



Temporal Changes in Physicochemical Parameters of Water of Gharana Wetland Reserve (J&K) and Assessment of its Pollution Status Using Comprehensive Pollution Index

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Abstract: Gharana wetland conservation reserve, located in the outskirts of Jammu region of Jammu and Kashmir UT has gained global recognition in the past few years since it harbours a number of migratory birds, including some rare and endangered species which migrate here during winters every year. Owing to its international recognition, an attempt has been made to assess the water quality of the wetland using Comprehensive Pollution Index (CPI) wherein various physicochemical parameters were considered. For this, the water samples were collected seasonally for a period of one year i.e. 2018-19 and analysed for various physicochemical parameters by following established procedures. The results of the present study revealed that due to encroachment of wetland area by the villagers, weed growth, siltation and various anthropogenic stresses like bathing of livestock, defecation, drainage from households and run off of insecticides as well as pesticides from the adjoining fields into the wetland, its water quality is severely deteriorating day by day. On the basis of CPI score, it was observed that this waterbody was moderately polluted. It can therefore be concluded that this continued exploitation of the Reserve will further lead to deterioration of its water quality and shrinkage of the area. It is recommended that proper maintenance of waterbody is necessary. Thus, the present study will help in formulating certain strategies to combat the pollution threat to this waterbody and convert it from a dying wetland to a thriving ecosystem.

Keywords: Wetland, Eutrophication, Migratory birds
