

Seasonal Variations in Water Quality of Four Stations in the Periyar River Basins

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Studies were conducted to evaluate the quality of water at four stations of the river Periyar with a view to utilise them for drinking purposes. These stations include Kanakkankadavu, Purappallikavu, Pathalam and Manjummal, which are in Ernakulam District, Kerala, India. In the study, nutrient elements like Fe, Mn, Cu, and Zn were detected occasionally and found well below the maximum permissible limits. Mercury and lead were detected in the months of January and March of the sampling period at Kanakkankadavu. Trace levels of As, Se, Cr and Cd were detected in some samples during the particular months of the study period. Significantly higher levels of magnesium and calcium were detected during the summer season. The hydrographic data revealed that all the sources have acidic pH, turbidity, low salinity during monsoon and nitrate, sulphate and hardness were higher during the summer months. Kanakkankadavu and Purappallikavu had extreme salinity and the presence of certain toxic metals during the summer months while at other stations these were found well below the limits. The results that these water sources could be utilized for meeting the growing demands of drinking water for Cochin City after introducing certain water quality management measures.