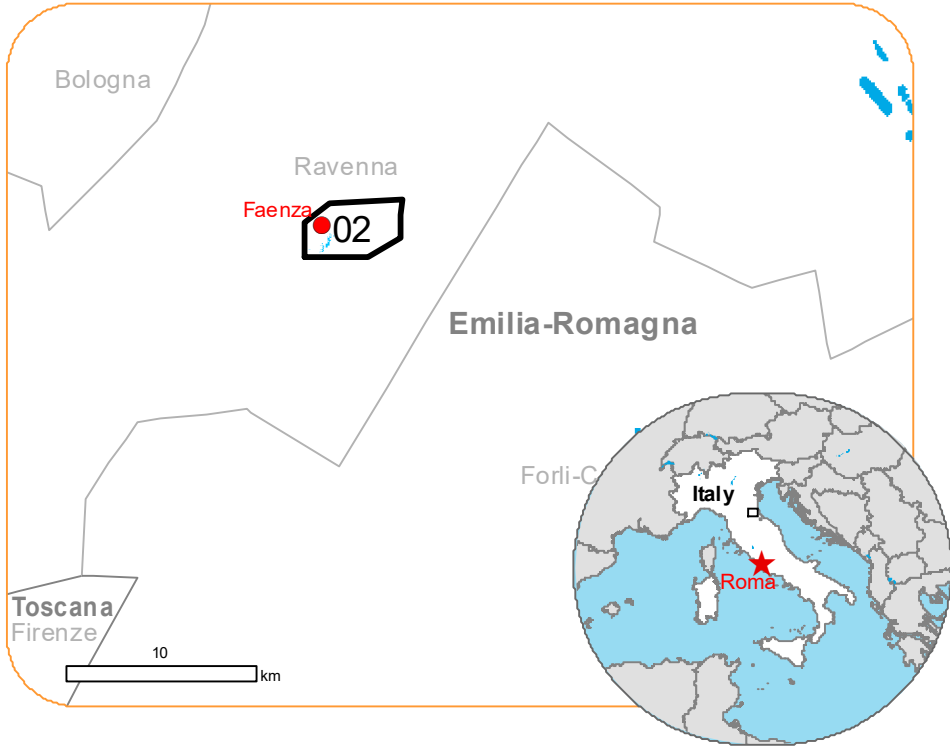




Situation as of 05/05/2023 10:00 UTC  
Grading - Overview map 01



Flood trace 29.0 ha  
Flooded area 10.0 ha  
Potentially affected population ~ 500

Potentially Affected Built-up and Transportations

Built-Up 81 No.  
Road 3.4 km

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

**General Information**  
Area of Interest  
Detail map  
**Hydrography**  
River  
Lake  
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 activation webpage.

**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 29/10/2021; 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.

Base vector layers: OpenStreetMap © OpenStreetMap contributors (current year), Wikimapia.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.

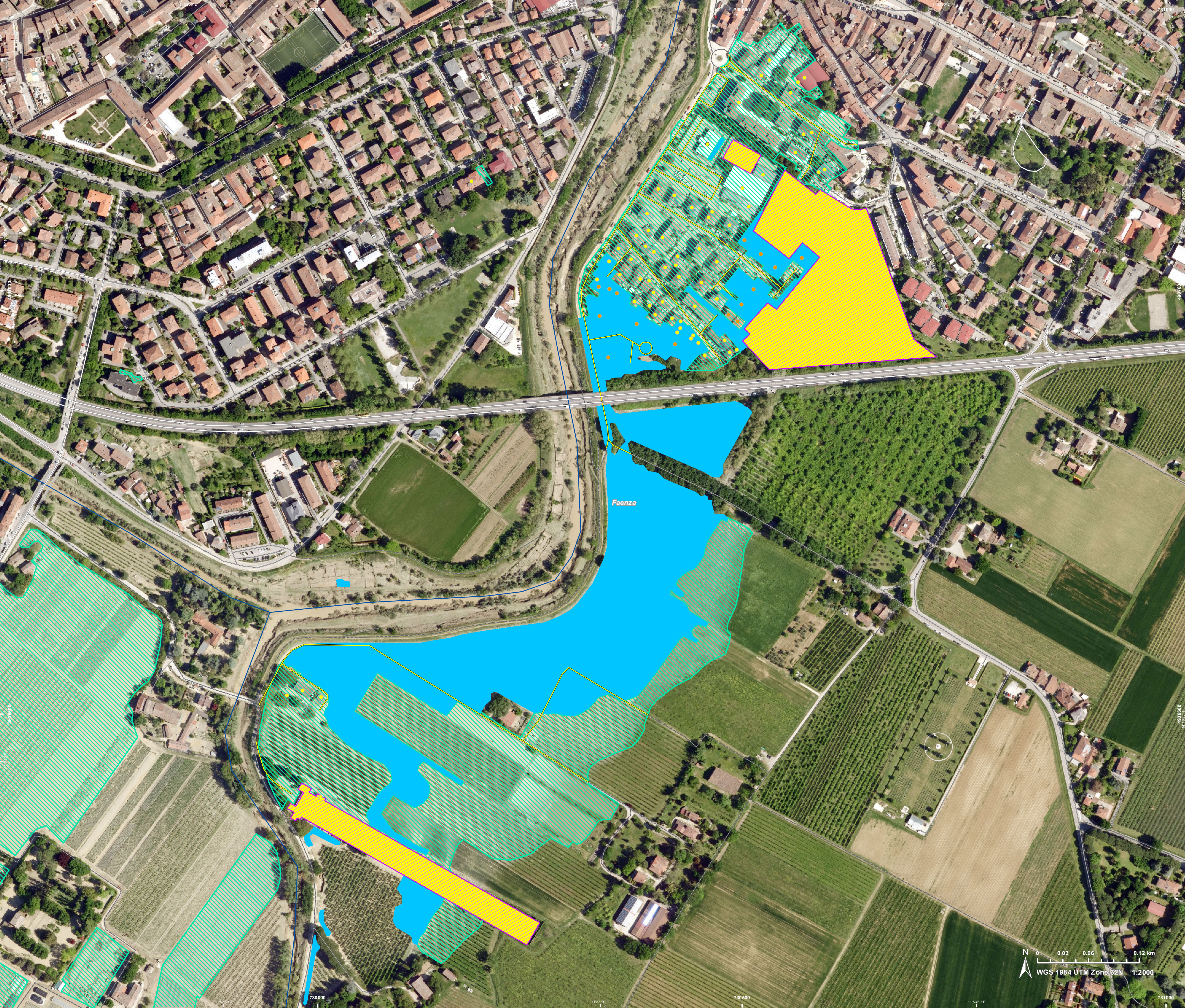
The thematic layer has been derived from post-event satellite image by means of visual interpretation.  
The scale of analysis is 1:10000. The estimated geometric accuracy (RMSE) is 2.5 m or better, from native positional accuracy of the background satellite image. The minimum mapping unit (MMU) is 100 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

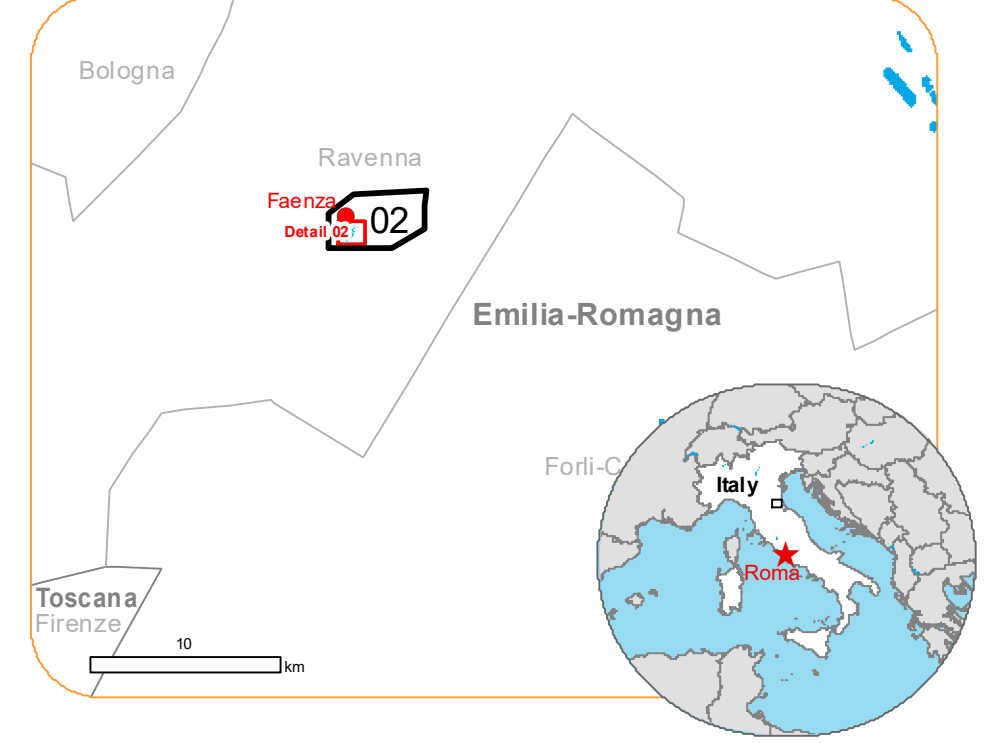






**EMSR659 - AOI02**  
**Flood in Italy**  
**LAMONE-FAENZA**

**Situation as of 05/05/2023 10:00 UTC**  
Grading - Detail map 02



**Flood trace 19.5 ha**  
**Flooded area 10.0 ha**  
**67.24 % and 100 %**  
**of total in AOI respectively**

**Potentially affected population**  
**~ 500**

**Potentially Affected Built-up and Transportations**

Built-Up	Road
79 No.	2.8 km
97.53% of potentially affected	82.35% of potentially affected

**Crisis Information**

- Flooded
- Flood trace

**Built Up Grading**

- Residential Building, Possibly damaged
- Residential Building, Damaged
- Non-residential Building, Possibly damaged

**Facilities Grading**

- Possibly damaged

**Transportation Grading**

- Road, Possibly damaged

**No visible damage**

- Main road, No visible damage
- Local road, No visible damage
- Track, No visible damage

**General Information**

- Area of Interest

**Hydrography**

- River

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Pre-event image: ESRI World Imagery © DigitalGlobe (acquired on 29/10/2021; GSD 0.6 m, approx. 0% cloud coverage in AOI).  
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Population data: GHS Population Grid © European Commission, 2022  
[https://ghsl.jrc.ec.europa.eu/ghs\\_pop2022.php](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.

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EMSR659 AOI: 02 Lamone-Faenza Grading

Consequences within the AOI								
	Unit of measurement			Destroyed	Damaged	Possibly damaged*	Total affected**	Total in AOI
Flood trace		ha						13.8
Flooded area		ha						10.0
Estimated population	Number of inhabitants						~ 500	~ 23,000
Built-up	Residential Buildings	No.		0	15	63	78	2,820
	Office buildings	No.		0	0	0	0	1
	Administrative	No.		0	0	0	0	1
	Wholesale and retail trade buildings	No.		0	0	0	0	6
	Industrial buildings	No.		0	0	2	2	67
	Public entertainment buildings	No.		0	0	0	0	1
	School, university and research buildings	No.		0	0	0	0	6
	Non-residential farm buildings	No.		0	0	0	0	3
	Buildings used as places of worship and for religious activities	No.		0	0	1	1	30
	Historic or protected monuments	No.		0	0	0	0	1
	Communication buildings, stations, terminals and associated buildings	No.		0	0	0	0	3
Transportation	Primary Road	km		0.0	0.0	0.1	0.1	13.2
	Secondary Road	km		0.0	0.0	0.0	0.0	5.7
	Local Road	km		0.0	0.0	2.5	2.5	78.6
	Cart Track	km		0.0	0.0	0.8	0.8	45.5
	Long-distance railways	km		0.0	0.0	0.0	0.0	12.5
Facilities	Settling Basin	ha		0.0	0.0	5.2	5.2	5.2
	Sport and recreation constructions	ha		0.0	0.0	4.0	4.0	34.3
			Very high damage	High damage	Moderate damage	Negligible to slight damage	Total affected**	Total in AOI
Land use	Heterogeneous agricultural areas	ha	NA	NA	NA	NA	16.6	809.5
	Other	ha	NA	NA	NA	NA	6.8	405.7
	Arable land	ha	NA	NA	NA	NA	0.4	117.9
* 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  
EUROPEAN UNION

