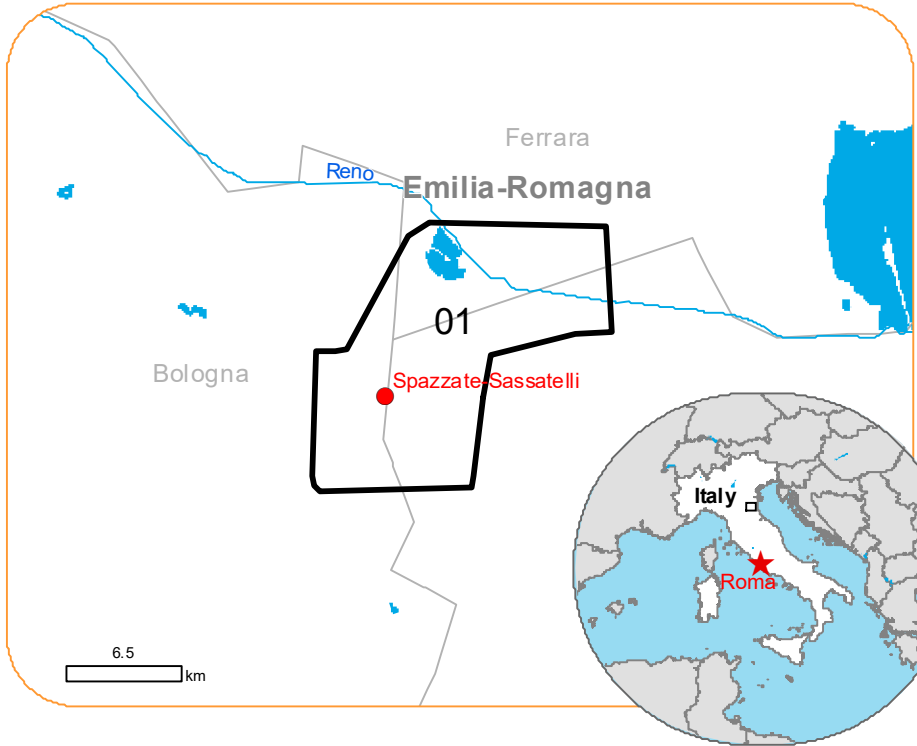


Situation as of 05/05/2023 10:07 UTC
Grading Consolidation - Overview map 01



Flood trace 20.8 ha
Flooded area 1610.86 ha
Potentially affected population ~ 200

Affected Built-up and Transportations

Road 31.0 km
Built-Up 292 No.
Airport 0.3 km

Crisis Information

- Flooded Area
- Flood trace
- Built Up Grading**
 - Residential Building, Possibly damaged
 - Residential Building, Destroyed
 - Residential Building, Damaged
 - Non-residential Building, Possibly damaged
 - Non residential Building, Damaged
- Facilities Grading**
 - Possibly damaged
- Transportation Grading**
 - Road, Damaged
 - Road, Possibly damaged
 - Airfield runway, Possibly damaged
- No visible damage**
 - Main road, No visible damage
 - Local road, No visible damage
 - Track, No visible damage
 - Railway, No visible damage
 - Airfield runway, No visible damage
 - Airfield and Heliport, No visible damage

General Information

- Area of Interest
- Detail map
- Image Footprint
- Administrative boundaries**
 - Province
 - Municipality
- Hydrography**
 - River
 - Stream
 - Lake
 - Land Subject to Inundation

All data displayed on the map(s), as well as the Land Use - Land Cover layer, is available in the Crisis Information Package and the Base Layer Package (for reference data). All products and data are also available for download on the

Event: On the 02 May 2023, an intense phase of bad weather, with considerable rainfall, hit Emilia-Romagna, Italy. The event is on-going with river levels very high, the breaking of the Sillaro River embankment and the overflow of the Lamone River producing flooding close to the cities of Massa Lombarda and Conselice. 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: ESRI World Imagery © DigitalGlobe (acquired on 29/07/2021, GSD 0.6 m, approx. 0% cloud coverage in AoI)
Post-event image: Aerial data @ European Commission (acquired on 05/05/2023 10:00 UTC, resolution 0.20 m) provided under Copernicus by CGR, Compagnia Generale Ripresearee (S.P.A.), all rights reserved. This image is used as background image
Post-event image: Pleiades-1A/B © CNES (2023), distributed by Airbus DS (acquired on 05/05/2023 at 10:07 UTC, GSD 0.5 m, approx. 0% cloud coverage in AoI, 15.8° off-nadir angle).
All images are provided under COPERNICUS by the European Union and ESA, all rights reserved.

Base vector layers: OpenStreetMap © OpenStreetMap contributors (current year), Wikimedia.org, GeoNames 2015, EuroBoundaryMap 2017 © EuroGeographics
Inset maps: JRC 2013, GISCO 2010 © EuroGeographics, Natural Earth 2012, CCM River DB © EUJRC2007, GeoNames 2015.

Population data:
GHS Population Grid © European Commission, 2022
https://ghsl.jrc.ec.europa.eu/ghs_pop2022.php
Digital Elevation Model: COP-DEM-EEA-10-R product © DLR e.V. (2014-2018) and © Airbus Defence and Space GmbH (2020) provided under COPERNICUS by the European Union and ESA, all rights reserved.

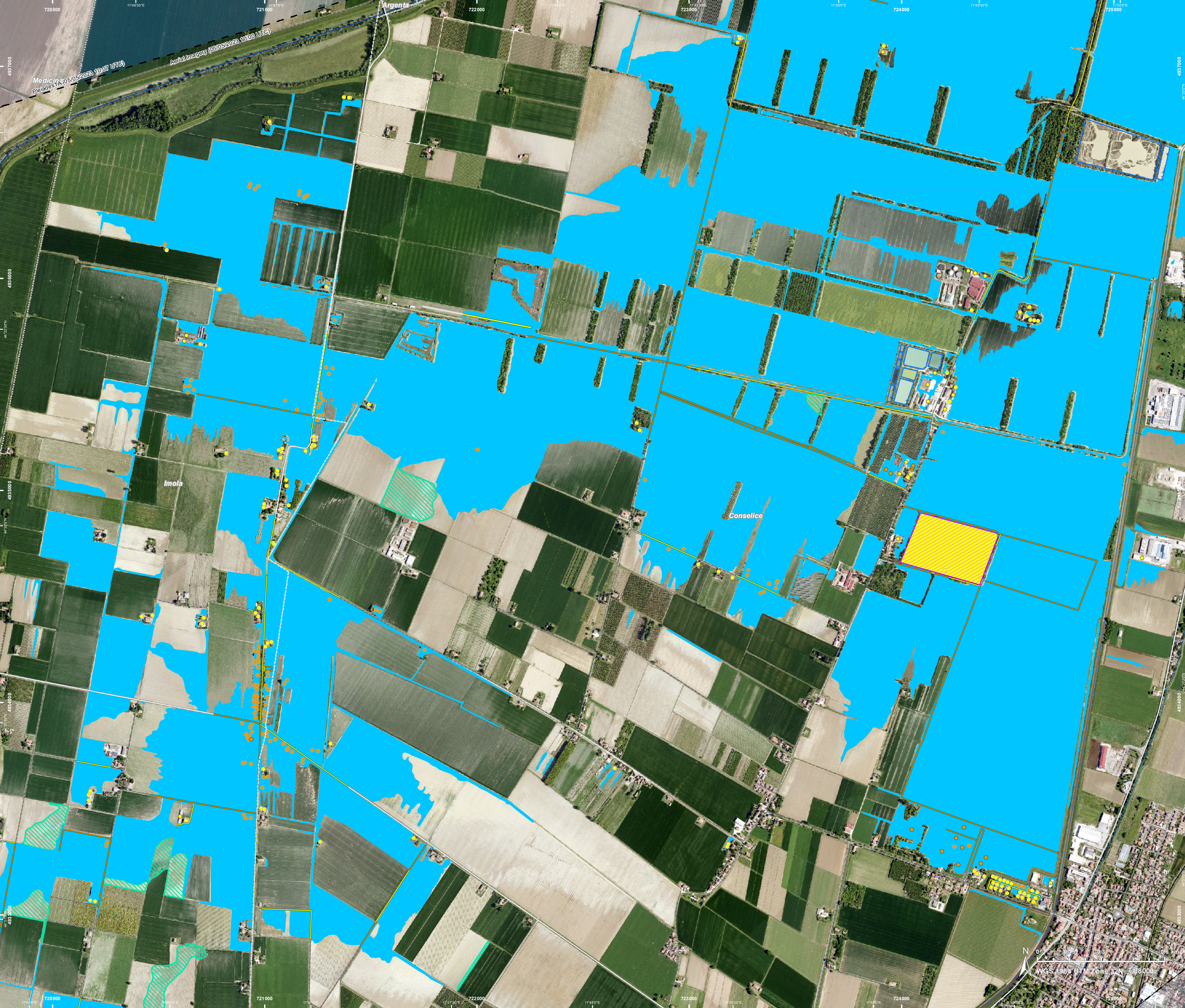
The thematic layer has been derived from post-event satellite image using a semi-automatic approach.


The scale of analysis is 1:10000. The estimated geometric accuracy (RMSE) is 2.5 m or better, from native positional accuracy of the background satellite image. The minimum mapping unit (MMU) is 100 sq m.

Map produced by Telespazio Iberica released by e-GEOS on the 08/05/2023.

Details on this activation and service conditions available through the QR code or at the link:
<https://emergency.copernicus.eu/EMSR659>

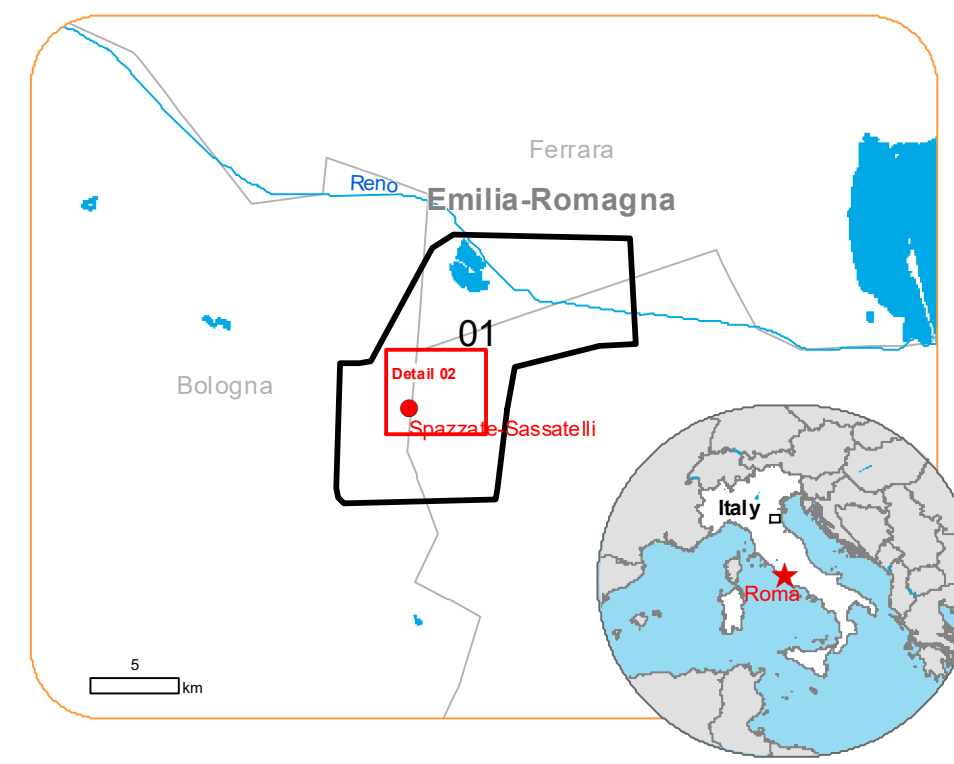






EMSR659 - AOI01
Flood in Italy
SPAZZATE-SASSATELLI

Situation as of 05/05/2023 10:07 UTC
Grading Consolidation - Detail map 02





Flood trace 16.0 ha
76.92% of total in AOI
Flooded area 986.4 ha
61.23% of total in AOI



Potentially affected population
~ 200

Affected Built-up and Transportations



Built-Up
262 No.
89.73% of potentially affected



Road
21.3 km
68.71% of potentially affected



Airport
0.3 km
100% of potentially affected

Crisis Information

- Flooded Area
- Flood trace
- Built Up Grading**
 - Residential Building, Possibly damaged
 - Residential Building, Damaged
 - Non-residential Building, Possibly damaged
 - Non residential Building, Damaged
- Facilities Grading**
 - Possibly damaged
- Transportation Grading**
 - Road, Damaged
 - Road, Possibly damaged
 - Airfield runway, Possibly damaged
- No visible damage**
 - Main road, No visible damage
 - Local road, No visible damage
 - Track, No visible damage
 - Railway, No visible damage
 - Airfield runway, No visible damage

General Information

- Area of Interest
- Image Footprint
- Administrative boundaries**
 - Province
 - Municipality
- Hydrography**
 - River
 - Stream
 - Lake

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Data sources and analysis: Pre-event image: ESRI World Imagery © DigitalGlobe (acquired on 29/07/2021, GSD 0.6 m, approx. 0% cloud coverage in AOI)
Post-event image: Aerial data @ European Commission (acquired on 05/05/2023 10:00 UTC, resolution 0.20 m) provided under Copernicus by CGR, Compagnia Generale Ripreseeree (S.P.A.), all rights reserved. This image is used as background image.
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EMSR659 AOI: 01 Spazzate-Sassatelli Grading

Consequences within the AOI								
	Unit of measurement			Destroyed	Damaged	Possibly damaged*	Total affected**	Total in AOI
Flood trace		ha						20.8
Flooded area		ha						1,610.9
Estimated population	Number of inhabitants						~ 200	~ 16,000
Built-up	Residential Buildings	No.		1	130	119	250	6,568
	Industrial buildings	No.		0	16	25	41	287
	Other non-residential buildings	No.		0	0	0	0	268
	Non-residential farm buildings	No.		0	0	0	0	12
	Buildings used as places of worship and for religious activities	No.		0	1	0	1	10
	Communication buildings, stations, terminals and associated buildings	No.		0	0	0	0	1
Transportation	Airfield runways	ha		0.0	0.0	0.0	0.0	1.4
	Airfield runways	km		0.0	0.0	0.3	0.3	1.0
	Primary Road	km		0.0	0.0	0.0	0.0	24.3
	Secondary Road	km		0.0	0.2	2.0	2.2	20.8
	Local Road	km		0.0	0.4	1.5	1.9	96.2
	Cart Track	km		0.0	18.3	8.5	26.9	239.0
	Long-distance railways	km		0.0	0.0	0.0	0.0	19.3
Facilities	Power plant constructions	ha		0.0	0.0	0.0	0.0	5.1
	Sport and recreation constructions	ha		0.0	0.0	9.8	9.8	21.6
	Long-distance pipelines, communication and electricity lines	km		0.0	0.0	0.0	0.0	48.8
	Local pipelines and cables	km		0.0	0.0	0.0	0.0	0.3
			Very high damage	High damage	Moderate damage	Negligible to slight damage	Total affected**	Total in AOI
Land use	Arable land	ha	NA	NA	NA	NA	1,319.3	11,221.3
	Permanent crops	ha	NA	NA	NA	NA	182.2	329.4
	Heterogeneous agricultural areas	ha	NA	NA	NA	NA	77.1	2,967.5
	Inland wetlands	ha	NA	NA	NA	NA	35.8	1,072.2
	Other	ha	NA	NA	NA	NA	17.4	732.0
* Presence of damage proxies and proximity with destroyed/damaged asset ** Sum of all damage classes								

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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PROGRAMME OF THE
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