

THEIR BIODIVERSITY AND MANAGEMENT
IN THE PHILIPPINES

Tackling the Issue on Alien Invasive Species

► By **REXIE JANE PARREÑO**

Whether these are called alien invasive or invasive alien species, these undesired organisms have to be managed properly. Thus the Philippines' Department of Environment and Natural Resources (DENR) led national scientists, environment officers and decision makers in formulating and recommending approaches and possible policies on how to properly manage them during the Workshop on the Biodiversity and Management of Alien Invasive Species in the Philippines.

The ASEAN Regional Centre for Biodiversity Conservation (ARCBC) sponsored the workshop, which aimed to: a) identify and assess their effects on biodiversity in the Philippines; b) identify issues and concerns regarding these species; c) identify and discuss existing policies/regulation and quarantine laws pertaining

to these species; and d) recommend management approaches/possible policies to regulate them.

"The only way we could manage the alien invasive species is by understanding their characteristics and the processes involved in the invasions. Legislation and regulations to restrict the movement of unwanted organisms are very important," DENR Secretary Heherson T. Alvarez said in his keynote address read by DENR Undersecretary Demetrio L. Ignacio, Jr. during the Seminar-Workshop held from 22-23 May 2001.

Secretary Alvarez identified the detrimental effects as "displacement or destruction of indigenous species, pollution of gene pool, loss of species diversity, disruption of energy and nutrient cycling, increased production costs as they may require high input, and so forth."

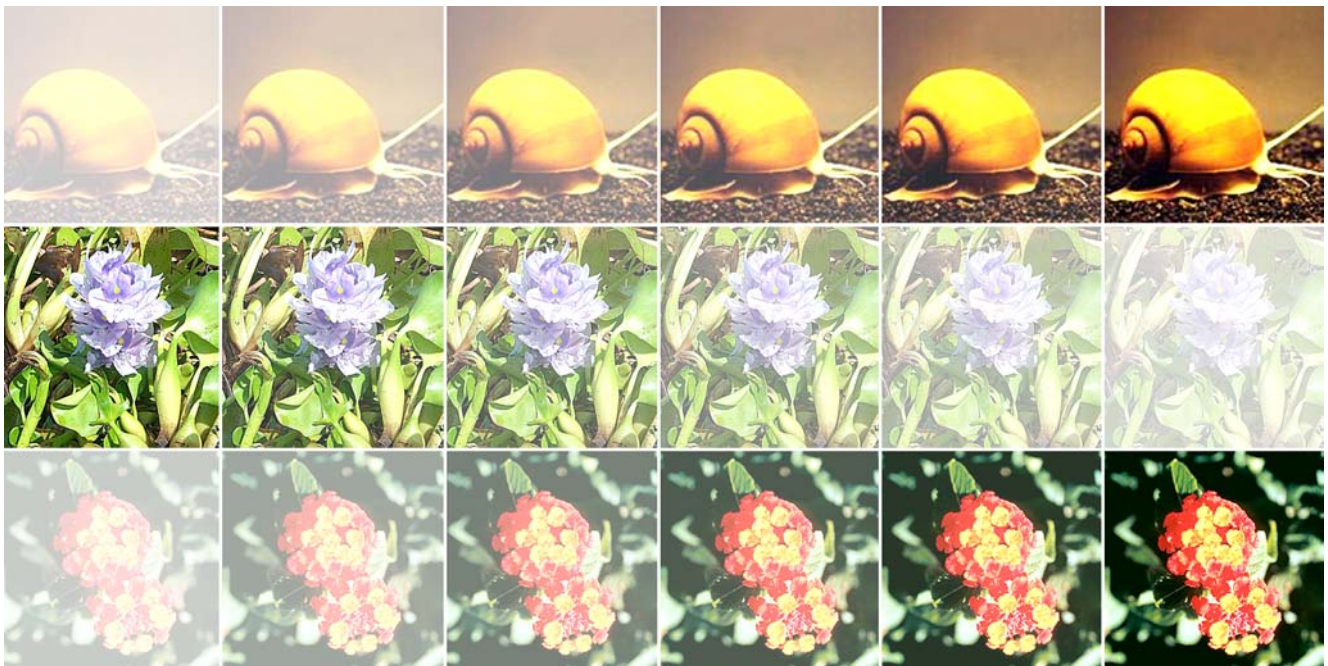
According to the Convention on Biological Diversity (CBD), "Invasive

alien species are species introduced deliberately or unintentionally outside their natural habitats where they have the ability to establish themselves, invade, outcompete natives and take over the new environments." Parties to the CBD are expected to "prevent the introduction of, control or eradicate those alien species, which threaten ecosystems, habitats, or species" (Article 8h of CBD).

Some of the invasive species introduced into Philippine waters and those others considered under the "watch list" were the Thai catfish (*Clarias batrachus*), golden apple snail (*Pomacea canaliculata*), African catfish or janitor fish (*Clarias gariepinus*), white goby (*Glossogobius giurus*) and eleotrid (*Hyseleotris*).

For instance in 1999, the golden apple snail infested 11% of the irrigated rice fields in the Philippines, displacing the native kuhol (*Pila luzonica*). The species was brought in from the United States in 1980 as a source of animal protein for humans and livelihood. The Thai catfish introduced in 1972 also displaced the native *Clarias macrocephalus* (Guerrero 2001).

In the forestry sector, plantations grow several introduced tree species



such as *Gmelina arborea*, *Acacia mangium*, *Paraserianthes falcataria*, *Swietenia macrophylla*, and *Acacia auriculiformis*. Some species like *G. arborea* and *A. mangium* have become hosts to damaging insects, *Attacus sp.* and *Anoplophora luciphor*, respectively (San Valentin, 2001).

A highly invasive species in the grassland ecosystem is hagonoy (*Chromolaena odorata*), which originated from Mexico, West Indies and Tropical America during World War II. This species is the most threatening plant in the Philippine grasslands, according to Dr. Leonardo M. Florece of the School of Environmental Science and Management, one of the resource speakers. He said that it can outgrow forage species, thereby cutting down the feeds available for livestock; its profuse lateral branches reduce the photosynthetic activity of grasses and eliminates other existing species. Total damage cost of the species is about 21 million pesos (about US\$ 420,000) annually.

Dr. John R. MacKinnon, a British scientist, reported on several major disasters such as introductions of American squirrels to the United Kingdom, British rabbits to Australia, Tamarix and Melaleuca bushes to the United States, all of which caused several billion dollars of damage.

For some economic reasons and other interests, people introduce alien species into new habitats, not being aware of their adverse effects. This has prompted Secretary Alvarez to point out: "There is a relatively low effort made for educating the public about the economic and ecological damage that can result from biotic introductions."

Resource persons were Dr. Theresa Mundita Lim (PAWB-DENR), Dr. Adelina Santos-Borja (Laguna Lake Development Authority), Dr. Rafael Guerrero (Philippine Council for Aquatic and Marine Research and Development), Mr. Horacio San

Valentin (Ecosystems Research and Development Bureau or ERDB) and Dr. Leonardo Florece (School of Environmental Science and Management-UPLB).

Over a hundred participants from various government and non-government offices, DENR, civil society groups and academic institutions joined the seminar-workshop. They formed into workshop groups and identified issues and concerns on the four ecosystems: freshwater, forest, grassland and agricultural. They also identified the direct causes for these problems as well as the existing policies that ought to solve these. The gaps and weaknesses (if any) relevant to these

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policies that call for enhancement were also given details. From here, the participants formulated their recommendations and action plans.

Their major recommendations are summarized as follows:

- Conduct pilot test before introducing alien species to determine their beneficial and invasive attributes.
- Enforce rigid inspection and quarantine regulations to prevent uncontrolled transfer of pests when importing logs and reforestation species.
- Monitor identified alien species invasive to indigenous and endemic species.
- Monitor developments relevant to "altered species" (genetically modified organisms or GMOs).
- Use of "invasive alien species"

instead of "alien invasive species".

- Mobilize inter-agency effort through task forces involving the DENR, Department of Agriculture, NGOs, other government agencies, communities, private entities and other related agencies.
- Improve existing policies and other regulations related to invasive alien species and formulate new policies.
- Enhance public awareness and encourage advocacy campaigns by making people understand the impact of such species and involving them in action plans.
- Conduct more researches on invasive alien species and disseminate results to the public and other appropriate bodies.
- Establish a baseline data on endemic/indigenous and alien species.

Before the workshop closed, Director Texon informed the participants that the proceedings including the recommendations and agreements will be forwarded to the Philippine Council for Sustainable Development through the relevant sub-committee, the House of Representatives through the Committee on Biodiversity and to the Office of the DENR Secretary through Undersecretary Ignacio.

The seminar-workshop was organized by ARCBC in collaboration with the Protected Areas and Wildlife Bureau of the DENR last 22-23 May in Quezon City, Philippines.

It was also held in celebration of the International Day for Biological Diversity, which is 22 May, the date the text of the Convention on Biological Diversity was adopted. This year's theme is "Biodiversity and management of alien invasive species". ■