

Response of Fungal Community in the Unpolluted and Polluted (Textile and Distillery Wastes) Habitats

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37 fungal species were recorded, maximum found in textile wastewater polluted habitats (35) followed by unpolluted (15) and distillery polluted (6) habitats. Fungal diversity in sediment samples of textile wastewater polluted habitats (25) was a little lower than wastewater samples (32), whereas it varied little both in the samples of unpolluted habitats (Sambhar wetlands : 5-6; Garden tanks : 9-10) and distillery waste (3-5). Seasonal variation in species diversity was more pronounced in the textile wastewater polluted habitats. Their minimum number was often found during the rainy season while maximum in the winter season, in the polluted habitats but during summer in the unpolluted habitats. *Aspergillus* was the most diverse genus represented by 7 species, followed by *Cladosporium* and *Fusarium* (3 species each) while *Drechslera*, *Rhizopus* and *Trichoderma* had 2 species each. The remaining genera (18) were monotypic. Colony Forming Units (CFUs) were also maximum in the textile wastewater polluted habitats ($5.6-1898.9 \times 10^3/L$), followed by unpolluted ($6.7-560.0 \times 10^3/L$) and distillery waste polluted habitats ($3.1-53.3 \times 10^3/L$), being usually higher in the sediment samples. Their number also varied seasonally, being maximum during winter season in the water samples, whereas in summer in the sediment samples. *Aspergillus fumigatus*, *A. niger*, *Cladosporium cladosporioides*, *C. sphaerospermum* and *Penicillium chrysogenum* usually contributed maximum to the CFU values in the polluted as well as in unpolluted habitats.