

POLICY BRIEF



TOWARDS SUSTAINABLE MANGROVE-SHRIMP AQUACULTURE THROUGH CAPACITY BUILDING AND PARTNERSHIP IN THE MEKONG RIVER DELTA

The Mekong River Delta is one of the most productive agricultural areas in the world, though it is also the most vulnerable. Vietnam has used the “International Principles” to adapt legislation and develop its national program toward better management of shrimp farming. However, it was reported by small-scale farmers in Tra Vinh province that the Principles were difficult to apply, as they focus on ecology and ignore the adaptation and social aspects. Shrimp farmers have been experiencing declining yields and incomes, along with the continued clearance of mangroves.

Vietnam has lost half of its mangrove forests over the past 30 years, with the majority of them being converted into shrimp farms. A worrying trend, as healthy mangroves make important contributions to both climate change adaptation and mitigation, forms a natural habitat for many aquatic and terrestrial species, and provides a source of livelihood for coastal communities.

To reduce the pressure on mangroves and enhance shrimp farmer livelihoods and resilience, the project “Towards Sustainable Mangrove-Shrimp Aquaculture Through Capacity Building and Partnership in the Mekong River Delta” was implemented to support the development and introduction of sustainable aquaculture models which coexist symbiotically with mangrove forests.

This project aimed to achieve the sustainable transition of shrimp farming in Tra Vinh based on ecological/organic shrimp farming requirements according to national and international standards, through a detail-oriented analysis of the environmental, social, and economic conditions of the region and context-specific capacity-building methods that targeted local stakeholders in shrimp farming.



KEY FINDINGS

The total area of forest shrimp farming in Tra Vinh is 7,041 ha, concentrated in 5 sub-regions of Duyen Hai district and Duyen Hai town. This area will be maintained until 2050 (Decision No. 1925/QĐ-UBND dated September 29, 2022). According to Plan No. 69/KH-UBND dated August 6, 2021, of the Provincial People's Committee, by 2030, 5,700 ha (accounting for 80.9% of the total area) of mangrove-shrimp will be awarded export ecological certification. Compared with the certification criteria, below are the issues that farming areas are facing, and also barriers to achieving ecological certification (domestic and international):

- ❖ The farming areas have not been thoroughly planned, so the infrastructure, irrigation system, and farming areas have not been properly arranged, invested in, and not dredged annually. Thus, there is inadequate water circulation in many regions, which hinders the growth and development of mangrove trees, and causes tree deaths in some areas. In addition, since there is no regulation on separate supply and drainage channels, the wastewater from one shrimp pond (especially the wastewater from the industrial shrimp pond) becomes the supply water of another shrimp pond. This is the cause of disease spread and outbreak, causing a high mortality rate of shrimp, affecting the income of farmers.
- ❖ In the area with many shrimp ponds, each pond has a small area (about 1 ha), and the percentage of forest trees in each pond is low (10-20%), while according to the regulations on ecological shrimp farming, it is necessary to ensure the rate of forest canopy over 40% in the farming pond.
- ❖ Interspersed with the mangrove-shrimp farming ponds are the intensive farming shrimp ponds. This makes it difficult to achieve certified organic shrimp farming areas.

KEY FINDINGS

- ❖ Although households have been trained in mangrove-shrimp farming techniques before, and many households have had 20 years of farming experience, they still do not follow the correct techniques, shrimp are not stocked according to the seasonal schedule, leading to a high mortality rate.
- ❖ There is a total of 22 shrimp hatchery production and nursing fry facilities in Tra Vinh, scattered in Duyen Hai district with infrastructure that has not been synchronously invested, fry production is not quality-checked before reaching the consumers, causing damage to farmers.
- ❖ In the whole farming area, a production chain has not yet been established, people produce and consume products independently, the products are made without brands, and sold at low prices, which are often forced by traders.

For the aforementioned reasons, it can be said that the current mangrove-shrimp farming area in Tra Vinh is not sustainable. In order to achieve ecological farming certification from now to 2030, it is necessary for the joint efforts of management agencies, seafood processing, and exporting enterprises, and the mangrove-shrimp farming community to solve the above issues.





POLICY RECOMMENDATIONS

- ❖ Review of 5 shrimp farming sub-regions of Duyen Hai district and Duyen Hai town, Tra Vinh province according to TCVN 11041-8:2018 or criteria of international certifications (such as ASIC or Best Aquaculture Practices - BAP).
- ❖ Research and rearrange the irrigation system in the region, clearly specifying separate water supply and drainage canals, add new excavations (if necessary), and/ or renovate the existing canals to ensure water circulation according to the tides.
- ❖ Study suitable locations, plant additional mangrove trees in the shrimp ponds to ensure the forest coverage rate to reach at least 40% and in the buffer zones to increase natural food sources for farmed shrimp in particular and aquatic organisms in the area in general.
- ❖ Build an environmental monitoring station in the farming area and provide sufficient information on water quality for farmers.
- ❖ Arrange fry production facilities into the aquatic complex for centralized management, strengthen the inspection of fry quality and provide information on the origin and quality of fry for farmers.
- ❖ Encourage households in the area to convert farming methods towards compliance with farming techniques and ecological/organic farming requirements according to TCVN 11041-8:2018 or criteria of international certification (such as ASIC, BAP, and Global GAP)
- ❖ Encourage households with farming ponds close to each other to form cooperative groups or cooperatives to facilitate the reorganization of shrimp farming towards sustainability and value chain linkage.
- ❖ Connect and encourage the participation of enterprises in the chain from supplying inputs for production to processing and consuming products, in order to increase product value, and ensure harmonization of benefits for all relevant stakeholders.
- ❖ Support legal procedures and partial funding for cooperative groups/cooperatives that want to be awarded ecological/organic shrimp certification.

The project is funded and implemented by:



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