

Vietnam urged to enforce mangrove conservation policy



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Mangrove management policy in Vietnam's Mekong Delta needs stronger state enforcement, if the country is to meet its conservation goals while still allowing for people in the delta area to benefit from the ecosystem services that mangroves provide the shrimp farming sector.

New research has also calculated the optimal amount of mangrove forest that these farms need to retain, if shrimp farming is to be viable here: about 60%. If they remove more than that, they lose the important ecosystem services that the forests provide to the shrimp farming activities, upon which farmers depend for a livelihood.

The state should therefore ensure that no more than 40% of mangrove forests on these farms are felled, contrary to what is happening now, as farmers continue to convert their land in order to expand their shrimp farming activities.

These are the findings of a team of environmental economists from the University of Economics in Ho Chi Minh City, Vietnam, who recently visited the delta to assess the effectiveness of the mangrove conservation policy, which allows farmers to manage their forests themselves.

Vietnam has seen a dramatic loss of its mangrove forests in the past century. After the Vietnam War ended in 1975, the total area covered by mangrove forests dropped sharply from 200,000 hectares to less than 72,000 hectares in just two decades. At the time, all these forests were under the direct management of the state.

In an attempt to reverse this trend, the state implemented a new forest management approach in 1995: the government decided to allow farmers to



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Farmers in Vietnam's Mekong Delta are compromising their shrimp farming operations, by cutting down mangrove forests. Healthy mangroves support shrimp farming.

manage mangroves directly, giving them land rights and requiring them to take responsibility for the conservation of the forests in their care. Under this policy, farmers had to keep at least 60% of their mangrove forests intact, and were allowed to convert up to 40% of the remaining area into other uses - with shrimp farming being the most popular alternative farming initiative.

But the policy was poorly implemented. Farmers quickly began converting more forest than the law allowed, to increase the size of their shrimp ponds. This was the farmers' attempt to maximise their profits, not realising that they were in fact undermining them instead, as the loss of mangrove forests also undermined the ecosystem services that they needed in order to farm shrimp optimally.

Researchers from the University of Economics tried to answer the ongoing conservation question faced by the state: how much mangrove area should farmers be allowed to convert, to get the best balance between the profit from shrimp farming and the state's forest conservation goals.

In 2017, a team of economists from the university visited eight provinces in the Mekong Delta in southern Vietnam, to see how effective this 'decentralised' mangrove forest management approach has been.

The Mekong River Delta (MRD) spans some 40,000 square kilometers, where the Mekong River meets the South China Sea. The delta stretches across 14 provinces and cities, and has a population of 18 million, which accounts for 20.5% of the country's population.

The delta is the largest farming and aquaculture region in Vietnam, making up some 70% of the country's total farmed area, and providing over 52% of annual aquaculture output. In 2014, aquaculture in the area covered around 800,000 hectares, with total output of over 2.4 million tons. Even though some state-driven reforestation efforts have promoted recovery of the total mangrove coverage in coastal areas and the river mouth to about 100,000 hectares, the overall trend in forest loss has not been reversed sufficiently, researchers argue.

In visiting the eight provinces, the team surveyed more than 800 households to assess the impact of the state's mangrove management policy. Part of the policy has been to allocate land rights and management responsibility to farmers, usually for a period of 20 years. Thereafter, the farmer's rights to the land will either be renewed or passed on to another farmer. Researchers found that, in cases where farmers had longer and more secure access to a piece of land, they tended to convert larger areas of mangrove forest.

Meanwhile, in areas where farmers are able to access their forests more easily by motorbike, this resulted in less removal of forests. This is probably because there is greater community transparency, with neighbours and foresters able to keep an eye on activities in the forest, researchers speculate.

Importantly, too, the researchers found that when farmers had a wider range of livelihood strategies and more diverse sources of income, they tended to convert less of the mangrove forests. These farmers are operating in a labour market, so when market conditions are more favourable for non-agricultural employment opportunities, and particularly when wages are higher, the mangroves are better conserved.

The important result from this study is that the optimal mangrove coverage for shrimp farming is approximately 60%. This implies that maintaining the level of mangrove coverage of 60% complies with the policy, and also brings about the highest level of output and profit for shrimp farmers. The recommendation for the next step is that the government should find a good pathway to enforce this current policy, ensuring that farmers can't convert more than 40% of the mangrove forests. In that way, both stakeholders can achieve their goals in balance.

In addition to their role in shrimp farming, mangroves are highly productive in maintaining a wide variety of flora and fauna species and supporting the coastal food chains. With the emergence of climate change problems, the ecosystem services of mangroves become more important. Mangroves play a crucial role in protecting coastal areas and adapting to harsh environmental conditions. Mangroves serve as natural barriers to storms, shoreline erosion and sea level rise.

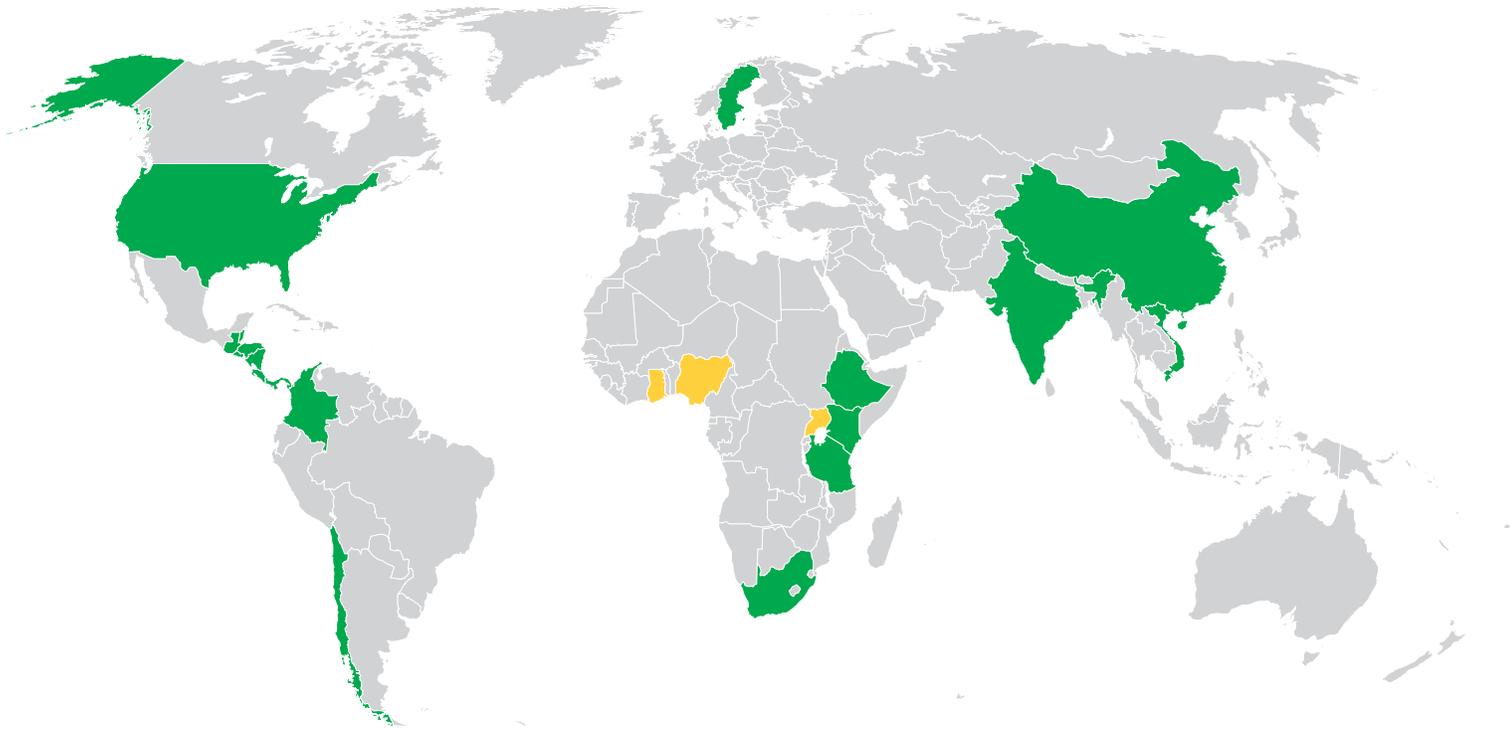
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