

Draft for Comments - February 8, 2013

Use Case (extreme weather event - super storm)

Descriptive Title – (e.g., Enabling better community and business decision support for proactive planning and emergency response in case of a super storm)

Entities involved – (government agencies, NGOs, academia, commercial, users)

Roles and Activities:

Characterize and model the storm (NOAA/NWS maps, FEMA Warnings, Local government alerts); forecast modeling, info for community to collaborate; after the storm impact modeling (collaboration among federal, state, private sector and universities)

How you use social media. Use ground observations to feed models; inundation modeling, vulnerability modeling, social science collaboration.

Characterize Impacts (communication, infrastructure, public health, water, utilities, transportation, businesses, population); surge & flood; Social science integration (public health, demographics)

Highlight interdisciplinary elements

Atmospheric Science, Hydrology, Physical Oceanography, Space Weather; Societal Impacts
Inter-agency (USGCRP, NOAA, NASA, NSF, USGS, USDA, FEMA, DOD, DOE, EPA, FAA, Bureau of Reclamation, other)

What current capabilities can be leveraged/augmented?:

Federated access to Data Repositories; Do data discovery – registration service, data centers participating OpenDap almost nonexistent in geoscience; but exists in ocean work.

Web services; Harnessing of social feed and semi-quantitative analysis of social feed related to inundation; prepare warning, understand extent and rate of inundation and extent of damage, feed into emergency response – new capability ; Managing global catalog for data, software, models, methods and workflow; Web service creation and publishing

Inclusive collaboration enabling participation from international/government/industry/academia/NGOs and other domains; GCIS and Fusion tools that support integration, assimilation & visualization

What new capabilities are needed to support this scenario?

Social Science Integration; Predictive Analysis; Improved Coordination and Communication across institutions and silos – live real-time collaboration to understand the evolving situation of the hazard – federated databases, develop workflows for pre-, during-and post- hazard; involve local sensors, universities; have people on site doing post hazard evidence; LiDAR, Hyperspectral, Aerial Mapping – group evaluation (multi-agency, multi-university); current damage, new vulnerability. Other?

Benefits:

Mitigate loss of lives, property damage, and business interruptions

Educational

Experience on real-time live data to understand hazard phenomena

Real time live research with wide variety of data

Fed agencies have live real-time situational awareness to manage and provide predictions and have access to information and experts.

Post-hazard research.