

**D-08 : AN ASSESSMENT OF THE IMPACT OF KUKULE GANGA (A
BRANCH OF KALUGANGA) DIVERSION ON ITS AQUATIC FAUNA**

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The purpose of this study was to assess the impact of the proposed diversion of the Kukule Ganga by the Kukule-Kukule route on aquatic fauna. The study was conducted from October 1991 to June 1992. Aquatic fauna was sampled fortnightly. Tributeries of Kukule Ganga and Pelang Ganga were sampled at 24 selected stations. Fish samples were collected using cast and scoop nets, other aquatic fauna according to Laglar (1956).

There are 16 species of fish, five species of insect nymphs, three species of freshwater prawns, two species of molluscs and two species of eels in the region. Some of the species of fish are threatened and endemic to Sri Lanka. Further, eels such as *Anguilla bicolor bicolor*, *A. nebulosa nebulosa* and *Macrobrachium sp* migrate to the

sea and lagoon for spawning. Species such as *Puntius nigrofasciatus*, *P.pleurotenia*, *P.sarana*, *Danio aequipinnatus* and *P. vittatus* migrate from river to tributeries for spawning. Head ends of six major tributeries that sustain above species of fish would be inundated, thus riverine species of fish would be affected. Some of the above species of fish also feed on aquatic insect nymphs. Therefore, the natural ecological balance in the region would be disturbed. A part of Kukule Ganga, from weir to water outfall would be dry during dry seasons. Thus the aquatic fauna in the above region would be lost. Therefore, a minimum of $1.45 \text{ m}^3/\text{s}$ of water should be released during the dry seasons in order to sustain downstream aquatic life. The flow of the water in the tunnel would be $48 \text{ m}^3/\text{s}$ and it would disturb the fauna at the water outfall. Fish mortality due to turbines could be prevented by erecting slats, screening and constructing fish bypasses near the turbines. A contour type fish pass (= ladder) could help migratory fish and other animals.

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