

HYDROBIOLOGICAL SIGNIFICANCE OF WETLANDS IN INDIAN PUNJAB.

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The state of Punjab in India, with a total geographical area of 50,362 sq.kms. only, has a special significance for its contributions of food grains towards the central pool. The name Punjab, which included part of western Punjab now in Pakistan, was derived from its five rivers. Now the Rivers Sutlej and Beas are two major rivers passing through the State, which serves as its lifelines. Its rich soils and good irrigation system linked with hardworking farmers have made the country food grain surplus. Green revolution is the word linked to this state. Ancient agriculture had been mostly dependant on the rain water or surface waters available in rivers, streams, ponds, open wells, etc. Thus role of rivers, streams and manmade wetlands occupying just 23000 ha area cannot be ignored while appreciating the achievements in agricultural production. But recently tubewell systems have replaced the earlier systems of irrigation. This has also changed the view of farmers for surface water sources which are thus being ruthlessly reclaimed creating serious imbalances in State's ground water table and sustainability of agro-economy. While the natural wetlands have suffered the most the large man made riverine reservoirs made for water supplies, are also shrinking due to encroachments and upstream diversion.

Harike and Ropar Wetlands came into formation in 1952 with the construction of majestic barrages over river Sutlej. Harike Wetland with original water storage capacity of 67,900 acre-feet, receives 25 million acre-feet of water through rivers Sutlej and Beas and diverts 29,984 cusecs (cubic feet per second) through three canals for irrigation and drinking water supplies in south western parts of Punjab and important parts of Rajasthan. Over the time water storage capacity of this wetland has reduced to 14740 acre-feet. Ropar Wetland located upstream of Harike Wetland provides drinking and irrigation water supplies to most parts of Punjab and Haryana States. Once made for this sole purpose, the Wetlands have helped enormous build up of biological resources and their conservation including some rare species. Because of unique wildlife values, Harike Wetland was notified as Wildlife Sanctuary in 1981 and as Ramsar site in 1990. The Ministry of Environment & Forests, Govt. of India has designated Ropar and Kanjli Wetlands as national wetlands. All these wetlands are, however, suffering from encroachments, siltation, weed growth, pollution, and upstream diversion, which are changing the local hydrological regime. Details shall be discussed.