International Journal of Applied and Natural Sciences (IJANS)
ISSN(P): 2319-4014; ISSN(E): 2319-4022
Vol. 7, Issue 3, Apr - May 2018; 57-64

International Academy of Science, Engineering and Technology
Connecting Researchers; Nurturing Innovations

APPRAISAL OF WATER QUALITY OF TAPI RIVER IN REFERENCE TO BACTERIOLOGICAL AND PHYSICO-CHEMICAL PROPERTIES

***Kinjal Sangani*[1] *& Kapila Manoj*[2]**

[1]*Research Scholar, Veer Narmad South Gujarat University, Surat, Gujarat, India*

[2]*Professor and Head, Department of Aquatic Biology, Veer Narmad South Gujarat University, Surat, Gujarat, India*

ABSTRACT

Present paper deals with the annual variations in Bacteriological and physicochemical quality of Tapi River, Surat, and Gujarat. The bacterial genera isolated were identified using Bergey's manual of determinative bacteriology. The concentrations of Nitrate, Nitrite, and phosphate were recorded higher at the downstream sites with depletion of Dissolved oxygen concentration throughout the year. Bacterial counts were recorded highest during the summer season. Presence of various bacterial genera, including some pathogens and fecal indicators viz., Escherichia, Klebsiella, Enterobacter, Streptococcus, Salmonella, Shigella, Citrobacter, Vibrio etc. were observed. It is also observed that bacteria from Gammaproteobacteria group were frequently distributed throughout the year. The Tapi River water quality monitoring brought out that human interference and anthropogenic activities, as well as agricultural practices, significantly alter natural properties of water resources.

KEYWORDS: *Bacteriological, Pathogens, Physico-Chemical, Tapi River, Water Quality*

Article History

Received: *30 Apr 2018* **|** ***Revised:*** *03 May 2018* **|** ***Accepted:*** *12 May 2018*