AN ADAPTIVE MANAGEMENT APPROCAH TO CONTROL SPREAD OF INVASIVE ALIEN SPECIES IN BUNDALA RAMSAR WETLAND IN SRI LANKA

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Habitat degradation due to invasive plant species is identified as one of the major threats in several protected areas managed by Department of Wildlife Conservation in Sri Lanka. Bundala National Park, covering an area of 6216 ha is located about 250 km Southeast of Colombo ($06^0$08' – $06^0$14' N, $81^0$08' – $81^0$18'). The Bundala National Park is Sri Lanka's first Wetland of International importance declared under the Ramsar Convention. The park consists of mainly dry thorny scrubland and lagoons, which are shallow brackish water lagoons. They harbours a rich bird life including several species of migratory waterfowls. It also contains key nesting sites for five species of marine turtles. Arid and semiarid terrestrial habitats shelter a wide range of species, including elephants and other mammals, reptiles, amphibians and fish species. The introduced *Prosopis julifolia,* a tree species native to Central and South America as a fuel wood in home gardens by the Forest Department has expanded its distribution and has invaded the Bundala National Park. There are large stands of *Prosopis julifolia* that prevents the growth of other indigenous species. Furthermore it invades the lagoon and as a result the area covered by the lagoon is also being reduced. *Opuntia stricta var. dillenii,* which is also a plant native to Central America, is used mainly as a hedge species around human dwellings and from there it may have invaded wetland habitats in Bundala National Park.

The spread of these invasive alien plant species has resulted in the progressive deterioration of wildlife habitats and native biodiversity in the park, and hence warranting immediate management to curtail their spread. The general methodology adopted for the invasive plant management programme in Sri Lanka is based on adaptive management techniques. Adaptive management is a process that involves planning, management and monitoring to provide a framework for testing assumptions, adaptation and learning. Invasive species were eradicated manually and mechanically. Lack of a planned systematic research programme to compile field observations in areas subjected to invasive plant management is a major constraint. In addition, views of non-scientific public and lack of funds for adaptive management techniques are the major constraints