

# Overview of the Aquatic Plant Industry and Future Research Needs

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## Abstract

The aquatic plant export industry related to the aquarium trade is a newly developed export industry with a potential for expansion. Presently there are 17 plant exporters and approximately 70% of the naturally occurring indigenous aquatic plant species in Sri Lanka are being used in the industry as well as exotic plant species imported for culture and re-export. The number of aquatic plant culturists however is limited to less than 25 and therefore the cultured stocks are not sufficient to meet the demand resulting in wild collection for export even though regulations restrict such activities.

Most endemic and threatened species are collected from the wild for export and therefore it is necessary to introduce techniques for propagation and production of good quality plants so that the pressure on the environment is reduced.

A survey carried out during 2001-2003 in two districts showed that some endemic species are morphologically similar depending on some environmental factors and rare species may resemble a more common species resulting in misidentification by collectors and threatening their natural existence. Presently there are 9 threatened endemic species and 2 threatened indigenous species used in the export trade.

Culture methods used by exporters are mainly vegetative and collection of vegetative parts from the wild regularly also pose a threat to the wild stocks. Although some species can be propagated successfully through seeds, the exporters and culturists are reluctant to do so as wild collection is much easier and less expensive. However experiments have shown that seed propagation could produce better quality plants.

Among the other threats to aquatic plants noted during field surveys, upstream activities including siltation, sand mining, use of detergents, nutrient enrichment, fouling organisms and spread of exotic species need to be controlled in addition to wild collection for commercial purposes.

Further research is needed to develop better technology and low cost methods for propagation and identification of other exportable species. It is also necessary to determine the distribution and colour variations as well as other natural characteristics that could add more value to the product. Development of tissue culture techniques, improved health management, increased growth rate, control of pests and epiphytes, and genetic improvement and development of new strains could also benefit the industry.

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