

**ASSESSMENT OF KALU RIVER BASIN WATER QUALITY
BASED ON THE WATER QUALITY INDEX**



BY

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ABSTRACT

This study aimed to assess the water quality of the Kalu Ganga Basin using the Water Quality Index (WQI) method. Water samples were collected from three different locations within the basin, and various physicochemical parameters such as pH, Turbidity, and Biological Oxygen Demand (BOD), Electrical conductivity (EC), Dissolved Oxygen (DO), Ammonia, Total Alkalinity, Total Hardness, Chemical Oxygen Demand (COD), Total Iron, Sulphate, Nitrate were measured. The WQI was calculated using the weighted arithmetic mean method, and the results were analyzed using descriptive statistics.

The results showed that the WQI values varied across the three locations, with the highest mean value recorded at kandana (118.7), followed by Ilimba (98.38) and Raw Kalu ganga (72.41). The study revealed that the water quality in the Kalu Ganga Basin was below the good water quality, as all WQI values fell within the “good” and “poor” category. However, the study identified some areas for improvement, particularly in the Raw Kalu Ganga area, which had a lower WQI value compared to the other two locations. The results can be used in policy and decision-making regarding water resource management and conservation efforts in the area.

Key words: CEA standard, Electrical Conductivity, Kalu Ganga, Water Quality Index.

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