

## THE HYDROBIOLOGY AND FISH PRODUCTION POTENTIAL OF MAJOR FRESHWATER RESERVOIRS IN HAMBANTOTA DISTRICT SRI LANKA

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Hambantota district with an area of about 2563 km<sup>2</sup> is sparsely populated and is mostly occupied by a rural population. Because of the very unfavourable climate existing over most parts of the district, irrigation has played an important role since ancient times. Numerous ancient irrigation works dot the district, most of them now abandoned. In the recent times large reservoirs have been constructed for the development of agriculture in the intermediate zone such as Muruthawela reservoir and new irrigation schemes have commenced with the construction of Lunugamwehera reservoir to develop agriculture in the arid zone areas.

These irrigation schemes have now made available large (perennial) and small (mainly seasonal) expanses of water for agricultural development which could also be profitably used for production of fish to provide the much needed proteins for the rural population of the densely populated areas (Costa 1979). There are only a few studies available in Sri Lanka on Limnological

studies associated with fish production. Hydrobiology and fish production potential in water bodies in Sri Lanka have been studied by Costa and Liyanage (1978), Wijeyaratne and Costa (1981) Wijeyaratne and Amarasinghe (1987) and Amarasinghe *et al.* (1983).

The present study was undertaken to get some detailed information about the hydrobiological conditions existing in the major reservoirs of the Hambantota district and to assess the fish production potential

Information about these are necessary for the proper management of fisheries in these reservoirs.

The present study was carried out over a period of one year. The reservoirs studied are; Udukiriwela wewa, Muruthawela wewa, Ridiyagama wewa, Badagiriya wewa, Wirawila wewa, Tissa wewa and Yodakandiya wewa.

The surface area and capacity of water at full supply level of the reservoirs are given in Table 1.

Table 1. Morphometric data of the reservoirs studied (From "Register of irrigation projects in Sri Lanka")

Tank	Area at full supply level (ha)	Volume at full supply level (x 10 <sup>6</sup> m <sup>3</sup> )
Udukiriwela	261.00	3.92
Muruthawela	517.00	43.98
Ridiyagama	881.53	26.60
Badagiriya	477.90	11.07
Wirawila	615.72	14.36
Tissa	282.79	4.29
Yodakandiya	601.68	10.24

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