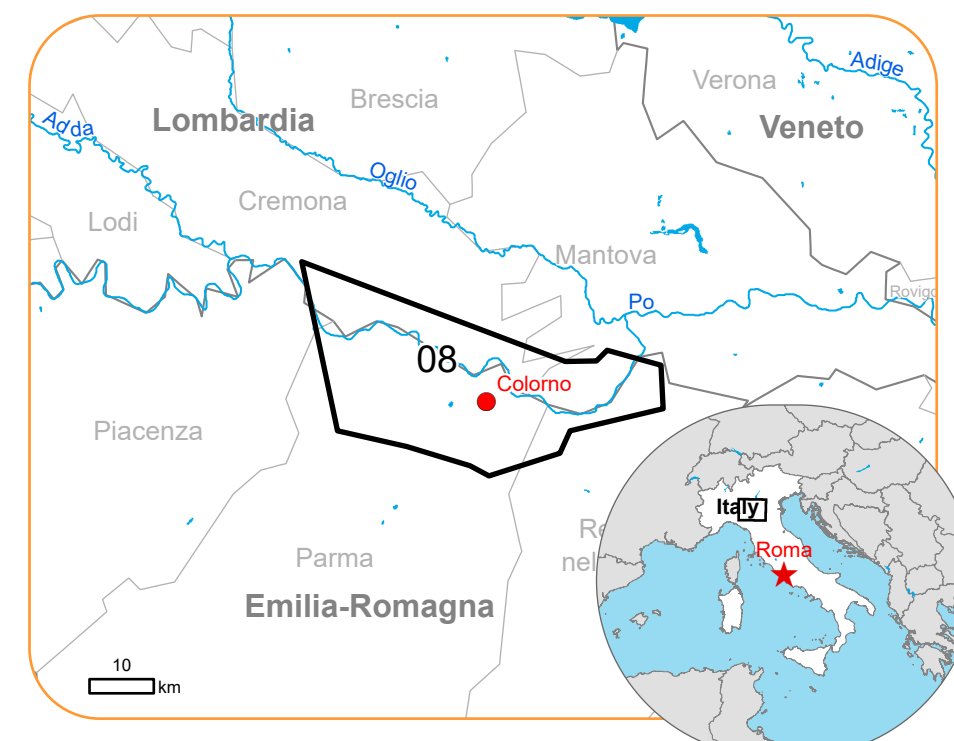


EMSR771 - AOI08
Flood in Emilia- Romagna, Italy
COLORNO

Situation as of 22/10/2024 17:56 UTC
Delineation MONIT01 - Overview map 01



Flooded area
1,121.7 ha

Potentially affected
population
~ 30

Potentially Affected Built-up and Transportations

Built-Up
0.02 ha

Road
12.1 km

Estimated flood depth (m)	Hydrography
Below 0.50	Lake, River
0.50 - 1.00	
1.00 - 2.00	
2.00 - 4.00	
4.00 - 6.00	
Crisis Information	Facilities
Maximum Flood Extent	Long-distance pipelines or lines
Area of Interest	Local pipelines or lines
Not Analysed	Dam
Administrative Boundaries	Mining or extraction site
Region	Water Well
Province	Power plant
Municipality	Sport and recreation constructions
Placenames	Dump Site
Placename	Water or Aquatic infrastructure
Built-Up Area	Transportation
Residential	Highway
Non residential	Main road
School, university and research buildings	Local road
Hospital or institutional care buildings	Railway
Military	Airfield runway
	Navigable canal
	Helipad
	Water or Aquatic infrastructure

Event: Italy has been hit in recent days by a severe phase of bad weather, which has caused flooding in large parts of the country. In Emilia-Romagna, in particular, several rivers reached the third-highest alert level. During the night and early hours of October 20, several rivers in the city of Bologna overflowed, causing flooding in the city and neighboring municipalities: San Lazzaro, Medicina and Budrio. The situation is still ongoing, although the weather is expected to improve. The National Civil Protection System has been configured as national emergency. Copernicus EMS Rapid Mapping is requested to provide initial rough estimation, flood extent and damage assessment emergency mapping.

Data sources and analysis: Pre-event image: Sentinel-2A/B (2024) (acquired on 30/08/2024 at 10:16 UTC, resolution 10 m). This image is used as background image. Post-event image: COSMO-SkyMed SG © ASI (2024), distributed by e-GEOS S.p.A. (acquired on 22/10/2024 at 17:56 UTC, resolution 3.0 m). All images are provided under COPERNICUS by the European Union and ESA, all rights reserved.

The thematic layer has been derived from post-event satellite image using a semi-automatic approach. Please be aware that the thematic accuracy might be lower in urban and forested areas due to inherent limitations of the SAR analysis technique.

The flood depth information is based on the analysis of post-event satellite imagery and on Digital Elevation Model data. The maximum flood extent corresponds to the flood observed in all previous products (cumulative analysis). The flooded area corresponds to the water observed in the most recent satellite imagery, excluding the permanent water.

Map produced by Planetek Hellas released by SERTIT on the 24/10/2024.

Details on this activation and service conditions available through the QR code or at the link: <https://rapidmapping.emergency.copernicus.eu/EMSR771>

Consequences within the AOI		Unit of measurement	Affected	Total in AOI
Flooded area*		ha		1,121.7
Maximum flood extent**		ha		5,525.5
Estimated population	Number of inhabitants		~ 30	~ 150,000
Built-up	Residential Buildings	ha	0	2,975.1
	Office buildings	ha	0	82.5
	Wholesale and retail trade buildings	ha	0	34.1
	Industrial buildings	ha	0.02	1,607.1
	School, university and research buildings	ha	0	10.5
	Hospital or institutional care buildings	ha	0	3.9
	Military	ha	0	13.3
Transportation	Cemetery	ha	0	37.5
	Navigable canals	ha	0	0.3
	Helipad	ha	0	0.5
	Airfield runways	km	0	2.0
	Navigable canals	km	0	0.2
	Highways	km	0	31.5
	Primary Road	km	0.1	135.3
	Secondary Road	km	0	193.4
	Local Road	km	0.1	1,108.5
	Cart Track	km	11.9	2,527.9
Facilities	Long-distance railways	km	0	127.3
	Settling Basin	ha	0	4.7
	Constructions for mining or extraction	ha	0.2	296.2
	Power plant constructions	ha	0	63.6
	Sport and recreation constructions	ha	0	433.1
	Other civil engineering works not elsewhere classified	ha	0	95.4
	Long-distance pipelines, communication and electricity lines	km	1.5	233.3
	Local pipelines and cables	km	0	11.4
	Dams	km	0	0.7
Land use	Arable land	ha	686.1	78,118.5
	Shrub and/or herbaceous vegetation association	ha	175.8	4,433.8
	Forests	ha	120.1	3,420.5
	Other	ha	117.7	8,941.9
	Open spaces with little or no vegetation	ha	14.5	239.7
	Inland wetlands	ha	7.1	200.5
	Heterogeneous agricultural areas	ha	0.5	530.2
	Permanent crops	ha	0	27.1
	Pastures	ha	0	192.5

* Corresponds to the water observed in the most recent satellite imagery, excluding permanent water
** Corresponds to the water observed in all previous products and in all crisis imagery, excluding permanent water (cumulative analysis).

Disclaimer:
Full disclaimer and other helpful information available in the online manual:
<https://emergency.copernicus.eu/mapping/ems/online-manual-rapid-mapping-products>
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Data Access:
All data displayed on the map(s), as well as the Physiography and Land Use - Land Cover layers, are available in the Crisis Information Package and the Base Layer Package (for reference data). The table above is available in editable format in the Crisis Information Package. All products and data are also available for download on the portal.

Estimated Population:
Estimated population is based on Copernicus Global Human Settlement Layer (GHSL) dataset. Additional population datasets and analysis are available in the summary table.

Data Sources:
Base Vector Layers: OpenStreetMap © OpenStreetMap contributors (2024), Wikimapia.org, GeoNames 2015, Corine Land Cover (CLC) 2018, EuroBoundaryMap 2017 ©EuroGeographics.
Inset Maps: JRC 2013, GSCD 2010 © EuroGeographics, Natural Earth 2012, CCM River DB © EUJRC2007, GeoNames 2015.
Digital Elevation Model: FABDEM (ForestAndBuildingsremovedCopernicusDEM) removes building and tree height biases from the Copernicus GLO 30 Digital Elevation Model (DEM) (Airbus,2020).

