

DISASTER IMPACT ON SUNDARBANS - A CASE STUDY ON SIDR AFFECTED AREA

MOHAMMAD ZAKIR HOSSAIN KHAN

Institute of Disaster Management and Vulnerability Studies, Dhaka University, Bangladesh

ABSTRACT

The primary indicators of environmental sustainability is the biodiversity and its conservation stated by Kates et al. (2001), whereas the assessment of biomass and floristic diversity in tropical forests has been identified as a priority by many international organizations stated by Stork et al. (1997). Cyclone 'Sidr', a tropical cyclone, was one of the biggest cyclones in the history of Bangladesh, formed in the central Bay of Bengal hit the coast of Bangladesh in 2007 and it made landfall on 15th of November with peaking wind speed of over 260 km/h. It resulted in an estimated 4,000 human deaths and the displacement of over 3 million people stated by US Embassy Dhaka (2007). The most significant devastating impact it left behind is on the diversity of flora of the Sundarbans. One quarter of the biomass cover (which is approximately 2500 sq. km) of the Sundarbans mangrove forest was damaged by the storm directly or indirectly due to the tidal surge stated by CEGIS (2007). The study shows that the total forest area damaged by the cyclone Sidr was about 21% of the Sundarbans. It was found that highly affected forest areas were dominated by Keora (*Sonneratia apetala*). Trees of Keora are comparatively taller more than 15 m and grow on newly accreted forest land. Moderately affected areas were dominated by Sundri (*Heritiera fomes*) and Gewa (*Excoecaria agallocha*). They are medium range from 10-15 m to small 5-10 m trees. Slightly affected areas were identified along the river banks and in the northern part of Sundarban. They were mainly Gewa dominated areas with comparatively smaller trees.

KEYWORDS: Primary Indicators of Environmental Sustainability, Diversity in Tropical Forests