

Promoting climate-smart water technologies and innovations for sustainable water resources and rice production under climate change in the Lancang-Mekong Region



SEI fact sheet

June 2023

Project duration: 2023-2025

Background

The Mekong-Lancang Basin is experiencing the adverse effects of climate change, leading to water scarcity and reduced crop production. The region also faces increasing risks from extreme weather events, including severe droughts and water scarcity.

The recent drought in 2019-2020 affected 1,330 km² of farmlands in Thailand alone, causing damages worth approximately US \$320 million. The trend indicates a high risk of droughts worsening in the region, affecting food security and livelihoods.

Rice, for example, is a primary food crop for subsistence and economies in the Mekong-Lancang Basin, with over 100,000 km² of agricultural land dedicated to rice production. However, rice farmers face challenges related to climate change and water scarcity, potentially making them unable to sustain their socioeconomic needs and meet market demands.

Goals

Enhance technical exchange and cooperation and build capacity in adopting climate-smart technologies and innovations for sustainable water resources and rice production



Mission: Enhance technical exchange and cooperation and build capacity in adopting climate-smart technologies and innovations for sustainable water resources and rice production



Vision: Build climate-resilient water resources and rice farming systems in the Mekong-Lancang Region

Objectives

Enhance technical exchange and cooperation and build capacity in adopting climate-smart technologies and innovations for sustainable water resources and rice production

- ▶ Facilitate the exchange of technical and practical knowledge in climate-smart water technologies for improved water management in rice farming systems.
- ▶ Strengthen the knowledge and capacity of local agencies, experts, and farmers to implement climate-smart water technologies through training programs.
- ▶ Promote implementing climate-smart water technologies through joint research, pilot studies, and collaboration between Thailand, Lao PDR, and China, incorporating reliable technologies from various countries.
- ▶ Foster cooperation among Mekong-Lancang countries to advance climate-smart water technologies in water resources management for rice farming systems, emphasizing public-private partnerships.

Key strategies



Showcasing good practices: Showcase proven techniques and good practices of climate-smart water technologies and innovations in rice farming systems across all six Mekong-Lancang countries. Engage with practitioners, experts, enterprises, and relevant government agencies to disseminate knowledge.

IMAGE (ABOVE) by Hartono Subagio from Pexels



Capacity building of farmers and government agencies: Conduct field training and provide support from private sectors to empower farmers and government agencies in Thailand and China to adopt climate-smart water technologies. Promote changes in farming practices.



Demonstrating, monitoring, and evaluating pilot studies in Thailand and China: Conduct joint research to enhance knowledge and capacity. Translate research outputs into actionable recommendations.

Activities






Year 1

- ▶ Conduct a joint review and engage with experts to identify good practices and barriers using climate-smart water technologies in rice farming systems across all six MLC countries.
- ▶ Organize a regional workshop for knowledge exchange among stakeholders.
- ▶ Hold national consultation meetings in Thailand and China to select case study sites and technologies.
- ▶ Identify collaboration opportunities with Lao PDR.
- ▶ Install selected climate-smart water management systems in the case study sites.
- ▶ Produce communication products to raise awareness.

Year 2

- ▶ Conduct on-site and online training for farmers and government agencies on climate-smart water technologies and techniques.
- ▶ Monitor and collect data from installed systems in case study sites.
- ▶ Conduct joint research comparing water use efficiency and rice production with and without climate-smart water management systems.
- ▶ Organize a regional workshop for sharing lessons learned and seeking technical cooperation.
- ▶ Prepare recommendations for public-private partnerships in investing in climate-smart water technologies.

Key deliverables

-  State of Knowledge Report on climate-smart water technologies in rice farming systems.
-  Exchange of knowledge as workshop and meeting proceedings.
-  Demonstration sites in Thailand and China using climate-smart water technologies.
-  Joint research papers.
-  Policy briefs.

Gender equality and social equity

The project considers gender equality and social equity throughout its design and implementation. It aims to ensure equal opportunities and benefits for all stakeholders, contributing to achieving SDGs 2, 5, 6, 13, and 17.



Project partners:

