



Landslide 318.7 ha
Flood trace 107.5 ha
Flooded area 71.2 ha

Potentially affected population ~ 150

Affected Built-up and Transportations

Built-Up 294 No.
Road 22.1 km
Railway 3.1 km

| Crisis Information | General Information |
|--|--|
| <div><div></div>Flooded Area</div> <div><div></div>Landslide</div> <div><div></div>Flood trace</div> | <div><div></div>Area of Interest</div> <div><div></div>Administrative Boundaries</div> <div><div></div>Province</div> <div><div></div>Municipality</div> |
| Built Up Grading | Placenames |
| <div><div></div>Destroyed</div> <div><div></div>Damaged</div> <div><div></div>Possibly damaged</div> | <div><div></div>Placename</div> |
| Facilities Grading | Hydrography |
| <div><div></div>Damaged</div> | <div><div></div>River</div> <div><div></div>Stream</div> <div><div></div>River</div> |
| Transportation Grading | |
| <div><div></div>Road, Destroyed</div> <div><div></div>Road, Damaged</div> <div><div></div>Road, Possibly damaged</div> <div><div></div>Railway, Destroyed</div> <div><div></div>Railway, Possibly damaged</div> <div><div></div>Main road, No visible damage</div> <div><div></div>Local road, No visible damage</div> <div><div></div>Track, No visible damage</div> <div><div></div>Railway, No visible damage</div> | |

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 01/06/2023, resolution 1.0 m). Post-event image: Pléiades Neo © CNES (2024), distributed by Airbus DS (acquired on 08/05/2024 at 13:23 UTC, resolution 0.3 m). This image is used as background image. All images are provided under COPENICUS by the European Union and ESA, all rights reserved.

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: CopernicusDEM (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 using a semi-automatic approach.

Map produced by e-GEOS released by e-GEOS on the 09/05/2024.

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 |
| Landslide | ha | | | | | | 318.7 |
| Flood trace | ha | | | | | | 107.5 |
| Flooded area | ha | | | | | | 71.2 |
| Estimated population | Number of inhabitants | | | | | ~ 150 | ~ 2 100 |
| Built-up | Residential Buildings | No. | 61 | 87 | 146 | 294 | 509 |
| | Communication buildings, stations, terminals and associated buildings | No. | 0 | 0 | 0 | 0 | 1 |
| | Unclassified | No. | 0 | 0 | 0 | 0 | 1 |
| Transportation | Primary Road | km | 2.2 | 0.7 | 2.8 | 5.6 | 15.6 |
| | Local Road | km | 1.2 | 0.8 | 0.5 | 2.5 | 34.9 |
| | Cart Track | km | 8.2 | 4.9 | 0.6 | 13.7 | 225.5 |
| | No Driveway | km | 0.3 | 0.1 | 0 | 0.3 | 0.3 |
| | Long-distance railways | km | 1.4 | 0 | 1.7 | 3.1 | 22.8 |
| Facilities | Dams | ha | 0 | 1.2 | 0 | 1.2 | 1.2 |
| | Sport and recreation constructions | ha | 0 | 0 | 0 | 0 | 1.8 |
| | Long-distance pipelines, communication and electricity lines | km | 0 | 0 | 0 | 0 | 16.6 |
| Land use | Forests | ha | | | | 392.4 | 9 142.5 |
| | Inland wetlands | ha | | | | 78.5 | 466.5 |
| | Shrub and/or herbaceous vegetation association | ha | | | | 15.0 | 294.2 |
| | Other | ha | | | | 8.0 | 280.5 |
| | Heterogeneous agricultural areas | ha | | | | 3.5 | 199.8 |
| * 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.

Access to the portal



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