

# Chapter 10

## Fisher Women Find Opportunities to Preserve the Coastal Environment and Face the Challenges: Climate Change and Environment

**Md. Shafiqul Islam**

*International University of Business Agriculture and Technology, Bangladesh*

**Ummul Fatiha Binte Shafiq**

*Jatiya Kabi Kazi Nazrul Islam University, Bangladesh*

### **ABSTRACT**

*Coastal environment is a complex term in relation to definition, context, and importance. Fisher women do not get recognition and importance in the social realm. This study was conducted with aims to explore the role of fisher women in preserving coastal environment and what challenges they face. Both qualitative and quantitative data were used in this study. Direct engagement of women in coastal fishing is hard to find, but the indirect involvement of women is remarkable. They are involved in multiple tasks, including fish drying, cleaning, sorting, storage, packing, net maintenance, grading, and collection. Several livelihood activities get narrowed, and fisher women suffer more. They face several problems and live with disasters in the coastal environment. The poor fisher women often settle in the risky areas. Fishing activities are often low-income, but they stopped different livelihood activities for environmental shocks. They initiated new livelihood options switching from fishing.*

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## **INTRODUCTION**

Social-ecological resilience is an essential part of the fisher women to cope with and adapting coastal disasters and environment. This study explores the ways through how the fisher women use their knowledge and build capacity and take actions. Natural hazards are the creeping phenomenon and a part of human history (Adger et al., 2011). Asia and the Pacific is in the sixth position of the World's ten highest risk countries as mentioned by the World Risk Index. It has been mentioned that 23 percent of people (1.2 billion) live within the vicinity of the coast globally and 50 percent are going to be at risk by 2030 (Zimmerman et al., 2004). Around fifty percent death toll from disasters is caused by natural hazards in Asia and the Pacific in the 21<sup>st</sup> century (UNESCAP, 2012). Another study mentioned that global damages from disasters have increased from USD 14 billion to USD140 billion over the 10 years period from 1976-1985 and 2005-2014 (GFDR, 2016). The scale and frequency of natural disasters are increasing due to climate change and anthropogenic factors (Campanella, 2006). Bangladesh is the country of coastline and very much vulnerable to disasters. The coastal fisher women are exposed to coastal disasters including, cyclones, tidal surges, floods, and other natural disasters due to geographical settings of Bangladesh. The coastal fisher women also have limited access to modern technology for warning and responses to disasters in Bangladesh. It is assumed that 50 million people are expected to be at risk by 2080 for increasing population density and climate change issues (Amin, 2004). Jones (2017) mentioned that resilience enhances people's understanding to respond to climate change risks. Societies become stuck in a series of problems including loss, depletion, disappearance and collapse even death (Elliott, 2018).

A study mentioned that climate change impact will increase and affect economic sectors and many aspects of natural and human wellbeing (Jones, 2019). The coastal fisher women are trying to fight with disaster by using their local knowledge/indigenous knowledge from generation to generation. The degree of adaptive response is not enough to make them resilient to coastal environment. In this connection more adaptive and coping measures essentially required in managing future disaster impacts and preservation of coastal environment. Social ecological network is interdependencies between social and ecological factors (Barnes et al., 2019). Local resilience is the capacity of linked socio-ecological systems to absorb and respond to the recurrent disturbance and impacts as to retain essential processes and feedback to sustain (Moss & Townsend, 2004). Mutahara et al. (2017) reported that Bangladesh faces several environmental extreme events including floods, droughts, cyclones, tsunami, tidal surges, riverbank, and coastal erosion and is intermingled to salinity intrusion. The coastal area is frequently affected due to the country's funnel shaped coast situated in the Bay of Bengal. The area is also translated as the high poverty zone that makes local community more vulnerable (Hossain et al., 2011). Environment and climate change impacts surrogates more disasters and increase extreme events in Bangladesh as well as Globally (IPCC, 2012). Onset coastal districts of Bangladesh are more vulnerable due to its geographical location and characteristics. The setting of Bangladesh coastal environment describes very low elevation with the terrain topography that makes it more vulnerable to extreme environment (Agrawala et al., 2003). Several studies found that south coastal regions have been affected by an increased occurrence of typical shocks including coastal floods, erosion, floods, storm surges and riverbank erosion as the influencing factors of environment and climate changes (Chowdhury, 2003; Huq et al., 2015). The area is affected by tidal flooding, inundation, and movement of saline water (ground and surface) during the dry season (Dasgupta et al., 2014a). Climate change increases river salinity leading to shortages of drinking water and irrigation, and significant changes in the aquatic ecosystems in the Southwest coastal

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