

REPORT ON DEMARCATION OF PRIORITY SUBWATERSHEDS IN
THE CATCHMENT OF NIZAMSAGAR RIVER VALLEY PROJECT,
KARNATAK STATE

Nizamsagar River Valley Project was taken up under the centrally sponsored scheme of soil conservation during the 4th plan. The objective has been to plan soil conservation measures for effective treatment of the problematic areas in order to minimise silt yield from the catchment. Ultimately around agricultural development of the catchment area is envisaged.

In view of the vast areas involved in each of the R.V.P. catchments against the limited resources of technical personnel and funds, it has been decided to concentrate soil conservation works on priority basis in such of the subwatersheds that are highly problematic and yield higher silt loads.

The task of demarcation of priority subwatersheds has been assigned to the All India Soil & Land Use Survey Organisation Department of Agriculture.

The field work was carried out by Bangalore Regional Centre of All India Soil & Land Use Survey (Deptt. of Agriculture) for demarcation of priority subwatersheds. A total of 3,70,940 ha. falling in Karnatak state part of the catchment of Nizamsagar have been surveyed and priority subwatersheds delineated. The area surveyed and reported covers subcatchment of parts of Mangra, Karanja and other streams and their tributaries. The most of the catchment area falls in district of Bidar and small parts of Gulbargh. The area is covered by Survey of India topo sheet Nos. 56F/3,4,7,8,11,12 and 56G/1,2,5,6,9,10. The area under report is shown on an index map; separate report has been prepared for catchment area falling in Andhra Pradesh.

CATCHMENT CHARACTERISTICS

Nizamsagar dam is built on Mangra river near Yellareddi in Nizamsagar district, Andhra Pradesh. Out of the total area of 8376 Sq. ^e _^ mls, nearly 149

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PRIORITY EVALUATION

As shown in Table 2, the subwatersheds have been graded in order of priority using "silt load index". Higher values of "silt load index" suggested higher priority and vice versa. Subwatersheds have been grouped into five categories to indicate their priorities as given below:-

<u>Priority Category</u>	<u>Silt load index Range</u>	<u>No. of sub watersheds</u>	<u>Area in Hec.</u>	<u>percentage of total area</u>
1. Very high	above 1500	5	19,154	5.2
2. High	1201 - 1500	36	1,08,627	29.3
3. Medium	801 - 1200	26	79,570	21.4
4. Low	401 - 800	21	1,17,515	31.7
5. Very low	Below- 401	8	46,074	12.4
Total		90	3,70,940	100

It is seen from the above table that the whole of catchment area of 3.71 lakh ha. falling in Karnatak has been divided into 90 subwatersheds. Out of these 5 subwatersheds covering a total area of 19,154 ha. (5.2% of the total catchment area within Karnatak) fall under very high priority and they cover most of subwatersheds along Manjra river on the border with Andhra Pradesh. Large number of subwatersheds (36) fall under high category covering an area of about 1,08,627 Ha (29.3%) and are located mainly along Manjra river. Table 2 shows the grading of various subwatersheds under very high, high, medium, low and very low priority categories.

For purposes of conservation measures in the catchment, subwatersheds falling under veryhigh and high priority categories can be selected in the first instance. These two categories have been shown in the maps by suitable symbols. Both the categories put together cover a total area of 1,27,781 ha. i.e. 34.5 percent of the total area.

In order to initiate detailed soil surveys for providing basic soil and land resource data for proper planning and execution of soil conservation programmes, it is proposed to take up soil surveys in the following subwatersheds in the first instance.

S.No.	Subwater- shed code	Area in Ha.	Silt load index	Relative priority
1.	Nj1a	2253	1612	1
2.	Nj1b	3219	1599	2
3.	Nk1a	5312	1564	3
4.	Nk1b	3541	1528	4
5.	Nj1e	2574	1479	6
6.	Nj1d	4185	1367	13
7.	Nk1c	5796	1285	32
8.	Nj1c	4950	1158	44
9.	Nj1g	3249	1035	48
10.	Nj1f	5474	984	51
	Total	40553		

It is proposed to take up detailed soil survey in the above mentioned 10 priority subwatersheds in the first instance. They cover 40553 Ha or nearly 31.7 percent of the total area under very high and high priority categories.

The priority grading number of the subwatershed does not essentially necessitate that the detailed soil survey and soil conservation works should follow the same order. They are meant primarily to show the relative severity of the problem in the different subwatersheds. Since they all comprise first priority subwatersheds, detailed surveys and soil conservation works may be started from upstream in any order to suit local conditions and convenience.

It is expected that the priorities fixed for the reported part of Nizamsagar catchment, as well as the high priority subwatersheds selected above for subsequent soil surveys shall meet the approval of the State Govt. of Karnataka.

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Approval of the above selected subwatersheds from the State Government is requested. Any suggestions or modifications that State may have shall be very much appreciated.

If further clarifications and explanations are desired communications would be welcome by the All India Soil & Land Use Survey Organisation, Deptt: of Agriculture, I.A.R.I. Buildings, New Delhi 110012, and Asstt: Soil Survey Officer Red and laterite, All India Soil & Land Use Survey (Deptt: of Agriculture) Hebbal, Bangalore, Karnatak. Any comments and suggestions would be appreciated.