

IMPACT OF CLIMATE CHANGE

BIODIVERSITY & ENVIRONMENT

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Impact of Climate Change Biodiversity and Environment

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Chapter 11

Diversity and Distribution of Ephemeroptera Larvae in the Post-Monsoon Season from Achenkovil River, Kerala

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A study on the diversity and distribution of the order Ephemeroptera, benthic macro fauna of Achenkovil River, Kerala was conducted from October 2018 to January 2019 in nine sampling stations along the river to evaluate the water quality of the river using Biotic Index Value. Traditionally, the assessment of river water quality has been based mainly on physical, chemical, and some biological characteristics. A small group of biological ecosystem level indicators can assess river condition. The river Achenkovil rises south of Devarmalai in the Western Ghats in the Pathanamthitta district at an elevation of 700 m. The macro-benthos in the post-monsoon season was collected between 6-12 hours using van Veen grab. The sediment samples were washed through three sets of sieves having mesh sizes 2 mm, 1 mm, and 0.5 mm. Retained sediments were collected. From the result, it is clear that Epimerophtherans dominated the upstream region with rich biodiversity. Many species coming under the family like Baetidae, Caenidae, and Heptageniidae were identified. The rich diversity in the upstream indicates good water quality. The decrease in diversity towards the downstream end has indicated its deteriorated water quality.