



VIETNAM

National Report on the Management of Invasive Alien Species

Background

Vietnam's commitment to conserve and protect biodiversity dates back well before the government ratified the Convention on Biological Diversity (CBD) in 1994 and adopted a Biodiversity Action Plan (BAP) in 1995. The declaration of the first national park in 1962 and the National Conservation Strategy (1985) and the National Plan for Environment and Sustainable Development (1991), were the foundations for the development of the BAP (Sulma Warne and Tran Lien Phong *In: Biodiversity Planning in Asia: Vietnam* www.icem.com.au/bioplan/vietnam.pdf).

Today, an impressive number of priority projects found in the BAP has been completed or is being implemented. The BAP has succeeded in putting biodiversity on the national agenda and heightening awareness of the values of biodiversity resources. Accordingly however, the BAP must now be updated and its implementation strengthened within the umbrella of the new National Strategy for Environmental Protection 2001-2010 (Sulma Warne and Tran Lien Phong *In: Biodiversity Planning in Asia: Vietnam* www.icem.com.au/bioplan/vietnam.pdf).

Key Threats to Biodiversity

The key threats to biodiversity in Vietnam include agricultural encroachment, wildlife trade, hunting/fishing, NTFP collection, logging and subsequent erosion, alien invasive species, forest fires and pollution. (Sulma Warne and Tran Lien Phong *In: Biodiversity Planning in Asia: Vietnam* www.icem.com.au/bioplan/vietnam.pdf)

Aside from the degradation of terrestrial, wetland and marine ecosystems due to industrial developments among other causes, an increasing number of plant and animal species are under threat because of uncontrolled wildlife trade, alien invasive species, and unsustainable harvesting of non-timber forest products.

Coupled with this is that the existing legislative and institutional frameworks are weak and the roles

and responsibilities of line ministries involved in the conservation of biodiversity have not yet been clearly defined. There are no appropriate mechanisms to effectively coordinate biodiversity conservation activities, particularly between line ministries, and between government and international conservation organisations and donors. (Sulma Warne and Tran Lien Phong *In: Biodiversity Planning in Asia: Vietnam* www.icem.com.au/bioplan/vietnam.pdf)

Major Alien Species Identified as Harmful, Invasive or Pests and their impacts

1) Golden apple snail (*Pomacea* sp.)

The Golden apple snail (GAS) was introduced in Vietnam in 1988 through many pathways without undergoing quarantine. Since its introduction, the apple snail was considered a rich protein food for fish and duck, thus its culture was

encouraged from the South to the North. In 1992, two golden apple snail farms were established in the country - one in Kien Giang province, and the other in Ho Chi Ming City - as a joint venture between Vietnam and Taiwan. The aim was to culture the golden apple snail on a large scale for export to Taiwan. Unfortunately, a large number of snails escaped from the culture ponds, and found their way into others ponds, trenches, and ricefields nearby. When the floods came, the snail spread more rapidly into the delta region of the Mekong River.

Ten years after its introduction, the apple snail has found its way in 57 of the 61 provinces of the country, and in 1997 has affected more than 132,000 hectares of ricefields, ponds, lakes and trenches.

The GAS has greatly affected the crops as it has:

- Reduced seedling density; reseeding has to be done two or three times per crop season;
- Increased the use of pesticides and the cost for pest control;
- Reduced the income of farmers; and
- Affected the tourism industry.





Golden apple snail

www.appleinail.net



Mimosa plant

The Kyoto Shimbun Co., Ltd.

- 2) Yellow meal worm beetle (*Tenebrio molitor* L.)
- 3) Ho mang chua (*Ophiphagus hannah*)
- 4) Haily (*Myocaster coypus*)
- 5) Mimosa plant (*Mimosa pigra* L.). Mimosa is not an alien plant but it is restricted in Vietnam, and drifted from Cambodia following the Mekong River.

Programmes and Management Efforts on Invasive Species

- The Plant Protection Department of the Ministry of Agriculture and Development has included in its training programme for farmers the Integrated Pest Management (IPM) in rice to help control the spread of the snail and other pests. This programme has now expanded to the Mekong River delta in the South of Vietnam.
- The Prime Minister issued two decisions prohibiting the culture, trade and movement of the GAS, and a standing committee was created to control the golden apple snail at both the Central and provincial levels.
- Two national programmes for controlling GAS were carried out from 1994-1995 with the attendance of pupils, farmers, women, students

and soldiers.

- The most useful method for controlling GAS is handpicking them. Other methods used were botanical insecticides; using fishes and ducks to control GAS; and also chemicals.
- Some 2,684 Farmer Field Schools (FFS) on Integrated Pest Management (IPM) in rice have been organised nationwide and more than 182,000 farmers trained on how to recognise the GAS, how to distinguish its characteristics, and how to control the infestation in rice fields, ponds, lakes, and trenches.
- Another project, which was funded by FAO, was on the Integrated Snail Management of rice in Vietnam, wherein farmers were trained on the IPM of the snail; this included the study and transfer of the techniques on using fish to control the golden snail.
- The National Plant Protection Institute of MARD is studying the use of biological agents for controlling the mimosa plant: The NIPP is implementing a project using the biological agent (*Calosobruchus quadritatus*) for controlling mimosa plant (*Mimosa pigra* L.) at Nam Cat Tien National Park in Dong Nai province).
- Thu Duc University of Agriculture and Forestry and the Queensland Department of Primary Industry Study have also conducted a study to control mimosa plant (*Mimosa pigra* L.) at Tram Chim National Park in Dong Thap province. The project is facing difficulties because seeds of mimosa drift annually from Cambodia to Vietnam thru the Mekong River.
- The Mushroom Thien Tan Ltd. Company and the Department of Agricultural and Forestry Extension under the MARD, conducted an evaluation project in Hanoi on the farming of haily (*Myocaster coypus*), which was imported from China. At the end of 2002, after having more information on the high risk potential of *Myocaster coypus* to agricultural production and other sections, the Minister of MARD decided to eradicate haily by prohibiting its culture, import, and transport in the whole country. ■

*Excerpts from the paper entitled "National Report on the Management of Invasive Alien Species in Vietnam" presented by **Duong Minh Tu** and **Pham Dinh Viet Hong** during the Workshop on the Prevention and Management of Invasive Alien Species: Forging Cooperation through South and Southeast Asia, held on 14-16 August 2002 in Bangkok, Thailand.

Other Source:

Sulma Warne and Tran Lien Phong In: Biodiversity Planning in Asia: Vietnam www.icem.com.au/bioplan/vietnam.pdf