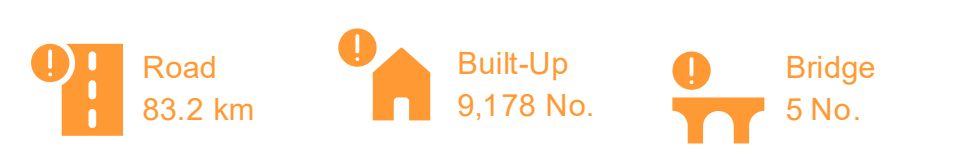


Affected Built-up and Transportations



Crisis Information

- Flooded Area
- Landslide
- Flood trace

Built-Up Grading

- Residential Building, Destroyed
- Residential Building, Damaged
- Residential Building, Possibly damaged
- Non-residential Building, Destroyed
- Non residential Building, Damaged
- Non-residential Building, Possibly damaged
- Unclassified Building, Destroyed
- Unclassified Building, Damaged
- Unclassified Building, Possibly damaged
- Unclassified Building, Not Analysed

Facilities Grading

- Damaged
- Possibly damaged

Transportation Grading

- Bridge and elevated highway, Destroyed
- Bridge and elevated highway, Damaged
- Main road, No visible damage
- Track, No visible damage
- Local road, No visible damage
- Road, Destroyed
- Road, Damaged
- Road, Possibly damaged
- Highway, No visible damage

General Information

- Area of Interest
- Detail map
- Not Analysed

Placenames

- Placename

Hydrography

- River
- Stream
- Reservoir

Event: On the 10 September 2023, Mediterranean storm Daniel caused devastating floods in Libya, sweeping away entire neighborhoods in multiple coastal towns in the North East of the country. It also caused the destruction of two dams upstream of Derna town, triggering a wave of flash floods that hit the heart of the city, with massive destruction to the buildings and all the bridges on Derna valley. As many as 2,000 people were feared dead, according to one of the country's leaders. Copernicus EMS Rapid Mapping is requested to provide flood delineation and damage assessment emergency mapping.

Data sources and analysis: Pre-event image: ESRI World Imagery © DigitalGlobe (acquired on 05/06/2022, resolution 0.6 m). Post-event image: GeoEye © Maxar Technologies, Inc. (2023), (acquired on 13/09/2023 at 09:18 UTC, resolution 0.5 m). This image is used as background image. All images are provided under COPERNICUS by the European Union and ESA, all rights reserved.

Base vector layers: OpenStreetMap © OpenStreetMap contributors (2023), 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.

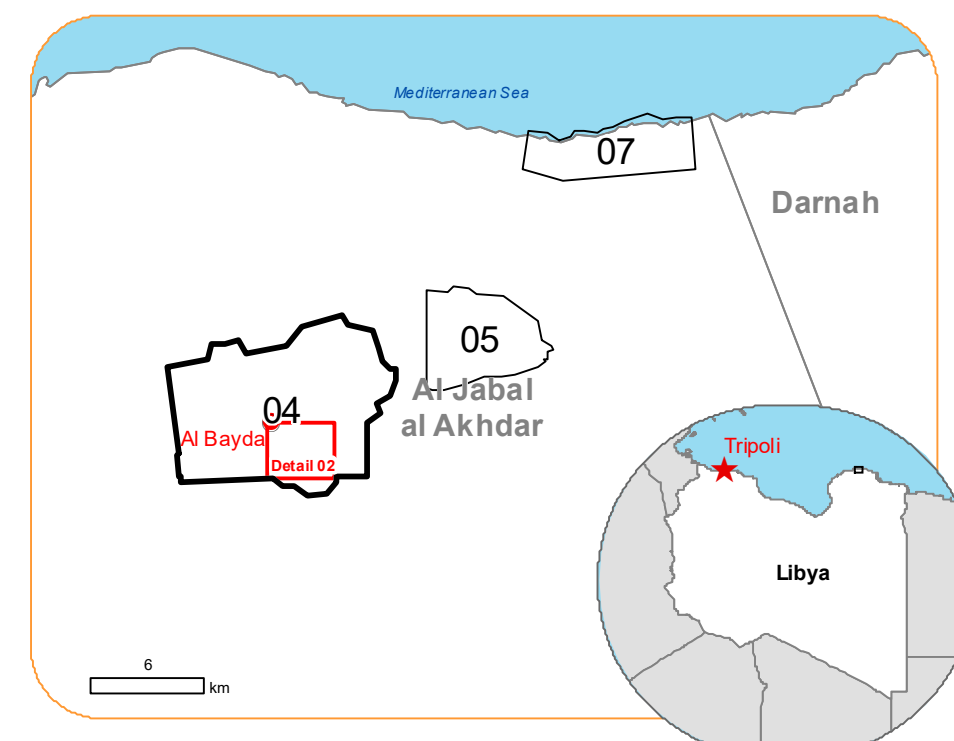
Population data: GHS Population Grid © European Commission, 2023 https://ghsl.jrc.ec.europa.eu/ghs_pop2023.php

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

Map produced by CLS released by SERTIT on the 14/09/2023.



Situation as of 13/09/2023 09:18 UTC
Grading - Detail map 02



Flooded area 7.0 ha
(35% of total in AOI)
Landslide 0.5 ha
(71% of total in AOI)
Flood trace 195.9 ha
(17% of total in AOI)

Potentially affected population ~ 4700
(18% of total affected)

Affected Built-up and Transportations

Road 29.5 km
(35% of total affected)

Built-Up 4,350 No.
(47% of total affected)

Bridge 4 No.
(80% of total affected)

- Crisis Information**
- Flooded Area
 - Landslide
 - Flood trace
- Built-Up Grading**
- Residential Building, Destroyed
 - Residential Building, Damaged
 - Residential Building, Possibly damaged
 - Non-residential Building, Destroyed
 - Non-residential Building, Damaged
 - Non-residential Building, Possibly damaged
 - Unclassified Building, Destroyed
 - Unclassified Building, Damaged
 - Unclassified Building, Possibly damaged
- Facilities Grading**
- Damaged
- Transportation Grading**
- Bridge and elevated highway, Destroyed
 - Main road, No visible damage
 - Track, No visible damage
 - Local road, No visible damage
 - Road, Destroyed
 - Road, Damaged
 - Road, Possibly damaged
 - Highway, No visible damage
- General Information**
- Area of Interest
- Placenames**
- Placename
- Hydrography**
- River
 - Reservoir

Event: On the 10 September 2023, Mediterranean storm Daniel caused devastating floods in Libya, sweeping away entire neighborhoods in multiple coastal towns in the North East of the country. It also caused the destruction of two dams upstream of Derna town, triggering a wave of flash floods that hit the heart of the city, with massive destruction to the buildings and all the bridges on Derna valley. As many as 2,000 people were feared dead, according to one of the country's leaders. Copernicus EMS Rapid Mapping is requested to provide flood delineation and damage assessment emergency mapping.

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Consequences within the AOI						
	Unit of measurement	Destroyed	Damaged	Possibly damaged*	Total affected**	Total in AOI
Flooded area	ha					20,2
Landslide	ha					0,7
Flood trace	ha					1 122,1
Estimated population	Number of inhabitants				~ 26 000	~ 120 000
Built-up	Residential Buildings	No. 28	54	4 372	4 454	4 473
	Public entertainment buildings	No. 0	0	0	0	1
	School, university and research buildings	No. 0	0	1	1	17
	Hospital or institutional care buildings	No. 0	0	0	0	1
	Other non-residential buildings	No. 44	29	1 133	1 206	1 273
	Buildings used as places of worship and for religious activities	No. 0	0	0	0	1
	Building point	No. 19	29	317	365	393
	Hotel buildings	No. 0	0	0	0	3
	Unclassified	No. 34	22	3 096	3 152	12 556
Transportation	Highways	km 0,0	0,0	0,2	0,2	45,0
	Primary Road	km 0,0	0,0	0,1	0,1	23,6
	Secondary Road	km 0,9	2,3	0,2	3,4	19,5
	Local Road	km 6,6	29,4	40,1	76,1	622,2
	Cart Track	km 2,3	0,9	0,2	3,4	33,8
	Bridges and elevated highways	No. 3	2	0	5	5
Facilities	Settling Basin	ha 0,0	2,9	0,0	2,9	2,9
	Power plant constructions	ha 0,0	0,0	2,3	2,3	2,3
	Sport and recreation constructions	ha 0,0	0,7	18,1	18,8	26,1
	Other civil engineering works not elsewhere classified	ha 0,0	0,0	6,3	6,3	6,3
	Long-distance pipelines, communication and electricity lines	km 0,0	0,0	0,0	0,0	8,5
Land use	Other	ha			419,7	1 915,1
	Heterogeneous agricultural areas	ha			311,5	2 184,0
	Shrub and/or herbaceous vegetation association	ha			286,4	2 422,3
	Forests	ha			98,7	1 495,3
	Open spaces with little or no vegetation	ha			26,7	84,8
* 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 Land Use - Land Cover layer(s),

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.



PROGRAMME OF THE
EUROPEAN UNION

