

Monitoring of Post-Katrina Infrastructure Recovery with Remote Sensing

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Hurricane Katrina presented a unique opportunity to study the infrastructure recovery associated with multiple modes of damage (flood, surge and wind) through the application of advanced technologies and methods. The role of remote sensing technologies and techniques in the monitoring and assessment of disaster recovery is explored in this study.

This study encompasses field-based, georeferenced, high-resolution digital video and still images documenting damage conditions as well as the recovery process collected using the VIEWS™ data collection and visualization system along the Mississippi coast and in New Orleans. These images are linked with a temporal sequence of high-resolution QuickBird and NOAA satellite images acquired before Hurricane Katrina, immediately following the hurricane, and in May 2006.

The purpose of the work is to compile a longitudinal post-disaster recovery dataset, building on benchmark September 2005 post-Katrina reconnaissance supported by the Multidisciplinary Center for Earthquake Engineering Research (MCEER). Preliminary findings document elements of the recovery process and will be used to support research into the characteristics of disaster recovery.

Deployment to the Gulf Coast in June of 2006 was supported with Natural Hazard Center Quick Response funds and a Dunsheath Expedition Award grant from the University of London. The field area for this work includes: Gulfport, Biloxi, Waveland-Bay St. Louis, and New Orleans.