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WATER RESOURCES MANAGEMENT IN TROPICAL RIVER CATCHMENTS

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ABSTRACT

The main hydrological and environmental problems in tropical catchments are discussed, with particular emphasis on the complex issues of the Citarum River catchment, West Java, Indonesia. The concept of basin planning is introduced, from which decision-support systems are suggested within water resources management strategies. The relationship between available water resources and various water demand sectors (such as domestic, municipal, industrial) is given. The effect of land use and various industrial activities on the degree of availability and quality of water is also included in the study. The various degrees of contamination in groundwater are presented in detail. Practical measures on how to remedy the continuous decline of groundwater levels and quality in the form of quantitative strategies are also given. Finally, an overview is given of the management strategies for water resources, which can be used to improve the present deterioration of water resources and to cope with increasing future demands.

Reference: Fares, Y.R.; Water Resources Management in Tropical River Catchments, Journal of Environmental Hydrology, Vol. 11, Paper 14, November 2003.

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