

# Invasive alien fishes cause the extinction of native fishes

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5 MINUTE READ



Cream dory or pangasius, which are native to Indochina, are among the most sought-after fish in the Marikina River. Adults can easily breach 20 pounds in weight.

2

After the recent monsoon rains, dozens of people were trying their luck at fishing in Marikina River. When heavy rains wash over the mountains of the Sierra Madre, the water push the fishes from the floating farms of Laguna Lake that make many escape and swim down the Marikina and Pasig Rivers.

This is the best time to fish, so people flock to the rivers. One used a sudsud, a V-framed scissor net usually used in coastal areas to catch bottom dwellers. Others used fishing rods to pull out knifefish and cream dory, some as heavy as 20 pounds!

Twenty years ago, the Marikina River still had bottom-dwelling gobies called biya, spear-shaped halfbeaks called kasuswit, climbing perch called martiniko, which can briefly crawl on land to reach the next muddy pool, colorful gouramis and a host of other fish.

## **Invasive fishes**

Today, invasive fishes have taken over the river. Hailing mostly from Africa, South America and Indochina, they have successfully adapted to Philippine waterways—which is bad news for our native fish.

After the recent monsoon rains, local fishers caught black chin tilapia (called Gloria or Arroyo because like the former President, the fish have little moles on their faces), Nile tilapia, African catfish, janitor fish, pangasius or cream dory, plus smaller fishes like guppies and mollies which eat mosquito larvae.

These fishes are not native to the Philippines. The only native fish caught that day were several kanduli, brackish water catfish usually caught in Manila Bay.

## **Native fishes disappearing**

The Philippines' native fishes are slowly disappearing—which seems to be the norm and not the exception for many of the rivers and lakes.

Even protected biodiversity bastions like Taal Lake with its unique freshwater sardines called tawilis and trevally called maliputo, have not been spared from the introduction of exotics, which are imported for two reasons.

The first, of course, is for food. The pressing need to feed the increasing number of the population has given rise to tilapia farms all over the archipelago. So successful are tilapia at colonizing waterways that most Filipinos now think the ubiquitous fish is native to the country.

Newcomers to the country's aquaculture industry include pangasius, a giant catfish from Indochina, which are marketed as «cream dory» to make the bland fish sound a bit more delicious.

The aquarium trade is the second entry point for invasive fish. It is best exemplified by the janitor fish, which is becoming more common in the country's rivers. Many of the fish are sold when they are young, cute and still colorful.

As the fish mature, they lose their bright color and grow larger than most fish keepers think. Unwilling to kill the grown fish, aquarists sometimes release them in local waterways—not knowing that the fish which come from similar climates as the Philippines can survive and even breed in the country's waters.

The country's rivers and lakes are now host to giant knifefish and snakeheads from Indochina, janitor fish from the meandering rivers of the Amazon, plus territorial cichlids from Africa.

## **Proven disastrous in Africa**

What can happen if the invasive fishes continue to swim amok in the country's rivers?

In East Africa's Lake Victoria, the introduction of Nile perch has proven disastrous. In an attempt to “boost fisheries productivity,” the predatory fish was introduced to the lake in the 1950s.

Growing over six feet long, it soon preyed on over 100 other fish species, practically wiping out 60 percent of the lake's native cichlids in what may be the largest vertebrate extinction of the 20th century.

As you read this, thousands of brightly colored cichlids (one species alone is worth P2,000 apiece, compared to Nile perch which sells for P200 per kilogram) are being eaten hourly.

## **15 fish species in Lake Lanao declared extinct**

The Philippines has already experienced a similar phenomenon, with at least 15 fish species declared extinct in Lake Lanao.

“This is not the first time we are witnessing the impacts of invasive alien species, which eat or outcompete native species,” said Dr. Theresa Mundita Lim, executive director for the Asean Centre for Biodiversity, an intergovernmental body which protects and conserves Asean's biological diversity.

“While the introduction of invasive alien species like tilapia or pangasius may be perceived as valuable for livelihoods, food production or pest control, science-based assessments should be undertaken to determine if it leads to adverse impacts on the environment and biodiversity,” Lim said.

“We should ensure that this will not bring more harm in the long run. The extinction of native and edible fish species affects nutrition, food security and dietary diversity. This leads to numerous local, national and regional implications,” she added.

According to the Asean Biodiversity Outlook 2, Asean member states have identified 112 invasive alien species affecting forests, agriculture and aquatic ecosystems.

“Given that we have all these introduced species already being considered as economically important and are being used in aquaculture, it is imperative that we focus our research and technology development on the breeding, propagation and culture of our native species like ayungin, tawilis, maliputo, igat and native hito, both for conservation and sustainable aquaculture,” explained Dr. Ma. Rowena Eguia, a geneticist from Southeast Asian Fisheries Development Center/Aquaculture Department (Seafdec/AQD), an international body which promotes sustainable fisheries development in Southeast Asia.

## **Benefits of farming native fishes**

Best Alternatives, a nongovernment organization based in the Philippines, and VB Consultancy, a research firm based in Europe, are working to highlight the dangers of farming invasive species.

Instead of farming potentially invasive foreign fish, the two groups are working to convince governments and private institutions to farm native species instead.

“In addition to conserving genetic diversity, farming native fish has many benefits,” explained Jonah van Beijnen, head of VB Consultancy.

“They are often best suited to local climates, giving them better chances of surviving adverse weather effects like storms or droughts,” van Beijnen added. “Local species can better resist both disease and parasites. Lastly, they are typically in demand and fetch better prices than invasive fish.”

Institutions like Seafdec/AQD, Department of Agriculture (DA)-Bureau of Fisheries and Aquatic Resources, DA-National Fisheries Research

and Development Institute, and the University of the Philippines are already doing studies on the rearing and farming of ayungin, tawilis, maliputo and other native fish.

This is a vital step in protecting and sustainable managing the populations of native fishes still thriving in the country's rivers and lakes, and initiating their return in Marikina River.

Image courtesy of Gregg Yan

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