

## ABSTRACT

- 1. Surveyed Area** : Inventory of Rapid Reconnaissance Survey for Prioritization of Microwatersheds in 2B6A and 2B6I of Middle Ganga FPR Subcatchments of 2B6 Catchment , Districts- Aligarh, Bareilly, Bijnor, Budaun, Etah, Farrukhabad, Hardoi, Hathras, Jyotiba Phule Nagar, Kannauj, Mainpuri, Moradabad and Shahjahanpur, Uttar Pradesh State
- 2. Location** : 27° 01' 23" to 29° 13' 07" North Latitudes and 78° 09' 51" to 79° 58' 54" East Longitudes
- 3. Total Area Surveyed** : 1163985 ha
- 4. Kind of Survey** : Rapid Reconnaissance Survey
- 5. Period of Survey** : January, 2010 to July, 2012
- 6. Agro climatic zone** : Middle Gangetic Plain Region (IV)
- 7. Base Maps** : Survey of India Toposheets on 1:50,000 scale
- 8. Hydrological division** :
- 2 Region
  - 2B Basin
  - 2B6 Catchment
  - 2B6 A & I Subcatchments
  - 2B6A1 Watersheds
  - 2B6A1a, b ... Subwatersheds
  - 2B6A1a1, 2 ... Microwatersheds

## 9. Areal Extent of Different Runoff Potential Mapping Units (RPMUs)

Sl. No.	RPMU	Runoff Potential Value	Area in ha	Percentage
1	AL01	54	119295	10.25%
2	AL02	56	455445	39.13%
3	AL03	55	10455	0.90%
4	AL04	67	26217	2.25%
5	AL05	56	132656	11.40%
7	AL06	58	16984	1.46%
8	AL07	55	850	0.07%
9	AL08	56	34061	2.93%
10	AL09	62	34483	2.96%
11	AL10	62	21745	1.87%
12	AL11	57	20661	1.78%
13	AL12	54	36983	3.18%
14	AL13	56	163924	14.08%
15	AL14	56	15725	1.35%
16	AL15	54	38919	3.34%
17	AL16	58	5474	0.47%
18	HB	-	11732	1.01%
19	River	-	14558	1.25%
20	Tank	-	3818	0.33%
<b>Grand Total</b>			<b>1163985</b>	<b>100.00</b>

## 10. Soil Erosion Hazards

Districts	EROSION					
	None to slight erosion	Slight erosion	Slight to Moderate erosion	Moderate to Severe erosion	Severe erosion	Misc
Aligarh	5786	-	-	-	-	-
Bareilly	75	-	-	-	-	-
Bijnor	22668	263	634	-	-	469
Budaun	251626	64366	37424	17501	8967	6617
Etah	128749	52851	1919	3526	291	4334
Farrukhabad	74627	37153	2711	1410	2123	6336
Hardoli	7282	-	194	7	-	3807
Hathras	3330	5528	-	-	-	98
Jyotiba Phule Nagar	120615	12916	5201	5343	2122	1228
Kannauj	45115	6268	1737	1922	2495	3507
Mainpuri	32182	6612	-	1056	149	1496
Moradabad	96521	13000	8993	2330	1623	1731
Shahjahanpur	7731	17675	1427	1388	8460	470
<b>Total of Area (ha)</b>	<b>796307</b>	<b>216632</b>	<b>60240</b>	<b>34483</b>	<b>26230</b>	<b>30093</b>
<i>Percentage</i>	<i>68.41</i>	<i>18.61</i>	<i>5.18</i>	<i>2.96</i>	<i>2.25</i>	<i>2.59</i>

### 11. District wise distribution of Microwatersheds under different priority categories

Districts	Priority Category			
	High	Medium	Low	Very Low
Aligarh	-	-	5786	-
Bareilly	-	-	75	-
Bijnor	-	-	3939	20095
Budaun	425	19415	335013	31648
Etah	-	-	136100	55570
Farrukhabad	-	-	83528	40819
Hardoli	-	-	6048	5242
Hathras	-	-	8956	-
Jyotiba Phule Nagar	-	2356	106086	38983
Kannauj	-	879	44743	15422
Mainpuri	-	-	32077	9418
Moradabad	-	-	124196	-
Shahjahanpur	3156	7533	26477	-
<b>No of MWS</b>	<b>7</b>	<b>46</b>	<b>1277</b>	<b>322</b>
<b>Total Area (ha)</b>	<b>3581</b>	<b>30183</b>	<b>913024</b>	<b>217197</b>
<b>Percentage</b>	<b>0.31</b>	<b>2.59</b>	<b>78.44</b>	<b>18.66</b>

### 12. Distribution of Area under Different Priority Categories

Sl. No.	Priority Category	No.of Microwatersheds	Area in ha	Percentage
1	High (66-70)	6	3581	0.31
2	Medium (61-65)	41	30183	2.59
3	Low (56-60)	1110	913024	78.44
4	Very Low (55 & below)	269	217197	18.66
<b>Grand Total</b>		<b>1426</b>	<b>1163985</b>	<b>100.00</b>

### 13. Salient Features:

- ⇒ Delineation and codification is done up to microwatersheds level in order to have viable size of the treatment area having district spatial extent and unique national code.
- ⇒ Out of the total 1163985 ha area only 3581 ha falls under high category.
- ⇒ 6 microwatersheds falls under high priority with 3581 ha (0.31%) which needs immediate attention for proper soil and water conservation.
- ⇒ About 26230 ha area (2.25%) is prone for severe erosion and 34483 ha (2.96%) is prone for moderate to severe erosion hazards.

- ⇒ Alluvial plain occupies nearly 717853 ha and 81374 ha are mapped as river/stream banks of the total surveyed area.
- ⇒ Only very deep soils covers an area of 1133892 ha 97.41% of the total surveyed area.

## HOW TO USE SOIL SURVEY REPORT

The report embodies the results of Rapid Reconnaissance Survey conducted for identification and delineation of priority microwatersheds of Middle Ganga Catchment (2B6) of districts- Aligarh, Bareilly, Bijnor, Budaun, Etah, Farrukhabad, Hardoi, Hathras, Jyotiba Phule Nagar, Kannauj, Mainpuri, Moradabad and Shahjahanpur, Uttar Pradesh State covering an area of 1163985 ha spread over 1426 microwatersheds. The priorities are fixed on the basis of Runoff Potential Index (RPI). Higher the values of Runoff Potential Index suggest higher priority and vice versa. The concerned maps on the scale of 1:50,000 are appended with the report. It also furnishes information on general characteristics of the area such as, location and extent, physiography, relief, drainage, geology, climate, present landuse, natural vegetation, water supply and soils of the area.

In the map, each microwatershed is marked by a symbol like '2B6A1a1' etc. where '2' stands for water resource region, '2B' indicates basin, '2B6' for catchment, '2B6A' for subcatchment, '2B6A1' for watershed, '2B6A1a' for subwatershed and '2B6A1a 1' for microwatershed. Within each microwatershed, the Runoff Potential Mapping Units (RPMUs) are demarcated according and symbolized by capital English alphabets, based on geological origin of the land 'AL' stands for Alluvium and their further subdivisions are made on the basis of land and soil characteristics. Each unit connotes a set of physiography, slope, landuse, soil characteristics such as soil depth, colour, texture, severity of erosion and management practices. Mapping units are assigned with respective runoff potential weightage value of different microwatersheds have been categorized as very high, high, medium, low and very low priority areas according to runoff potential index value.

The mapping legends furnished in the Table-4 and differentiating characteristics of each mapping units represented in Table-5.

The details of computation made for determining districtwise runoff potential index of various microwatersheds are furnished in Annexure-I, the information of relative priority of microwatersheds in descending order of grading in Annexure-II and districtwise distribution of area under different priority categories are furnished Annexure-III.

Microwatersheds categorized under very high and high priority are selected for treatment of degraded lands of these microwatersheds under FPR scheme. Both treatable and non-treatable lands are occupied by each priority (very high and high category) microwatersheds. The ratio of treatable and non-treatable lands in a priority microwatershed

varies with the kind, degree and extent of the degraded lands occupied by the some microwatersheds.

For further clarification, information or comments contact may be made to:

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