



ESERCITAZIONE
SISMA DELLO STRETTO
Reggio Calabria e Messina
4-5-6 Novembre 2022

A civil protection exercise of the National Civil Protection System

<http://www.protezionecivile.gov.it>

Luigi D'Angelo

**Operational Director for Emergency Coordination –
Civil Protection Department**

Naples, November 29, 2022



PROTEZIONE CIVILE
Presidenza del Consiglio dei Ministri
Dipartimento della Protezione Civile

Exe Sisma dello Stretto 2022

National Full scale exercise

some of the activities as Command post exercise

*The Department of Civil Protection and the Calabria and Sicily Regions
have agreed to test the*

*civil protection operability in the framework of the national
programme for seismic risk*

*through a national exercise that took place from
4 to 5 November 2022*

on November 6, hot wash-up debriefing

*The exercise involved the territories of Calabria and Sicily Regions, with
a focus on the Provinces of Messina and Reggio Calabria*

37 Calabria and 19 Sicily coastal municipalities

3500 civil protection actors and 2000 volunteers

2000 actors involved in the Command post exercise



SIMULATED EVENT

Magnitude of the event: $M_w = 6.2$ - $M_l = 6$

Epicentral intensity = 9

Epicenter location:

Longitude = 15.711

Latitude = 38.137

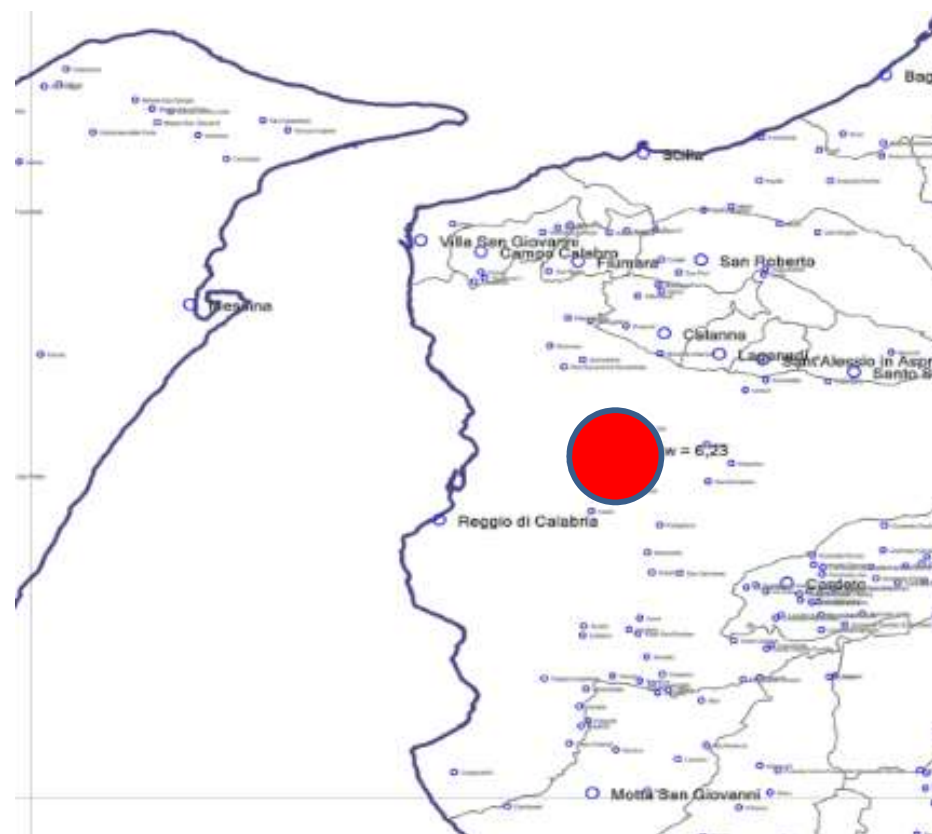
Depth = 20.0 Km

HISTORICAL REFERENCE EVENT

Earthquake of the Strait of Messina

January 16, 1975

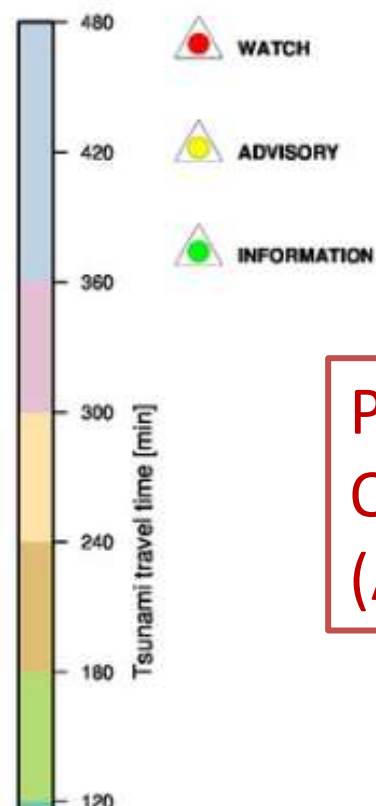
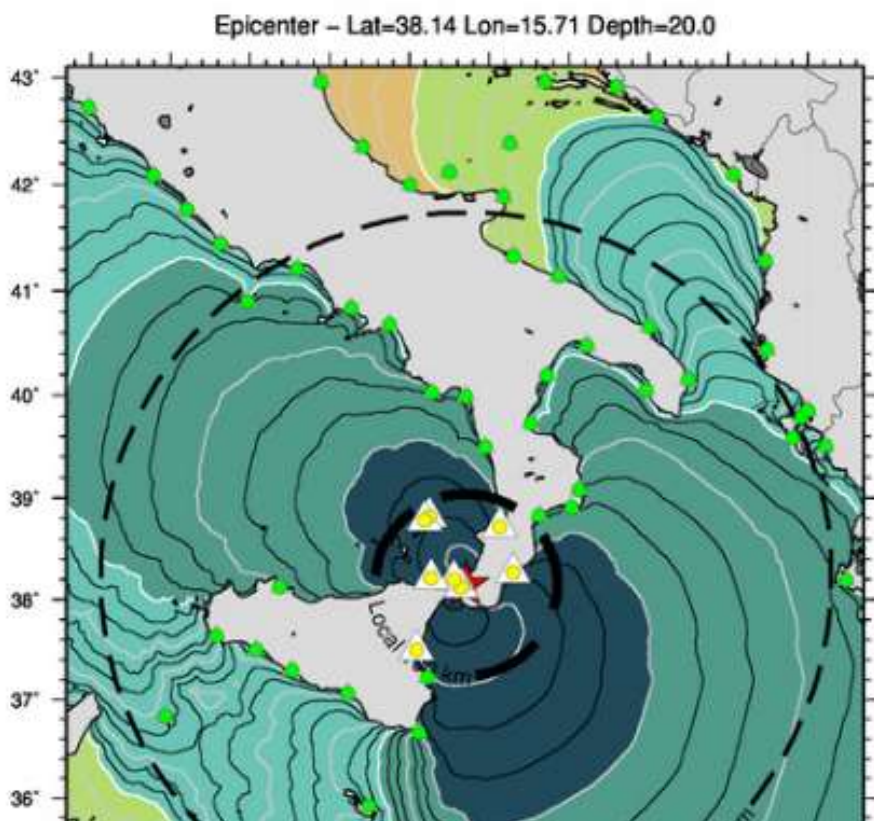
$M_l = 5.5$



TSUNAMI SCENARIO

Magnitude of the seismic event : $M_w = 6.2$ - $M_l = 6$

Able to trigger onshore environmental effects such as landslides and liquefaction and possible **tsunamis**.



Possible tsunami with
ORANGE alert level
(ADVISORY)

- **17/02/2017:** the Italian Prime Minister signed a national act (entered into force as from June) which **formally established the national tsunami early warning system (the SiAM)**
- **SiAM** is based on the responsibilities, and related activities, of the following three institutions:
 - **INGV⁽¹⁾**, through its Tsunami Alert Center⁽²⁾: detection of potentially tsunami-genic seismic events, evaluation of the alert level at national scale, issuing of the related alert messages;
 - **ISPRA⁽³⁾**: management of the sea level monitoring network;
 - **DPC⁽⁴⁾**: SiAM coordinator, responsible for the dissemination of the alert messages to **the entire National Civil Protection Service** (from the central level to the local authorities and the operational bodies)
- **15/11/2018: National guidelines on how to update the civil protection management plans with respect of tsunami risk**
 - detailed explanation of the tsunami early warning system at national level
 - probabilistic tsunami hazard map for the entire national coastline
 - Inundation maps & evacuation zones



(1) National Institute for Geophysics and Volcanology
 (2) CAT – Centro Allerta Tsunami
 (3) National Institute for the Environmental Research
 (4) Italian Civil Protection Department

EXERCISE GENERAL OBJECTIVES

- ✓ Activation of the **Coordination Centres** at the different territorial levels with the emergency telecommunications test
- ✓ Setting up of **working areas** for urgent technical assistance and medical aid activities
- ✓ Setting up of **gathering areas for the rescuers and accommodation areas for the population**
- ✓ Deployment of the **Regional Volunteers Organizations** coming from the two involved regions as well as from other regions.
- ✓ Assessment and post seismic event usability activities, with surveys on the buildings, as well as activities for the evaluation of the seismo-induced risk
- ✓ Assessment of **the accessibility of the area** for the arrival of the resources coming from other regions
- ✓ Test of the **pilot public alert system IT-Alert tsunami**
- ✓ **Theoretical and operational training activities**

NOVEMBER 4, AT 10:00 A.M.

Crisis Unit: immediately



Municipal Operational Centers and Relief Coordination Center



Operational Committee: at 11:00 a.m.



Dicomac: at 4:00 p.m.



SIAM PLATFORM TSUNAMI MESSAGES TRANSMISSION

Dedicated technological platform for automatic, near real time dissemination of alert messages to the entire emergency response system at all levels through email, sms

The Platform distributes the messages to the SNPC branches (Annex 2-Indications of the Head of the Civil Protection Department of 10 October 2018) through the addresses of the Centralised Master Data (ANCE) updated by the representative of each institution

*** ESERCITAZIONE - ESERCITAZIONE - ESERCITAZIONE *** - SISTEMA D'ALLERTAMENTO NAZIONALE PER I MAREMOTI GENERATI DA SISMA

*** ESERCITAZIONE *** ESERCITAZIONE *** ESERCITAZIONE ***

MESSAGGIO INIZIALE

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MESSAGGIO ITALIA: LIVELLO ALLERTA ROSSO (WATCH)
MESSAGGIO MEDITERRANEO: WATCH

POSSIBILI ONDE DI MAREMOTO SUL TERRITORIO NAZIONALE.

LIVELLO ALLERTA ROSSO (WATCH) : Sicilia Calabria Basilicata Campania
LIVELLO ALLERTA ARANCIONE (ADVISORY): Lazio Puglia Molise Abruzzo

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MESSAGGIO N.:001
NTWC: INGV-CATIT-NTWC
TIPO: INITIAL
INVIATO: 09:37 LT 10 OCT 2019 (Local Time)
07:37 UTC 10 OCT 2019 (Coordinated Universal Time)

Parametri automatici del terremoto

Tempo origine 09:32 LT 10 OCT 2019 07:32 UTC 10 OCT 2019
Area TEST
Magnitudo 7.0
Coordinate 39.24 NORTH 15.71 EAST
Profondita' 10 Km



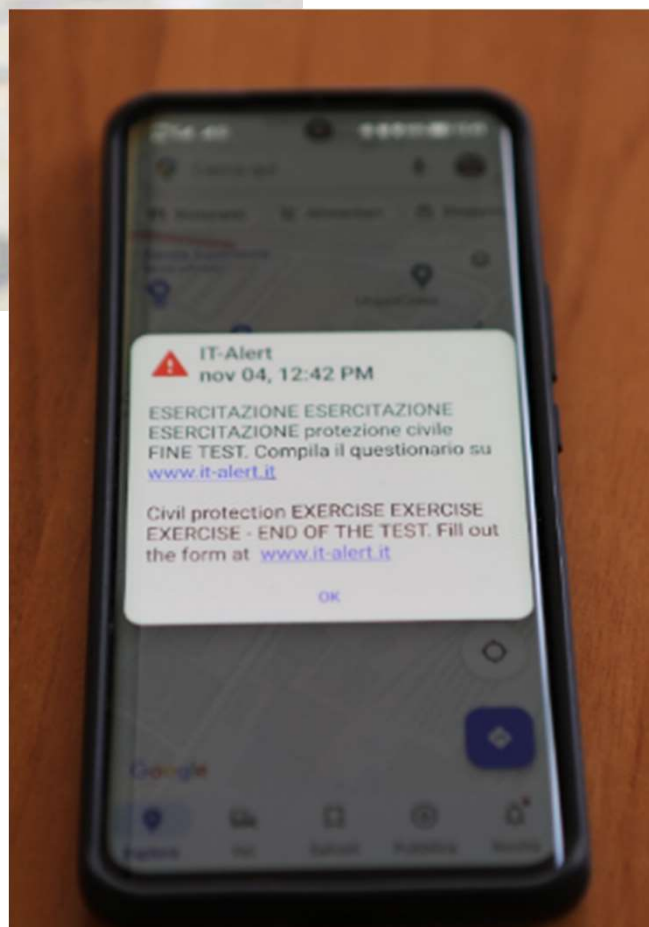
IT – ALERT

Test of the pilot Public Alert System IT-Alert using immediate notification (messages via cell broadcast technology) on smartphones and mobile phones in a specific geographic area (tested for the first time in Italy on April - Vulcano Island), in order to inform the citizens for those events classified as “*severe emergencies and forthcoming or ongoing catastrophes*”



Test of the It-Alert system by sending **the tsunami risk message.**

Preparation of message for the industrial risk scenario (NATECH refinery event in Milazzo) and test of transmission procedures without actually sending the message.



Number of cellbroadcast messages: about 440.000

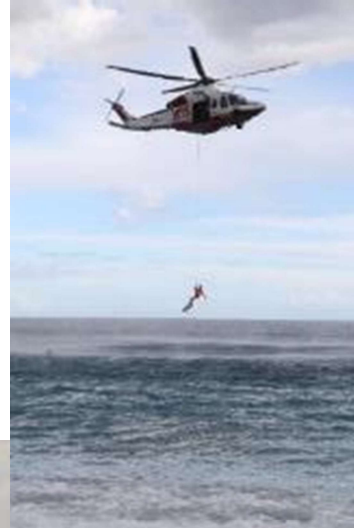
Questionnaires: about 20.000 people have replied

50% has answered to be prepared in case of tsunami risk

The trust in the Institution has increased (about 12.000)

NOVEMBER 5, 2022: OPERATIONAL SCENARIOS AT REGGIO CALABRIA AND MESSINA

Navy, Air Force
Marine Corps - Coast Guard
Police Forces
Fire Fighters
Volunteers
Italian Red Cross
Essential Services Providers



ASSESSMENT ACTIVITIES WITH THE SCIENTIFIC COMMUNITY

- **INGV**: seismic event and tsunامي - SiAM
- **CNR-IGAG** assessment of the seismo-induced effects
- **CNR-IMAA** data gathering and interactive mapping
- **ISPRA** SIAM activity and analysis of the seismo-induced effects on the territory
- **EUCENTRE** vulnerability assessment of accessibility infrastructures
- **ASI** – Italian Space Agency
- **Order of the Geologists** for technical surveys
- **UNICAL-CAMILAB** for the assessment of induced seismic effects
- **CIMA Foundation** participatory planning and IT-Alert activities



Messina (Capo Peloro): survey activities on the effects on the territory hit by the earthquake and the tsunami in the Capo Peloro area, with the involvement of technicians from the Municipality and the Order of Geologists of Sicily

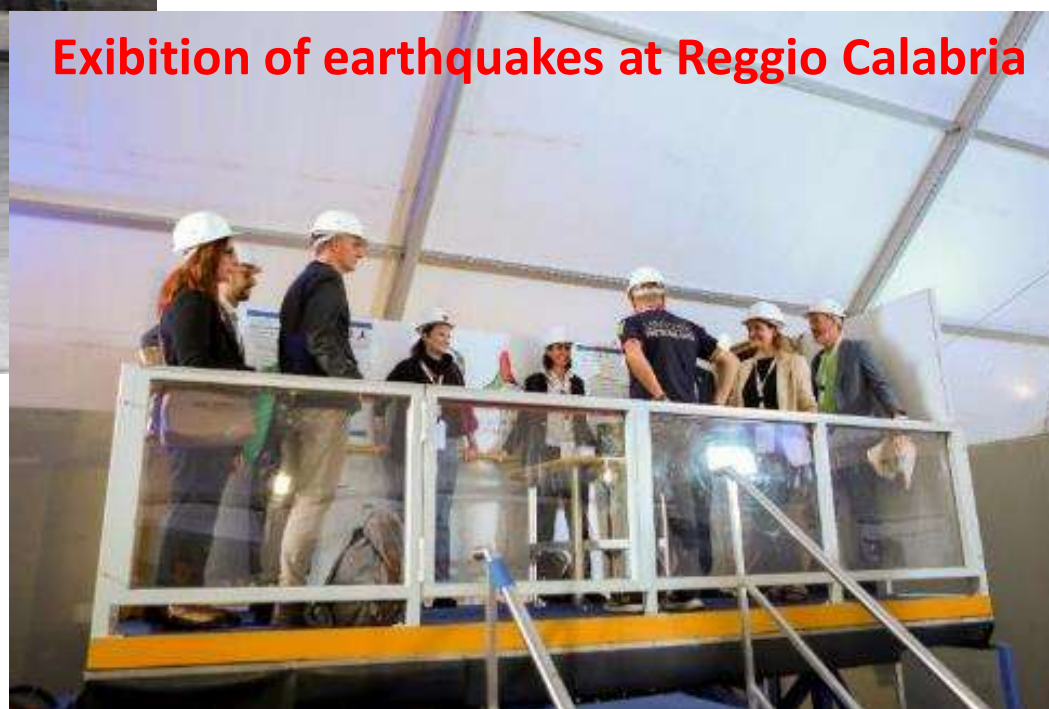


TRAINING AND INFORMATION ACTIVITIES



Io Non Rischio Campaign

Training courses for the officers and technicians of municipalities, prefectures, regions, operational structures of Calabria and Sicily



PILOT PROJECT ON PARTICIPATORY PLANNING



**Municipality of Bagnara
Calabria (RC) involvement of
the local population in the
framework of a participatory
civil protection planning pilot
project - in cooperation with
CIMA Foundation**



ACTIVITIES ON CULTURAL HERITAGE



WORLD TSUNAMI AWARENESS DAY 2022

STROMBOLI - NOVEMBER 5, 2022



Io non rischio campaign



Tsunami early warning system



Exercise on tsunami civil protection plan



Certificate of attendance



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Thank you for your attention!

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