Banko Janakari

A Journal of Forestry Information for Nepal

Invasive Alien Species: A Menace to Biodiversity

Convention on Biological Diversity (CBD) has recognized the threat to indigenous species and ecosystems caused by Invasive Alien Species (IAS). In this connection, the Conference of Parties to the CBD has urged its parties to strengthen the guiding principles for the prevention, introduction and mitigation of the impacts of alien species.

Global Biodiversity Outlook 3 has also clearly indicated alien species as one of the five principal pressures that have threatened the world's biodiversity. IAS has become an issue of high concern on the international and national agenda because of its profound impacts on native biodiversity, people and economy. IAS has been recognized worldwide as a direct driver of biodiversity loss. Today, no habitat is free from the threat posed by the IAS menace.

Meanwhile, both the frequency of invasive species incursions and the intensity of the impacts have increased to a phenomenal and unprecedented level, causing loss of valuable species. IAS has drawn increasing international and national attention in recent decades, as managing it continues to be more and more challenging.

In Asia and the Pacific region, the Asia-Pacific Forest Invasive Species Network (APFISN) was established under the aegis of the Food and Agriculture Organization of the United Nations (FAO) as a response to curtail the immense costs and dangers posed by invasive species in the sustainable management of the region's forests. Department of Forest Research and Survey (DFRS) serves as the focal institution of APFISN in Nepal.

In Nepal, hundreds of IAS has been introduced wittingly or unwittingly during the last 50 years. At present, they have spread all over the country, occurring in various ecosystems. Although, Nepal Biodiversity Strategy (2002) has recognized the threats posed by IAS, the related Nepal Biodiveristy Strategy Implementation Plan (2006-2010) failed to specify any programmes on IAS. Today, Nepal has been hard hit by outbreaks of some IAS specially the *Mikania micrantha*, *Parthenium hysterophorus*, *Chromolaena odorata*, *Ageratina adenophora*, *Lantana camara* and *Eichhornia crassipes.* The wildlife as well as the protected areas has suffered disproportionately from invasive species. *Mikania* has gravely invaded the Koshi Tappu Wildlife Reserve and Chitwan National Park of Nepal. Some nationally important wetlands have been seriously affected by *Eichhornia*.

IAS cause serious impediments to conservation and the sustainable use of biological diversity, and generate significant negative impacts on goods and services provided by ecosystems. From

management perspective, it is essential to prioritize IAS damages and identify the sensitive and vulnerable areas affected by IAS. Mechanical, chemical and biological measures can be used to control IAS and their spread. However, selection of the most suitable strategy may require in-depth research, careful planning and detailed monitoring.

In the face of enormous impacts that can result from IAS, relatively meager efforts have been made till date in Nepal. The country still lacks proper policy direction on IAS. Although, the Plant Protection Act and Plant Protection Regulation provide some regulatory mechanisms for managing IAS. There is a need of coordination among the stakeholders: particularly among the Department of Agriculture, the National Plant Protection Organization, and the DFRS. At present, there is a lack of a comprehensive or coordinated survey and monitoring mechanism to properly document or catalogue IAS in Nepal. The present knowledge on IAS is inadequate to deal with the monumental magnitude of the issue.

DFRS, as a focal point of APFISN Nepal, has recently prepared an Action Plan on IAS management and presented in the APFISN workshop held between 6 and11 November 2011 in Beijing, China. The first phase of the Three -Year Action Plan includes activities like preparing IAS strategy, surveying distribution, intensity and impacts of IAS, and establishing national level network among the concerned stakeholders. The second phase includes activities like organizing a regional level interaction programme, training for the concerned professionals and organizing awareness programme at local level.