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## The Role Of Geospatial Tools In Disaster Management Life Cycle

Turan ERDEN and Mehmet Zeki COŞKUN



Istanbul Technical University (ITU)  
Department of Geomatics  
İstanbul / TURKEY



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### INTRODUCCION



*Geospatial tools have a great potential in disaster management life cycle*

- *saving lives*
- *limiting damages*
- *reducing the costs*

*Disaster managers, especially, would like to know*

- *where the incidents are*
- *where their impacts are greatest*
- *where critical information is needed to respond*



## INTRODUCCION - types of geospatial tool



### Geographic Information Systems

- Remote sensing
- Geographic Information Systems (GIS)
- Spatial Decision Support Systems (SDSS); and
- Clearinghouses
- Geolibraries
- Archives
- Geoportals
- Geobrowsers



## DISASTER MANAGEMENT LIFE CYCLE



All-hazard or comprehensive disaster management model in the early 1970s



Disaster management activities divided into 4 functional classes



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## THE ROLE OF MAPS IN DISASTER MANAGEMENT



- A main geospatial tool.
- Provides spatial organization of the all critical movements.



## THE ROLE OF GEOSPATIAL TOOLS IN DISASTER MANAGEMENT



- 1-Preparedness phase
- \*identifying data requirements
  - \*developing data sets
  - \*sharing data across agencies

Risks which exist now or will be potentially existed in the future scenarios

- 2-Response phase
- \*provide damage estimates
  - \*determine conditions during an event
  - \*determine conditions during an event



## THE ROLE OF GEOSPATIAL TOOLS IN DISASTER MANAGEMENT



### 3-Recovery phase

\*use of geospatial information and analysis to help managers direct the recovery process

### 4-Mitigation phase

\*visualize and measure the effects of alternative mitigation plans

Geospatial tools have particular benefit due to their ability to permit the evaluation of multiple alternatives rapidly.



## GIS AND SDSS IN DISASTER MANAGEMENT



GIS are able to integrate information from different sources, scales, accuracies, and formats into a single source.

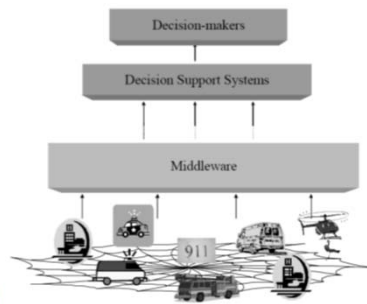
GIS can be a powerful tool for analysis purposes because each phase in the disaster management life cycle is geographically and spatially related to each other.



## GIS AND SDSS IN DISASTER MANAGEMENT



SDSS provide the essential information for decision makers when decisions involve location. For example, a SDSS can be used for determining the evacuation routes, choosing the optimal location of response teams, or allocating evacuees to shelters.



# THANK YOU



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