

## Present Status and Significance of Wetlands in Kashmir

Bilal Ahmad Bhat

### How to cite this article:

Bilal Ahmad Bhat. Present Status and Significance of Wetlands in Kashmir. Indian Journal of Waste Management. 2020;4(1):9-14.

### Abstract

Kashmir traditionally known as paradise on earth for its beauty is replete with diverse types of fresh water bodies. Majorities of these natural aquatic system are shallow basined and classified under western Himalayan wetlands. The wetlands of Kashmir valley are mostly located in the flood plan of River Jehlum and Sind and are characterized by the varying in Hydroedaphic features. All the wetlands are linked with each other. Wetlands form a significant part of our ecosystem. Wetlands decrease flooding, remove pollutants from water, recharge groundwater, protect shorelines, provide habitat for wildlife, and perform other various important functions. Records say that there are 29 wetlands in Jammu and Kashmir State, 16 in the Kashmir valley, eight in Jammu and five in Ladakh. All of these have been brought under conservation plans. The winged visitors from Central Asia and Europe start arriving Kashmir valley in lakhs towards the first week of November and the concentration of migratory birds will peak around first week of February. Kashmir presents migratory birds a comparatively hospitable alternate habitat compared to the extreme freezing conditions in their natural habitats in Siberia, China, Japan and other countries in northern hemisphere. Tufted Duck, Gadwall, Brahminy Duck, Garganey, Greylag Goose, Mallard, Common Merganser, Northern Pintail, Common Pochard, Ferruginous Pochard, Red-Crested Pochard, Ruddy Shelduck, Northern Shoveler, Common Teal, and Eurasian Wigeon are some of the most sighted birds in the wetlands of Kashmir. It is reported that there are around 106 species of birds nestle in these wetlands, including 25 species of land birds which visit occasionally and several endangered species. Wildlife Warden, are blaming the Revenue Department for failing to take any preventive measures to save the wetlands. They feel helpless as Revenue Department is not providing them the details about the possession of the lands. Nothing is being done to sort out the issues with the locals who have encroached upon the land around the wetlands in the absence of proper records. Beautiful Valley of Kashmir is bestowed with large number of impressive wetlands like Haigam, Mirgund, Shalbug Wetland etc. In this study, we report the present status of important wetlands in Kashmir valley. It is noticed that wetlands at present are fallen victim to unbridled development, with extensive encroachment, garbage dumping and the release of untreated sewage. It is recommended that we must continuously monitor wetlands and their surroundings. We should work together to develop strategies and action plans for the conservation and restoration of wetlands in Kashmir.

**Keywords:** Kashmir; Wetland; Water bodies; Wildlife; Animal life.

### Introduction

The word "wetland" is derived from the combination of two independent words - 'wet' and 'land' which primarily gives the idea of a land saturated with water, that may house certain plants and "animals. (Ansari and Oseni, 2012). According to Article-1 of the Convention on wetlands of

international importance especially as waterfowl Habitat (1971), "wetlands are areas of marsh, fen, peat land or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide doesn't exceed 6-metres. These are habitats where water saturation determines the nature of plants and animals, whether aquatic or terrestrial,

**Author's Affiliation:** Associate Professor, Division of Social Science, Faculty of Fisheries, Rangil Ganderbal, Sher-e-Kashmir University of Agriculture Sciences and Technology of Kashmir, Jammu and Kashmir.

**Corresponding author:** Bilal Ahmad Bhat, Associate Professor, Division of Social Science, Faculty of Fisheries, Rangil Ganderbal, Sher-e-Kashmir University of Agriculture Sciences and Technology of Kashmir, Jammu and Kashmir.

**E-mail:** bhat\_bilal@rediffmail.com

that are found in such areas (Cowardin, et al., 1979). Wetlands are features transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. Wetlands for the purpose of this classification must have one or more of the three characteristics i.e., (i) At least periodically the land supports predominantly hydrophytes. (ii) The substrate is predominantly un-drained hydric soils; and (iii) The substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season each year. Wetlands are transitional habitats in the sense that they are neither terrestrial nor aquatic, but exhibit characteristics of both. Their boundaries are part of a continuum of physical and functional characters, and may expand or contract over time depending upon factors such as average annual precipitation, evapotranspiration and modifications to the watershed. The transitional nature of wetland characteristics and the shifting of wetland boundaries render precise identification of wetland boundaries, if not possible (Moirangleima, 2010). It is reported that wetlands vary according to their origin, geographical location, water-regime, chemistry, dominant plants and soil or sediment characteristics ((Maltby, 1986). The classifications of wetlands have been suggested from time to time as earlier classification describes wetland types on the basis of flooding, depth, dominant forms of vegetation and salinity regimes. At international level, wetlands have been classified by many scholars and Academicians (e.g., Dugan, 1990). Kashmir valley famous in world for its beauty is replete with diverse types of fresh water bodies. Majority of these natural aquatic system are shallow basined and classified under western Himalayan wetlands. The wetlands of Kashmir valley are mostly located in the flood plan of River Jehlum and Sind and are characterized by the varying in Hydroedaphic features. All the wetlands are linked with each other. Wetlands form a significant part of our ecosystem. Wetlands can decrease flooding, remove pollutants from water, recharge groundwater, protect shorelines, provide habitat for wildlife, and perform other various important functions. The wetlands of Kashmir valley can also be classified in a comparatively easier way on the basis of various characteristics like altitude, size (water-spread area) status of wetland, location, and source of water.

Records say that there are 29 wetlands in JandK State before 5 August 2019, 16 in the Kashmir valley, eight in Jammu and five in Ladakh. All of these have been brought under conservation plans.

The winged visitors from Central Asia and Europe start arriving Kashmir valley in lakhs towards the first week of November and the concentration of migratory birds will peak around first week of February. Kashmir presents migratory birds a comparatively hospitable alternate habitat compared to the extreme freezing conditions in their natural habitats in Siberia, China, Japan and other countries in northern hemisphere. Tufted Duck, Gadwall, Brahminy Duck, Garganey, Greylag Goose, Mallard, Common Merganser, Northern Pintail, Common Pochard, Ferruginous Pochard, Red-Crested Pochard, Ruddy Shelduck, Northern Shoveler, Common Teal, and Eurasian Wigeon are some of the most sighted birds in the wetlands of Kashmir. It is reported that there are around 106 species of birds nestle in these wetlands, including 25 species of land birds which visit occasionally and several endangered species. Wildlife Warden, are blaming the Revenue Department for failing to take any preventive measures to save the wetlands. They feel helpless as Revenue Department is not providing them the details about the possession of the lands. Nothing is being done to sort out the issues with the locals who have encroached upon the land around the wetlands in the absence of proper records. Beautiful Valley of Kashmir is bestowed with large number of impressive wetlands like Haigam Rakh, Mirgund Wetland, Shalbug Wetland. In this study, we discuss the role of wetlands and their present status based on our field surveys.

## Methodology

In the current study we examine the wetlands of Kashmir valley in the light of history and by field visits. To collect information about the wetlands, we surveyed areas and interviewed people surrounding the wetlands and people related to the protection of these wetlands. Finally, we present results on the basis of the information collected through our field visits.

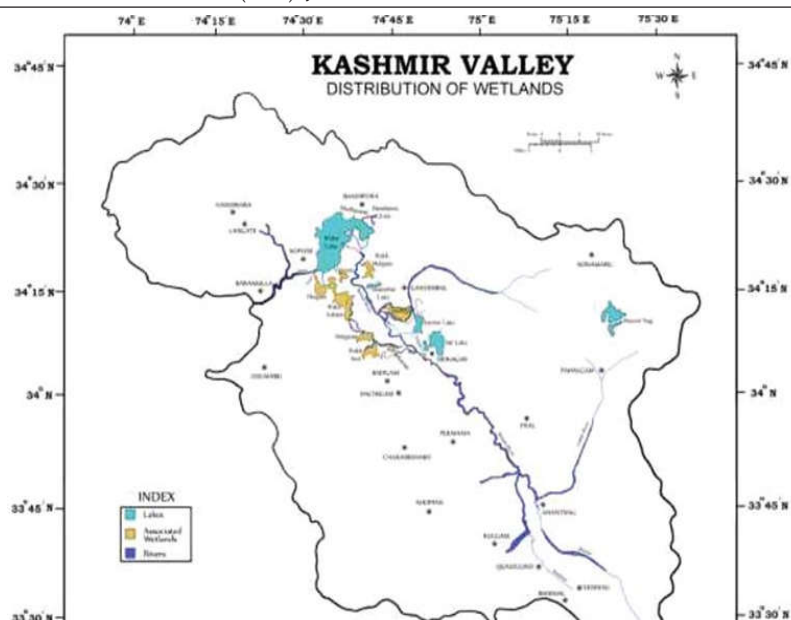
## Results and Discussion

*Hokersar-13.75 Sq.Km:* The Hokersar wetland, which was one known as the "Queen of Wetlands" was recently in news for being on the brink of extinction due to encroachment activities. Hokersar Wetland in Kashmir is filled with the migratory birds who prey on fish and insects in this protected territory. Migratory birds start their annual sojourn here in early September and stay until mid-February

**Table 1:** The Wetlands of Kashmir Valley of Jammu and Kashmir.

S.No.	Name of Wetland	District	Present Status
1.	Khushal Sar	Srinagar	Marshy
2.	Gilsar	Srinagar	Habitation/Marshy
3.	Ahansar	Srinagar	Marshy/Agriculture
4.	Anchar lake	Srinagar	Plantation/Habitation/agriculture
5.	Nagin lake	Srinagar	Marshy/Habitation
6.	Dale lake	Srinagar	Marshy/Habitation/Agriculture
7.	Rampur Taloo	Anantnag	Playground
8.	Chakla Nambal	Anantnag	Agriculture land
9.	Munshahun Taloo	Anantnag	Agriculture
10.	Kiel Khanun Taloo	Anantnag	Agriculture
11.	Buta Sar	Kupwara	ButaSar
12.	Tekipur	Kupwara	Seasonal
13.	Nonn Khan Chak	Kupwara	Seasonal
14.	Wudina Sar	Baramulla	Agriculture
15.	Tsore Teng	Baramulla	Seasonal
16.	Malipur	Baramulla	Marshy
17.	Wullar Lake	Bandipora	Marshy/Plantation/Agriculture
18.	HaighanJhil	Baramulla	Agriculture/Marshy
19.	Gadsar	Baramulla	Agriculture
20.	Rakhi Malanpur	Pulwama	Agriculture
21.	Chow kidarSar	Pulwama	Agriculture
22.	Baner Nambal	Pulwama	Horticulture
23.	Bod Sar	Pulwama	Marshy/Agriculture
24.	Rakhi-Arth	Budgam	Land/ Agriculture
25.	Nambli Narkur	Budgam	Plantation/Agri/Marshy/Habitation
26.	Hokar Sar	Budgam	Plantation/Marshy/Habitation
27.	Danda Rokhaw	Budgam	Marshy/Agriculture

Source: Directory of Lakes and Water Bodies. (2012). Jammu and Kashmir.



Source: Cartographed by the Researcher from Topographic Maps of Kashmir Valley

or early March. Hokersar is an important refuge for migratory waterfowls, shorebirds and trans-Himalayan species during winters. It also acts as one of the major flood absorption basins. Hokersar has been declared as Conservation Reserve under the Jammu and Kashmir Wildlife (Protection) Act, 1978. It was also declared as Ramsar site on November 8, 2005 under the Ramsar Convention. The study shows that the open waters of the wetland have been colonized by the weeds and other aquatic vegetation. Some areas of the wetland that existed in 1969 have been converted into paddy fields. About 10 hectares of the wetland has been converted into built-up area. This wetland is on the brink of extinction as per various environmentalists.

*KhushalSar*-is Located in Srinagar, jammu and kahshmir. The Lake stretches from Zoonimar upto Aali Masjid and gets connected to Anchar Lake via small channel which is its primary out flow. Gilsar is also connected to khushalsar. Its maximum length according to authority of envis is 1.6 km (0.99 mi) and its maximum width is 0.6 km (0.37 mi), with surface elevation of 1,582 m (5,190 ft). It Starts with Gil kadal from its South side stretches to hawal and Ali masjid road from west it starches to Geasyaar road where it stretches to Alijan road and from its east it gets connected to Anchar lake from the Nallah Bolajpur. Nadru being a large produce from Zadibal side on which people depend for there livelihood. Fishermen used to reside on the banks of this water body for catching the fishes which used to be there livelihood. Shakeel Ahmad wani who is 55 years old and his generation have been living there since ages says there are about 7 springs around this wetland and also the source of water is from Gilsar it used to be crystal clear and was considered as a blessing as it was the source of our healthy living fishes mineral water and other vegetation were exploited by the people living around these banks. We recall beautiful memories related to this lake a healthy lifestyle with satisfying life where everything was at disposal we used to think ourselves as lucky beings for natural gifts bestowed to us. Bashir Ahmad who lives on the banks says about 1500 kanals is the estimated area of Khushal Sar lake as heard from patwari.

*Narkara*-3.25 Sq.Km:The Narkara Wetland in Kashmir valley receives its water supply from Doodh ganga catchment and is surrounded by the paddy cultivation and willow plantation areas. It is observed that due to heavy encroachments, the considerable amount of marshy area has been converted into the solid land masses. Narkara wetland is the favorite habitat site for a number

of water fowl species like Grelag goose, Ruddy shelduck, Pintail, Common teal, Mallard, Gadwal, Wigeon, Shoveller and Tufted duck. As per the census data the population of migratory birds has reduced from lacks to only 3,275 birds in winter season.

*Manibugh*-4.50 Sq.Km: Manibugh Wetland is located in Pampore Area of Jammu and Kashmir. Manibugh Wetland was managed for organized shooting from November/ December till April. However this practise has been stopped from past few years as protection to the wetland and flora and fauna. At present it is spread over 2 square kilometres of land and marshes. It is the breeding ground and the meeting point of many birds. This wetland is characterised by the low level body. This wetland is at present characterized by low water levels since they are surrounded by cultivation areas which washes organic and inorganic constituents in wetland.

*Chatlam*-0.25 Sq.Km: Chatlam Wetland in Kashmir valley was initially a game reserve, however now it is being maintained by the fisheries and fish farms. It is a spring fed wetland. The shores of this wetland are elevated due to the deposits of fine grained sand and loam. Migratory fowls are majorly found in these areas.

*Mirgund*- 4.00 sq.Km: Mirgund wetland in Kashmir is a shallow temporary wetland. The water supply for this wetland is Sukhna Nalla and other channels that are used to irrigate the adjacent paddy fields. The wetland is being extensively used for harvesting fodder and graing livestock. It has fluvial type of fresh water origin.

*Shallabugh*-16.0 sq.km: Shallabugh (Ganderbal), According to officials, Lakhs of migratory birds come to Shallabugh wetland in Sherpathri area of Ganderbal from far off places like Siberia, Central Asia, Northern Europe, Ladakh, China and Central Asia.

Some of the popular migratory birds visiting the Shallabugh reserve include Geese, Bar Geese, White Heeled Duck, Shoveller, Red-Crested Pochard, White-Eyed Pochard, Common Teal, Pintail, Mallard, Gadwall, Coot, Hoonk and Graylag. Among these, Pintail, Common Teal and Gadwall are the birds visiting this wetland in maximum numbers. The flying visitors started to throng to this wetland from the first week of November and the outward migration is expected from March up to mid April.

*Hygam*-7.25 sq. Km: Hygam Wetlands is one of the famous wetland areas in District Baramullal



30kilometres from District Srinagar of Jammu and Kashmir. It has the 1400 hectares of land and the area is dominated with extensive reed beds. Hygam Wetlands drains into Wular Lake of Kashmir valley through Tara zoo. The main source of water is Nigle Nullah and Babakul. The area of Hygam Wetlands is used by waterfowls. The depth is 1 to 25 meters as it is located on the flood plains of Jhelum River of Jammu and Kashmir. Hygam Wetlands has dense settlements and the people in this area are dependent on reed business and fishery. The extensive reed boats help to allow the

passage of the boats between the areas of open waters. Hygam Wetlands is the rich belt of birds of local and migratory origin and the fishes of all types that are easily available in Jammu and Kashmir. Strips of willows species have been planted around the perimeters of wetlands of Hygam. It is most important for the national and international tourists for the rich source of natural beauty in the waters. The blue sky, blue waters and the snow capped mountains and the green colour soothe the tourists. Hygam Wetlands has the rich source of water lilies



that allure one to have a photograph there. It is now a protected game sanctuary in Jammu and Kashmir.

## Conclusion

The Kashmir valley in Jammu and Kashmir region has a large number of wetlands. However, their ecological and socio-economic values were rarely explored. It is observed from our field survey that wetlands in Kashmir valley are currently facing multi-dimensional threats due to human encroachments and government apathy. Public awareness is an important factor in saving wetland of Kashmir. The famous wetlands of Kashmir are Dal Lake, Anchar, Wular, Haigam, Malgam, Hokersar and Kranchu lakes. These wetlands face serious threat from anthropogenic activities like increasing human settlements, urbanization,

siltation, expansion of agricultural fields and the expansion of roads. Wetlands are distributed almost in every state of India in the form of rivers, lakes, ponds, marshes, salt pans. Lastly, the distribution of wetlands has also been provided in India and especially in Kashmir Valley. It has come to our notice that wetlands are distributed almost in every state of India in the form of rivers, lakes, ponds, marshes, salt pans, reservoirs and tanks. However, the majority of the wetlands of Kashmir Valley belong to the lakes, ponds, salt pans and rivers only. and reservoirs. However, it is observed that majority of the wetlands of Kashmir Valley belong to the lakes, ponds, salt pans and rivers only. It is concluded in the name of mad development by masses coupled with inefficient vision of policy makers the situation with reference to wetlands in Kashmir is quite unhealthy. We need to protect our

wetlands as they have importance in our lives and people should take a lead in this otherwise we are doomed.

*Acknowledgement:* The author would like to thank all those who provided information related to topic especially, Shaikh Ghulam Rasool, Chairperson, RTI Movement, Jammu and Kashmir.

## Reference

1. Ansari, A. H., Oseni, U. A. (2012). Wetlands and Global Warming: Impacts, Adaptation and Mitigation- Developing Countries Perspective. Serial Publications: New Delhi.
2. Directory of Lakes and water-bodies of JandK State. (2012). Department of Ecology, Environment and Remote Sensing, Jammu and Kashmir.
3. Dugan, P. J. (1990). Wetland Conservation: A Review of Current Issues and Required Action. Gland, Switzerland: IUCN, The World Conservation Union.
4. ENVIS News Letter. (2014). Water bodies of Jammu and Kashmir, Department of Ecology, Environment and Remote Sensing, Government of Jammu and Kashmir.
5. Maltby, E. (1986). Waterlogged wealth, why waste the world's wet places. International Institute Environment and Development: London and Washington DC.
6. Moirangleima, K. (2010). Sustainable management of wetlands-Central Valley of Manipur. B.R Publishing Corporation: Delhi.
7. National Wetland Inventory and Assessment: High Attitude Himalayan Lakes (2011). Ministry of Environment and Forests, Government of India..

