

Prawn sandwich destroys Philippines fish nurseries

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MANILA: She helped turn many of the world's prawn farmers into millionaires, but Jurgenne Primavera now worries that her life's work might have indirectly accelerated the destruction of fish nurseries.

The Filipina zoologist, whose research on breeding the black tiger prawn became a manual that revolutionized the aquaculture industry, pointed at 66 hectares (163 acres) of brackish water fishponds at the bottom of a windy bluff in this seaside town south of Manila.

Local conservationists have filed a landmark suit against the owner, a wealthy lawyer accused of killing off mangroves—trees that grow on marshy coasts and serve as vital nurseries for the young of open-sea fish species.

"The law bans cutting of mangroves, but he (the fishpond owner) skirted that by building dikes that cut off the seawater, until the trees eventually died," said Jessie de los Reyes, a local marine ecology advocate.

"Now the community is suffering because their ground water has turned salty and their access to fishing areas has been cut," de los Reyes added. The case is pending.

Despite cheap government loans and generous land leases in the 1970s, prawn culture failed to reach its full potential in the Philippines, where the ponds turned out to be better suited for growing milkfish, said Primavera of the Philippines-based Southeast Asian Fisheries Development Center.

But the industry took off elsewhere, creating new wealth for many of the pioneers who fed the world's acquired taste for prawn sandwiches.

"Mangroves were cleared for prawn farming in countries that did not have a long tradition in aquaculture, such as Thailand, Vietnam and Ecuador," said Primavera.

Thriving at or near the mouths of silt-laden rivers and estuaries, the trees feature grotesque-shaped prop roots that serve as lungs allowing them to thrive in saline and waterlogged soils.

They serve as nutrient-rich marine nurseries for juvenile fish, shrimp and other wildlife and as habitats or

wintering areas for coastal and migratory birds, and they protect shores against storms and large waves.

Over the past 50 years aquaculture, or commercial fish farming, has wiped out a third of the world's mangrove forests. In some areas such as the Philippines the loss has been up to 80 percent, said Norman Duke, a University of Queensland marine biologist who is one of the world's foremost experts on mangrove forest ecosystems.

"The simple story is: no mangroves, no fish," Duke said.

Subject to volatile market prices and ecosystem degradation, prawn farms last only for a few years and abandoned farms are virtual wastelands, said Nico Koedam, a University of Brussels botanist who has done extensive research in Sri Lanka, India and Kenya.

"This is happening mostly in Southeast Asia," said Koedam. "You also lose a lot of mangrove forests from fishponds in India and Sri Lanka as well."

Adds Duke: "Conversion is final. Once the soil dries out nothing will grow on it."

The Food and Agriculture Organization projects marine capture of fish flattening out at 86-87 million tons annually between 2004 and 2030, and with aquaculture accounting for a progressively rising share in total fish production to 74 million tons in 2015 from 45.5 million tons in 2004.

Despite the rapid loss of mangroves, the International Union for Conservation of Nature (IUCN) denotes the Philippines as the "center of the center" of marine ecosystem diversity.

Primavera said the Southeast Asian archipelago remains one of the world's top 15 nations in terms of fish production.

However, this was unlikely to be sustained with the permanent loss of natural fish nurseries.

The Philippines is home to about half the world's mangrove species, but Primavera said up to two varieties are in the IUCN's "red list" of critically endangered species.



■ Marine biologists from different countries inspect newly reforested mangroves in Calatagan, south of Manila. Over the past 50 years aquaculture, or commercial fish farming, has wiped out a third of the world's mangrove forests. AFP PHOTO