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Effect of mismanagement of minor-perennial tank, Uduwela reservoir, Narammala, towards fish production

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Sri Lanka has the highest density of freshwater resources compared to its land area in the world i.e. over 250 000 ha which means that 1/25 of it is covered with water. Majority of these resources consist of seasonal and perennial reservoirs which are man-made.

A fish stocking programme of these reservoirs has been effected from 1951. Carp is considered as one of the most suitable species for these water bodies. It is mandatory to stock carp fingerlings at 1-2 fish/m^2 rate annually and in order to achieve higher survival rate they should be stocked in a rational way. Present study was carried out to determine the factors that had been affecting the sustainable management of a minor perennial tank, Udawela reservoir Narammala. Past research revealed that total fish carp fingerlings had been stocked into this reservoir is only once during the past five years and total had been only 2000. This shows that only 0.5% of the total requirement has been stocked. As a result only 24.4kg monthly production was recorded from January to May 2007. 9% of *Channa striatus* and 5% of *Clarias brachisoma* were in the catch. Since all these fish are carnivorous, the need to stock healthy carp fingerlings at higher stocking densities is hereby stressed. 74% *Oreochromis mossabicus* is the major species that was caught from the reservoir. Only 12% of the introduced carp fish by weight were in the catch.

Although the carp harvest was low due to the act that the stocking was low , result show that this reservoir can be efficiently use for stocking of carp. A theoretical estimate of 7 500 kg annually could be easily harvested through proper management. Management can be achieved, the establishment of a co-management system with a carp based fishery and the development of a reservoir cove for the continuous stocking of carp fingerlings would be essential for sustainable development of these minor-perennial reservoirs.

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