Managing Biosecurity Threats

Submitted by: Viet Nam
MANAGING BIOSECURITY THREATS in Viet Nam

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Introduction

Invasive alien species are serious threats to biosecurity of each economy in particular and the whole world in general. They threaten indigenous species by competing for food, encroaching on domicile, spreading diseases over indigenous organism species, including animals, plants and human. They damage crops, lose ecological environment ‘s balance, exercise negative influence on biodiversity at national level, international level. Many nations of the world had to spend a lot of money and more effort on preventing and exterminating when the invasive alien species invade their territory.

Vietnam, a country is situated in South East of Asia with more than 3,700 kilometers of land border and nearly 3,200 kilometers of coastline and its neighbouring countries are China, Laos, Cambodia, but up to now, having no report that assessed adequately on alien species. Especially, newly introduced species are still having a small quantity. Nevertheless, they are having a latent risk of breaking out to cause great disasters of agricultural production and ecological environmental disaster.

However, in the past period, my economy also had mistake lessons from invade alien species, which bring about bad effects to environment, economy and community health. I would like to report some typical
**Some typical Invasive Alien Species in Vietnam**

1/ **Golden apple snail (pomacea):**

   This species originates from South America to be entered Vietnam from 1975 with a small number. It begins to become a serious problem from 1989. By 1995, it has caused a lot of serious damages to agricultural production and ecological environment. The total areas of crop are infested to reach 15,305 hectare. Thousands of rice crop hectare are completely destroyed.

   The golden apple snail disaster has directly threatened to assure security for national food program.

   The sending on golden apple snail annihilating campaign comes to hundreds of billion VN $ong. FAO has given a support to Vietnam US $ 250,000 for this campaign.

   Now, golden apple snail is in being with a small quantity under integrated pest management (IPM) and they almost have been managing to break out.

2/ **Mimosa pigra:**

   The origin of mimosa pigra from the Tropical America region. They entered Vietnam from 1981. They are shrub species sprouting density with many hard prickles. The damaging effects of them are to make vegetational cover changing, adverse effect to fauna where they invaded. Very few other crops can grow in the shade of mimosa pigra and almost not animal can use them to eat. They obstructed traffic and activity of livestock.

   Now, they appear everywhere, especially The National Tram Chim Garden, A famous conserving zone of Vietnam. There, they transgress pasture of Eleocharis spp. that are important foods of the red head crane (Grus antigone sharpii) and it is a precious rare bird of Vietnam and the world. This is a grave threat to this bird. Furthermore, the red head crane is one of the objects of attracting tourist from domestic and foreign country. The invading of mimosa has been indirectly influenced by source of revenue from tourist. Every year, the local government has to spend hundreds of million Vietnam dong on preventing and exterminating them.
3/ *Eichhornia crassipes* (water hyacinth):

This invasive Alien species originated from Central America and South America. Water hyacinth was introduced into Vietnam in 1992 and up to now, they have been become a kind of crop commonly all the country. The damaging effect on waterway, obstructed irrigational system, increasing irrigation cost. They shade sunlight infiltrate into the water and reduce oxygen dissolved concentration leading to change composition of water plants and bring about changing population structure of animals and plants. The carrion of water hyacinth when disintegrating causes an infected water supply.

4/ *Myocastor coypus*:

This invasive alien species originated from south America at the end of the 20\textsuperscript{th} century. They were introduced into Vietnam with economic purpose. They were fed to test at some cities in Vietnam as Hanoi, Hochiminh, Daclac. However, as timely discover their potential harms to agricultural dyke system and people healthy. Mard has promulgated a decision to destroy the whole *myocastor coypus* through out country.

5/ *Tenebrio molitor*:

In 1996, this invasive alien species was introduced into to Vietnam by unofficial way with purpose of food birds. Only in short time, they were discovered and right away Plant Protection Department, an office belonging to MARD has combined with organizations which has responsibility for killing them timely.

6/ *Lantana camera* :

This species originated from Central America. They were introduced into Vietnam from the beginning of the 20\textsuperscript{th} century for the ornamental plant. Now, they are occurred everywhere the whole country. They burns easily and to be regenerated quickly after burning to transgress many other crops. Although, they have not caused any losses but in future they will become an implicit threat.
Management invasive Alien species organizations system of Viet Nam

1/ Ministry of Agriculture and Rural Development:
   a. Plant Protection Department
   b. Agriculture Department
   c. Department of Animal Health
2/ Ministry of Resources and Environment:
   Include: Organizations of manage Environment
   Organizations of manage Biodiversity
3/ Ministry of Aquicultue:
   Include: Organizations of quarantine aquatic product
4/ General Customs Department.

Viet Nam promulgate legal documents for managing invasive alien species

1/ Decree of plant protection and quarantine – 2001:
   Article 1, prescribe: "Degree include prevention and control of pests harmful to vegetation resources, plant quarantine"
   Decree also prescribe:
   Article 15: "Entrust minister of Agriculture and Rural development decide to declare list of plant quarantine subjects of socialist Republic of Vietnam."
   Article 27: "Every offence introduce or spread. Strange pest into Vietnam or among areas in economy is strictly prohibited."
2/ Decree of veterinary 1993:
   Article 1, prescribe: "Degree include methods prevention and control of epidemic diseases to animals, animal quarantine and animal product."
3/ The laws of Protection Environment 1994;
4/ Ordinance of government No 58/2002/ND-CP
   - Including Regulation on Plant Quarantine, Plant Protection and Pesticide
5/ Decision 58/2001/QD-BNN-Minister of Agriculture and Rural Development
   - Promulgate list of plant varieties, livestock is allowed import and is prohibited import.
**Suggestions:**

1/ Building a common strategy of APEC to cope with invasive alien species.

2/ Enhancing human resource development of risk assess and search for invasive alien species of member economy.

3/ Cooperation, sharing information experiences and knowledge together with risk analytic tool based on science and bring explicit and suitable for phytosanitary methods by SPS agreement of WTO.

4/ Building main principle to diagnose and determine, search for invasive Alien species.

*Thank you!*