

CONSERVATION OF FRESHWATER FISH BIODIVERSITY IN SRI LANKA.

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ABSTRACT

Freshwater environments of Sri Lanka support a rich biodiversity of ichthyofauna. Of the 88 indigenous species of freshwater fish recorded, about 43% are endemic to Sri Lanka. Some 80% of the endemic species are found only in streams and rivers. About 31% of the endemic species are considered to be endangered or vulnerable. Most of the endangered species have restricted habitat distributions and are confined to one drainage basin. Only 16% of the stream dwelling endemic species are considered to be common in their abundance.

The biodiversity of freshwater fish in Sri Lanka is threatened due to a complex of interrelated anthropogenic activities. These include habitat degradation caused by deforestation, gem mining, urbanization, siltation and pollution. Use of destructive fishing methods such as dynamiting and poisoning, over-exploitation and selective harvesting for aquarium fish trade, damming of rivers, introduction of exotic food fishes, poverty of the people and desire of the rich for more wealth are the other major factors that threaten freshwater fish biodiversity of Sri Lanka.

For a successful conservation, it is necessary to educate the public on the importance of biodiversity for the ecological stability of natural ecosystems. Community participation in conservation procedures, proper management of protected areas and mitigation of pollution are also required.

INTRODUCTION

Biological diversity, the variety among organisms and the ecological complexes in which they occur, is a product of millions of years of evolution. It sustains human societies by providing food, shelter and medicine. In addition, biodiversity contributes to the regulation of climate and recycling of nutrients, which are important for the survival of the human species in the earth ecosystem (Anon. 1987, Anon. 1991).

At present, however, biological diversity is threatened due to anthropogenic activities such as large scale clearing and burning of forests, over-harvesting of plants and animals, indiscriminate use of pesticides, draining and filling of wetlands, destructive fishing practices, pollution and conversion of wildlands to agricultural and urban uses (McNeely *et al.* 1990).

Much attention is paid today to the conservation of biological diversity of the earth's ecosystems. Since the tropics contain large number of species that could be lost, conservation biology has focussed mainly on this region (Wilson 1988). In the tropics, rainforest ecosystems have received much attention due to their rich biological diversity