GLIDE number: EQ-2012-000090-ITA

Activation ID: EMSR-004
Product N.: 01Finale, v4

Massa Finalese, ITALY
Earthquake - 29/05/2012
Grading Map - 02Detail

Production date: 21.06.2012

Cartographic Information

1:4000

Full color ISO A1, medium resolution (200 dpi)

0 0,075 0,15 0,3 km

Map Coordinate System: WGS 1984 UTM Zone 32N
Graticule: WGS 84 geographical coordinates

N

Legend

- Area of Interest
- **Crisis Information**
  - Gathering of People
- **Building Grading (Satellite 30/05/2012)**
  - Damaged (EMS 4,3,2)
- **Building Grading (Aerial 23/05/2012)**
  - Completely Destroyed (EMS 5)
  - Damaged (EMS 4,3,2)
  - Not Affected
- **Transportation**
  - Primary Road
  - Secondary Road
  - Local Road
  - Bridge
- **Points of interest**
  - Institutional
  - Other

	Consequences within the AOI
Estimated AOI population	2900 Inhabitants
Destroyed assets	13 Buildings
Damaged assets	32 Buildings

	Destroyed	Damaged		Destroyed	Damaged
Residential	10	27	Educational	0	0
Industrial	1	4	Medical	0	0
Commercial	0	0	Recreational	0	0
Institutional	0	0	Religious	0	0
Multi-Functional	0	0	Transportation	0	0
Other	2	1	Military	0	0

Map Information

An earthquake with a magnitude 5.8 killed at least 16 people in northern Italy on 29/05/2012, damaging buildings and leaving 14,000 people homeless in the Emilia Romagna region north of Bologna, one of Italy most agriculturally and industrially productive areas. The epicentre of the earthquake, which struck at depth of 9.6 km (6 miles), was less than 30 km (19 miles) from Modena, not far from where the magnitude 6 earthquake struck on 20th May (Source: www.glidenumber.net).
The core users of the map are Civil Protection authorities involved in operations in the field. The aim of the map production is to support the emergency response activities.

Data Sources

Airborne imagery © 2012 Courtesy of Blom CGR (acquired on 23/05/2012, 0% cloudy, 0.07m resolution).
WorldView-02 © DigitalGlobe (0% cloudy, 0.6m resolution, acquired on 30/05/2012).
Background imagery: WorldView-02 © DigitalGlobe (0% cloudy, 0.6m resolution, acquired on 30/05/2012).
LandScan © UT BATTELLE, LLC. 2010 (approx. 1km resolution).
Base vector layers based on Openstreetmap and Wikimapia refined by GAF (nominal scale 1:5000).
All Data sources are complete and with no gaps.

Dissemination/Publication

No restrictions on the publication of the mapping apply.
Delivery formats are GeoTIFF, GeoPDF, GeoJPEG and vectors (shapefile and KML formats).

Framework

The products elaborated for this rapid mapping are realized at the best of our ability, within a very short time frame during a crisis, optimising the available data and information. All geographic information has limitations due to scale, resolution, date and interpretation of the original data sources. The products are compliant with GIO-EMS RUSH Product Portfolio specifications.

Map production

The present map shows an updating of a building damage assessment in the area of Finale Emilia, ITALY, after 29/05/2012 aftershock. The previous assessment, based on aerial imagery acquired on 23/05/2012 (spatial resolution 0.07 m) and with an estimated thematic accuracy of 85%, has been updated by means of visual interpretation of post-event WorldView-02 satellite imagery acquired on 30/05/2012 (spatial resolution 0.6 m). Grading classes are based on EMS-98 damage grades, specifically: Completely Destroyed (EMS-98 Grade 5), Damaged (EMS-98 Grade 2-3-4), Not Affected.
Post-event satellite image have been orthorectified using RPC model and SRTM elevation data. The estimated geometric accuracy of this product is 5m CE90 or better, from native positional accuracy of the background orthoimage.
The estimated thematic accuracy of the updating is 60% or better, as it is based on visual interpretation of recognizable items on very high resolution satellite imagery. The overall estimated thematic accuracy is in the range 60-85% due to the use of two different post event data sources.
Map produced on 21/06/2012 by GAF AG under contract 257219 with the European Commission. All products are © of the European Commission.
Name of the release inspector (quality control): GAF AG (ODO).
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Earthquake

- Civil Protection
- Response
- Grading Map - Detail
- Planning
- Satellite Imagery © DigitalGlobe
- 29-05-2012

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