ENVIROMENTAL DAMAGE ASSESSMENT UTILIZING HIGH RESOLUTION GEOSPATIAL IMAGERY OF MISSISSIPPI GULF COAST - POST HURRICANE KATRINA

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Abstract: This study encompasses utilizing high resolution geospatial imagery to conduct environmental assessment of damage and destruction of the Mississippi Gulf Coast -- Post Hurricane Katrina. The goal is to implement a geospatial conversion and display system capable of projecting high resolution geospatial imagery encoupled with assessment tools to evaluate environmental conditions accumulated immediately after a major catastrophe. Utilizing projected and geographic coordinate systems to geographical display geospatial data provides immediate assessment of conditions impacted by an event. High resolution imagery provides excellent display of geospatial areas impacted by a major event. Single orthographical areas reduce geographical area projections which require extending observation site view on display screen; therefore, causing clutter and congestion that impedes projection and geographical display area. Implementing established geospatial data conversion techniques allow geospatial data to be converted, extracted and incorporated into a geographical information system. This combines the geographical layers into a unified source that allows geospatial analysis and assessment operations. The result of this study provides environmental assessment of areas along the Mississippi Gulf Coast impacted by Hurricane Katrina. The methodology can be incorporated as a post-storm / catastrophe tool for initial damage assessment associated with areas impacted by a natural and/or man-made event. Hurricane Katrina proved evident the need for environmental damage and destruction assessment tools.

Keywords: High-Resolution imagery, geographic information systems