

# Report on Detailed Soil Survey and Land Use of 2A2H1a1, 2A2H1b1, 2A2H1f1 and 2A2H6m2 Subwatersheds of Tenughat Dam Catchment, P.S. Petarbar, Dist. Bokaro; P.S. Gola, Dist. Hajaribag; P.S. Chandwa, Dist. Palamau, and P.S. Kuru, Dist. Lohardaga; Jharkhand State

## Abstract

1. **Survey area** : 2A2H1a1, 2A2H1b1, 2A2H1f1 and 2A2H6m2 sub-watersheds of Tenughat Dam Catchment, P.S. Petarbar, Dist. Bokaro; P.S. Gola, Dist. Hajaribag; P.S. Chandwa, Dist. Palamau, and P.S. Kuru, Dist. Lohardaga; Jharkhand State
2. **Type of Survey** : Detailed Soil Survey
3. **Location** : Latitudes : 23<sup>0</sup>33 '15" to 23<sup>0</sup>44 'N  
Longitudes : 85<sup>0</sup>45 '30" to 85<sup>0</sup>50 '30" E
4. **Total area mapped & reported** : 15291 ha
5. **Period of Survey** : March 2002 to June 2002 and Feb, 2003 to March, 03
6. **a) Agro Climatic Zone** : Eastern plateau and Hills Region, zone no. 7 (As per Planning Commission)  
**b) Climatic Region** : Humid south East (3)  
**c) Soil Conservation Region** : Eastern red soil region (8)



## 7. Soil Series mapped and their Subwatershed wise distribution

Sl.No.	Name of Soil Series	Area in ha	Percent of Total area	<u>Sub-watershes wise</u>			
				<u>area (ha)</u>			
				2A2H1a1 %	2A2H1b1 %	2A2H1f1 %	2A2H6m2 %
1.	Arrah	164	1.1	21 (0.4)	-	143 (5.0)	-
2.	Amra	1258	8.2	64 (1.3)	181 (5.0)	634 (21.9)	379 (9.9)
3.	Ballia	80	0.5	17 (0.3)	-	63 (2.2)	-
4.	Bathantoli	1341	8.8	452 (9.1)	215 (5.9)	290 (10.0)	384 (10.1)
5.	Chandu	197	1.3	-	-	-	197 (5.2)
6.	Dumka	3368	22.0	1775 (35.8)	1050 (28.9)	441 (15.3)	102 (2.7)
7.	Hensla	900	5.9	523 (10.5)	-	377 (13.0)	-
8.	Karaya	1518	9.9	823 (16.6)	217 (6.0)	475 (16.4)	3 (0.1)
9.	Kuru	201	1.3	-	-	-	201 (5.3)
10.	Lachimpur	1527	10.0	644 (13.0)	448 (12.3)	46 (1.6)	389 (10.2)
11.	Pusaro	2311	15.1	79 (1.6)	164 (4.5)	262 (9.1)	1806 (47.5)
12.	Sarua	140	0.9	-	-	-	140 (3.7)
13.	Misc.	2286	15.0	566 (11.4)	1356 (37.4)	160 (5.5)	204 (5.3)
<b>Grand total</b>		<b>15291</b>	<b>100%</b>	<b>4964</b>	<b>3631</b>	<b>2891</b>	<b>3805</b>

• Figures in parenthesis indicate percentage of total area of Subwatersheds

## 8. Subwatershed-wise distribution of area under different Land capability Classes and their Corresponding Soil Series

Sl No.	Land Capability Class	Sub-watershed wise area in ha				Total area in ha	Soil Series
		2A2H1a1	2A2H1b1	2A2H1f1	2A2H6m2		
1.	II	1000 (20.1)	432 (11.9)	827 (28.6)	1943 (51.1)	4202 (27.5)	Arrah Balua Chandu Bathantoli Pusaro Kuru, Koraya Sarua
2.	III	1541 (31.1)	607 (16.7)	826 (28.6)	1009 (26.5)	3983 (26.1)	Arrah, Bathanli, Chandu, Pusaro, Hensla, Lachimpur, Karaya, Kuru,
3.	IV	1562 (31.5)	1046 (28.8)	418 (14.5)	270 (7.1)	3296 (21.6)	Pusaro, Dumka
4.	VII	295 (5.9)	190 (5.2)	660 (22.8)	379 (10.0)	1524 (9.9)	Amra, Dumka
	Total (ha)	4398 (88.6)	2275 (62.6)	2731 (94.5)	3601 (94.7)	13005 (85.1)	
	Misc. (ha)	566 (11.4)	1356 (37.4)	160 (5.5)	204 (5.3)	2286 (14.9)	
	Grand Total (ha)	4964 100%	3631 100%	2891 100%	3805 100%	15291 100%	

• Figures in parenthesis indicate percentage of total area of Sub-watersheds

## 9. **Specific Problems and other Salient Features :**

- ⇒ Nearly 4626 ha (30.2%) of land is under shallow and 2427 ha (15.8%) under moderately deep soils.
- ⇒ Deep and very deep soils cover around 1341 ha (8.8%) and 4611 ha (30.2%) of the total area respectively.
- ⇒ About 14763 ha (9.6%) of land are subjected to severe erosion intensity which need adequate soil conservation measures.