View metadata, citation and similar papers at core.ac.uk
brought to you by CORE
provided by Universiti Putra Malaysia Institutional Repository

# An ecological evaluation approach for dam project development in Malaysia

ABSTRACT

Dams are built to provide water for irrigated agriculture, domestic or industrial use, to generate hydropower or help control floods. Decisions to build dams are made, as human knowledge and experiences expand and new technologies develop, parallel with the fact that the decision-making process is also increasingly becoming more open, inclusive and transparent. Despite the benefits provided by the dams to humankind, much environmental damage has occurred as a consequence of these projects. In particular, dam projects often lead to considerable changes in the natural ecosystem. As the changes are related to the fundamental ecological issues, ecological input should be mandatory and play a major role in all dam project decisions. This paper looks into various studies on the application of ecological evaluation methods in regards to the EIA for the land-use development projects, particularly the dam projects. It details the limitation and challenges faced by the ecological evaluation. Alternative approaches are considered and elucidated as the way forward to enhance the ecological evaluation framework. Towards this end, an ecological evaluation method for the EIA of dams based on ecosystem rarity is proposed. This method allows the loss and fragmentation of the ecosystem of the alternative dam site to be determined in an objective and replicable way.

**Keyword:** Ecological evaluation; Environmental Impact Assessment; Dam project; Malaysia