

**POTENTIAL PENETRATION OF EXOTIC
AQUATIC PLANTS TO NATURAL
ENVIRONMENT THROUGH ORNAMENTAL
PLANT INDUSTRY**

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ABSTARCT

Plant Protection Regulations of Sri Lanka prohibit the import of any aquatic plant. However, many exotic aquatic species have been introduced to different aquatic environments and has a vast potential for further introduction. Present study was conducted to evaluate the invasion risk of exotic aquatic plant species due to ornamental aquatic plant industry. Information on exotic aquatic plant species which are currently exported, amounts of exports and major exporters were obtained from the National Plant Quarantine Service of Sri Lanka. Nurseries of four leading exporters were selected and visited. Complete list of plant species exported by the companies was compiled. A field survey was performed in aquatic and semi-aquatic habitats in an area having 1km radius from selected nurseries to understand whether any species has escaped from the nurseries. Snapshots and the GPS data of the escaped species were taken. The five species having the highest demand in the export market were selected from the export data and a pre-entry invasion risk analysis was conducted. Finally, optimum environmental conditions required for successful establishment of high and very high risk species were mapped in relation to geo-climatic data of Sri Lanka using ArcGIS 10.1. *Echinodorus argentinensis*, *Mayaca sellowiana*, *Ceratophyllum demersum*, *Hydrilla verticillata*, *Hydrocotyle verticillata*, *Micranthemum umbrosum*, *Echinodorus grandiflorus*, *Echinodorus decumbens* and *Alternanthera sessilis* were detected vicinity of some nurseries which provided evidence that the plants were escaped from the nurseries. Results of the pre-entry risk analysis revealed that *Hygrophila difformis* is highly invasive, *Hydrocotyle leucocephala* and *Lilaeopsis brasiliensis* are moderately invasive while *Echinodorus bleheri* and *E. argentinensis* are with relatively low invasion risk. The overall results will support in policy decisions and regulation amendments on imports of aquatic plant species to Sri Lanka.