

Report on Prioritization of Microwatersheds of 2B2G4-5 and 2B2H1-4 Watersheds in 2B2G and 2B2H Subcatchments of 2B2 Catchment (Non RVP/FPR) Districts Gopalganj, Patna, Saran, Siwan, Vaishali and West Champaran of Bihar and Districts Kushinagar and Maharajganj of Uttar Pradesh State.

ABSTRACT

1. **Surveyed Area** : 2B2G4-5 and 2B2H1-4 watersheds of Gandak Catchment below Balmiki Nagar Barrage upto confluence of river Ganga.
2. **Location** : a) Latitude 25° 37'02" to 27° 11' 58" N.
b) Longitude 83° 47' 27" to 85° 11' 59" E
3. **Total Area** : 3,78,726 ha.
4. **Agroclimatic Region** : Middle Gangetic Plain (Region No.IV).
5. **Type of Survey** : Rapid Reconnaissance Survey for Prioritization of Microwatersheds.
6. **Period of Survey** : December, 2006 to June, 2007
7. **Base Material used** : Survey of India Topographical maps (on 1:50,000 scale)
8. **Hydrological Sub division** : a) Region – '2' Ganges River System flowing into the Bay of Bengal.
b) Basin - '2B' River Basin
c) Catchment – '2B2'
d) Sub-Catchment – '2B2G' & '2B2H'
e) Watersheds – '2B2G4 & G5, 2B2H1 to H4
f) Subwatersheds – 2B2G4a, 2B2G4b,.....2B2G5j
2B2H1a, 2B2H1b,2B2H4g
g) Microwatersheds – 403

9. Extent of Area under Different Runoff Potential Mapping Units (RPMU)

Sl.No	RPMU	Runoff Potential Value	Area (ha)	Area %
1	A01	55	139009	36.7
2	A02	52	12811	3.4
3	A03	55	27810	7.4
4	A04	52	1605	0.4
5	A05	53	144727	38.2
6	A06	56	15989	4.2
7	A07	58	3120	0.8
8	A08	55	2852	0.8
	SubTotal		347923	91.9
	River		25871	6.8
	Habitation		1646	0.4
	Water Bodies		3286	0.9
	SubTotal		30803	8.1
	Grand Total		378726	100.0

10. Districtwise Distribution of Area (ha) under Different Runoff Potential Mapping Units (RPMU).

Sl. No.	RPMU	Gopal ganj	Patna	Saran	Siwan	Paschim Champa ran	Vai shali	Kushi nagar	Maha rajganj	Total Area	%age of Area
1	A01	16780	-	49101	33554	9152	-	30058	364	139009	36.7
2	A02	349	-	3635	4939	1138	-	2487	263	12811	3.4
3	A03	2226	-	4198	4344	6773	-	10269	-	27810	7.4
4	A04	36	-	1405	73	-	-	91	-	1605	0.4
5	A05	14446	-	72954	39543	1269	-	15485	1030	144727	38.2
6	A06	-	-	16	-	11453	-	2829	1691	15989	4.2
7	A07	-	-	1388	-	941	-	791	-	3120	0.8
8	A08	-	-	-	-	10	-	608	2234	2852	0.8
	Subtotal	33837	0	132697	82453	30736	0	62618	5582	347923	91.9
	Percentage	8.9	0.0	35.0	21.8	8.1	0.0	16.5	1.5	91.9	
	River	830	108	4316	1841	11333	35	6635	773	25871	6.8
	Habitation	107		716	213	-	-	610		1646	0.4
	Water Body	111		841	852	-	-	1191	291	3286	0.9
	Subtotal	1048	108	5873	2906	11333	35	8436	1064	30803	8.1
	Percentage	0.3	0.0	1.6	0.8	3.0	0.0	2.2	0.3	8.1	
	Grand Total	34885	108	138570	85359	42069	35	71054	6646	378726	100.0
	Percentage	9.2	0.0	36.6	22.5	11.1	0.0	18.8	1.8	100.0	

11. Priority Categorization

Sl. No.	Priority Category	No. of Microwatersheds	(in ha)	
			Area (in ha)	Area %
1	Very High (70 & above)	-	-	-
2	High (65-69)	-	-	-
3	Medium (61-64)	-	-	-
4	Low (56-60)	34	31595	8.3
5	Very low (55 & below)	369	347131	91.7
	Grand Total	403	378726	100.00

12. Watershedwise Distribution of Area under Different Priority Categories

Sl. No.	Watershed Code	Priority Category (Area in ha/percentage)		Total Area (ha)
		Low	Very Low	
1	2B2G4	1434 (0.4)	61160 (16.2)	62594 (16.6)
2	2B2G5	27429 (7.2)	29746 (7.9)	57175 (15.1)
3	2B2H1	2732 (0.7)	98666 (26.0)	101398 (26.7)
4	2B2H2	-	41538 (11.0)	41538 (11.0)
5	2B2H3	-	73438 (19.4)	73438 (19.4)
6	2B2H4	-	42583 (11.2)	42583 (11.2)
	Total Percentage	31595 (8.3)	347131 (91.7)	378726 (100.0)

13. Districtwise distribution of Priority Area (ha) of 2B2G (part) and 2B2H Subcatchment with percentage in parenthesis

(in ha.)

Sl. No.	Water shed Code	Priority	Bihar						Uttar Pradesh		Total
			Gopalganj	Patna	Saran	Siwan	Vaishali	Paschim Champaran	Kushi nagar	Maharajganj	
1	2B2G4	Low	-	-	-	-	-	1434 (0.4)	-	-	1434 (0.4)
2	2B2G5	Low	-	-	-	-	-	21173 (5.6)	5490 (1.4)	766 (0.2)	27429 (7.2)
3	2B2H1	Low	43 (0.0)	-	2689 (0.7)	-	-	-	-	-	2732 (0.7)
1	2B2G4	V. Low	-	-	-	-	-	11855 (3.1)	49305 (13.0)	-	61160 (16.1)
2	2B2G5	V. Low	-	-	-	-	-	7607 (2.0)	16259 (4.3)	5880 (1.6)	29746 (7.9)
3	2B2H1	V. Low	17961 (4.7)	108 (0.0)	67800 (17.9)	12762 (3.4)	35 (0.0)	-	-	-	98666 (26.1)
4	2B2H2	V. Low	-	-	41538 (11.0)	-	-	-	-	-	41538 (11.0)
5	2B2H3	V. Low	10066 (2.7)	-	16319 (4.3)	47053 (12.4)	-	-	-	-	73438 (19.4)
6	2B2H4	V. Low	6815 (1.8)	-	10224 (2.7)	25544 (6.7)	-	-	-	-	42583 (11.2)
	Total		34885 (9.2)	108 (0.0)	138570 (36.6)	85359 (22.5)	35 (0.0)	42069 (11.1)	71054 (18.8)	6646 (1.8)	378726 (100.0)

14. Districtwise Distribution of Area under Different Soil Erosion Hazard.

(in ha.)

Sl. No.	Erosion	Bihar						Uttar Pradesh		Total	Percent age of Area
		Gopalganj	Patna	Saran	Siwan	Vaishali	Paschim Champa ran	Kushi nagar	Mahar ajganj		
1	None to slight erosion	31611	-	128483	78109	-	12500	48912	1657	301272	79.6
2	Slight to Moderate erosion	2226	-	4214	4344	-	18226	13098	1691	43799	11.5
3	Moderate to Severe erosion	-	-	-	-	-	10	608	2234	2852	0.8
	Misc. Land	1048	108	5873	2906	35	11333	8436	1064	30803	8.1
	Total	34885	108	138570	85359	35	42069	71054	6646	378726	100

14. Salient Features of the Area

- Out of total 403 microwatersheds covering 378726 ha, only 34 microwatersheds covering about 31595 ha (8.3%) are falling in low priority category and the rest are falling in very low priority category.
- The area is characterized by imperceptible slope 40.1 percent of the area is nearly level (0-1%), 39.2% area has 1-3% slope gradient and 13.6% area is under 1-5% slope gradient.
- 0.8% area is subjected to moderate to severe erosion, 11.5% area is under slight to moderate erosion hazard and rest of area has no erosion problem.
- The area is part of Indo-Gangetic alluvium and has very high potential for growing all types of cereals, legumes and vegetables. The area is infact extensively cultivated.
- Nearly 0.8% of the survey area is under forest and 0.4% area is under orchard.