

# Geographic Information Systems and Remote Sensing For Disaster Recovery

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## FIG Working Week 2016

CHRISTCHURCH, NEW ZEALAND 2-6 MAY 2016

Recovery

from disaster

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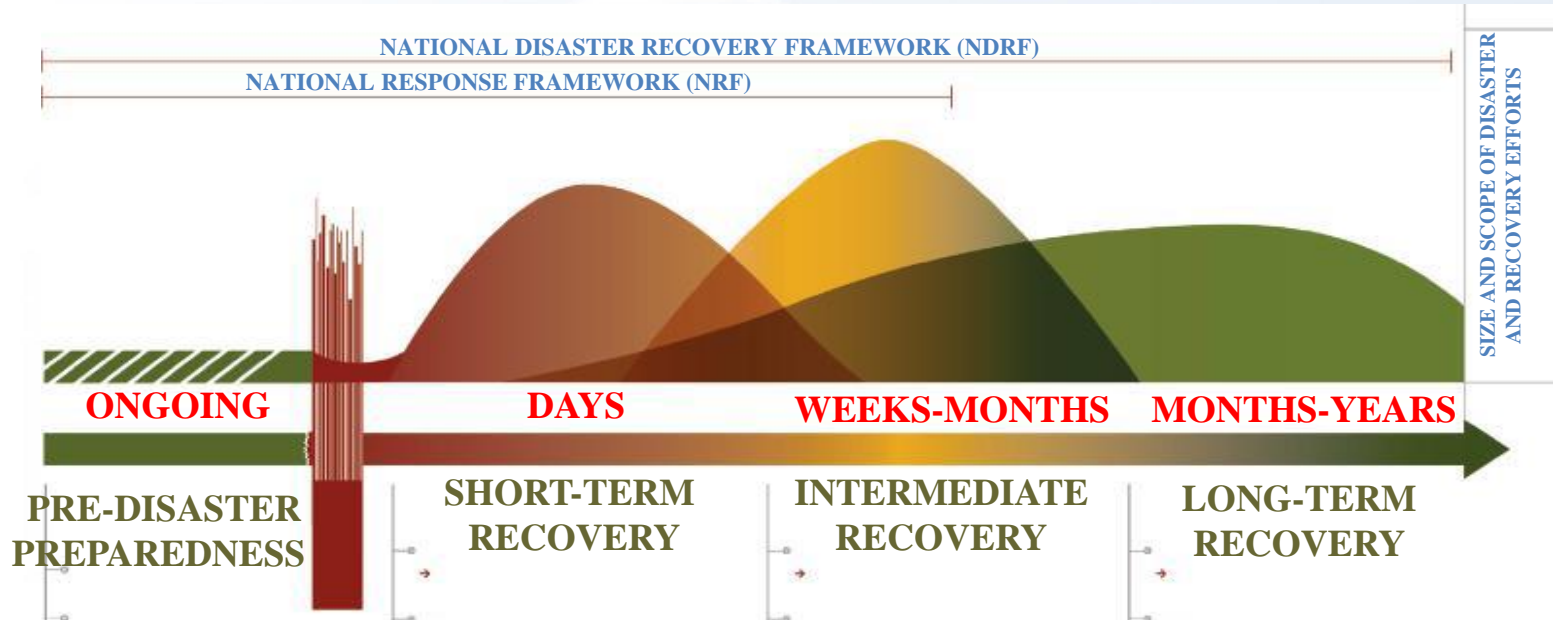


## The paper in lines

- Facets of GIS and remote sensing for disaster recovery



## Disaster recovery operates at varying space and time scales



These classes are discussed in detail in the paper



## USING GIS TO SUPPORT DISASTER RECOVERY TASKS

### Geocollaboration

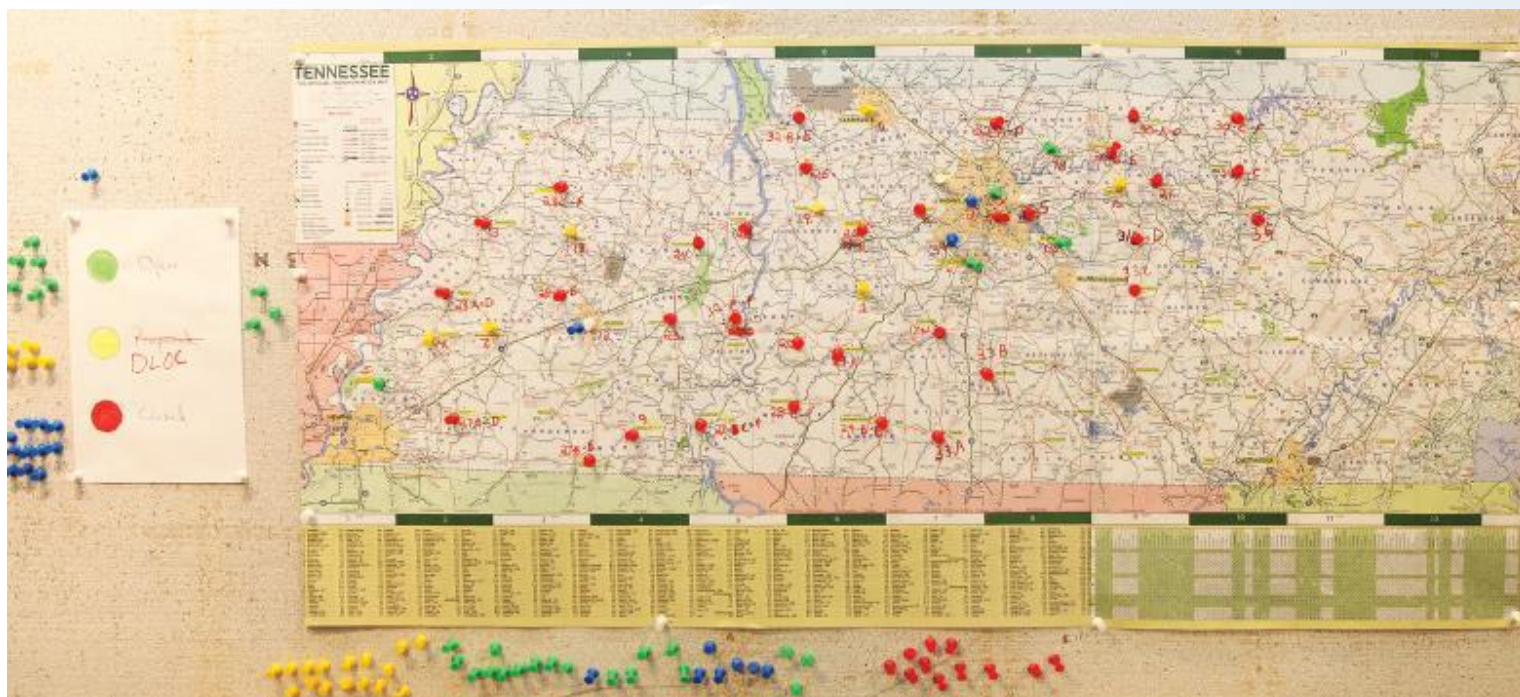


A housing recovery being held after 2012 Hurricane Sandy. In this image, the two People are using a map as the object of collaboration to review changes in elevation flood maps





## Geocollaboration



a base map show the locations of disaster recovery centers using colored push pins that signified the open (green), proposed (yellow), or closed (red).



### Geocollaboration

coordinating the activities of a wide variety of people involved in harbour management activities and when harbour emergencies occur



A picture of the large map display from the port of Rotterdam in the Netherlands

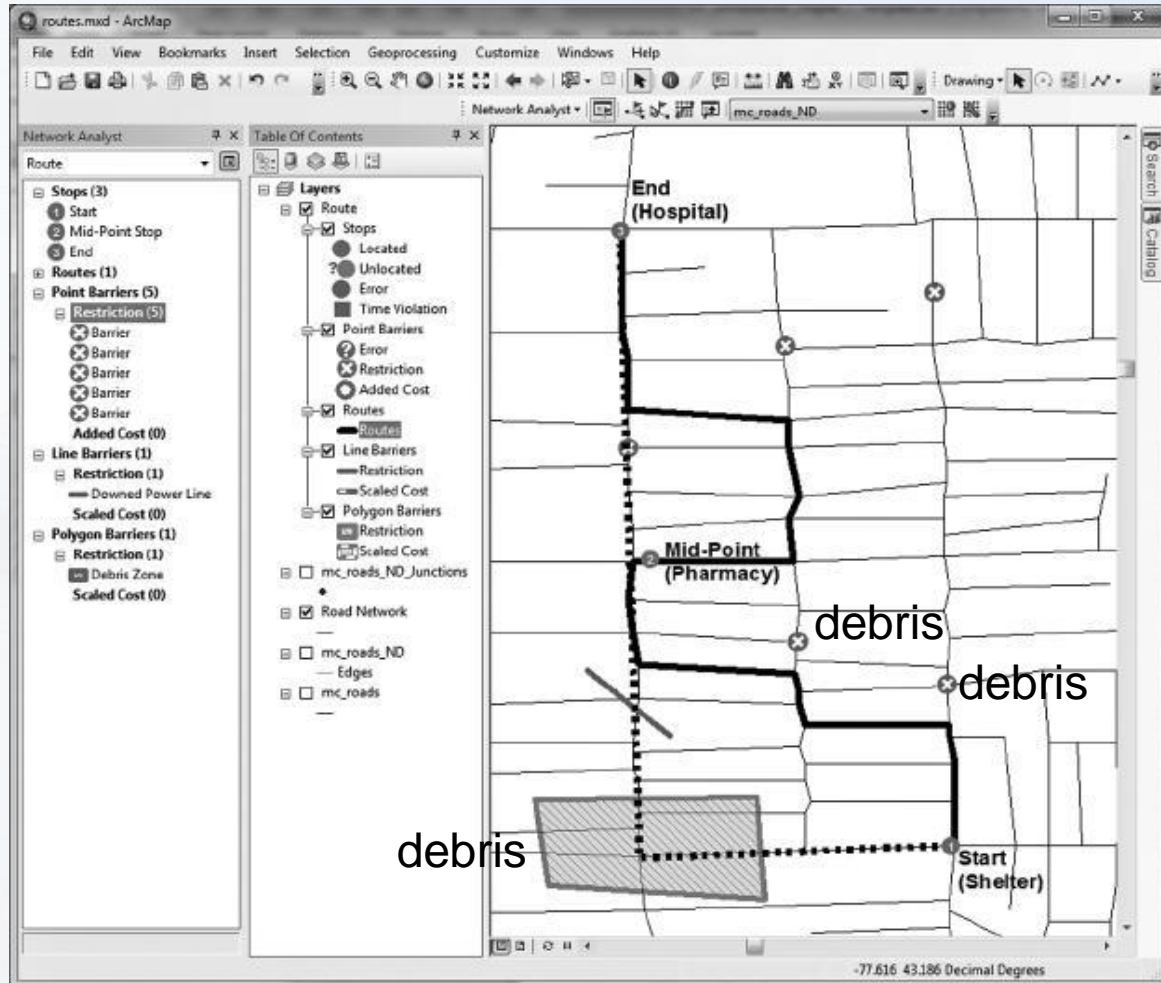




## Restoring Critical Infrastructure

The networking analysis tool inside ArcMap

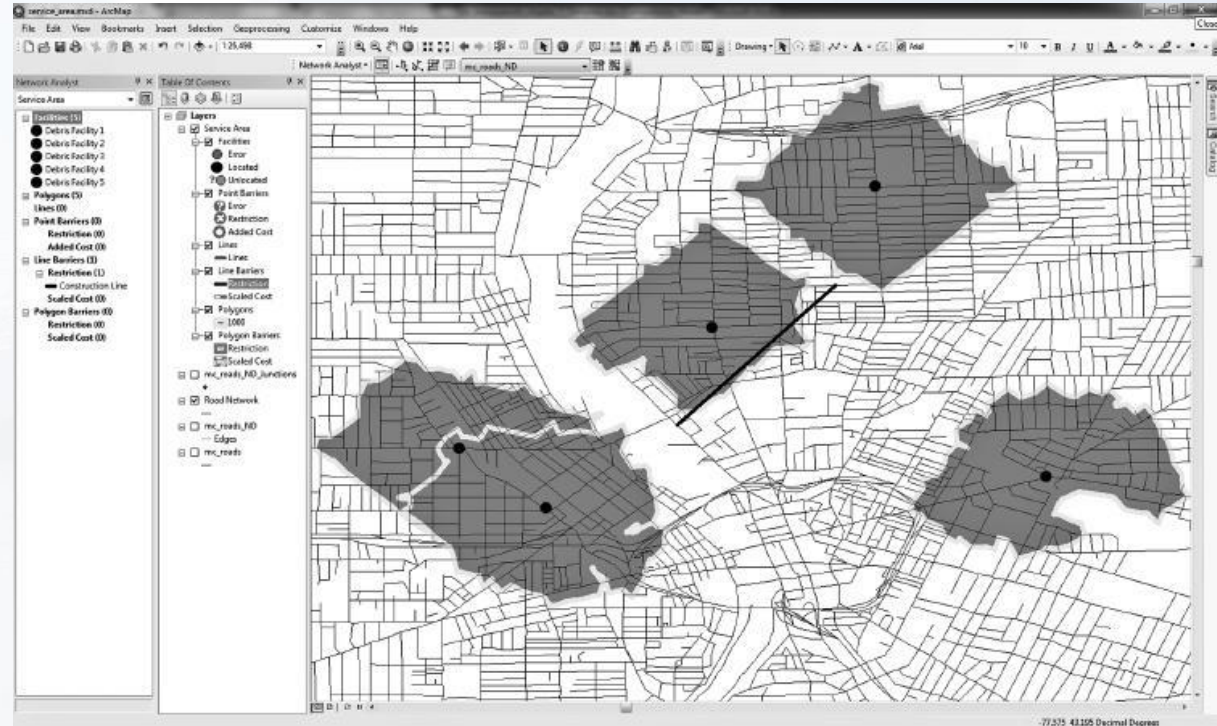
a hypothetical critical infrastructure restoration example of conducting an analysis as to which barriers should be removed to restore optimal and efficient transportation of elderly people





## Debris Clean-up

Debris clean-up  
service area  
network algorithm  
output results —  
areas 1000  
meters from  
debris collection  
points







## Recovery Planning



Using large maps to capture public opinion in feedback for housing recovery/restoration planning after Hurricane Sandy.



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quickly access important data in the field



## USING REMOTE SENSING TO SUPPORT DISASTER RECOVERY TASKS

- Providing data and imagery
- measure redevelopment progress
- aerial drones
- enter dangerous structures for search and rescue or monitoring dangerous situations such as nuclear discharges without directly endangering responders.