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Water Quality and Resident Perceptions of Declining Ecosystem Services at Shitalakkah Wetland in Narayangonj City

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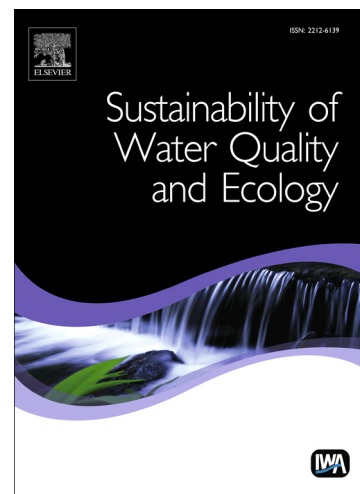
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**Water Quality and Resident Perceptions of Declining Ecosystem Services at
Shitalakkah Wetland in Narayangonj City**

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Abstract

Wetland ecosystem services provide social benefits. These services are vulnerable due
to human activities. The present research concerns perceptions of declining wetland
ecosystem services and their effects on water quality parameters. The percentages of
provisioning, regulating, cultural and supporting services were found to overshadow
ecosystem services, such that generation of goods and values in the studied wetlands are in
jeopardy. Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), turbidity,
conductivity, Total Dissolved Solids (TDS), Dissolved Oxygen (DO), heavy metals and salts
were measured as indicators of water quality. Many significant correlations were observed
and many of these parameters exceeded regulatory limits. Lead (Pb) in wetland 0.09 mg/L
far exceeded the safe limit (0.01 to 0.05 mg/L), while turbidity in wetland 21.12 was too high
to sustain fish. Wetland water pH was significantly correlated ($p \leq 0.01$) with Cd. TDS was
found to have a significant ($p \leq 0.01$; $p \leq 0.05$; $p \leq 0.1$) correlation with conductivity, Ca^{2+} ,

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