UTILIZATION OF SPACE BASED TECHNOLOGIES FOR DISASTER RISK REDUCTION

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Abstract: Delta region, southern west of Myanmar, is a low land area and naturally vulnerable to natural hazards associated with severe loss of lives and wealth. During the years from 1948 to 1994, Myanmar has been hit by 10 serve tropical cyclones. 'MALA' Cyclone (25/4/06), TORNADO (28/4/2006), and NARGIS (3/5/2008). Cyclone Nargis is the worst one and accompanied by storm surges. Cyclone hazard zonation is essential to emphasize after the devastating cyclonic surge of May 2008 when about 150,000 people lost their lives along with other damages. This study used the ILWIS-Geographic Information Systems (GIS) together with Remote Sensing Technology for Disaster Risk Reduction. The Storm Surge Model was applied to generate different cyclone hazard zones which is helpful to mitigate the impact of cyclones and is essential for Disaster Prevention and Preparedness. Hazard zonation maps have been prepared taking into consideration storm surge depth, the geomorphological map and the DTM. Images of inundation for different surge heights corresponding to different return periods were produced by using the spread functions of GIS. Images of inundation depths were also produced using DTM and the Geomorphological map. The analysis has been automated by using batch files. This improves the effectiveness and further potential of the model.