

CONCLUSION

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The present dissertation reflects the wetland wealth of Terai & Duars region of the Indian state of West Bengal and the present status of its wetland biodiversity in the region. The study area is the house of numerous large natural and a few artificial fresh water bodies with good biodiversity. From the floristic exploration as much as 433 species of flowering plants and 22 species of Pteridophytes has been recognized. Except these two major groups other major floristic groups like algae, fungi and bryophytes are also quite rich in all those wetlands but were not considered under the present survey. No species of gymnosperm has been recorded from these wetlands. Among the collected specimens, several species recognized under are endemic, exotic and *RET* categories. Some interesting wild relatives of cultivated plants like, *Oryza rufipogon*, *Oryza latifolia*, etc. are still available in these areas but the population structures of these plants are drastically decreasing due to several causes. Plants like *Dopatrium junceum*, *Coix aquatica* and *Rotala Mexicana*, *Rotala macrandra*, are quite rare. 43.46 % of the wetland flora of India is wildly growing here. Detailed phenological study including flowering and fruiting calendars as the primary data has been determined for 244 wild wetland species.

Two novelties [*Nymphaea abhayana* A. Chowdhury & M. Chowdhury of Nymphaeaceae and *Lindernia palustris* A. Chowdhury, M. Chowdhury & A.P Das of Linderniaceae] recoded during the present work express the capacity of the vegetation to maintain the forces of evolution in the area. In addition, the new records of as much as eight species of plants is also significant for the vegetation. Of these one [*Adenostemma suffruticosum* Gardner of Asteraceae] is new record for the entire northern hemisphere; three [*Potamogeton gramineus* Linnaeus of Potamogetonaceae, *Murdania keisak* (Hasskarl) Handel-Mazzetti of Commelinaceae and *Polygonum hastatogagittatum* Makino of Polygonaceae] are for the flora of the country; and, four [*Ludwigia peruviana* (Linnaeus) H. Hara of Onagraceae), *Hygrophila erecta* (N.L. Burman) Hochreutiner of Acanthaceae, *Soliva anthemifolia* (A. Jussieu) R. Brown of Asteraceae, *Carex phacota*, Sprengel of Cyperaceae] are forming the new records for the state of West Bengal.

The wetlands are also the houses for numerous economically important plants and those have very good socio-economic impact. The wetlands are also used by local people in various ways like agriculture, irrigation, fishing etc. for commercial benefits. Several natural and anthropological threats are also recognized those are responsible for gradual decrease in wetland areas and to make them unhealthy and unfavorable for the survival of existing biota.

The present dissertation is the first time report that reflects the actual status and biodiversity of wetlands of Terai & Duars. All these data were directly collected from the field for each of the selected 53 wetlands. The data extracted out from this work will be used as primary data for the proper delineation, classification and management program of Terai & Duars wetland for the policy makers. During field works, it is found that Govt. offices have no proper maps, land marks and detailed information about the wetlands of the study areas and only enlistment of few important wetlands has been prepared by them.

The wetlands like *Rasik Beel* (Coochbehar), *Ahiron Beel* (Murshidabad) and *Santragachhi Beel* (Hooghly) are enlisted under the national conservation project. But it is beyond expectation and unfortunate that no any wetland from Terai & Duars and also from the Maldah district has been selected for any such conservation project though these are very rich in their floral and faunal, especially avifaunal diversity. It is noteworthy that European small countries have declared numerous Ramsar wetlands starting from 5 hector areas whereas a large country like India declared only 26 Ramsar Sites till date.

Due to the lack of any proper and accepted conservation strategy, and the exploitive attitude of people, these areas are extracted and modified unscientifically leading to their gradual but fast destruction. The wetlands like *Doumahoni Beel*, *Gajoldoba Beel* and *Kathambari Beel* are almost filled up with eroded soil and people of surrounding villages are using it as cultivated land throughout the year. Several such wetlands of the district are now on the verge of extinction or these will be extinct within next few decades. So, the wetlands of Terai & Duars need immediate national and international recognition and nursing for their survival and for extending services for the humanity. Government should initiate various national and international projects and develop proper conservation strategies along with the remote sensing technology for mapping with view to conserve the wetlands and wetland biodiversity. Extension of tourism activities, in the name of ecotourism, is affecting the biodiversity and the conservation in such a manner that in future we have to forget that in those areas there were wetlands of wide biological importance. If proper initiatives are not taken immediately, it is quite possible that most of the wetlands of this area will lose their wilderness in the near future.