

# Promoting rice-shrimp farming innovations in Ca Mau province

## Mekong Delta Climate Resilience Programme (MCRP)

### 1. Rationale

#### Rice-shrimp farming - a potential adaptation solution to salinity intrusion in the Mekong Delta

Ca Mau province, with more than 70% of its population living in rural areas and with its sensitive geographical position being adjacent to both the East Sea and Gulf of Thailand, is being increasingly impacted by climate change. Coastal erosion and saltwater intrusion deep into the inland have affected people’s lives and livelihoods.

Various research has shown that integrated aquaculture farming systems such as rice-shrimp and rice-fish represent potential climate-adaptive practices in the Mekong Delta. The rice-shrimp rotation model is implemented in the brackish water conversion zone where rice is planted in the rainy season and shrimp is reared in the dry season when saline water intrudes. However, the rice-shrimp system faces several challenges to its success:

- Water quality deterioration and pollution affect survival rate and quality of farmed shrimp;
- Increased saline water intrusion and extreme weather events impact the productivity;
- Reduced quality of soil and water due to the pollution;

- A lack of cooperation between shrimp farmers, seafood enterprises and other key actors;
- Limited technical capacity of farmers.

### 2. Approach

#### Guide and support the rice-shrimp producers towards obtaining international quality standards and organic certifications

The Government of Viet Nam has declared that rice- shrimp farming is one of the highest prioritized targets for climate and saline-water intrusion adaptation in the Mekong Delta.

In 2021, the German technical cooperation project *Mekong Delta Climate Resilience Programme (MCRP)* facilitated collaboration among **eight partners**: the Directorate of Fisheries, the Ca Mau Department of Agriculture and Rural Development, Minh Phu Seafood Group, Loc Troi Group, Thoi Binh District People’s Committee, MCRP and two Rice-Shrimp Cooperatives of Dan Phat and Hoa Phat. Additional technical support from Can Tho University was provided **to elevate rice-shrimp production standards towards international and organic certifications** in Bien Bach Dong commune, Thoi Binh district, Ca Mau by implementing technical innovations on **461 ha of farms, supporting a total of 150 households over 3 years.**

CROP PLAN												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Saline water						Low salinity	Fresh water				
Black tiger shrimp crop	x	x	x	x	x	x						
Rice crop								prepare	x	x	x	x
Giant fresh-water prawn crop							x	x	x	x	x	

*Crop plan for the pilot rice-shrimp model*



### 3. Achievements by 2022

**Technical Innovation Guidelines (TIG) were developed and piloted for a full year in 12 pilot farms to verify the improvements**

- Over **50%** of farms achieved higher productivity: Average yield 2022: **260kg/ha**, compared with 200kg/ha in 2021.

#### Beneficiaries

- 150 households** in two rice-shrimp cooperatives took part in the pilot models.
- 279 farmers** (41 females) were trained on new TIG by trainers participating in Training of Trainers (ToT).
- 150 farmers** (21 females) were trained with ASC (Aquaculture Stewardship Council) certification by Minh Phu Seafood Group.
- 30 people** (six females), including technical aquaculture officers, cooperative leaders and private sector stakeholders were trained in ToT programs on technical innovation guidelines by Can Tho University.
- 34 people** (five females), including technical aquaculture officers, cooperative leaders and the private sector were trained in ToT programs on Internal Auditors in ASC certification by the Intertek Certification Body.
- 06** technical aquaculture and extension officers supervised by Can Tho University, carried out research for their Master's Theses on rice-shrimp innovations in the project site.
- Minh Phu Seafood Group invested around **EUR 85,000** for collaboration activities in 2021-2022 and allocated technical staff to support farmers, promoting the certification and widening potential areas for rice-shrimp farming.

#### Signing of farm contracts between Minh Phu Seafood Group and rice-shrimp farmers

- By October 2022, Minh Phu signed farm contracts with **150 households** with a premium price of VND 3,000/kg shrimp compared with market price in two cooperatives to source shrimp from the project site.

### 4. Cross-cutting topics

The private sector has achieved remarkable success as it acts as a key driver of change towards market and quality, while the MCRP promote better management practices in the shrimp value chain.

In addition, many women took part in hands-on training in making probiotics and management of the farming process.

### 5. Outlook

The pilot is being continued in the project's timeline and is expected to achieve ASC certification in 2023 and Organic Certification in 2025. Capacity-building remains the backbone activity of the innovation process. The innovation projects will be upscaled to other areas of Ca Mau and other provinces in the Mekong Delta from 2024.

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