



ENVIRONMENTAL DEGRADATION AND ASSOCIATED ECOLOGICAL AND HEALTH ISSUES IN A TROPICAL WETLAND AREA

ID 059

K. Shadananan NAIR

Cochin University of Science and Technology
Vallayil House, Kerala, INDIA
nair59@yahoo.com

ABSTRACT

Human impact on the environment leads to serious health issues and ecological problems in many parts of the World. In the Kuttanad wetland area in Kerala, India, failure in a development project now deteriorates the water quality, making life inhospitable to living organisms. Kuttanad is a typical coastal wetland with most of the area lying nearly one metre below sea level. Through generations, rice cultivation has been made possible by constructing dikes and pumping out water. Measures to multiply crop production and projects to prevent brackish water intrusion and evacuation of floodwater deteriorated the surface water and groundwater in the entire wetlands area. Five major rivers join this wetlands and their floodwater carrying domestic, industrial and agricultural pollutants flows to the backwater and Sea through this wetland only. Control of natural water flow through regulators disturbed the natural flushing, causing concentration of pesticides, fertilisers and industrial and domestic wastes on logged water and also promoted uncontrolled growth of weeds. The projects to prevent brackish water intrusion produced negative results and the targeted rice production could not be achieved. Rate of deterioration is so large that the quality of freshwater resources in many locations is far below safety level. The ponds, wells and canals on which majority of population depended for all domestic purposes are now highly contaminated. Many native species of fish, reptiles and amphibian faced extinction and the challenge still continues. Health issues are becoming serious. Water borne and vector borne deceases are spreading, and mosquitoes are multiplying fast. The wetland with rich biodiversity, capable of providing livelihood for millions in the area is also under threat also from the indiscriminate utilization, encroachments, reclamation, sand quarrying and urbanization. Even with three times the global average rainfall and fertile land, the region experiences serious seasonal water shortage and food crisis because of the lack of proper conservation and management. The proposed schemes river diversion, inland navigation and tourism promotion will accelerate the degradation of the ecosystem. Change in river runoff due to climate change, globalisation and associated rapid industrialisation and urbanization and the growing population make another challenge. In this study, a detailed analysis of the environmental degradation in the wetlands and the resulting ecological and health issues have been made. The State needs adequate environment and health policies and a strong political will to implement it. Some suggestions for policy guidelines have been presented.

Key words: .