

Ecology of Dry forests of Sri Lanka: Implications for the Conservation Management of Northernmost Dry Forests

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Abstract: This study assesses some floristic and physiognomic features and threats prevailing in dry forests at three localities: Bandaraketiya in Victoria-Randenigala-Rantambe sanctuary (in Badulla District), Bundala National Park (in Hambanthota District) and Manewakanda (in Anuradhapura District) and compare these with the situation in a dry forest in the Kilinochchi District to prescribe conservation and management guidelines for northernmost dry forests of the country. The density of individuals, the number of strata in the vegetation profile, species composition and the endemic and threatened plant species present in four forests were not comparable. These may be artefacts of their physical location and subsequent variations in the climate and the nature of disturbances (the type, frequency and magnitude). However, some climax forest species appear to be more site-specific but most of the early seral species show a wide distribution throughout the whole dry zone of the country. Severe and frequent disturbances in dry forests result in the formation of *plagioclimaxes* locally known as “scrub jungles” through deflected succession. Selective logging and subsequent severe grazing and browsing prevent the re-establishment of native climax tree species but pave the path for invasive species to occupy in forests. Therefore, floristically rich northernmost dry forests of Sri Lanka should be protected from selective logging and other anthropogenic activities such as clearance and cattle ranching. Policies should be formulated to conserve these unique dry forests and to prevent conversion, fragmentation and illegal human activities in them. Measures should be taken to introduce ecotourism industry to the area while conserving the forests and their biodiversity. Promoting to grow native dry forest timber tree species in home gardens of local villagers together with some fodder and fuel wood tree species would be beneficial in protecting the northern dry forests on the long run.

Keywords: Conservation, Disturbances, Dry Forest, Floristic and Physiognomic features, Sri Lanka