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## Lessons learnt from 10-years of co-management in Lake Malombe, Malawi, Africa and their applicability to Sri Lanka's perennial reservoirs

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## Abstract

The development of the fishery in Lake Malombe (14°30′-14°45′S; 35°12′-35°20′ E) in Malawi is typical of many cichlid dominated fisheries in Africa. As a consequence of a high mean annual water temperature (26.5°C), large nutrient input from a highly populated catchment and a shallow maximum depth (7 m), the lake with the extent of 390 km<sup>2</sup> is highly productive with historic annual fish yields of 12,000 MT having been recorded. Since the inception of a fisheries monitoring programme in 1976, the fishery has changed considerably, not only in terms of total catch, but also in gear utilisation and species composition. Annual catch from the lake declined from more than 12,000 MT in the 1980s to less than 5,000 MT in the 1990s. Initially, gillnets were the dominant gear in the fishery and were used to harvest large Oreochromis (Nyasalapia) species. As a consequence of excessive fishing effort and the introduction of a small-meshed purse seine in the mid 1980's the annual Oreochromis catch declined from 9,000 MT to less than 200 MT. The decline in Oreochromis catch was initially compensated for by an increased harvest of small haplochromine cichlids in the purse seine fishery, but by the early 1990s this fishery also began to show signs of overexploitation. The collapse of the Oreochromis stocks illustrated that top-down fisheries management had failed to ensure sustainable utilisation of this fishery. In response to this, a participatory fisheries management approach was initiated in 1993 by the Malawi Government. This approach was supported by German bilateral assistance through two GTZ-supported projects which together, resulted in the implementation of fisheries co-management for a 10-year period. Project interventions included the development of a new fisheries policy that provided the legal framework for co-management; the initiation of group-formation processes to establish management committees; extensive extension and research activities to support co-management and the development of management plans for the fishery. During the 10-year implementation period, the project needed to be adapted to the local situation and numerous changes were necessary for the implementation strategy. This paper assesses the 10-year GTZsupported implementation period on Lake Malombe to provide a case study of fisheries co-management in Africa. The paper also investigates the root causes for the decline in the fishery in the lake and discusses the experiences gained and lessons-learnt from Lake Malombe with particular reference to the management of reservoir fisheries in Sri Lanka.