Enhancing Climate Resilience in Thailand through Effective Water Management and Sustainable Agriculture (E-WMSA)

Flood retention areas in the Bang Rakam model prevent flooding along the Yom river from overflowing agricultural zones in the wet season (photo credit: Thai-German Climate Programme – Water)

CONTEXT

Thailand is a country categorised as being at 'extreme risk', that is, most vulnerable to future climate change impacts over the next 30 years. These impacts, such as extreme drought and flood, have been rising and have

adversely affected agricultural livelihoods, which are the most vulnerable to changing climatic conditions, and in particular those of rice farmers who produce the largest quantities of rice for the global market.

With climate extremes expected to increase, climate-informed water and agricultural management and climate-resilient water infrastructure will be critical in order to prepare for and respond to floods and droughts. In Thailand's National Adaptation Plan 2018, flood control and drought management are both highlighted as key priorities. Enhancing Climate Resilience in Thailand through Effective Water Management and Sustainable Agriculture (E-WMSA) project, funded by the Green Climate Fund (GCF) is an integrated solution that brings together water management approaches by considering climate risk information and reducing the volatility of agriculture.

The E-WMSA is executed by the United Nations Development Programme (UNDP) together with the Royal Irrigation Department (RID) under the Ministry of Agriculture and Cooperatives (MOAC). It combines three main components: 1) **improved climate information and cross sectoral coordination; 2) improved water management through strengthened infrastructure complementing Ecosystem-based Adaptation (EbA) measures; and 3) reduced volatility of agriculture livelihoods in drought and flood-prone areas through strengthened extension support and local planning,** to offer a holistic approach to enhancing climate resilience in Thailand.

Of the three components, the work package on complementing grey infrastructure with EbA measures and integration of EbA approaches into water management policy and planning is commissioned to GIZ by UNDP to support RID, local authorities and local communities in adapting water management in the Yom and Nan River basins in response to the extreme droughts and floods to come.

Objective

Improve water management through strengthened infrastructure complemented by EbA measures, for greater resilience to climate change impacts

Approaches

1. **Capacity building on EbA framework and approach**

   The project is raising awareness and understanding of relevant stakeholders in the Yom and Nan river basins on climate risks and its associated impacts, and how the EbA framework and approach can be a part of climate adaptation solutions.

2. **Identifying and implementing EbA measures to complement the planned grey infrastructure**

   The project aims to improve water management by complementing the grey water infrastructure with the implementation of suitable EbA measures following the EbA framework, starting from climate vulnerability and risk assessment, identification and prioritisation of suitable EbA solutions, to monitoring and evaluating of the cost-effectiveness of the EbA implementation.

3. **Integrating EbA measures into water management policy and planning**

   The project aims to integrate EbA solutions into the national water management planning, such as rehabilitation plans, in the Yom and Nan river basins. In addition, based on actual experience and lessons learnt from the EbA implementation at the basin scale, policy recommendations, including contributions to the implementation of the National Adaptation Plan/Nationally Determined Contributions, will be developed for further improvement of water management policy at the national level.

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Green Climate Fund (GCF) through the United Nations Development Programme (UNDP)

Country

Phitsanulok, Sukhothai and Uttaradit provinces, Thailand

PROJECT PARTNERS

The Royal Irrigation Department (RID)

PROJECT DURATION

04/2023 – 09/2026

MORE ABOUT PROJECT

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