

# **Support Action for Strengthening PAlestine capabilities for seismic Risk Mitigation**

## **SASPARM 2.0**

**2014 PROJECT FOR CIVIL PROTECTION FINANCIAL INSTRUMENT  
PREPAREDNESS AND PREVENTION SCHEME**

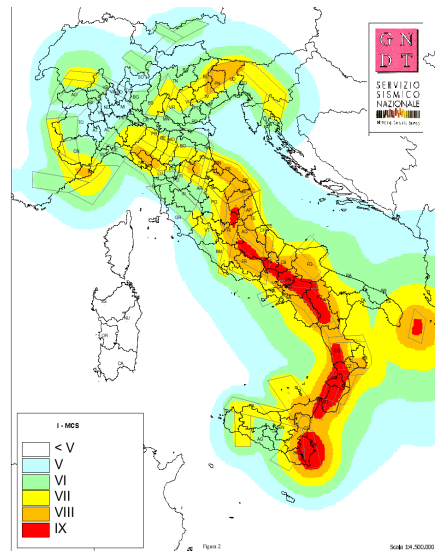
**ITALIAN SEISMIC RISK MAPS**

**Name**  
**e-mail**



## EVALUATION OF SEISMIC RISK MAPS IN ITALY

### Hazard



### Vulnerability

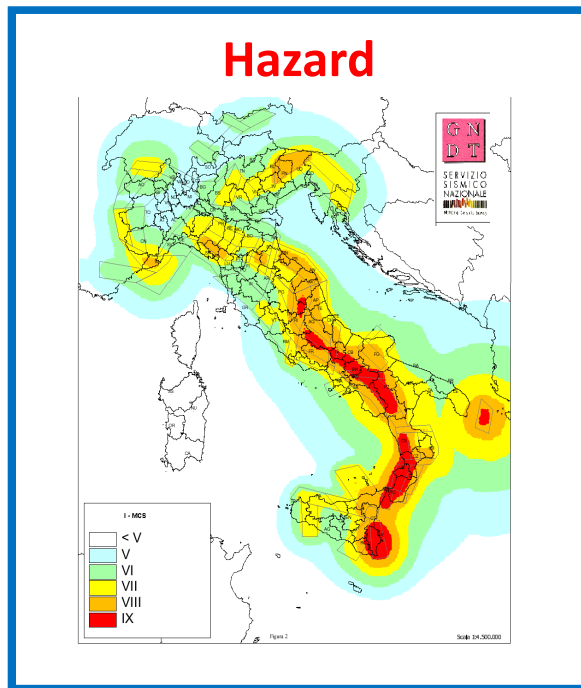


### Exposure



## SEISMIC RISK

## EVALUATION OF SEISMIC RISK MAPS IN ITALY



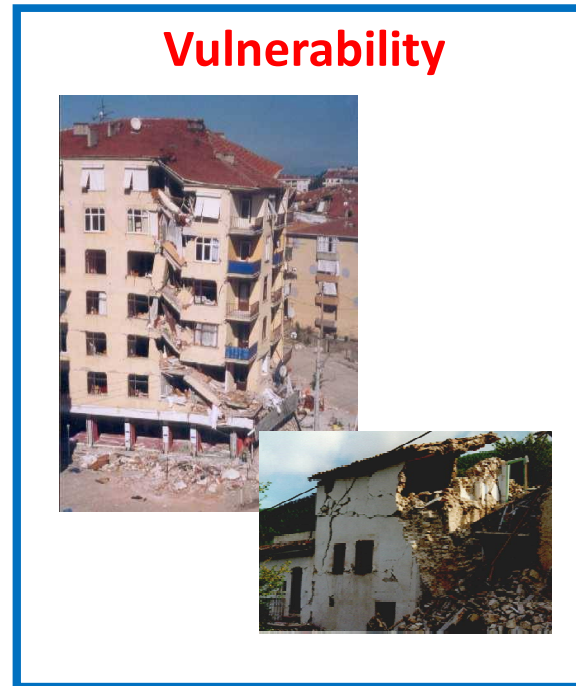
The seismic hazard is the severity of ground shaking.

The characteristics of the expected earthquake for each municipality are reported in the Italian Seismic Code.

## EVALUATION OF SEISMIC RISK MAPS IN ITALY

The buildings vulnerability is the susceptibility to damage.

We have used a simplified model of the building behavior.



## EVALUATION OF SEISMIC RISK MAPS IN ITALY

Italian census database elaborated in 2001 that reports the number of buildings, dwellings and population for each area within the municipality

### Exposure





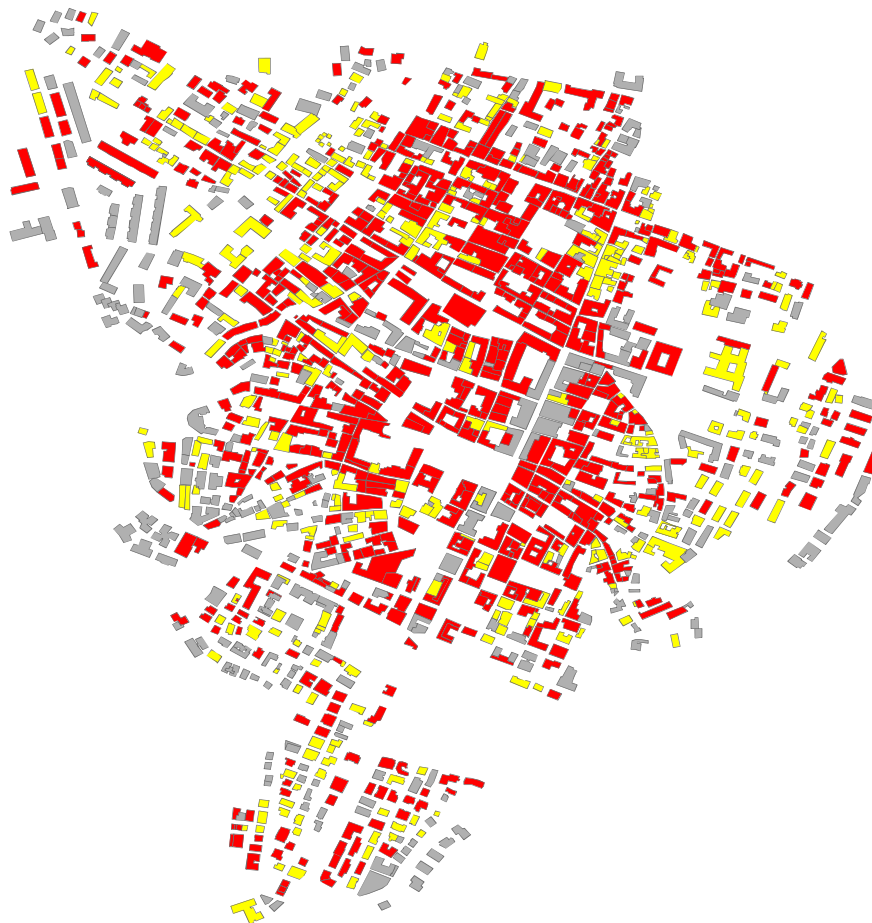
## EXAMPLE 1 OF ITALIAN SEISMIC RISK MAPS

### L'Aquila 2009 earthquake

- April 6, 2009
- Magnitude = 5.8
- Distance from the city of L'Aquila < 10 km
- Earthquake depth = 9 km



## EXAMPLE 1: DAMAGE SCENARIO FOR L'AQUILA



Probability of reaching  
the collapse:

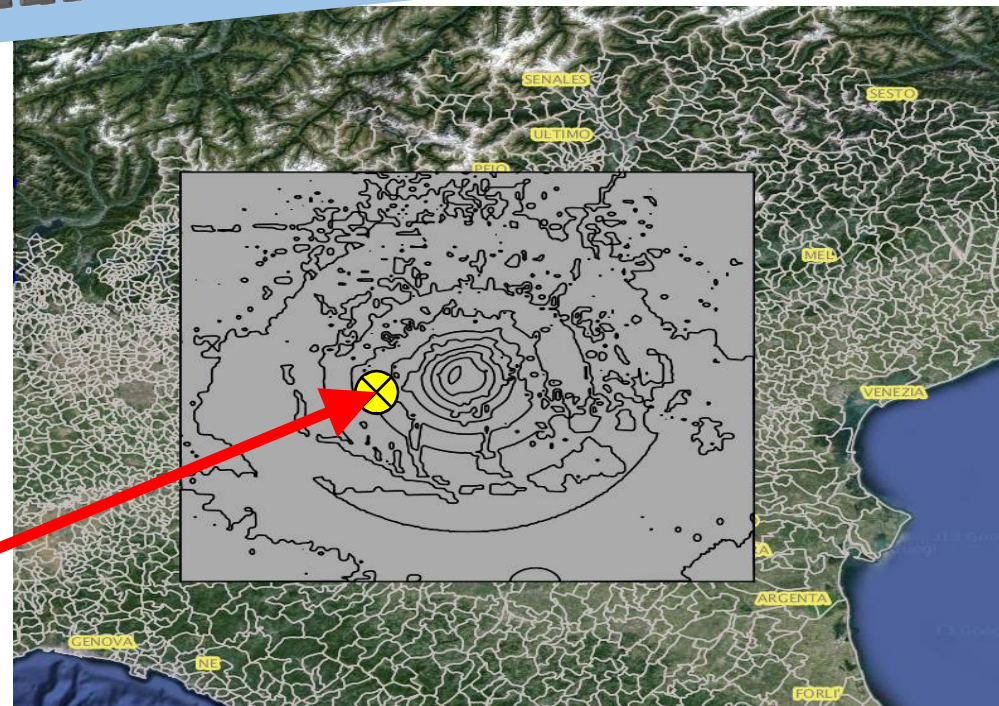
- 0% - 20%
- 21% - 50%
- 51% - 80%
- 81% - 100%

## EXAMPLE 2 OF ITALIAN SEISMIC RISK MAPS

### 25 dicembre 1222 earthquake

- Magnitude = 5.8
- Distance from the city of Ghedi = 30 km
- Earthquake depth = 10 km

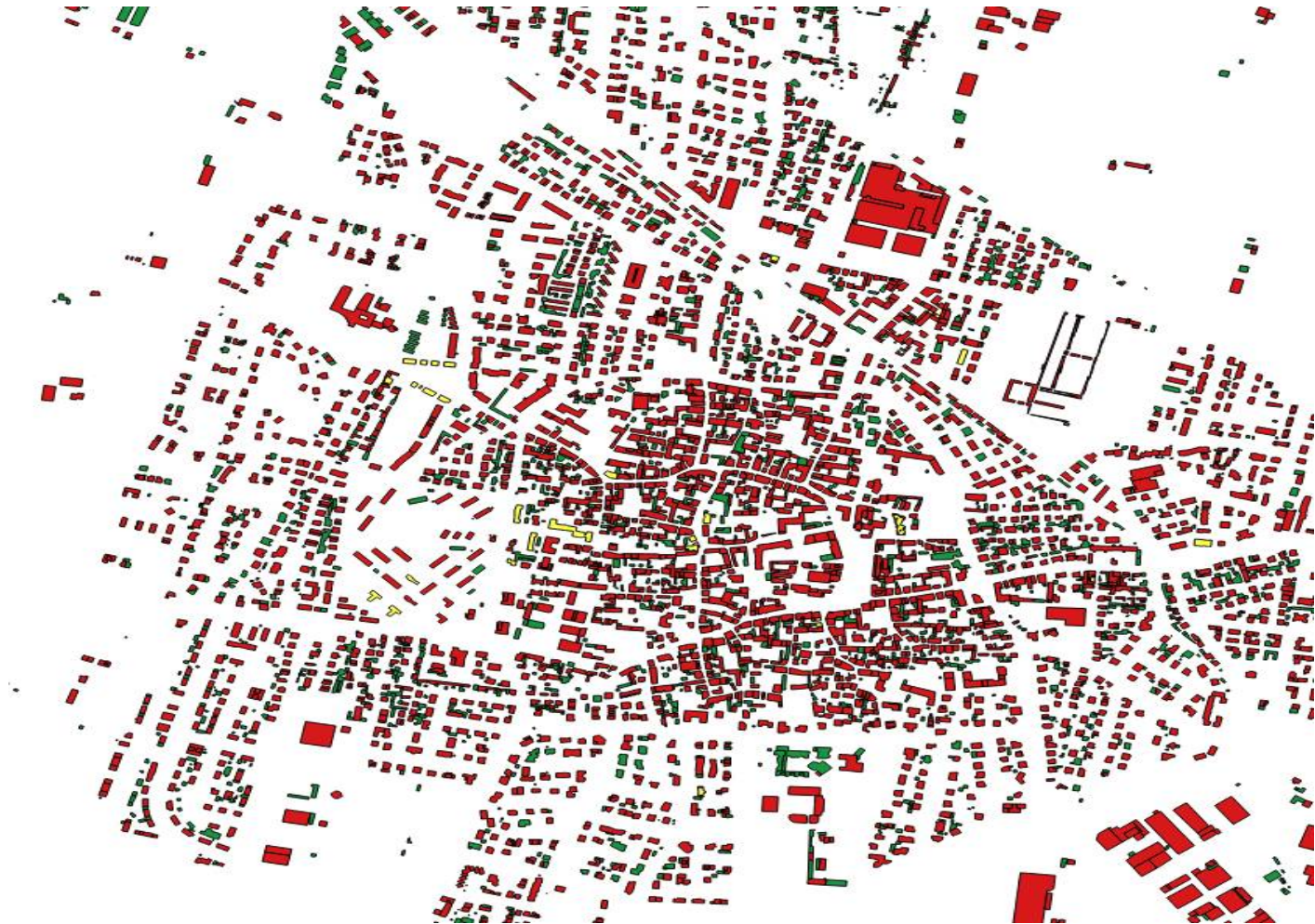
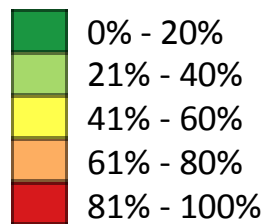
**GHEDI**





## EXAMPLE 2: DAMAGE SCENARIO FOR GHEDI

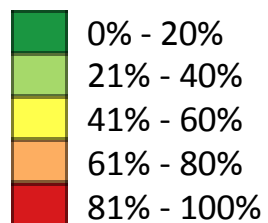
Probability of reaching  
the light damage:





## EXAMPLE 2: DAMAGE SCENARIO FOR GHEDI

Probability of reaching  
the severe damage:





## EXAMPLE 2: DAMAGE SCENARIO FOR GHEDI

