

Natural Hazards Assessment on the Tropical Cyclones Nargis in Myanmar

Hlaing Kay Thwe^{1*}, Shigeko, Haruyama¹, Maung Maung Aye²

¹Mie University , Graduate School of Bioresources, ²University of Yangon, Department of Geography

Myanmar is situated in the western part of the South-East Asia, bordering the Bay of Bengal and the Andaman Sea with its 2400 km long coast line. It is potentially rich with marine natural resources and also potentially threatened by the waves, cyclones and associated weather and which is often inundated by river floods and coastal areas exposed to stormy weather. Myanmar occasionally experiences storms, earthquakes, floods, landslides and forest fires. Among them, cyclones are the most destructive natural disaster. The occurrences of disasters have surged in Myanmar from 2006 to 2011. Year 2006 was the noticeable year when environmental changes and natural disasters happened in Myanmar. Tropical cyclones, formed over the Bay of Bengal in Pre-monsoon Period (April and May), and Post-monsoon Period (October and November), are the most destructive and cause huge socio-economic losses. The purpose of this study is to analysis the estimated flood area is affected by Nargis Cyclone in the study area and its effects on land cover, population, settlement pattern and some social problems. This present study focuses on environmental investigations based on Satellite data UNOSAT (22th May 2008) Aerial Photo, Landsat TM and ETM, Quick Bird (Google Earth), Moderate Resolution Imaging Spectroradiometer (MODIS), DEM ASTER-2 using GIS and remote sensing technologies. Then flooding area and hazards zone are analyzed and calculated depending on the questioner results.

Keywords: Natural hazards, Myanmar, tropical cyclones, Cyclone Nargis, floods