

Empirical Appraisal of Small Watershed Management Programme: A Case Study of Jiulong River Watershed Management Programme

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In recent years there has been a growing interest in addressing water quality and quantity issues by considering the hydrologic connections between upstream and downstream areas and assessing the cumulative impacts of all economic activities that take place throughout a watershed system rather than focusing on an isolated segment of the riverine system. In China, more than 1500 watershed management programmes have been initiated since late 1990s. However, there has been little attempt in the research community to develop empirical evaluation of these initiatives, especially those small coastal watershed management programmes. It is necessary to evaluate its effectiveness, performance, and management gap periodically so that program managers can adjust strategies to achieve effectiveness and expected outcomes. The case of Jiulong river watershed program (JLRWMP) provides an opportunity for developing and implementing a detailed procedure for the assessment.

As the second largest river in Fujian Province in southeastern China, Jiulong river watershed covers an area of 14741 km². It drains through 13 counties of Longyan, Zhangzhou and Xiamen Municipality and empties into the Xiamen Bay. With the rapid economic development and population increase especially in the coastal areas, accompanying with rapid and extensive economic development, the environmental, resources management problems of the watershed such as deterioration of freshwater and coastal water quality, destruction of ecosystem functions and soil runoff have become more and more severe. These have threatened the safe drinking water supply, disrupted transportation route, and challenged the sustainable development of the concerned watershed. Under this background, Fujian provincial government initiated the JLRWMP to address the key environmental and resources problems within the entire watershed.



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This paper is organized as follows: The first section provides a review of watershed management development in China and a background on JLRWMP. The second section describes objectives, specific targets, approach, institutional arrangement, implementing mechanism and components of JLRWMP. The third section presents a framework and indicators to evaluate the effectiveness, performance, information and management gaps of the watershed programme. The fourth section discusses the implement the empirical assessment of JLRWMP, and assesses the outcomes including its successes, failures and causes within the prevailing political, social, economic and cultural characteristics of the Juliong river-basin, as well as lessons learned from JLRWMP. Conclusions and recommendations are presented in the final section.