

CONTRACT RESEARCH ABSTRACTS

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STREAM BANK EROSION OF NILAMBE OYA; A CASE STUDY

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Abstract

Investigations were carried out at four research plots along the banks of Nilambe Oya at Masgolla village in the Upper sub-catchment of Nilambe and quantitative measurements of stream bank erosion in every research plot were calculated. This study was conducted over a period of two and a half years.

The unexploited and non-eroded two plots were used as control for observations and the other two exploited and eroded plots as test plots. Optimal stream reservation widths for the test plots were obtained by comparison the effects of factors on stream bank erosion with that of the control plots. This has led to the derivation of a rational formula to ascertain an optimal width of stream reservation.

The text highlights the importance of riverine environment and discusses its present conditions in Sri Lanka. The contribution of the riverine environment to the national economy is poorly recognized. The factors that contribute to denudation of stream bank reservations are complex and extensive. Policy, legislation and institutional causes also play some significant role in the destruction of stream bank reservations. Even though, a substantial amount of research in water resources is undertaken in Sri Lanka, the importance of the riverine environment has not been considered properly.

The study revealed that the rate of stream bank erosion is extraordinarily greater than field rates of soil loss in the catchment. Therefore, the seriousness of the stream bank erosion must be considered and priority should be given for the conservation of stream banks under any watershed development and management in the island.

This study has disclosed that stream bank reservations do not require very wide portions of lands as unproductive vegetation, when there is an acute scarcity of land in the entire island. The widths of reservations restricted to specifications stipulated in a few principle enactments are not quite logical in protecting stream banks. The most sensitive portion of the bank should be strictly conserved and the rest of the bank can be put under a productive land use. A balance between the competing requirements of conservation and production is clearly needed and it will be acceptable to the local people.