

Report on priority delineation of watersheds in 'Periyar' Catchment River Valley Project, Idduki district, Kerala.

i. ABSTRACT

1. Surveyed area : 'Periyar' Catchment, Idduki district, Kerala.
2. Location : 77°-07'-30'' to 77°-24'-45'' E longitudes and 9°-17' to 9°-39'-15'' N latitudes.
3. Total area : 60967 hectares.
4. Period of survey : 27th March to 5th May, 1991.
5. Type of survey : Rapid reconnaissance survey.
6. Base material : Survey of India toposheets of 1 : 50,000 scale.
7. Areal extent of different erosion intensity mapping units.

Sl.No.	Erosion intensity mapping units	Area in hectares	Percentage
1.	A	8578	14.07
2.	B	1914	3.14
3.	C	44250	72.58
4.	D	224	0.37
5.	E	131	0.22
6.	F	673	1.10
7.	G	860	1.41
8.	H	431	0.71
9.	I	470	0.77
10.	J	27	0.04
11.	K	245	0.40
Total		57803	94.81
Area under Periyar lake		2769	4.54
Tank		5	0.01
River		390	0.64
Grand Total		60967	100.00

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## 8. Hydrological divisions

- a. Catchment - Periyar 'P'  
 b. Subcatchment - 5 ( Pa, Pb, Pc, Pd, & Pf )  
 c. <sup>Sub</sup>Watersheds - 37

9. Soil erosion hazard

Sl.No.	Erosion	Area in hectares	Percentage
1.	Slight or no erosion	45320	74.34
2.	Moderate to slight erosion	3905	6.40
3.	Moderate to severe erosion	8578	14.07
Total		57803	94.81

## 10. Priority categorisation

Sl. No.	Priority category	Silt yield index range	No. of water-sheds	Area in hectares	Percentage
1.	Very high	1300 and above	4	3647	5.98
2.	High	1200 to 1299	2	3220	5.28
3.	Medium	1100 to 1199	11	17377	28.50
4.	Low	1000 to 1099	20	33954	55.69
5.	Very low	Less than 1000	-	-	-
Sub total			37	58198	95.45
Reservoir				2769	4.55
Grand Total				60967	100.00

11. Salient features

- a. Six watershed are very high and high priority categories.  
 b. 91% of the total area surveyed is under forests.

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12. Area under different land uses :

	Area in hectares	Percentage
a. Area under forest	- 46519	76.30
b. Area under grass	- 9048	14.84
c. Area under plantation	- 1991	3.27
d. Area under rainfed cultivation	- 245	0.40
e. Area under miscellaneous (River, tank & Periyar lake)	- 3164	5.19
Total	60967	100.00

## 13. Extent of area under different groups based on thickness mapped in the Periyar Catchment .

	Extent in hectares	Percen- tage
1. Moderately deep gravelly red soils	- 8578	14.07
2. Deep to very deep non-gravelly red soils	- 49225	80.74
3. Miscellaneous lands ( River, tank, reservoir etc.)	- 3164	5.19
Total	60967	100.00