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## **Microbial profiling with reference to Water Quality of World Largest Sewage Fed Fish Farms: Role of Sewage and urbanization**

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### **Abstract**

Microbial diversity structure plays a significant role in deciphering the health of wetland ecosystem as it alters the aquaculture dynamics through different functional cycle. In the present study, East Kolkata Wetland (EKWs) i.e World's Largest Sewage Fed Fish Farm was selected as the sampling sites to decipher the microbial community structure along with its predictive functional role in maintaining the different metabolic pathways. In addition to this, effort has been made to correlate the different environmental variables with that of bacterial diversity. Result obtained revealed that genera such as Arcobacter, Pseudomonas, Sulfurospirillum, Cloacibacterium etc. dominated the bacterial diversity in world largest sewage fed fish farm. Furthermore, environmental variables such as BOD, COD, and DO violated the prescribed CPCB norms for water quality required for the propagation of fisheries and irrigation in India. Moreover, present study confirmed the fact that environmental variables such as BOD, COD and DO were the major factors responsible for the proliferation of pathogenic bacterial diversity.

### **Biography**

Dr. Inderjeet Tyagi is currently working as Scientist B at the Zoological Survey of India, Ministry of Environment Forest and Climate Change, Kolkata. To his expertise, Dr. Tyagi has more than 8 years of experience in the field of wastewater treatment and Environmental Genomics. He is among the few Scientists from India working on the Environomics (Environmental Chemistry-Zoology interface). During his doctoral and post-doctoral days, he was actively involved in the synthesis of low-cost materials for application as adsorbent in wastewater treatment and nanotechnological interventions. Moreover, to his credit he has published more than 100 SCI articles in journal of international repute with cumulative impact factor (450), book chapter (06), One Indian Patent (Filed), and he also presented his work at different national as well as international platforms.

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