

Vietnam Business for Environment – VB4E

Project title: Mangrove-based shrimp farming to support mangrove recovery and coastline protection in the Mekong Delta

Project duration: 3 years

Geographic area of the proposed project: Coastal provinces in the Mekong Delta

Project idea:

Sea level rise in the Mekong Delta is currently occurring at an increasing rate with more intense storms and storm surges. Current coastal defenses that rely on a thin line of defense consisting of a compacted earth sea dyke and a thin line of protected mangroves in front of the sea dyke create an extreme risk for communities living behind the sea dyke. Although regulations stipulate a minimum 500 m of mangroves need to be maintained in front of the sea dyke, this buffer does not exist along approximately two-thirds of the coastline where it is impossible to reforest. Here, the depth of the mangrove is less than 100-200 m on average and in many areas more sea dykes are being totally exposed to direct wave action and leading to erosion and increasing maintenance costs.

This intensive shrimp production is itself vulnerable to the effects of climate change, in particular, increasing salinity levels, more extreme droughts like the El Nino driven 2015-2016 drought, and higher maximum ambient temperatures. These extreme conditions forces intensive shrimp producers to pump ground water to cool pond water and dilute lethal alkalinity and salinity levels. These conditions have in turn forced intensive shrimp farmers to continue to rely on the widespread use of antibiotics that threatens Vietnam's largest aquaculture export, and contaminates current organic shrimp production from Integrated Mangrove Shrimp (IMS) systems. The technical response, bio-secure and zero-exchange technology are also contributing to the problem of ground water pumping because they encourage farmers to refrain from using surface water for dilution because of the fear of introducing disease.

The project aims to convert the intensive shrimp production areas along the most vulnerable coastlines to IMS shrimp systems by providing incentives to adopt high-tech solutions. These solutions aim to simultaneously make intensive shrimp sustainable while also making room for IMS to reforest the coastal zone. The solution includes:

- Provide incentives for farmers to move their shrimp production off-farm into more efficient and climate-resilient indoor shrimp farming systems that no longer depend on groundwater pumping to respond to extreme conditions.
- Land-holders agree to convert their coastal land to IMS systems that can also be organically certified to increase the value of production.

IUCN currently estimates that by implementing the above solutions, mangrove recovery along these vulnerable coastal zones subject to the coastal squeeze.

Relevance to VB4E thematic areas

The project would contribute to two focus themes of water and wetland conservation and climate change.

Management structure:



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The project activities will be monitored and supervised by the VB4E's National Coordinating Body (NCB), who are experts on forestry, biodiversity, water resources, hence will provide technical advice and support during the project implementation. IUCN play the role as secretariat to the NCB to organize monitoring, evaluation and learning (MLE) trips for NCB.

The Provincial People's Committee, Farmer Unions, Women Unions and relevant functional departments will be engaged as key partners for the project implementation.

Total Budget: \$500,000/year * 3 years on rolling basis

Co-financing: IUCN would mobilize funding from other sources to co-finance the project

Please contact coordinator at VB4EAlliance@gmail.com for further information if you are interested in the project idea.