



Siam weed (*Chromolaena odorata*)

## Invasive Alien Species: Keeping intruders out

Photo by Saiful Bachri

Invasive alien species (IAS) continue to demonstrate impacts both on land and water habitats, imposing heavy costs in control and management. They continue to spread with the influence of the changing climate. The ASEAN Member States (AMS) have identified and listed key IAS affecting forests, agriculture, and aquatic ecosystems, as part of their actions to meet the requirements of Aichi Biodiversity Target 9. However, pathways of introduction have yet to be comprehensively documented.

In the Regional Workshop on Classical Biological Control of Invasive Alien Species jointly organized by the Centre for Agriculture and Biosciences International (CABI) and the ASEAN Centre for Biodiversity (ACB) in September 2014, four priority forest IAS were identified as requiring interventions



Under Aichi Biodiversity Target 9 of the CBD's Strategic Plan for Biodiversity 2011–2020, Parties are working to ensure that “by 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated and measures are in place to manage pathways to prevent their introduction and establishment.”

based on the consensus of nine AMS represented during the workshop. These are Siam weed (*Chromolaena odorata*), catclaw mimosa (*Mimosa pigra*), water hyacinth (*Eichhornia crassipes*), and mile-a-minute vine (*Mikania micrantha*)—all high-impacting and fast-spreading invasive species. The AMS also identified the golden apple snail (*Pomacea canaliculata*) as a priority IAS because of its significant impact in the agricultural sector.



Water hyacinth (*Eichhornia crassipes*)

Photo by Ruben Mojares





Mile-a-minute vine (*Mikania micrantha*)

Photo by Arne Witt

## What has been done?

All AMS are managing and controlling priority IAS, either manually or through the use of appropriate chemicals. The Integrated Pest Management (IPM) approach is also being applied particularly for IAS affecting the agriculture sector (e.g., the golden apple snail).

Cambodia, Indonesia, and the Philippines, have drafted their National Invasive Species Strategy and Action Plans (NISSAPs). Malaysia operationalized its National Action Plan for Prevention, Eradication, Containment, and Control of IAS in 2008. Thailand has established a list of IAS and developed national IAS control measures. In Viet Nam, a strong legal regulation system on import and export of biological materials is in place.

The Southeast Asian Ministers of Education Organization Regional Centre for Tropical Biology (SEAMEO-BIOTROP) regularly conducts a regional training course on IAS management to boost the knowledge and capacity of researchers, scientists, and technical personnel. In 2014, SEAMEO-BIOTROP and the United Nations Food and Agriculture Organization (UN-FAO) co-organized a Regional Seminar-Workshop on Harmonizing Approaches to Risk Assessment and Management of Forest Invasive Alien Plant Species in Southeast Asia where the participants called for a more harmonized and effective risk analysis of

forest invasive alien plant species, including the development of a region-wide long-term and short-term capacity building program; development of programs addressing gaps in risk analysis of forest invasive alien plant species; and mainstreaming IAS information, including/such as incorporating the threats posed by IAS, in the school curricula.

The United Nations Environment Programme Global Environment Facility - Centre for Agriculture and Biosciences International (UNEP - GEF-CABI) Regional Project on Removing Barriers to Invasive Species Management in Production and Protection Forests in SEA (FORIS) was implemented in Cambodia, Indonesia, the Philippines, and Viet Nam, with other stakeholders in the region, including ACB. The project's overall goal was to conserve important forests, species, and genetic diversity. Through this project, a webpage on IAS in the ASEAN region was developed. The IAS page can be accessed at <http://chm.aseanbiodiversity.org/invasivealienspecies/>





Catclaw mimosa (*Mimosa pigra*)

Photo by Prens

## Call for Action

1. **Establish an ASEAN regional program to address invasive alien species.** The regional program will enhance and highlight models of IAS management that are most effective in AMS, focusing on the key/priority IAS earlier identified and build the capacity of agencies and personnel in charge of such species.
2. **Conduct in-depth research on priority IAS.** An in-depth research, survey, identification, and analysis of the priority IAS in the region, including their pathways of introduction and early detection, should be conducted. Cost-effective eradication programs, including research on and testing of new control technologies, should be implemented. Comprehensive research on introduction pathways should be mainstreamed in government and private policies and action. Project research proposals should be developed to address the gaps in the state of knowledge regarding IAS, including the gaps in risk analysis.
3. **Analyze other regional IAS regulations, policies, and protocols.** The implications of other regional policies on IAS, such as EU Regulation 1143/2014 on invasive alien species, which entered into force on 1 January 2015, should be analyzed as these will mainly affect ongoing efforts to manage IAS, and may have implications on ASEAN trade relations. A regional IAS strategy that includes protocols to abate the spread of their establishment is necessary. This translates to implementation of stricter quarantine border control measures.
4. **Conduct IAS taxonomic work through a network of experts and continuous exchange of information.** Taxonomic information is necessary for agencies and border authorities to detect, manage, and control invasive alien species. Networking and sharing of experiences, information, and expertise facilitate early detection and identification of IAS, and the development of less expensive and more effective prevention, control, and management measures.
5. **Raise awareness and expand public education campaigns and information sharing platforms on IAS.** IAS occurrences, pathways, and impacts, and other related information should be published in print and digital formats. Existing regional and global IAS networks and databases should be reviewed to enhance knowledge sharing and understanding of international and regional trends.

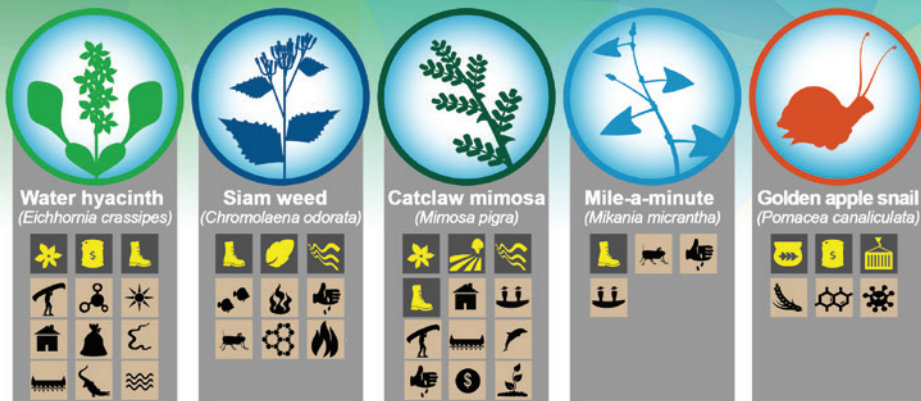
### Reference

ASEAN Centre for Biodiversity (2017). ASEAN Biodiversity Outlook 2. Philippines. (220 pages)

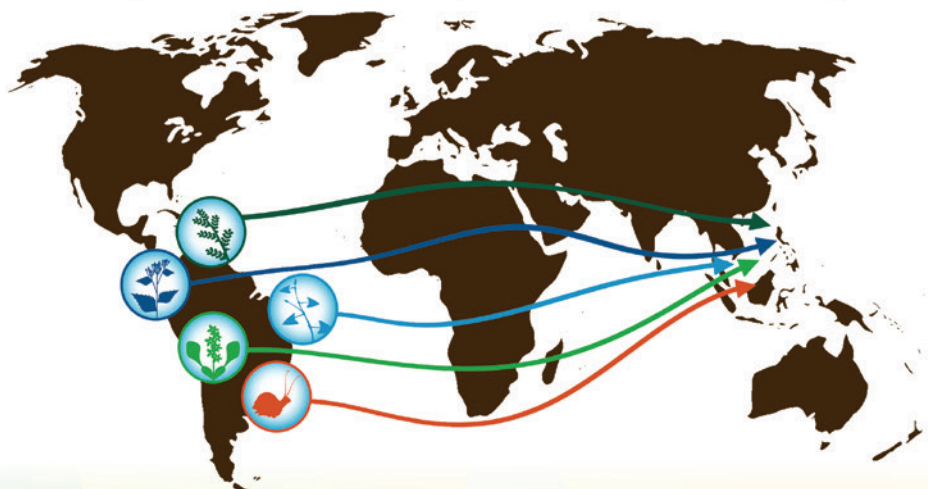
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## Top 5 Invasive Alien Species in the ASEAN Region



### Common Pathways of IAS



### Impacts of IAS



## Ways Forward

