

Libya 2023 floods - Emergency Situation Overview

13 September 2023 | Libya

CONTEXT & RATIONALE

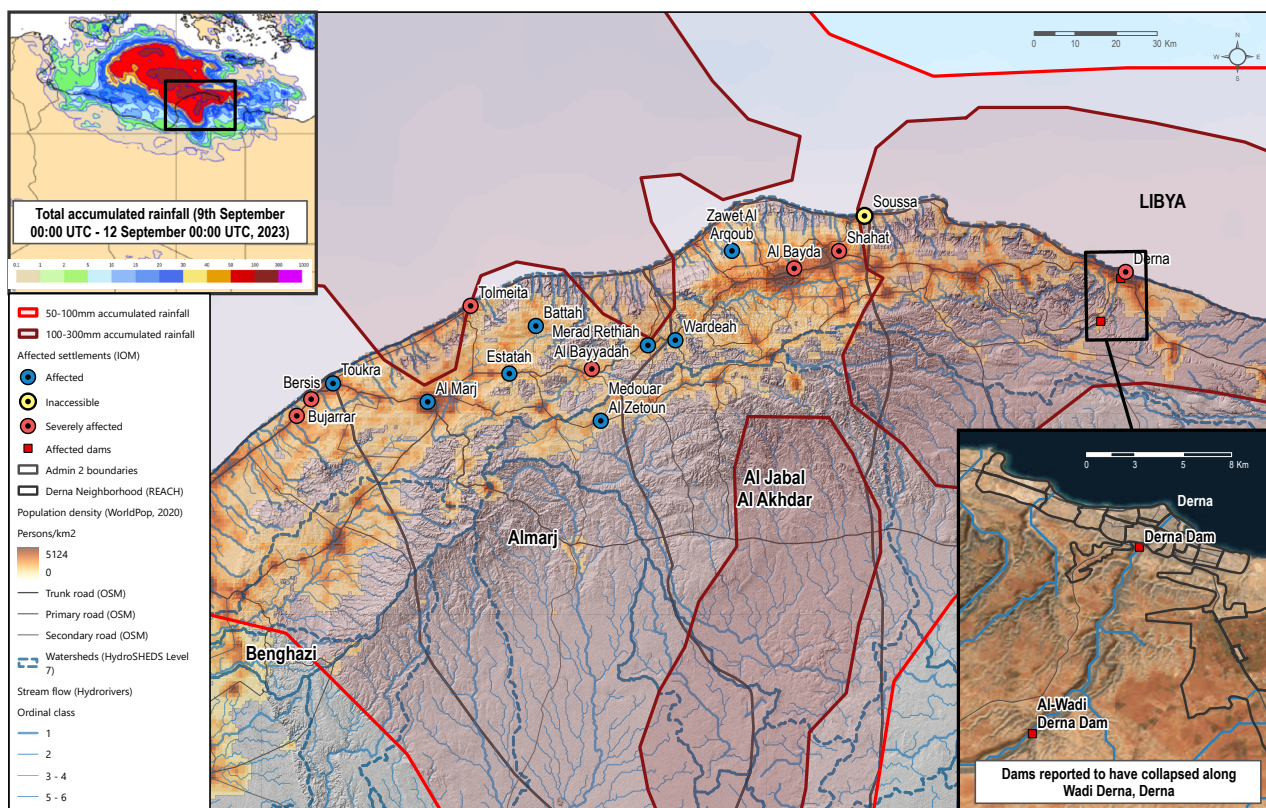
On the 11th of September, storm Daniel caused largescale flooding in Libya's northeast, leading to loss of lives and infrastructure damage in several coastal towns and along rivers, including Benghazi, Al-Jabal Al-Akhder, Al-Marj, Batah, Bayada, Albayda, Shahat and Soussa. The city of Derna appears to be particularly hard-hit after two dams broke upstream, releasing over 30 million cubic meters of water into the city of Derna. Initial reports suggest extensive damage to housing and critical infrastructure. Early estimations suggest [at least 5000 casualties](#) in affected areas country-wide, [at least 2,300 people lost their lives in Derna only](#), while [over 30,000 people were reported missing](#). As of the 13th of September, search and rescue is ongoing and the emergency response is mobilising.

At the time of writing, access challenges and conflicting information results in [a lack of updated reliable data on the impact of the floods across affected areas](#). This output provides initial remote sensing analysis on the impact of the storm and subsequent flash floods in Derna, triangulated with pre-crisis data from the [2022 Multi-Sector Needs Assessment \(MSNA\)](#) and the [Derna Settlement-Based Assessment \(SBA\)](#) that was conducted by REACH in March of this year. More detailed pre-crisis information from both these assessments can be found in the [MSNA Bulletin](#) and the [Derna SBA Situation Overview](#).

In Derna, rainfall exceeded 100mm in just 3 days, while the average monthly rainfall in September is under 1.5mm.

KEY MESSAGES

- Storm Daniel's devastating impact on Eastern Libya marks an **unprecedented climatic event** for the Mediterranean region.
- In just 3 days, almost **100 mm of rainfall hit Derna city**, one hundred times more than would fall during the average month of September. In tandem, **the breach of 2 dams** sent another 30 million cubic meters of water into central Derna destroying key infrastructure and countless homes.
- The affected neighbourhoods also hosted several of the city's healthcare facilities, with residents previously travelling to these areas for healthcare. As such the disruption of city-wide access to healthcare, combined with the likely damage to sewage networks and sanitation facilities, poses a **significant risk of infectious disease outbreaks**.
- While physical access to the city is improving, the situation remains dire and **humanitarian assistance and mobile services must be mobilised urgently to prevent further loss of life**.



LACK OF ACCESS TO WATER AND HEALTHCARE ARE PRE-EXISTING VULNERABILITIES OF PARTICULAR CONCERN

Even prior to the flooding, findings suggest that access to clean water and healthcare were of particular concern in Derna. In the 2022 MSNA, the majority of Libyan households (69%) interviewed in Derna were found to have unmet needs related to WASH, [positioning Derna in the top 3 assessed baladiyas with the highest % of households with unmet WASH needs](#). Needs were particularly driven by one-in-three households reporting not having had sufficient water for drinking in the 30 days prior to data collection. Moreover, nearly half (44%) of households reported relying on bottled water as their primary water source;

any disruption to supply caused by the flooding could lead to immediate shortages of clean drinking water.

In March 2023, [findings from the SBA](#) suggested that while healthcare facilities existed in most neighbourhoods of Derna, two-thirds of interviewed residents reported experiencing challenges to accessing healthcare, mostly citing a lack of medicine at facilities, poor quality services, and being unable to afford services. Frequent electricity cuts further impaired medical services prior to the floods.



Image source: UNOSAT, image 1: GeoEye (1 July 2023), image 2: SkySat (12 September 2023)

POTENTIAL IMPACT

The most affected neighborhoods of Derna (based on [UNOSAT damage analysis](#)) housed several clinics that were also frequented by residents of other neighborhoods, including the peri-urban districts (Muhallas) of Abu Mansour - Al Fataiah, Corsah and La Troun. According to the [2022 Derna SBA](#), 26% of the local population of these peri-urban areas would go to Al Bilal to see a doctor, while 12% of them would go to Al Maghar. The disruption of healthcare services in the affected neighborhoods is expected to heavily constrain access to healthcare in the entire town and surrounding areas of particular concern due to the significant numbers of injured.

The floods also destroyed several of the main roads of the city, creating challenges in accessing services and markets around the affected areas. The households of the most affected districts had better connectivity to the public sewage system than the average of the other districts, especially of the peri-urban districts, therefore households displaced from the most affected areas likely face serious challenges related to sanitation, further exacerbated by the possible destruction of sanitation facilities and sewage systems in other, less affected areas as well.

Sanitation problems along with mud and other debris entering still-standing homes with the flood water can lead to water contamination and thus to a heightened risk of infectious diseases, which will cause the situation to further deteriorate particularly given the reduced access to healthcare.

RISK FACTORS TO MONITOR

- The combination of remaining floodwater, extensive damage to infrastructure, and lack of access to medicine even prior to the flooding creates a considerable risk for waterborne diseases to start spreading quickly.
- Mud and debris entering homes along with flood water can lead to structural damages and the spread of mold, risking to make even more homes inhabitable.

MOST AFFECTED NEIGHBOURHOODS²

Neighbourhood	Affected buildings	Flooded (%)
Al-Batin	149	61%
Alzzwhur	42	21%
Al-Bilad	668	78%
Al-Eilwa	817	96%
Al-Maghar	225	97%
Shaebiat Ghazi	136	16%
Shayha Alsharqia	139	17%

² Calculated from [UNOSAT damage analysis](#) using REACH neighbourhood boundaries