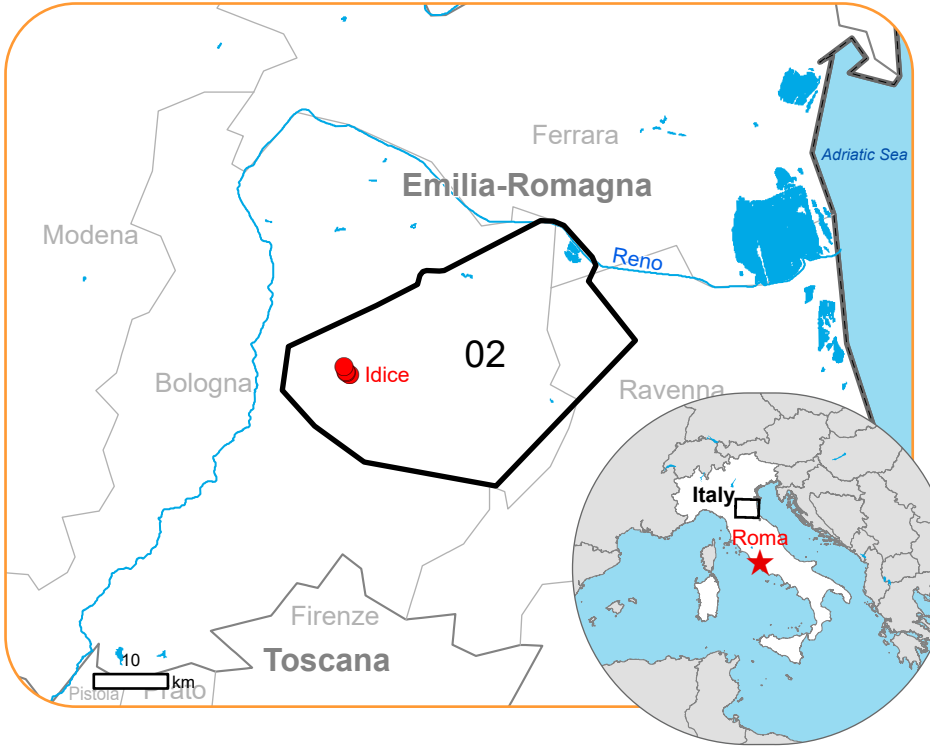




Situation as of 19/09/2024 17:04 UTC
Delineation - Overview map 01



Flooded area
1,608.8 ha

Potentially affected population
~ 200

Potentially Affected Built-up and Transportations

Road
32.2 km

Railway
0.3 km

Built-Up
1.1 ha

Estimated flood depth (m)

Below 0.50
0.50 - 1.00
1.00 - 2.00
2.00 - 4.00
4.00 - 6.00

Area of Interest
Detail map

Administrative Boundaries

Province
Municipality

Placenames

Placename

Built-Up Area

Residential
Non residential
School, university and research buildings
Hospital or institutional care buildings
Military

Hydrography

Lake, River

Facilities

Long-distance pipelines or lines
Local pipelines or lines
Dam

Facilities

Mining or extraction site
Power plant
Sport and recreation constructions
Dump Site
Water or Aquatic infrastructure

Transportation

Highway
Main road
Local road
Railway
Airfield runway
Navigable canal
Airfield
Helipad
Water or Aquatic infrastructure

Event: Since the early morning of 18 September 2024, intense rainfall is affecting the Emilia-Romagna region in Italy. The situation is ongoing with several rivers at red alert level and local floods are reported in some areas of Rimini, Brisighella and Cesena. Flooding is foreseen in several areas in the next hours. Copernicus EMS Rapid Mapping is requested to provide estimation of flood extents, andj damage assessment emergency mapping.

Data sources and analysis: Pre-event image: Sentinel-2A/B (2024) (acquired on 10/08/2024 at 10:05 UTC, resolution 10.0 m). This image is used as background image.
Post-event image: RADARSAT 2 Data and products © MacDonald, Dettwiler and Associates Ltd. (2024) (acquired on 19/09/2024 at 17:04 UTC, resolution 3.0 m).
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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 flooded area corresponds to the water observed in the most recent satellite imagery, excluding the permanent water.

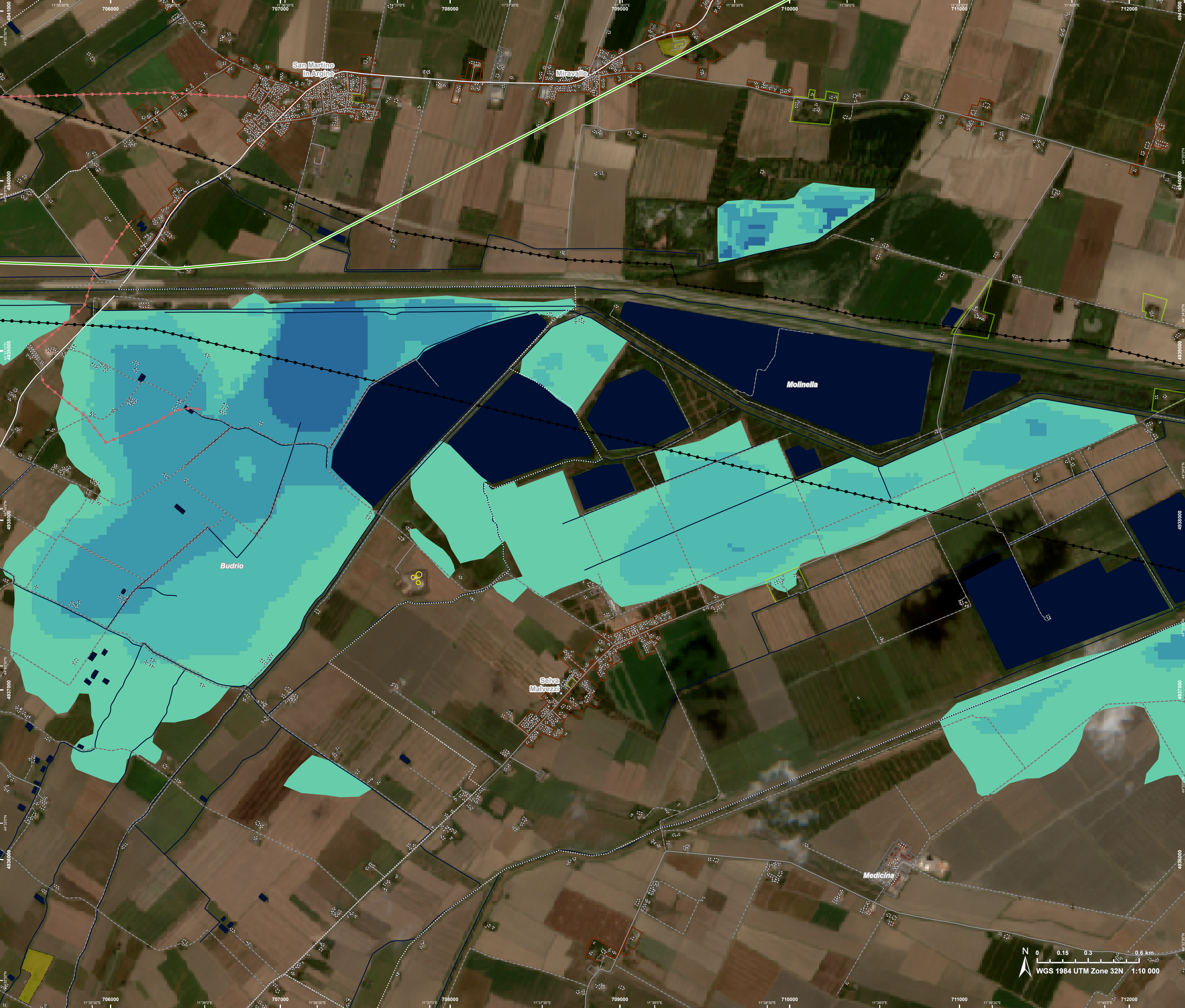
Map produced by e-GEOS released by SERTIT on the 20/09/2024.

Details on this activation and service conditions available through the QR code or at the link: <https://rapidmapping.emergency.copernicus.eu/EMSR762>

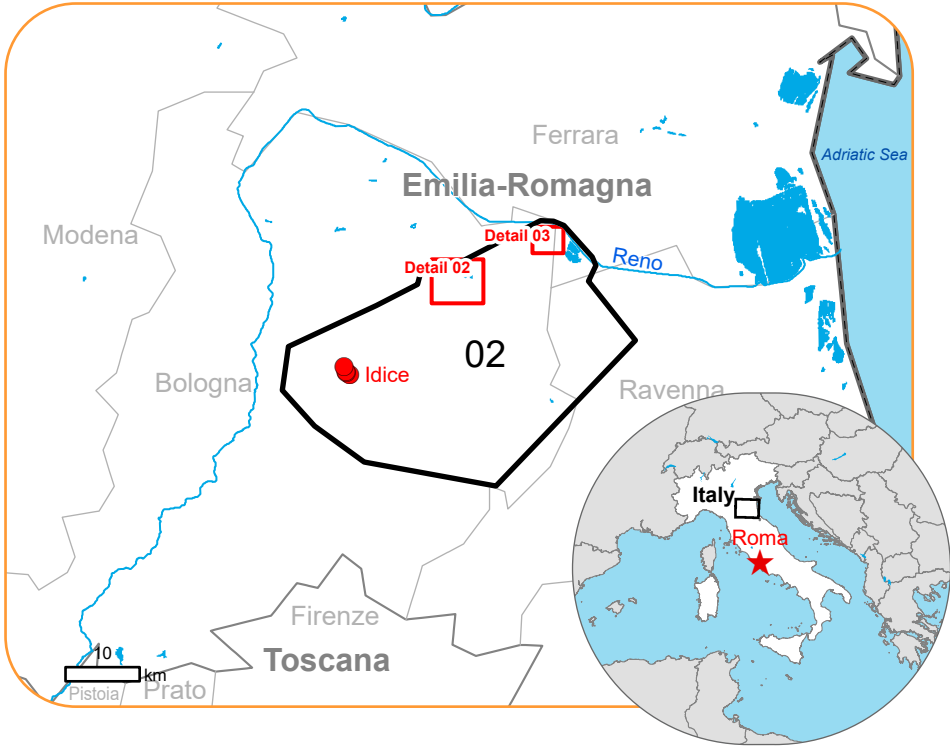


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Situation as of 19/09/2024 17:04 UTC
Delineation - Detail map 02



Estimated flood depth (m)

- Below 0.50
- 0.50 - 1.00
- 1.00 - 2.00
- 2.00 - 4.00

General Information

Area of Interest

Administrative Boundaries

Municipality

Placenames

Placename

Built-Up Area

- Residential
- Non residential

Built-Up Area

- Residential
- Non residential
- Reservoirs, silos and warehouses
- Unclassified

Built-Up Area

- Residential
- Non residential

Hydrography

Lake, River

Facilities

- Long-distance pipelines or lines
- Local pipelines or lines
- Sport and recreation constructions
- Dump Site

Transportation

- Main road
- Local road
- Track

Event: Since the early morning of 18 September 2024, intense rainfall is affecting the Emilia-Romagna region in Italy. The situation is ongoing with several rivers at red alert level and local floods are reported in some areas of Rimini, Brisighella and Cesena. Flooding is foreseen in several areas in the next hours. Copernicus EMS Rapid Mapping is requested to provide estimation of flood extents, and) damage assessment emergency mapping.

Data sources and analysis: Pre-event image: Sentinel-2A/B (2024) (acquired on 10/08/2024 at 10:05 UTC, resolution 10.0 m). This image is used as background image.

Post-event image: RADARSAT 2 Data and products © MacDonald, Dettwiler and Associates Ltd. (2024) (acquired on 19/09/2024 at 17:04 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.

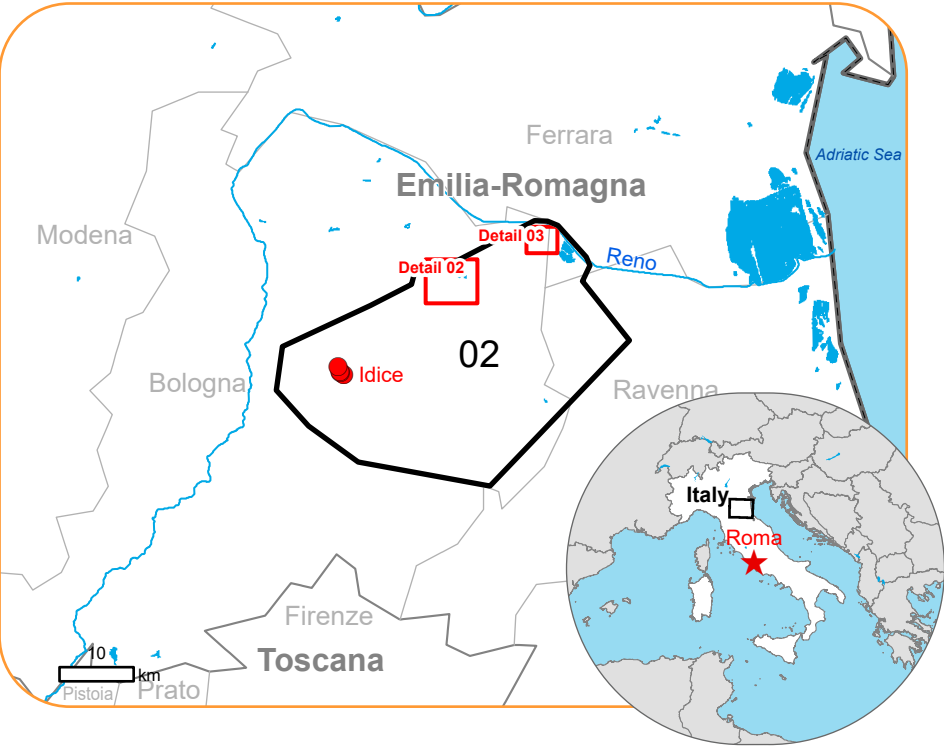
The flood depth information is based on the analysis of post-event satellite imagery and on Digital Elevation Model data. The flooded area corresponds to the water observed in the most recent satellite imagery, excluding the permanent water.

Map produced by e-GEOS released by SERTIT on the 20/09/2024.

Details on this activation and service conditions available through the QR code or at the link: <https://rapidmapping.emergency.copernicus.eu/EMSR762>



Situation as of 19/09/2024 17:04 UTC
Delineation - Detail map 03



Estimated flood depth (m)

- Below 0.50
- 0.50 - 1.00
- 1.00 - 2.00

General Information

- Area of Interest

Administrative Boundaries

- Province

Built-Up Area

- Residential
- Non residential

Built-Up Area

- Non residential
- Reservoirs, silos and warehouses
- Unclassified

Built-Up Area

- Residential
- Non residential

Hydrography

- Lake, River

Facilities

- Long-distance pipelines or lines
- Local pipelines or lines
- Sport and recreation constructions

Transportation

- Main road
- Local road
- Track

Event: Since the early morning of 18 September 2024, intense rainfall is affecting the Emilia-Romagna region in Italy. The situation is ongoing with several rivers at red alert level and local floods are reported in some areas of Rimini, Brisighella and Cesena. Flooding is foreseen in several areas in the next hours. Copernicus EMS Rapid Mapping is requested to provide estimation of flood extents, and] damage assessment emergency mapping.

Data sources and analysis: Pre-event image: Sentinel-2A/B (2024) (acquired on 10/08/2024 at 10:05 UTC, resolution 10.0 m). This image is used as background image.
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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 flooded area corresponds to the water observed in the most recent satellite imagery, excluding the permanent water.

Map produced by e-GEOS released by SERTIT on the 20/09/2024.
Details on this activation and service conditions available through the QR code or at the link: <https://rapidmapping.emergency.copernicus.eu/EMSR762>

Consequences within the AOI		Unit of measurement	Affected	Total in AOI
Flooded area		ha		1 608.8
Estimated population	Number of inhabitants		~ 200	~ 370 000
Built-up	Residential Buildings	ha	0.7	5 666.9
	Office buildings	ha	0	98.0
	Wholesale and retail trade buildings	ha	0	2.4
	Industrial buildings	ha	0.4	515.1
	School, university and research buildings	ha	0	4.5
	Hospital or institutional care buildings	ha	0	1.3
	Military	ha	0	1.1
	Cemetery	ha	0	20.5
Transportation	Airfield runways	ha	0	16.3
	Navigable canals	ha	0	0.2
	Helipad	ha	0	0.4
	Airfield runways	km	0	4.1
	Navigable canals	km	0	0.4
	Highways	km	0	109.5
	Primary Road	km	0	203.4
	Secondary Road	km	0.8	228.1
	Local Road	km	3.7	1 747.0
	Cart Track	km	27.7	2 020.4
	Railway Yard	km	0	0.7
	Long-distance railways	km	0.3	343.1
Facilities	Settling Basin	ha	0	11.7
	Constructions for mining or extraction	ha	0	237.0
	Power plant constructions	ha	0	85.6
	Sport and recreation constructions	ha	1.6	1 985.6
	Other civil engineering works not elsewhere classified	ha	0	50.5
	Long-distance pipelines, communication and electricity lines	km	7.3	492.9
	Local pipelines and cables	km	1.0	88.1
	Dams	km	0	0.1
Land use	Arable land	ha	1 503.2	66 379.2
	Inland wetlands	ha	57.1	2 224.5
	Heterogeneous agricultural areas	ha	47.0	18 295.8
	Other	ha	1.2	8 592.2
	Forests	ha	0.2	2 443.7
	Permanent crops	ha	0	518.4
	Shrub and/or herbaceous vegetation association	ha	0	2 700.8
	Open spaces with little or no vegetation	ha	0	322.1

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.

Access to 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, 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).



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