



PROJECT DOCUMENT

Program Categories: Departmental Programs

Project Title: Modernizing irrigated agriculture to protect and restore aquatic biodiversity and ecosystem services in South-East Asia

Responsible Department: IFRDMD

Total Duration: 2019-2021

Funding Sources: Food and Agriculture Organization of the United Nations (FAO)

Estimated Budget for 2020: USD 47,000

1. INTRODUCTION

Asia contains 70% of the world's irrigated area, where 34% of cultivated land is irrigated, as compared to only 10% in North America and 6% in Africa. Irrigation has been largely developed to secure rice productivity. However, in many countries, and especially in Southeast Asia, fish comprise the main animal-source protein – for instance, in the four countries of the Lower Mekong Basin, freshwater fish and other aquatic animals make up 50-80% of animal protein consumed by people.

Irrigation infrastructure (water storage, delivery and drainage systems) was designed with the sole purpose of achieving efficient water delivery for agricultural crops such as rice. This had wide ranging, and often negative, impacts on water resources and the aquatic ecosystems and fisheries that are dependent upon them. To avoid and reduce such negative impacts in new or rehabilitated irrigation schemes, irrigation managers need to find technological options (incorporating new design features, changing design) and policy solutions (e.g. by introducing new environmental policies, legislation and best-practice guidelines).

Although the increase in crop productivity and associated improved food security due to expanded irrigation have been fundamental to the rapid fall in extreme poverty in many Asian countries, the impact on freshwater biodiversity and associated ecosystem services has been less well documented. Some of the impacts have been positive, with the extension of aquatic regimes and inadvertent creation of wetlands and habitat, elsewhere there have been negative impacts on fish migration and water connectivity, water flows and the loss of natural habitat. This has in turn limited opportunities for food security and nutrition from wild capture fisheries, as well as resulted in the loss of biodiversity in the systems affected by connectivity losses. The World Wildlife Fund's (WWF) Living Planet Index shows that the decline in freshwater species is closely correlated with the expansion of irrigation.

2. PROJECT

1.1 Goal /Overall Objectives

Objective

Develop technical guidelines for the design and operation of irrigation infrastructure to sustain freshwater fisheries productivity and conserve aquatic biodiversity, Build institutional and policy-level awareness in Myanmar and Indonesia of processes and benefits of integrating the design of irrigation infrastructure with enhancement of natural resource productivity and biodiversity and Disseminate processes and build capacity at national and regional levels to manage irrigation infrastructure for improved productivity of irrigated agriculture and living aquatic resources.

1.2 Outcomes and Expected Outputs

Outcomes

Improved technical and policy-making capacities for practitioners and decision makers from the agriculture, environment and irrigation sub-sectors with regard to best-practice agricultural water management for enhancing aquatic biodiversity and protecting ecosystem services, Increased coordination between ministries (and stakeholders) in the agriculture/irrigation and NRM/environment sectors, New technical and policy understanding among academic institutions, farmers, NGOs and other key stakeholders relevant to water management, aquatic biodiversity and ecosystem services of water, Enhanced national government capacity to design technically-sound and bankable irrigation and environment projects for government and/or donor funding,

Outputs

Developing materials for technical and policy guidance, and resource mobilization Stakeholder consultation and buy-in and Dissemination and capacity development at national and regional levels.

1.3 Project Description/Framework

Activity 1: Exchange contracts and inception meeting

Activity 2: Initial stakeholder consultations

Activity 3: Perform desktop review

Activity 4: Outcomes workshop

Activity 5: Develop guidelines

Activity 6: Indonesia and Myanmar consultation

3. PROGRESS/ACHIEVEMENTS OF ACTIVITIES IN THE YEAR 2019

Project/Activity Title	Duration	Remarks
Activity 1 Exchange contracts and inception meeting	Sept	
Activity 2 Initial stakeholder consultations	Nov	
Activity 3 Perform desktop review	Dec	

4. PROPOSED FUTURE ACTIVITIES FOR THE YEAR 2020

4.1 Planning of the Project Activities

Project/Activity Title	Duration	Remarks
Activity 1 Developing materials for technical and policy guidance	Jan-June	
Activity 2 Stakeholder consultation and buy-in	Jun-Nov	
Activity 3 Dissemination and capacity building at national and regional levels	Dec	

4.2 Expected Outcomes/Outputs

Proposed Activity	Expected Outcomes/Outputs of Activity	Duration
Activity 1	Annual progress and delivery of global guidelines	June

Activity 2	Workshop report to capture agreed outcomes Ministerial agreement letter validating a way forward	Nov
Activity 3	Environmentally friendly irrigation implemented using accepted international guidelines	Dec