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Main forces in managing invasive alien species in Sri Lanka: an analysis of existing literature

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The spread of Invasive Alien Species (IAS) has a tremendous impact on the sustainability of ecosystem services. It affects a country in many ways, mainly in economic, social, and environmental dimensions. As far as Sri Lanka is concerned, control and eradication of IAS is still a high priority in managing and protecting biodiversity. It is evident that the controlling and monitoring programmes implemented have not achieved the intended outcome of reducing the impact on endemic and native species. Therefore, this research suggests a novel way of identifying and managing the threats from IAS to endemic species, so that controlling the IAS below the harmful level is achievable. The model developed by adopting Porter's Five Forces model in the area of business management identifies the forces that have an impact on the 'rivalry' between IAS and endemic and native species. This model will be beneficial for policy makers in developing a mechanism for managing IAS. The study took into consideration significant research carried out locally and overseas, and investigated common determinants that help to manage the IAS, to keep their impact under economically and environmentally harmful levels. The main forces identified, that affect the spread and damage creation, are intentional entry, unintentional entry, ecological suitability, community awareness, and managing and controlling mechanisms by the government. The paper evaluated the usual methods applied to manage the IAS in Sri Lanka and suggested possible policy improvements and technically viable remediation as solutions for the problem. The effective methods suggested are policy based instruments (subsidies and taxes), enhancement of monitoring and fines, community enforcements, and application of mobile technology for identification.

Key words: IAS, awareness, community enforcement