Flood plain wetland fisheries of India: with special reference to impact of climate change

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Received: 20 December 2016 / Accepted: 22 June 2017

Abstract Floodplain wetlands of India are biologically rich sensitive ecosystem that support unique aquatic biodiversity and play vital role in providing livelihood and nutritional security to a large section of the population of the country. Besides contributing to the environmental sustainability through Carbon sequestration, flood plain wetlands also serve as source for harvesting flood and rain water. Covering around 5.5 Lakh ha area, the flood plain wetlands of India are one of the major sources for fish production of the country, offering vast potential for capture as well as culture based fisheries. Degradation and shrinkage of the floodplain wetlands have been recorded due to several natural and anthropogenic reasons. In addition to that, the change in the climatic condition may have a far more devastating impact on these natural resources. Substantial change in climate with increasing temperature trend (0.60 °C during last 112 years) as well as changing pattern and intensity of rainfall have been reported in India. It is projected that extreme climate changes may have profound impact on wetlands, mediated through several direct or indirect pathways. Attention is urgently required at different levels for conservation and revamping of these resources along with coping up and mitigation strategies to address the impending challenges. However, there is dearth of scientific information specific to the flood plain wetlands of India. This paper reviews the present status and importance of the flood plain wetlands of India with special reference to impact of climate change along with coping-up and mitigation measures.

Keywords Flood plain · Carbon sequestration · Ramsar sites · Climate change · Conservation · Mitigation

Introduction

Wetlands are amongst the most diversified and productive ecosystem on the earth created by the impact of prolonged inundation with water and are