# Bioinvasion and Global Environmental Governance: The Transnational Policy Network on Invasive Alien Species

## Vietnam's Action on IAS

## **Description**<sup>3</sup>

Vietnam, formally known as the Socialist Republic of Vietnam, is located in the eastern edge of indo-china, along the Pacific, bordering China to the north and Cambodia and Laos to its west. The mainland coastline stretches 3,444 km and the country claims 12 nautical miles of sea as part of its territory.

Vietnam attained its independence formally on the 2<sup>nd</sup> of September 1945, after World War II but only managed to drive the French out nine years later. Its communist government controlled the South for two years after the US withdrew. Since 1986, however, the Vietnamese government has gradually liberalized the economy through a variety of reforms. Its present population consists of over 86 million.

The country's main trading partners are Japan, China, the United States and Singapore. Its main imports are machinery, petroleum products, fertilizer, steel products, raw cotton, grain, cement and motorcycles. Its export industry revolves around crude oil, marine products, rice, coffee, rubber, tea, garments and shoes. Vietnam is also a member of the ASEAN free trade agreement, the US-Vietnam bilateral trade agreement

#### **Overview of Biodiversity**

Vietnam has 15 terrestrial eco-regions and sub-eco-regions and 3 marine eco-regions. Among the "200 Global Eco-regions," five are priority eco-regions. Ecosystems range from mountain to lowland, river basins, lakes, coastal lagoons, ocean and islands. Wetlands are found in many parts of the country but mainly in the Mekong and Hong river deltas. Coral reefs are scattered from northern to southern coast of the country, but more abundant in the south.

- Convention on Biological Diversity: Country Profile
- Earth Trends Country Profile on Biodiversity and Protected Areas

## Legislation relating to IAS

- Ordinance on Plant Protection and Quarantine (2001)<sup>2</sup>
- Resolution No. 41/NQ-TW (2004) on environmental protection in the period of accelerated national industrialization and modernization<sup>2</sup>
- Ordinance on Veterinary (1993)<sup>2</sup>
- Government Decree No. 58/2002/ND-CP guiding the implementation of the Plant Protection Quarantine Ordinance<sup>2</sup>
- <u>Decision no. 117/2000/QD-BNN-BVTV</u> promulgating the Socialist Republic of Vietnam's list of objects subject to plant quarantine.
- <u>Decision No. 84/2002/QD-BNN</u> issuing the regulation on state management over activities of disinfection vaporization of articles liable to plant quarantine

## Government Agencies/Programs dealing with IAS

- Ministry of Agriculture and Rural Development
  - o Directory of Provincial Departments of Agriculture and Rural Development
  - o Plant Protection Department
  - Forest Protection Department
- Ministry of Fisheries
- Ministry of Natural Resources and Environment
  - Vietnam Environment Administration

# **Major Invasive Alien Species**<sup>1, 2 & 4</sup>

Cinnamomum camphora (tree)Lantana camaraGambusia affinis (fish)Myocastor coypusKappaphycus spp. (algae)Panicum repens (grass)

<u>Mimosa pigra</u> (shrub) <u>Pomacea canaliculata</u> (mollusc)

Pomacea canaliculata(mollusc)Trogoderma granariumEichhornia crassipes(aquatic plant)Urochloa maxima(grass)

## Native Species Exported/Introduced to Non-Native Environments<sup>4</sup>

<u>Channa marulius</u> (fish) <u>Pycnonotus jocosus</u> (bird)

<u>Commelina benghalensis</u> (herb) <u>Rhodomyrtus tomentosa</u> (tree, shrub) <u>Ligustrum sinense</u> (tree, shrub) <u>Rubus moluccanus</u> (vine, climber, shrub)

<u>Melastoma candidum</u> (shrub) <u>Trapa natans</u> (aquatic plant)

# Table 1 Action to prevent, detect and manage invasive alien species based on three areas: biodiversity, human health, and economic

Note: Many actions including projects, publications and programs that fit into one area may also fit the dimensions of another; where available project links and funding (in brackets) is provided.

Area	Action		
Biodiversity	• The Fourth Country Report to the CBD states the investigation, assessment and intervention activities for managing and preventing harmful invasive alien species have been taken in consideration. Furthermore, the report summarizes the effects of the introduction of new species on native flora: The introduction of new species, especially those hybrid ones with high productivity, has led to decrease in both area and gene sources of native plants. This action has impoverished native gene sources, and several cropping gene were regretfully lost. For instance, in the period 1998-1999, in Krong No district of Dak Lak province 15 indigenous rice species were found losing (including 6 sticky rice species and 9 ordinary rice species) among 73 rice species locally recorded. Basically, over the past 20 years, many invasive alien species such as yellow snail (Pomacea caniculata), coypu (Myocastor coypus), khapra beetle		

- (*Trogoderma granarium*), giant mimosa (*Mimosa pigra*) have been introduced and caused serious damages and attracted attention from public, scientists and managers. (see Table 8 Area and loss of indigenous species in 1970-1999)<sup>1</sup>
- The Ministry of Fishery (2005) announced a list of 41 harmful invasive aquatic species (33 fish species and 8 other species) with classified groups: White-9 species (stranger species without negative effects to native aquatic biodiversity and traditional aquaculture); Grey-18 species (stranger species with uncertainty of negative effects on aquatic biodiversity and traditional aquaculture and thus continuous monitoring required); and Black-14 species (stranger species with harmful effects on aquatic biodiversity and traditional aquaculture and need to be strictly managed at farms and killed in natural aquatic areas). <sup>1</sup>
- The <u>National Action Plan on Biodiversity</u> (decision no. 79/2007/QD-TTg) of Vietnam includes:
  - 4. (Mechanisms to ensure the) Sustainable use of biological resources:
  - d/ Strictly control and management of invasive alien species:
  - To monitor, evaluate and prevent invasive alien species;
  - To investigate and collect data on invasive alien species;
  - To adopt and carry out strategies on prevention and control of invasive alien species and handling of incidents caused by invasive alien species.
  - IV. Organization of Implementation
  - 1. Activities of the Ministry of Natural Resources and Environment includes, *inter alia*, to create a plan to prevent and control invasive alien species.<sup>5</sup>
- In the report "Threatened and alien species in Vietnam," Pilgrim and Duc Tu write "Although several invasive alien species have been identified in Vietnam as causing severe negative impacts to biodiversity, and significant economic costs, very little has been done to control them... In the Mekong Delta, M. pigra stems are used as fuel wood, and experiments are also showing success in the use of young stems for goat food, and in M. pigra biomass as a mushroom growing medium. Likewise, in recent years, Eighhornia crassipes has begun to be used for purposes such as manure production, production of ethanol, and artistic weaving material. Unfortunately, creating economic value for these invasive species may ultimately create a disincentive to eradication. If economic uses cannot be found, the government has sometimes just mobilized enormous numbers of the public to help control invasive species. A program in the 1990s collected hundreds of tones of *Pomacea* canaliculata and their eggs and then provided training courses for farmers on integrated management to control this species..."<sup>2</sup>

Human health

• Resolution No. 41/NQ-TW "on environmental protection in the

	period of promoting industrialization and modernization, in which a task given to prevent invasion of IAS and GMOs which cause negative impacts to human(s) and the environment." <sup>2</sup>
Economic	<ul> <li>Fourth Country Report to the CBD states the Agriculture and Fishery sectors have released examination procedures for imported plants and animals before bringing into large scale production.<sup>1</sup></li> <li>Plant Protection Department responsible for approving imports of invasive species. Quarantine checks can occur pre-border, border, and post-entry.</li> <li>Ordinance on Veterinary (1993) "article 1 regulates 'prevention and protection measures [against] animal diseases [including] quarantine of animals and their products".<sup>2</sup></li> <li>Government Decree No. 58/2002/ND-CP includes regulations on protection, quarantine of plants, and management of medicines for plant protection "in whicharticle 16 regulates 'strict prohibition of any introduction of quarantined plants and alive alien species to Vietnam expect scientific purposes with permission given by Minister of Agriculture and Rural Development'; article 13 regulates 'strict prohibition of import of those animals and their products and others which listed in import-ban'".<sup>2</sup></li> <li>Ordinance on Plant Protection and Quarantine (2001)<sup>2</sup></li> <li>Article 1 Plant protection and quarantine as referred to in this Ordinance include those activities relating to the prevention and management of injurious pests, plant quarantine and pesticide management.</li> <li>Article 27 It is strictly prohibited to bring into Vietnam or distribute within the country the following items:         <ol> <li>Pests included in the plant quarantine pest list;</li> <li>Novel injurious organisms; and</li> </ol> </li> <li>Soil infected with injurious pests.<sup>2</sup></li> </ul>

Table 2 Action on IAS in cooperation with other countries

Bilateral agreement/	Countries/	Action
Organization	Member	
ASEAN Center for	(at formation)	Workshop in Viet Nam to discuss management of
<b>Biodiversity</b> (ACB)	Brunei	<u>invasive alien species</u> (December 2008)
	Darussalam,	The two-day workshop will gather experts from the
	Cambodia,	United Nations Environment Programme, World
	Indonesia, Lao	Conservation Union, Food and Agriculture
	PDR, Malaysia,	Organization, and ACB to provide an overview of
	Myanmar, the	the global status of invasive alien species, discuss
	Philippines,	agriculture invasive alien species management, and
	Thailand,	introduce a national framework for the management
	Singapore and	of these species. Resource persons from Cambodia,

## Vietnam Indonesia, the Philippines, and Viet Nam will also present their respective country's reports on how they manage invasive alien species. The joint workshop between the ASEAN Center for Biodiversity and the Ministry of Natural Resources and Environment seeks to enhance the capability of ASEAN Member States to protect the environment against invasive alien species. "Among the capacity needs which have to be addressed include: developing capacity for the prevention of entry and control of invasive alien species; developing and strengthening national policies, laws and regulations pertaining to invasive alien species management; sharing of lessons based on scientific research and monitoring; promoting business opportunities to utilize invasive alien species; communication, education and public awareness; and inclusion of invasive alien species concerns in regional trade agreements," Director Fuentes explained. ACB Supports Biodiversity Research in ASEAN **Region** (2009) The ACB has announced that it will support eleven research projects under its Joint Research/Initiatives on Biodiversity programme, established to support worthy biodiversity research initiatives from Southeast Asian-based research, academic, non-government, and government institutions and agencies. Proposals approved for implementation in Viet Nam are: Research on Scientific Bases for Establishment of a Regional Master Plan for Biodiversity Monitoring; Proposal for Research on Policy, Legal and Institutional Framework of Protected Areas; Study on Scientific Social and Economic Bases and Policy for Establishing the Transboundary Protected Area Complex among Viet Nam, Lao PDR, and Cambodia; and Research on Solutions to Control the Spread of *Mimosa* pigra in Viet Nam and ASEAN Countries. Asia-Pacific Forest The APFISN has been established as a response to Australia. **Invasive Species** Bangladesh, the immense costs and dangers posed by invasive Network (APFISN) Bhutan, species to the sustainable management of forests in

Cambodia, China, Fiji, India, Indonesia, Japan, Republic of Korea, Laos, Malaysia, Maldives, Mongolia, Myanmar, Nepal, New Zealand, Papua New Guinea, Philippines, Samoa, Solomon Islands, Sri Lanka, Thailand, Timor-Leste, Tonga, USA, Vanuatu, and Vietnam

the Asia-Pacific region. It is a cooperative alliance of 32 member countries of the Asia-Pacific Forestry Commission (APFC). The network operates under the umbrella of APFC which is a statutory body of the Food and Agricultural Organization of the United Nations. The APFISN focuses on inter-country cooperation that helps to detect, prevent, monitor, eradicate and/or control forest invasive species in the Asia-Pacific region.

#### What does APFISN do?

- Raises awareness of FIS throughout the Asia-Pacific region
- Exchanges and shares information on FIS among member countries
- Facilitates access to technical expertise, research results and training and education opportunities
- Strengthens capacities of member countries to conduct research, manage FIS and prevent new incursions
- Develop strategies for regional cooperation and collaboration in combating threats posed by FIS

Vietnam has yet to submit a country report.

#### **Case Studies**

An overview of two invasive species and national response in Viet Nam<sup>6</sup>

Duong Minh Tu

#### **Summary**

The Government of Viet Nam has adopted the new revised text of the International Plant Protection Convention and its mandate for invasive species is discussed briefly. Two invasive species, golden apple snail and the khapra beetle, are described and national response to counter the threat of invasives is elaborated. Proposals to address the problem are suggested.

#### References

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