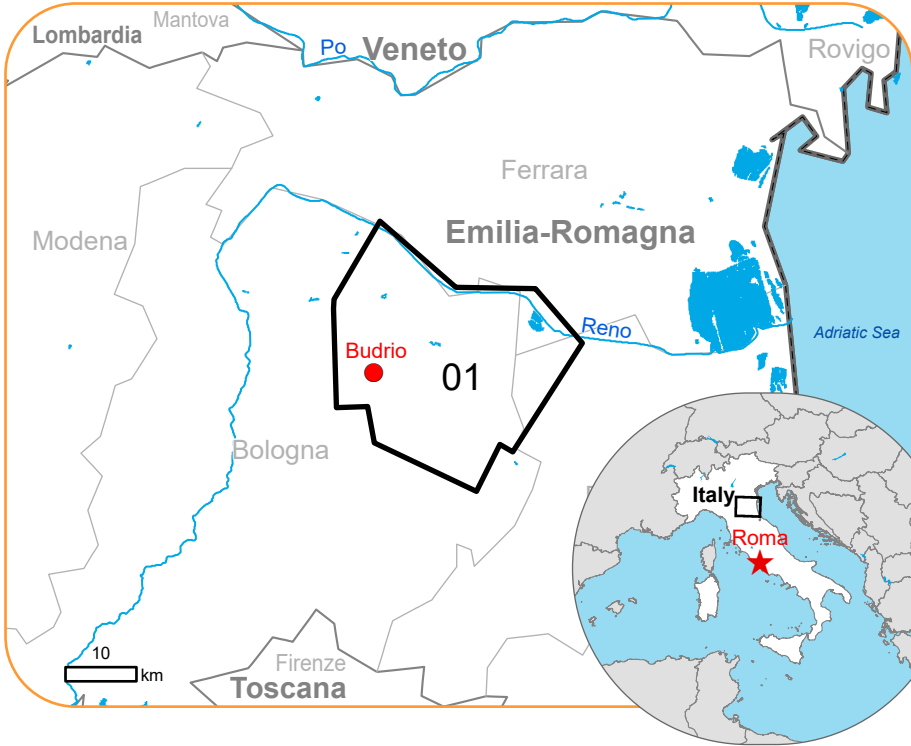




EMSR771 - AOI01
Flood in Emilia-Romagna, Italy
BUDRIOMOLINELLA

Situation as of 24/10/2024 05:27 UTC
Delineation MONIT02 - Overview map 01



Flooded area
773.8 ha



Potentially affected
population
~ 30

Potentially Affected Built-up and Transportations



Railway

0.3 km



Road

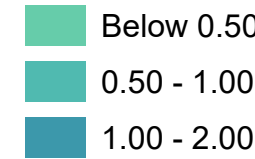
10.4 km



Built-Up

0.6 ha

Estimated flood depth (m)



Crisis Information

Maximum Flood Extent

General Information

Area of Interest

Image Footprint

Not Analysed

Administrative Boundaries

Province

Municipality

Placenames

Placename

Built-Up Area

Residential

Non residential

School, university and research buildings

Hospital or institutional care buildings

Military

Unclassified

Hydrography

Lake, River

Facilities

Long-distance pipelines or lines

Local pipelines or lines

Mining or extraction site

Power plant

Sport and recreation constructions

Dump Site

Water or Aquatic infrastructure

Transportation

Highway

Main road

Local road

Track

Airfield runway

Navigable canal

Airfield

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 10:05 UTC, resolution 10.0 m). This image is used as background image. Post-event image: Sentinel-1A/B (2024) (acquired on 24/10/2024 at 05:27 UTC, resolution 20.0 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 Telespazio Iberica 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>



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Consequences within the AOI		Unit of measurement	Affected	Total in AOI
Flooded area*		ha		773.8
Maximum flood extent**		ha		3,638.2
Estimated population	Number of inhabitants		~ 30	~ 100,000
Built-up	Residential Buildings	ha	0.6	2,042.5
	Office buildings	ha	0	27.5
	Wholesale and retail trade buildings	ha	0	5.2
	Industrial buildings	ha	0.02	893.7
	School, university and research buildings	ha	0	6.3
	Hospital or institutional care buildings	ha	0	9.4
	Military	ha	0	12.8
	Cemetery	ha	0	25.3
	Building block	ha	0	83.5
	Unclassified	ha	0	32.3
Transportation	Airfield runways	ha	0	24.0
	Navigable canals	ha	0	12.6
	Helipad	ha	0	0.1
	Airfield runways	km	0	4.5
	Navigable canals	km	0	13.2
	Highways	km	0	36.2
	Primary Road	km	0.1	106.3
	Secondary Road	km	0	177.7
	Local Road	km	0.2	797.7
	Cart Track	km	10.1	1,469.6
Facilities	Long-distance railways	km	0.3	75.6
	Settling Basin	ha	0	11.0
	Constructions for mining or extraction	ha	0	47.8
	Power plant constructions	ha	0.2	34.2
	Sport and recreation constructions	ha	0.01	446.5
	Other civil engineering works not elsewhere classified	ha	0	60.2
	Long-distance pipelines, communication and electricity lines	km	2.0	356.9
Land use	Local pipelines and cables	km	0.3	66.9
	Arable land	ha	740.8	64,311.3
	Inland wetlands	ha	23.9	3,031.0
	Other	ha	5.7	3,375.8
	Heterogeneous agricultural areas	ha	2.6	7,557.7
	Shrub and/or herbaceous vegetation association	ha	0.5	25.2
	Forests	ha	0.2	72.0
	Permanent crops	ha	0	512.9

* 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.

Access to the portal



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, GISCO 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).

Digital Terrain Model (5m) © Geoportale Regione Emilia-Romagna (2019).



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