

# Characteristics of Nutrient and Sediment Loads in a Lowland River System on the East Coast of Sri Lanka

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**ABSTRACT.** Economy of Sri Lanka, in general and Eastern province in particular, is largely depends on agriculture. Ampara is one of the most productive rice producing regions in Sri Lanka. The Gal-Oya River flows through the lowlands of the south-east coast of Sri Lanka and is predominately surrounded by rice paddies. The irrigated agriculture is at a high risk of excessive nutrient inputs due to the high application rates of nitrogen fertilisers used by Sri Lankan farmers. A baseline assessment of water quality was conducted in the Gal-Oya, with four sampling surveys in total. Two sampling surveys occurred during the dry season, one during the inter-monsoonal season and one during the monsoonal rains. Standard physical-chemical parameters were measured in situ and samples were taken for chemical analysis of free-nitrate, reactive-phosphate and suspended solids. The monsoonal rains were associated with dramatic increases in free-nitrate concentrations and suspended solids. This baseline study reveals the need for further investigations into the impacts associated with large-scale agriculture along the east coast of Sri Lanka. Water quality monitoring programs have been severely restricted along the East coast of Sri Lanka since the onset of the conflict between separatist and government forces in 1983. This monitoring programme represents the first major water quality assessment to be conducted for over two decades on the Gal-Oya.

**Key words:** Water Pollution; Nitrogen, Suspended Solids.

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