

Report on the demarcation of priority subwatersheds
in Ad subcatchment, Nagarjunasagar RVP, Andhra Pradesh

ABSTRACT

1. Survey area Ad subcatchment, Nagarjunasagar catchment, Mahboobnagar district, Andhra Pradesh
2. Location $15^{\circ}55'$ - $16^{\circ}25'$ N Lat and $77^{\circ}55'$ - $78^{\circ}55'$ E Long
3. Total area 2,75,907 ha (+21,247 ha under streams, tanks, reservoirs spread, etc.)
- 4.a) Period of survey April, 79 to July, 79
December, 80 to January, 81
- b) Type of survey Rapid reconnaissance for priority delineation
5. Base material Aerial photographs (1:20,000)
Toposheets (1:50,000)
6. Mapping unit details

Mapping unit	Area (ha)	Per cent
A	1100	0.4
B	19824	7.2
C	109061	39.5
D	22327	8.1
E	190	-
F	690	0.3
H	3714	1.4
J	361	0.1
K	3631	1.3
M	1882	0.7
N	1333	0.5
Q	8447	3.1
R	29967	10.9
R1	16859	6.1
U	5812	2.1
V	1816	0.6
W	32307	11.7
W1	15141	5.5
W2	1445	0.5
Total 19	275907	100.0

(ii)

7. Hydrologic division

- a) Catchment A - Nagarjunasagar, A.P.
 b) Subcatchment Ad
 c) Watersheds 7 Ad3 to Ad9
 (Ad1 and Ad2 reported in Agri 37)
 d) Subwatersheds 107

8. Soil and landscape characteristics

a) Depth classes

Watershed	Effective depth ranges (cm)			Hills	Total
	10-25	25-100	50 & above		
Ad3	144	15939	8426	-	24509
Ad4	16763	16368	8194	-	41325
Ad5	39178	2398	86	532	42194
Ad6	15813	7874	637	980	25304
Ad7	27550	11723	2065	2268	43606
Ad8	26359	10917	1239	2679	41194
Ad9	38932	15051	1804	1988	57775
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Total	164739 (59.7)	80270 (29.1)	22451 (8.1)	8447 (3.1)	275907 (100)

b) Erosion intensities

Watershed	Erosion intensity			Hills	Total
	None to slight	Moderate to severe	Severe to very severe		
Ad3	7448	1088	15973	-	24509
Ad4	7693	15259	18373	-	41325
Ad5	-	29059	12603	532	42194
Ad6	67	24042	215	980	25304
Ad7	171	39989	2178	2268	43606
Ad8	1247	34530	2738	2679	41194
Ad9	1431	46587	7770	1988	57775
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Total	18057	189553	59850	8447	275907
Percent	(6.5)	(68.7)	(21.7)	(3.1)	(100)

c) Stoniness

Watershed	Intensity				Total
	None	Slight	Moderate	Hills	
Ad3	24509	-	-	-	24509
Ad4	24599	14721	2005	-	41325
Ad5	16120	13027	12515	532	42194
Ad6	24034	197	93	980	25304
Ad7	35089	4129	2120	2268	43606
Ad8	35289	702	2524	2679	41194
Ad9	48336	2155	5296	1988	57775
Total	207976	34931	24553	8447	275907
Percent	(75.3)	(12.7)	(8.9)	(3.1)	(100)

d) Rockiness

Watershed	Intensity				Total
	None	Slight to moderate	Moderate to severe	Hills	
Ad3	178	8392	15939	-	24509
Ad4	148	22804	18373	-	41325
Ad5	16185	13027	12450	532	42194
Ad6	24127	197	-	980	25304
Ad7	37268	2986	1084	2268	43606
Ad8	37465	623	427	2679	41194
Ad9	52739	2155	893	1988	57775
Total	168110	50184	49166	8447	275907
	(60.9)	(18.2)	(17.8)	(3.1)	(100)

e) Slope Classes

Water shed	Slope ranges (%)						Total
	0-3	3-5	5-10	10-15	15-25	25-50 Hills	
Ad3	8426	144	-	-	-	15939	24509
Ad4	8194	37	111	14610	2005	16368	41325
Ad5	-	16120	153	12939	12450	532	42194
Ad6	85	23949	197	93	-	980	25304
Ad7	664	34614	1744	3232	1084	2268	43606
Ad8	2932	34042	702	412	427	2679	41194
Ad9	6064	46210	2057	563	893	1988	57775
Total	26365	155116	4964	31849	16859	40754	275907
Percent	(9.6)	(56.2)	(1.8)	(11.5)	(6.1)	(14.8)	(100)

9. Priority classification

Priority category	Sediment yield index range	No. of water sheds	Area (ha)	% of total
Very high	1300 and above	4	8456	3.1
High	1200 - 1299	23	55722	20.2
Medium	1100 - 1199	24	56290	20.4
Low	1000 - 1099	12	33075	12.0
Very low	Below 1000	44	122364	44.3
	Total	107	275907	100.0