Decision Making Improvement for DRM through technological support and the 4th Disaster Risk Management Knowledge Centre Annual Seminar:

*Acting today, protecting tomorrow*

Bucharest, Romania, from 16th to 18th October 2019
General data and info

Overall population: 580,548
Density population (in/sq km): 2439
Surface: 240 sq km
Coastal Length: 42 km
Coastal urbanized up to 93%
Concrete/artificial coastal: 9 km
Creeks in urbanized area: 235 km
Covered Creeks: 151 km
Green areas: 67 sq km (95% Natural protected, 5% urban)
Roads: 1,474 km
The meteo-hydrogeological risk that threatens the city of Genoa can be identified both in the dense natural hydrographic network which innervates the urban area to the needs of urban settlements developed near the coast.
the urban environment of the city, mainly situated along the coast, is exposed to storms, violent rainfall, flash-floods, heat waves, coastal erosion and other extreme weather events (storms surge, winds) that occur with increasing intensity and frequency. The exposure to the increase in temperature and extreme weather events cause a reduction in the quality of life in urban areas (e.g., heat islands, reduction in quality and availability of water, drought, etc.); damages and economic losses; impact on human health, especially for the most vulnerable groups of the population.
GEOGRAPHIC – URBANISTIC – CLIMATIC CONTEXTS

2014 Weather Extremes

1.200.000 sqm urban area flooding

October

129 landslides occurred in 24h

November

Cost and loss

1 victim

144 displaced families

290,000,000 € in damages for private property and commercial

270,000,000 € in damages for public property

3,500,000 € in damages for cultural heritage and strategic buildings

Source: La Repubblica
Planned Intervention on hydrographic network infrastructures

**Flooding exposure**
- Red area - return period 50 years
- Yellow area – return period 200 years
- Green area – return period 500 years

**Adaptation actions**

**GEOGRAPHIC – URBANISTIC – CLIMATIC CONTEXTS**

**Investment framework 2015 - 2020**

- 2015: 24 million €
- 2016: 26 million €
- 2017: 60 million €
- 2018: 107 million €
- 2019: 100 million €
- 2020: 108 million €

Total investment: 423,778,000 €
Goal 1 – target: Decision makers

**Dynamic risk assessment process** and reliable risk scenarios to enable decision makers to improve urban resilience to address:

- extreme **precipitation** and change in flood regime that cause urban flooding and flash flood, landslides, debris flow, changing in total precipitation, storm wind, impact on urban water supply infrastructure and water quality, supply chain disruptions, power outage, loss of communication, and transport interruption;
- extreme **temperature** and drying trend, which can affect urban area with heat wave, warm spell, drought, water scarcity, forest fire and wildland-urban fire, invasive species, and habitat for disease vectors;
- **sea level** rise that can expose the urbanized coastal line, port facilities and factory plants located on low-lying coastal areas to sea flooding, storm surge and erosion.
Goal 2 – target: Policy makers

**Easy-to-understand tool** for policy makers to show in a simple and intuitive way:

- the different **hazards** that threaten urban and natural areas of the municipality
- the risk-specific **exposure** areal (hazard-prone) of the territory
- the **vulnerabilities** of infrastructure, population, ecosystems and socio-economic sectors of the city
- measures and suggestions for DRR
GENOA CORNER IN RISK DATA HUB
The challenge: analysis at local scale

Municipality

Districts

number of units: 9
inhabitants min: 57,451
inhabitants max: 88,727
area homogeneity:

Urban units

Census sections

number of units: 71
inhabitants min: 1,062
inhabitants max: 13,180
area homogeneity:

number of units: 3,610
average inhabitants: 165
area homogeneity:
Thank you for your attention
And now...
Demo of Genoa Corner - JRC

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