

## Factors Influencing Water Resources Management Effectiveness: A Case Study of Irrigation Office 4 in the Yom River Basin, Northern Thailand

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### Abstract

Water resource management currently faces significant challenges from climate change, increasing water demand, and stakeholder complexity, necessitating integrated approaches that combine governmental, public sector, and water user organizations. Although previous studies have examined various factors related to water resource management, research integrating strategic management, governance, participation, and Integrated Water Resources Management (IWRM) within a single causal model remains limited, particularly in the context of Thailand's Yom River Basin. This study aims to (1) examine the levels of strategic management, IWRM, governance, member participation, and water resource management effectiveness; (2) analyze the causal relationship model among these factors, with IWRM as a mediating variable; and (3) develop a model for enhancing water resource management effectiveness of the Royal Irrigation Department Office No. 4. The conceptual framework integrates Systems Theory, Collaborative Governance Theory, and Strategic Management Theory with IWRM concepts. A sequential explanatory mixed-methods design is employed, comprising a quantitative survey of 400 members of irrigation water user organizations in the Yom River Basin, selected through multi-stage sampling, followed by in-depth qualitative interviews with 12 key informants and 9 experts to explain and validate the quantitative findings. This paper presents the conceptual framework and proposed research methodology, as the study is currently in the proposal stage. The empirical findings will be reported after completion of the data collection and analysis. The study is expected to yield a causal model that elucidates the mechanisms for improving water resource management effectiveness, offering practical guidelines for policy development and serving as a reference framework for water management agencies in similar contexts.

### Keywords

Strategic Management, Integrated Water Resources Management, Governance, Participation, Water Resources Management Effectiveness.