



Research Article

Ecosystem-based river basin management: its approach and policy-level application[†]

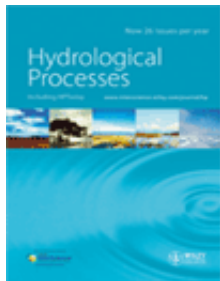
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- Abstract
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Keywords:

integrated approach; river basin management; ecosystem approach; ecosystem functions; ecosystem

Abstract

Integrated Water Resources Management is an approach aimed at achieving sustainable development with a focus on water resources. This management concept is characterized by its catchment approach, inter-sectoral and interdisciplinary approach and multiple management objectives. There is an effort to widen the management scope to include multiple resources and environmental considerations in the river basin management schemes. In order to achieve river basin management objectives and multiple global environmental benefits, an ecosystem approach to river basin management is promoted. The Ecosystem-based River Basin Management aims to maximize and optimize the total value of the ecosystem functions relevant to classified ecosystems within a river basin by conserving and even enhancing these functions for the next generations. A procedure to incorporate such ecosystem functions into policy framework is presented in this paper. Based on this policy framework of the Ecosystem-based River Basin Management, a case study is introduced to apply the concept to the Yangtze River basin. According to the United Nations Environment Programme (UNEP) assessment report, this basin suffers from frequent floods of large magnitudes, which are due to the degradation of ecosystem functions in the basin. In this case, the government of the People's Republic of China introduced Ecosystem Function Conservation Areas to conserve ecosystem functions related to flood events and magnitude, such as soil conservation, agricultural practices and forestry, while producing economic benefits for the local population. Copyright © 2003 John Wiley & Sons, Ltd.

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