Invasive species have been identified by the Chief of the U.S. Department of Agriculture Forest Service as one of the four significant threats to our Nation’s forest and rangeland ecosystems.

Control and Management

The Forest Service currently has programs for control and management of invasive species in terrestrial and aquatic ecosystems. Many of these activities are accomplished with partners across jurisdictional boundaries.

We identify and prioritize which invasive species will be controlled and managed and we strive to effectively implement management plans to do so. When invasive species become established as free-living populations in an ecosystem, a strategic approach for control is required to minimize their impacts or reduce their spread. Effective control relies on a clear understanding of the target species including its biology, the ecosystem it has infested, and associated introduction pathways and effective tools. It also relies on persistent follow-through with monitoring of treatment efforts. Forest Service control and management activities are founded on integrated pest management principles that may include a combination of physical or mechanical, biological, cultural, and chemical techniques. This integrated approach also includes assessments of risk, identification of thresholds for action, and planning to reach the most desired outcome. Tools developed by Forest Service and partners support our control and management activities. In addition, the Forest Service works collaboratively with domestic and international partners to identify potential new techniques and biological control agents for invasive species control and management.

Restoration and Rehabilitation

The Forest Service is striving to restore or rehabilitate degraded areas to their proper ecological functions. The agency is implementing actions to prevent and respond to invasive species issues and to provide benefits to the public. Their efforts reduce invasive species impacts and improve ecosystem function by enhancing biodiversity.

Water hyacinth is a free-floating aquatic plant that has invaded aquatic areas throughout the United States. Plants can grow to 3 ft. in height. The very showy blue-purple flowers are born on upright spikes. Each flower has six petals with the uppermost having a yellow patch. Water hyacinth invades lakes, ponds, rivers, marshes, and other types of wetland habitats. It reproduces chiefly by vegetative means and can quickly form dense floating mats of vegetation (populations can double in size in two weeks!). These dense mats restrict light to the underwater environment, reduce the light availability for submerged plants and aquatic invertebrates, and deplete the oxygen levels. Water hyacinth is native to South America.

Japanese Climbing Fern (Above and Right).

Eurasian watermilfoil (Above) is recently introduced and spreading. Threatens native game fish and aquatic habitat.

Deep rooted sedge (Cyperus eriensis), a native of South America, has recently become a serious pest in the coastal plain of the southeastern United States. First reported in the United States in 1990, this aggressive weed is now well established in disturbed areas in Texas, Louisiana, Mississippi, Alabama, Georgia, and Florida. Flooding, construction equipment, moving, and soil moving activities, especially across highways, spread these tiny seeds, resulting in infestations in new areas. Currently deep rooted sedge is beginning to displace native vegetation even in undisturbed habitats, and without widespread control it will likely continue to spread rapidly, infesting agricultural, forested, riparian, and urban areas.

Deep rooted sedge (Cyperus eriensis) (Above).

Plant. Deciduous tree to 60 feet (18 m) in height and 3 feet (90 cm) in diameter, with heart-shaped leaves, dangling yellowish spikes in spring yielding small clusters of three-lobed fruit that split to reveal popcon-like seeds in fall and winter.

Ecology. Invades stream banks, riverbanks, and wet areas like ditches as well as upland sites. Thrives in both freshwater and saline soils. Shade tolerant, flood tolerant, and allelopathic. Increasing widely through ornamental plantings. Spreading by bird- and water-dispersed seeds and colonizing by pother surface root sprouts.

Deep rooted sedge (Cyperus eriensis) (Above).

Water hyacinth (Above Right).

Deep rooted sedge (Cyperus eriensis) (Above).