



VARIABILITY AND ASSESSMENT OF WATER QUALITY PARAMETER OVER SEASON IN THE TEKNAF COAST OF BANGLADESH

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Master of Science in Fisheries Resource Management**

Department of Fisheries Resource Management

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**Chattogram Veterinary and Animal Sciences University
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JUNE, 2022

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This is to certify that we have examined the above Master's thesis and have found that is complete and satisfactory in all respects, and that all revisions required by the thesis examination committee have been made

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List of Abbreviations

PPT = Parts Per Thousand

PPM = Parts Per million

kg = Kilogram

mg/l = Milligram/ Litter

°C = Degree Centigrade

% = Percentage

cm = Centimeter

DO = Dissolved Oxygen

TDS = Total Dissolved Solids

No. = Number

CO₂ = Carbon Dioxide

ABSTARCTS

The present investigated dissertation wrapped to give a quick overview of some physico–chemical parameters of water with seasonal variability of the Teknaf coast of Bangladesh covering the over season from March 2020 to February 2021. For investigation, samples were collected from two different sampling stations Moheshkhalia para and Naf estuary of the Teknaf coast to evaluate the physicochemical parameters of water. Throughout the research, seven physio-chemical parameters were analyzed, which were water Salinity, pH, DO, Temperature, TDS, Transparency, Alkalinity and average value ranges from (23.60±5.08) mg/L, pH (7.59±0.65), (6.26±1.20) mg/L, (25.62±5.59) °C, (557.33±65.62) ppm, (49.04± 9.55) cm and (214.75±57.55) ppm respectively. In the study period, no significant relation was found in terms of station and season but seasonally high significant relation was found in Temperature and Salinity. Furthermore, all observed parameters have variable correlation but DO and pH has showed higher significant positive relationship with each other. The findings of the seasonal variability of water quality parameters were apparently harmonious and maximum variables were observed in Winter and Monsoon. The level of physico-chemical parameters of water were increased during Pre-Monsoon, Post Monsoon and Winter and decreased during Monsoon. In converse, only TDS was increased during monsoon season in the period of study due to pollution or low rainfall. The variability of physico-chemical parameters have figured according to reasonable seasonal and spatial variations. Therefore, obtained parameters of study will provide comparable ideas about water quality parameters in the coastal region of Bangladesh, convenient zonation of fishing and fish culture activity.

Key word: Water quality, Teknaf Coast, Seasonal Variation, Physico-chemical parameter.