

Session I – Biodiversity Conservation and Management

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**Community based conservation as a tool to conserve freshwater fish in Sri Lanka:
Evidence from *Puntius bandula* conservation programme****T. B. S. Muthunayake^{*1}, R. L. H. R. Wickramasinghe², U. R. Wickramasinghe³, Sampath De A. Goonatilake⁴, A. Padmaperuma³, R. A. A. R. Ranatunge¹ and D. K. Weerakoon¹**¹Department of Zoology, University of Colombo, Sri Lanka.²Bio diversity Secretariat, Ministry of Environment, Sri Lanka.³Field Ornithology Group of Sri Lanka, University of Colombo, Sri Lanka.⁴IUCN – Sri Lanka Office.

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Abstract

Puntius bandula is an endemic fish restricted to two unprotected small streams at Galapitamada. The streams are surrounded by habitats subjected to frequent anthropogenic threats such as destruction of floral assemblages of the catchment and stream banks, releasing of agrochemicals, fertilizers and kitchen waste, artificial constructions of the stream bank, narrowing of the stream and collapsing of the stream bank due to expanding paddy cultivations and illegal collection of fish by unauthorized parties. The population size of *P. bandula* has declined rapidly during the past two decades making it a Critically Endangered species. The main aim of this programme was to ensure long term survival of this species through a participatory conservation approach. First, a standardized questionnaire survey was done to determine the degree of awareness, the willingness of the community to conserve *P. bandula*, obtain a profile of the community and to introduce the objectives of the programme. Further, awareness was raised in the community through presentations and discussions held at monthly community meetings. An environment protection committee was established and an action plan was drawn up. Under this; two community awareness workshops, transect walk, school environment programmes and monthly community meetings were conducted. Further, several communication tools such as calendars, a brochure, a time table, powerpoint presentations, video clips and sign boards were produced. The degree of awareness of the community was increased up to 85% after the awareness programme from 54%. Also a tree planting campaign was conducted with the community to enhance the habitat of *P. bandula*. Finally a small stock of adult *P. bandula* (15 females and 5 males) was translocated to a new locality as a participatory approach to establish a second population and 10 adults and 7 fry were observed in the new locality three months after the translocation. It can be concluded that, this approach is useful in conserving endemic freshwater fish species in Sri Lanka by minimizing threats via self awareness, since most of them are located outside of the protected area net work and subjected to anthropogenic threats.

Key words: *Puntius bandula*, community based conservation