

ZAKRI ABDUL  
HAMID

# PROTECT OUR NATIVE FISHES AND RIVER ECOSYSTEM

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**I**NVASIVE fish species are a major threat to our marine and inland waters and they undermine essential biodiversity.

Species invasions rank closely behind habitat loss as a cause of species decline and extinction and they pose significant economic and public health problems.

The United Nations Biodiversity Convention, which Malaysia is a party to, requires signatory nations to take actions as far as possible and as appropriate to prevent their introduction and control or eradicate alien species that threaten ecosystems, habitats and local species.

One alien fish species menacing our rivers is the Mekong red tail catfish. Fondly known as the “ikan patin Mekong”, it’s quite a favourite among local fish farmers, with a soft, delicate flesh that makes it a popular restaurant menu item rivalling the local ikan patin.

The problem with the Mekong red tail catfish started when it was released from its captive culture into the wild. Researchers noted that its voracious eating habit, rapid growth and high spawning rate meant that this species could occupy all available space in the rivers.

Anglers and fishermen have also been landing aliens from more distant places. In a series of articles on this subject, *New Straits Times* Terengganu bureau chief Rosli Zakaria related the local detection of another catfish species – *phractocephalus hemioliopterus* – a native to the Amazon river.

“It is a beautiful catfish with black markings on its body and red fins. Unfortunately, no one wants to buy this fish because of its black flesh. It is good for

aquariums when small, but becomes a nuisance when it outgrows the aquarium.”

The writer also listed a number of alien fish species from Africa as well as North and South America which have found their way into our natural ecosystem.

They may arrive in the country well-contained but once released into our streams, either deliberately or by accident, there’s no telling where they might end up.

When these predatory fish species were released into our rivers is vague, but it’s believed that some have been set free by hobbyists since the late 1980s.

To be sure, not all alien fish species are bad. Chile supports a thriving introduced-salmon industry, which accounts for about 20 per cent of the world’s farmed salmon.

In this country, many have been imported in the past for aquaculture, some as early as the 19th century. For example, according to the Department of Fisheries (DoF), the introduction of the Chinese grass carp, bighead, silver and common carp species, and the practice of polyculture, started in the 1800s.

The introduction coincided with the migration of Southern Chinese people, who brought along their techniques, marking the beginning of aquaculture in Malaysia.

Javanese carp, known locally as “lampam jawa”, is one of the most important freshwater fishes cultured in the country. It was first introduced in 1953 from Indonesia and was bred by the DoF for distribution to fish farmers.

In 1992, some 120,000 Javanese carp were released in mining pools, rivers and reservoirs throughout the country. In an effort to expand the gene pool, subsequent re-introductions of the fish from Indonesia and Thailand, where the fish is known as Thai silver carp, were undertaken by the government in the late 1970s and mid-1980s.

Tilapias were introduced to Malaysia by the Japanese in the 1940s as a cheap protein source. The most popular species for culture is the Nile tilapia. Two other species used for culture include the Mozambique tilapia and the blue tilapia.



*Invasive alien fish species such as this ikan patin Mekong are threatening the survival of Malaysia’s native species. FILE PIC*

It is the invasive alien species (IAS) that are the problem. In addition to fish, IAS include plants, animals, pathogens and other organisms that are non-native to an ecosystem which may cause economic or environmental harm or adversely affect human health.

In particular, they impact adversely on biodiversity, including a decline or elimination of native species – through competition, predation, or transmission of pathogens – and the disruption of local ecosystems and ecosystem functions.

An *Action Plan for Aquatic Invasive Alien Species* was released by the DoF in 2007, and a sequel was published in 2014 by the Department of Agriculture to include plants and animals.

Both were well-balanced pieces of work. The view advanced was not to ban aquatic IAS outright but to have risk assessments and to evaluate the benefits associ-

ated with their use and regulate their movement appropriately.

The 2014 National Action Plan had four strategies:

**Strengthen** legal framework in relation to IAS prevention, detection and monitoring, eradication, containment and control;

**Intensify** capacity building for the implementation of the action plan;

**Enhance** research and development of IAS; and,

**Increase** public awareness of IAS. These suggestions are sound and reasonable. But they need solid government support, adequate funding and increased manpower. It’s time to put more energy into protecting our native species.

The writer was the founding chair of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services and recipient of the MIDORI Prize for Biodiversity 2018

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