	G2	15	0.67	305	0.02
33.	G3	16	0.67	50	0.004
34.	G5	15	0.63	7505	0.5
35.	G6	18	0.70	2949	0.2
36.	G7	16	0.66	6462	0.5
37.	G8	13	0.58	43764	3.1
38.	G9	15	0.64	750	0.1
39.	P1	15	0.72	35032	2.5
40.	P2	19	0.82	30548	2.2
41.	P3	21	0.88	4678	0.3
42.	P4	16	0.70	12078	0.9
43.	P5	19	0.72	1221	0.1
44.	P6	16	0.66	60111	4.3
45.	P7	14	0.62	3653	0.3
46.	P8	16	0.65	71586	5.1
47.	P9	13	0.59	9386	5.1
48.	P10	17	0.68	1637	0.1

Sr.No.	Mapping Units	Weightage Value	Delivery Ratio	Area in ha.	%
49.	P11	16	0.67	410	0.03
50.	P12	15	0.63	8638	0.6
51.	S1	16	0.70	285	0.02
52.	S2	16	0.67	2229	0.2
53.	S3	15	0.63	1600	0.1
54.	S4	17	0.68	334	0.02
55.	S5	16	0.66	1500	0.1
56.	S6	13	0.59	3604	0.3
	TOTAL			13,45,287	96.3
MISC. (Streams, Waterbodies & Habitation)				16,471	1.2
SUBMERGED AREA				34,532	2.5
	GRAND TOTAL			**13,96,290**	**100.0**

Sailent Features :

* About 8.7% area falls under very high and high priority category. Soil and water conservation works may be taken up on priority basis.

* About 9% area is hilly with steep to very steep slope which contribute maximum runoff and silt load need afforestation programmes.

* About 21.7% area suffer with severe soil erosion and need immediate attention.