

A Holistic Approach for Sustainable Management of Chilka Lake, East Coast of India

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Chilka lake (N 19° 28' - 19° 54'; E 85° 06' - 85° 35') on the eastern seaboard of India is one of the largest brackish water bodies in Asia. It is separated from the Bay of Bengal by a long narrow stretch of sand spit formed by wave and wind action with a narrow opening at the northern end. The lagoon receives drainage of a few tributaries of a major river system. Covering an approximate area of 1000 km², it supports more than 150,000 people's livelihood. Past events in Chilka are some of the best examples of interaction between natural processes, human impacts, and socioeconomic conditions of coastal population and government policies. The lake is allegedly dying and on the verge of facing catastrophe, i.e., shrinkage of lake area, heavy sedimentation, eutrophication and depletion of fisheries resources. In the last decade, ill-planned and unconcerned developmental activities resulted in environmental and social problems and become issues of public unrest; caught headlines in news media and attracted national and international attention. This has led to public awareness and controversial debates among environmentalists, NGO activists, administrators, politicians and local community. Later, It was realized that all these problems are due to lacuna in management, lack of education and improper coordination among the traditional fishermen communities and the authorities. To accomplish the sustainable development of the lake, several educational and scientific programs are undertaken and also in the pipeline. This paper makes a comprehensive holistic assessment of the physical, chemical and biological environmental conditions and documents the status of the resources of the lake, the impact of human disturbances and the socioeconomic threats and constraints for its sustainable development and management. It is suggested that the local community can play a key role and government program and policies involving them through a rational consensus and common action plan is highly essential to keep this pristine environment intact and allowing the future generation to utilize to its bounty.