

Eco-Index for Assessing Ecological Disturbances at Downstream of a Hydropower Project

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Abstract : In the North Eastern part of India several hydro power projects are being proposed and execution for some of them are already initiated. There are controversies surrounding these constructions. Impact of these dams in the downstream part of the rivers needs to be assessed so that eco-system and people living downstream are protected by redesigning the projects if it becomes necessary. This may result in reducing the stresses to the affected ecosystem and people living downstream. At present many index based ecological methods are present to assess impact on ecology. However, none of these methods are capable of assessing the affect resulting from dam induced diurnal variation of flow in the downstream. We need environmental flow methodology based on hydrological index which can address the affect resulting from dam induced diurnal variation of flow and play an important role in a riverine ecosystem management and be able to provide a qualitative idea about changes in the habitat for aquatic and riparian species.

Keywords : ecosystem, environmental flow assessment, entropy, IHA, TNC

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