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Feasibility Study on Developing and Enhancing of Flood Forecasting and Warning Systems in Thailand

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Abstract : Thailand grapples with recurrent floods causing substantial repercussions on its economy, society, and environment. In 2021, the economic toll of these floods amounted to an estimated 53,282 million baht, primarily impacting the agricultural sector. The existing flood monitoring system in Thailand suffers from inaccuracies and insufficient information, resulting in delayed warnings and ineffective communication to the public. The Office of the National Water Resources (OWNR) is tasked with developing and integrating data and information systems for efficient water resources management, yet faces challenges in monitoring accuracy, forecasting, and timely warnings. This study endeavors to evaluate the viability of enhancing Thailand's Flood Forecasting and Warning (FFW) systems. Additionally, it aims to formulate a comprehensive work package grounded in international best practices to enhance the country's FFW systems. Employing qualitative research methodologies, the study conducted in-depth interviews and focus groups with pertinent agencies. Data analysis involved techniques like note-taking and document analysis. The study substantiates the feasibility of developing and enhancing FFW systems in Thailand. Implementation of international best practices can augment the precision of flood forecasting and warning systems, empowering local agencies and residents in high-risk areas to prepare proactively, thereby minimizing the adverse impact of floods on lives and property. This research underscores that Thailand can feasibly advance its FFW systems by adopting international best practices, enhancing accuracy, and improving preparedness. Consequently, the study enriches the theoretical understanding of flood forecasting and warning systems and furnishes valuable recommendations for their enhancement in Thailand.

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