Freshwater Fish Diversity at Greater Noakhali, Bangladesh

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ABSTRACT

This study assessed the spatial-temporal diversity of fish at greater Noakhali, an aquatic ecosystem that supports the most diverse fish communities in Bangladesh. Fish samples were collected from eight locations from July 2010 to June 2011 and diversity analyzed using PAST software. Findings showed that greater Noakhali is the habitat for 128 fish species. For the whole sampling area, the Shannon diversity index, evenness, Margalef richness and dominance index values were 4.501, 0.889, 15.763 and 0.012, respectively. Oreochromis mossambicus, Mastacembelus armatus and Tenualosa toli were the major contributory species in temporal terms and Tenualosa ilisha, Somileptes gongota and Mystus vittatus in spatial terms.

Keywords: Freshwater, Fish biodiversity, Noakhali, Bangladesh

INTRODUCTION

The extensive freshwater resources in Bangladesh (5,433,900 ha, covering 37% of the country) are the third most bio-diverse aquatic fishery in Asia, after China and India, with about 800 species in fresh, brackish and marine waters (Hussain and Mazid, 2001). This species diversity has been attributed to the diverse aquatic ecosystems that are scattered across the country in the form of rivers, ponds, ditches, lakes, beels/haors/baors (saucer shaped water bodies with monsoon expansion and winter contraction), floodplains and canals. Total fish production from the inland/freshwater area in 2003-04 was 914,752 MT, representing 78.3% of total fisheries production, accounting for 4.92% of GDP, 23% of the gross value added to agricultural products, more than 11% of export earnings, and employment for over 2 million people (DoF, 2005). Although fish provide 63% of Bangladesh's animal protein intake, fisheries production is not keeping pace with population growth (Hussain, 2010). To address this issue, the fisheries sector needs to maximize fish production in parallel with conserving its biological diversity.