



ASSOCIATION FOR TROPICAL BIOLOGY AND CONSERVATION Asia Pacific Conference

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10-13 September 2019
MAS ATHENA, THULHIRIYA, SRI LANKA

PROCEEDINGS



Can Assisted Natural Regeneration increase forest cover in Sri Lanka?

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Vegetation cover in the wet zone of Sri Lanka is decreasing since the colonial period mainly because of the introduction of plantation crops such as coffee, tea and rubber. Apart from that shifting, slash and burn and illegal felling of valuable timber trees have degraded several thousand hectares of dry zone vegetation. Presently, 1.14% of lands are being deforested annually. As a result the current percentage forest cover in Sri Lanka has come down to 29.7%. Restoring the degraded lands to their natural conditions with dominant primary forest species is a challenge and a difficult task. Soil seed bank is generally rich in native seeds but light-demanding and fast growing early pioneer species and alien invasive plants suppress the regeneration of native, late successional tree species. Therefore, the restoration of degraded forests using established common methods, including natural regeneration, is very challenging. To overcome this challenge, artificial regeneration methods can be initiated. Artificial regeneration is a technique of enrichment planting or replanting and is widely practiced in Sri Lanka albeit with a limited number of available species to convert degraded land to woodland. One of the adverse effects of this kind of strategy is the deliberate introduction of exotic plants that can even become invasive. Assisted natural regeneration (ANR) is a successful method to re-establish forest cover in deforested lands. This method allows natural seedlings to established and mature. It over comes obstacles which are generated by natural regeneration and artificial regeneration. NIFS- Popham Arboretum in Dambulla is the one of the woodlands found in Sri Lanka developed by ANR. About 36 acres of degraded land now has been converted in to dense woodland over a period of about 20 years. Interestingly this land has now been occupied by over 369 plant species belongs to 89 families and this forest now habitat for 25 species of mammals, 83 species of birds (with migrants) and 77 butterfly species. This successful method of restoration can be initiated to increase forest cover in any area if the necessary support is extended by the relevant authorities.

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