

(70)

## Floristic survey in three natural habitats along the southern expressway in Sri Lanka

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### Abstract

Southern transport development project (STDP) is one of the major road development activity implemented by the government of Sri Lanka with the final goal of increase of gross domestic production (GDP) of the country.

The entire project area from Kottawa to Godagama is located in the wet zone of Sri Lanka where the species diversity and endemism are very high. An attempt was made to study the natural vegetation along the expressway with the objectives of assessment of tree flora of natural and semi natural habitats in order to describe the vegetation in terms of their structure and composition and the human disturbances associated with the vegetation.

A systematic study of the vegetation by using transect method along the expressway was carried out in three representative sampling sites; at Kanana – a natural forest (denoted as site – A), Ranthotuwila – a riverine vegetation (denoted as site – B) and Panape – a marshland (denoted as site – C). Direct field observations and interviews with villagers and relevant other personals were carried out to find human disturbances on vegetation. Shannon – Wiener index of diversity and important value index (IVI) were used to assess the vegetation. Profile diagrams were drawn to show the structure of vegetation.

There were 50 tree species belong to 45 genera and 29 families found in site – A. Twenty three of them are endemic. Thirteen are threatened species. Therefore the site has a greater conservation value and requires protection to safeguard the viability of the habitat. The site – B consists of 5 true mangrove species including one endangered species, 2 other mangrove associates and 2 invasive species. Presence of 2 invasive species and severe anthropogenic activities in the site are the major threat to the existence of vegetation. Adoption of a proper management plan and strict implementation of existing rules and regulations to protect the site from human disturbances are essential for the protection of vegetation. Site – C dominated by 10 herbaceous species belong to 10 genera and 7 families. Investigations are required to identify the possible threats to the vegetation with the long term operation of the expressway especially due to the new exposure of the area.

**Key words:** Southern expressway, Sri Lanka, floristic survey