

**D-07 : THE IMPACT OF THE WEIRS ACROSS WAK-OYA, A MAIN
TRIBUTORY OF KELANI RIVER ON THE STREAM
AND ITS FISH FAUNA**

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Wak-oya is a main tributary of Kelani River originating from lowland rain forests of South-western ichthyological provinces of Sri Lanka. The two weirs at Labugama and Kalatuwawa have interrupted the flow regime of the stream and isolated the feeding canals of upper reaches. These changes together with contamination from water-purification plants, rubber factories and illegal gem mining on the stream bed have imposed stress on fish and other aquatic fauna. The aim of this study was to evaluate the impact of these factors on fish fauna.

Sampling was carried out once a month from Jan. 1990 to Aug. 1992. Stations A-W extending from head end to tail end were sampled for fish using cast net. pH, conductivity, temperature and dissolved ions were also monitored. Variations along the Wak-oya in diversity, distribution and abundance of fish and water quality parameters were estimated.

There are 24 species of fish 16 of which are Cyprinids and 4 are endangered and endemic. 4 species dominate the stream and the two reservoirs. Just below the weirs the diversity and the abundance of fish is greatly reduced and gradually increased downstream. The concentration of dissolved ions increased downstream while that of oxygen decreased.

The impoundment of streams without fish ladders or tail - water discharges adversely affect the downstream flow of the stream and its fauna. The Cyprinids which are migratory within the region for spawning also affected. Downstream of weirs the flow regime and colonization of stream is mainly due to the other feeding canals.