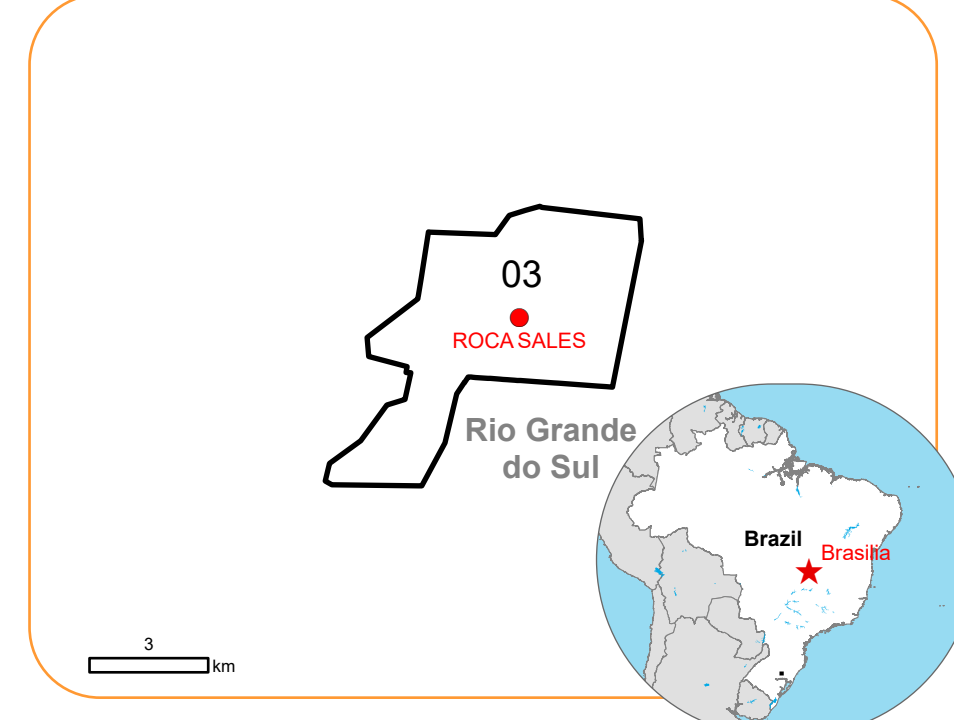


EMSR720 - AOI03
Flood in Rio Grande Do Sul State, Brazil
ROCA SALES

Situation as of 06/05/2024 13:05 UTC
Grading - Overview map 01



Flood trace 99.9 ha
Flooded area 1091.2 ha
Landslide 0.2 ha

Potentially affected population ~2700

Affected Built-up and Transportations

Built-up 1527 No.	Road 48.5 km
Railway 3.0 km	Bridge 1 No.

- Crisis Information**
- Flooded Area
 - Landslide
 - Flood trace
- Built Up Grading**
- Destroyed
 - Damaged
 - Possibly damaged
- Facilities Grading**
- Damaged
 - Possibly damaged
- Transportation Grading**
- Bridge and elevated highway, Possibly damaged
 - Road, Destroyed
 - Road, Damaged
 - Road, Possibly damaged
 - Railway, Possibly damaged
 - Main road, No visible damage
 - Local road, No visible damage
 - Track, No visible damage
 - Railway, No visible damage
- General Information**
- Area of Interest
- Administrative Boundaries**
- Province
- Placenames**
- Placename
- Hydrography**
- River
 - Stream
 - Island
 - Lake
 - Reservoir
 - River
 - River Bank

Event: Authorities in Brazil Rio Grande do Sul State declared a state of emergency on Thursday, 2 May 2024 after floods and mudslides caused by torrential rains left at least 30 people dead and 60 missing. Storm damage has affected nearly 150 municipalities, forcing over 15,000 people to flee from their homes. In some areas, the flood is so severe that entire communities have been completely cut off from road infrastructures and network. 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 02/03/2024, resolution 0.5 m). Post-event image: Pléiades Neo © CNES (2024), distributed by Airbus DS (acquired on 06/05/2024 at 13:05 UTC, resolution 0.3 m). This image is used as background image.

Base vector layers: OpenStreetMap © OpenStreetMap contributors (2024), Wikimapia.org, GeoNames 2015, Global Administrative Areas (2012), refined by the producer. Copernicus Global Land Service: Land Cover (2019). Inset maps: JRC 2013, Natural Earth 2012, GeoNames 2015.

Population data: GHS Population Grid © European Commission, 2023 https://ghsl.jrc.ec.europa.eu/ghs_pop2023.php
Digital Elevation Model: FABDEM (ForestAndBuildingsremovedCopernicusDEM) removes building and tree height biases from the Copernicus GLO 30 Digital Elevation Model (DEM) (Airbus,2020)

The thematic layer has been derived from post-event satellite image by means of visual interpretation.

Map produced by CLS released by e-GEOS on the 08/05/2024.

Details on this activation and service conditions available through the QR code or at the link: <https://rapidmapping.emergency.copernicus.eu/EMSR720>

Consequences within the AOI							
	Unit of measurement		Destroyed	Damaged	Possibly damaged*	Total affected**	Total in AOI
Flood trace		ha					1 091,2
Flooded area		ha					99,9
Landslide		ha					0,2
Estimated population	Number of inhabitants					~ 2 700	~ 8 400
Built-up	Residential Buildings	No.	0	3	21	24	162
	Office buildings	No.	0	0	0	0	1
	Institutional	No.	0	0	1	1	1
	Police station	No.	0	0	0	0	1
	Wholesale and retail trade buildings	No.	0	0	1	1	2
	Industrial buildings	No.	0	0	11	11	20
	School, university and research buildings	No.	0	0	4	4	4
	Non-residential farm buildings	No.	0	0	3	3	5
	Buildings used as places of worship and for religious activities	No.	0	0	1	1	5
	Cemetery	No.	0	0	0	0	3
	Building point	No.	0	0	8	8	25
	Communication buildings, stations, terminals and associated buildings	No.	0	0	1	1	3
Transportation	Unclassified	No.	52	66	1 355	1 473	3 977
	Primary Road	km	0	1,0	4,2	5,2	13,1
	Secondary Road	km	0,2	0,9	2,4	3,4	4,0
	Local Road	km	4,5	7,8	16,5	28,8	65,9
	Cart Track	km	3,4	3,6	3,9	10,9	24,4
	No Driveway	km	0,1	0	0	0,1	0,1
	Long-distance railways	km	0	0	3,0	3,0	9,8
Facilities	Bridges and elevated highways	No.	0	0	1	1	1
	Power plant constructions	ha	0	0	0,2	0,2	0,2
	Sport and recreation constructions	ha	0	0,04	3,5	3,6	4,1
Land use	Long-distance pipelines, communication and electricity lines	km	0	0	0	0	8,0
	Heterogeneous agricultural areas	ha				492,3	585,2
	Forests	ha				355,0	1 469,3
	Shrub and/or herbaceous vegetation association	ha				199,8	333,1
	Other	ha				74,0	283,9
	Inland wetlands	ha				70,4	166,6
* 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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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.