



JankiDevi Bajaj Government Girls
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Dissertation

PRELIMINARY STUDY OF HATHOLI TALAB
WETLAND OF BHAINSRORGARH WILDLIFE
SANCTUARY, RAWATBHATA, RAJASTHAN

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PRELIMINARY STUDY OF HATHOLI TALAB WETLAND OF BHAINSRORGARH WILDLIFE SANCTUARY, RAWATBHATA (RAJASTHAN)

Introduction:

What is a Wetland?

Wetlands are lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface. Wetlands vary widely because of regional and local differences in soils, topography, climate, hydrology, water chemistry, vegetation, and other factors, including human disturbance. Indeed, wetlands are found from the tundra to the tropics.

Types of Wetlands:

Many terms are used to describe wetlands, but most fall into three general categories:

Marshes are what most people think of as a wetland. Marshes feature shallow standing water, often near a lake or stream. Plants include rushes, reeds, sedges, cattails and grasses. Marshes provide habitat for many fish, amphibians, birds and mammals.

Swamps are forested wetlands dominated by trees and shrubs such as red maple, black ash, elm, poplar, willow and dogwoods. They can be located where groundwater comes close to the surface. Swamps provide habitat for a wide array of wildlife.

Peatlands include bogs and fens. Both are characterized by peat deposits, created by the accumulation of dead plant material. Fens are fed by groundwater, while bogs only get water from rainfall and snow. Many plants and animals are uniquely adapted to live in peatlands.

Importance of wetland studies:

Wetlands are ecologically sensitive systems and provide many significant services to the human population. The evaluation of wetlands with a multidisciplinary perspective in the natural sciences and social sciences provides efficient results. This perspective can give an increased understanding of the processes and problems

associated with such strategies. It is clear that wetlands expose noteworthy economic value (depending on the cost-benefit analysis) and they are under severe stress. The reasons for wetland loss and deterioration implicate excessive use, land degradation, urbanization, pollution, climate change, decrease biotic diversity, and invasive species. Since wetlands are complex multifunctional systems, they are likely to be the most beneficial if conserved as integrated ecosystems (within a catchment area) rather than their individual component parts.

Anthropogenic activities (urbanization, water and land uses, land cover changes, industrial activity, pollution, climatic change, etc.) have direct and indirect effects on wetlands. The degradation degree of an ecosystem is depended on temporal variation. Ecosystem recovery level and duration have two main factors. Firstly, anthropogenic pressures can increase or decrease due to the usage grade. Secondly, wetland's carrying capacity is changed due to spatial and temporal variation. For these reasons, positive and negative feedback mechanisms at the wetland are critical control systems. Therefore, the wetland is considered as holistic ecosystem perspective from its basin scale

For regulatory purposes under the Clean Water Act, the term wetlands means "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas."

This study is undertaken to assess overall status of wetlands of the study area so that according to the need conservation efforts can be applied. this could prove an important step to provide primary data of wetlands of the area for wetland conservation and management efforts.

Objectives:

- To understand the ecology of wetlands.
- To report important plant species found in wetland areas
- Threats on wetland due to the activities of local communities.
- Suggestions for effective management of wetlands.

Method of study:

Field surveys and data collection: Extensive field surveys are done for study of wetlands. — ?

Results and discussion:



Fig -

Hatholi Talab of Bhainsrogarh Wildlife Sanctuary:

Ecology of Hatholi Talab Wetland: Ecology is the study of interactions between the biotic and abiotic factors of a particular area. Study of the area from ecological point of view gives idea about the potential of the area in sustaining floral and faunal components. Along with aquatic diversify the Area is also suitable habitat for avifaunal species. Migratory bird species are also reported during surveys. Feeding and breeding habit of avifauna can also be studied here and area is rich in aquatic plant diversity. From ecological point of view it is a very important wetland of the area.

Plant diversity:



Fig -

Avifauna at Hatholitalab wetland



Fig -

Threat to wetlands:

- **Fishing:** extensive fishing is a serious threat to the ecology of the wetland.



Fig: fishing at Hatholitalab

- **Urbanization, Agriculture and industrial activities:** areas near wetland are ideal for agricultural uses. But due to these kinds of practices wetland is shrinking and its balance is disturbing.
- **Cultivation of various species:** cultivation of particular kind of species for economic purposes leads to loss of diversity of other species of flora and fauna.

- **Pollution:** main source of pollution is agricultural waste due to nearby agriculture lands.
- **Increasing Human Activities:** people are expanding their agriculture lands by shrinking of wetland area.
- **Excess use of water:** excess consumption of water by use of motors is a serious problem disturbing the hydrology of the ecosystem and life of living being in it.
- **Eutrophication:** eutrophication is triggering due to the increased activities as depth of water and area of wetland is shrinking and may lead to loss of this habitat in future.

Suggestions for effective management and conservation:

- 1) By limiting Agricultural practices in the wetland area.
- 2) Limiting the illegal activities like fishing and overuse of water body.
- 3) Conducting the Awareness programs for locals to help them understand the importance of such unique ecosystems.
- 4) Organising Social cleaning camps time to time.
- 5) Claiming the rules for use of resources from protected areas.
- 6) Providing alternate employment options to reduce dependence on wetlands.

Conclusion:

Preliminary study is important for assessment of current status and need of conservation efforts. It also gives idea about rate of depletion of resources for that area. Wetland ecosystems are very critical and under threat due to ignorance and lack of awareness about their unique properties and services. It is Important to conserve these unique ecosystems by local efforts before it gets extinct.

Reference -