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ANALYSIS OF PHYSICO-CHEMICAL PARAMETERS OF KINNERASANI RESERVOIR WATER IN BHADRADRI KOTHAGUDEM DISTRICT OF TELANGANA, INDIA

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AUTHORS' CONTRIBUTIONS

This work was carried out in collaboration between both authors. Author GSK designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Author GR managed the analyses of the study and the literature searches. Both authors read and approved the final manuscript.

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ABSTRACT

The water quality parameters such as Temperature, pH, Dissolved oxygen, Alkalinity, hardness, Phosphates and Nitrates were reported from Kinnerasani reservoir. The degree of water quality parameters was measured by the simple correlation coefficient (r) that is presented as correlation matrix. The pH has been found to show positive correlation with water temperature (r=0.3855), negative correlation with alkalinity (r=- 0.2207) and TDS (r=-0.4682). Strong correlation has been found to show with DO (r=0.553), turbidity (r=0.505) and Nitrates (r=0.858). The Dissolved Oxygen strongly correlated with hardness and nitrates. Seasonal fluctuations were observed in various physico-chemical parameters. The water quality parameters indicate that the reservoir is rich in nutrients and favourable for plankton and fish growth.

Keywords: Water quality parameters; temperature; ph; dissolved oxygen; nitrates; correlation; r value.

1. INTRODUCTION

Physico-chemical condition of water has its direct impact on growth, survival, reproduction and distribution of fishes. Any adverse change in environmental condition affects the life of fishes. Actually, aquatic life of any water body is governed by the interaction of various physical and chemical conditions. Water is one of the basic element supporting life and the environment. The nature and distribution of flora and fauna in a water body are generally controlled by the fluctuations in the physico-chemical characteristics of water. The health of the rivers and their bio-diversity are directly related to every component of the ecosystem. In freshwater bodies, nutrients play a key role as their

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