

Update on the impact of Storm Daniel in Derna district

OVERVIEW

On 10 September 2023, Storm Daniel made landfall in Libya, causing heavy rainfall, flash floods, and strong winds. It affected coastal towns and cities in the northeast of the country. As at 14 September, more than 883,900 people were in need across five districts (mantikas). Derna district is one of the most affected, with almost 99,500 residents in need of humanitarian assistance, including over 91,200 in Derna city and more than 8,200 in Al Mkheley (OCHA 14/09/2023). The most affected neighbourhoods of Derna city are Al-Maghar (which was 97% flooded), Al-Eilwa (96%), Al-Bilad (78%), Al-Batin (61%), and Alzzwhur (21%) (REACH 13/09/2023). Floodwaters affected an estimated 2,217 buildings (UNOSAT et al. 13/09/2023).

Between 10–13 September, almost 100mm of rain fell on Derna city, a hundred times more than the average for September (REACH 13/09/2023; WMO 12/09/2023). Two dams, the Al-Bilad Dam (approximately 13km south of Derna) and the larger Abu Mansour Dam (approximately 1km south of Derna), collapsed either late on 10 September or early on 11 September (EOS 13/09/2023; AP 15/09/2023 a and 15/09/2023 b). The storm filled and overwhelmed the Al-Bilad Dam with water, which then collected behind the Abu Mansour Dam, causing it to rupture and release an estimated 30 million m³ of water into the city (Al Jazeera 13/09/2023 a). A third dam, the Jaza Dam between Derna and Benghazi, is also filled with water and on the brink of collapse (NYT 12/09/2023; AP 15/09/2023 b).

On 15 September, the Libyan Red Crescent Society reported that the death toll in Derna city had risen to 11,300, with a further 10,100 people missing (AP 15/09/2023 a). The confirmed death toll will likely increase in the coming days as bodies are located and identified. The Mayor of Derna city has speculated that the total death toll could be 18,000–20,000 based on the number of flood-affected areas in Derna (Al Jazeera 13/09/2023 b). There is an urgent need for search-and-rescue teams, including specialised teams, as the window for locating survivors is rapidly closing (OCHA 14/09/2023; NBC 13/09/2023). Heavy machinery to clear debris is also needed (OCHA 14/09/2023).

As at 14 September, more than 7,000 people in Derna were injured, and an estimated 30,000 were displaced. IOM expects the number of displaced people to rise in the coming days as more data becomes available (AP 14/09/2023; IOM 14/09/2023). Information on IDPs and their needs is limited, but the numbers are likely to increase.

According to the regional government, priority needs include psychosocial support, food, shelter, NFIs, healthcare, and logistical support. Considering the extent of information gaps, data collection exercises, needs assessments, and technical support are also urgently required. The destruction, flooding, and blockage of most roads into and within the city cut off Derna from humanitarian assistance for several days following the disaster (OCHA 13/09/2023). As at 15 September, it was reported that humanitarian convoys had been able to enter the city “over the past couple of days” (AP 15/09/2023 a).

About this report

Aim: this report provides an initial overview of the humanitarian situation in Derna district, with an emphasis on Derna city, one of the most affected areas.

Methodology: this report is based on the review of secondary data, mainly reports from humanitarian organisations and media information.

Limitations: the nature of the crisis limits the availability of information on the full scale of needs and overall impact of the disaster. Information gaps are outlined below.

IMPACT OVERVIEW

Flood impact in Derna city as at 13 September



Source: UNOSAT 14/09/2023

Anticipated scope and scale

The number of people affected is anticipated to increase as more information becomes available. Estimates of the pre-crisis population of Derna city ranged from 86,000–125,000, while the wider Derna district had a population of over 201,600 (City Population accessed 15/09/2023; Reuters 12/09/2023). Upcoming changes in the weather in and around Derna district may also aggravate the needs of flood-affected populations. Night-time temperatures will fall below 15° C from November–March, increasing the need for adequate shelter and seasonal NFIs (IFRC 13/09/2023).

Rainfall is expected to increase from October–November, peaking in December with 332mm over an average of ten rainy days (normally, the wettest season presents with 86mm or 3.4in of rain) (IFRC 13/09/2023). Derna has been subject to a sequence of floods emanating from the Wadi River in the past, including major events in 1941, 1959, and 1968. With the collapse of the dams, the city has lost its protection from further flood events (PreventionWeb 13/09/2023). The city of Derna has also recently experienced a summer heatwave, worsening the impact of the flooding, as the dry ground could not absorb as much water (The National 13/09/2023).

Information gaps

- Precise and comprehensive numbers of the dead, missing, and injured are unavailable. Reported figures will continue to increase as access improves and rapid assessments are carried out.
- There is a lack of information regarding the number of people in need, as well as disaggregated data on their gender, age, and disability. UNICEF has started to map unaccompanied children (Al Jazeera 13/09/2023 c).
- The number of people who have been displaced and their current locations are unclear.
- Accurate information on the number, status, and capacity of health facilities is unavailable.

People affected in Derna district

	DERNA MANTIKA, INCLUDING DERNA CITY	COUNTRYWIDE
Total population (from 2020–2023)	201,639 (City Population accessed 15/09/2023; Reuters 12/09/2023)	6,812,341 (WB accessed 15/09/2023)
Flood-related people in need (as at 14 September 2023)	99,475 (OCHA 14/09/2023)	883,937 (OCHA 14/09/2023)
Flood-related deaths (as at 15 September 2023)	11,300 (AP 15/09/2023 a)	11,470 (AP 15/09/2023 a)
Flood-related injuries (as at 15 September 2023)	7,000 (AP 14/09/2023)	N/A
Flood-related displacement (as at 15 September 2023)	30,000 (IOM 14/09/2023)	35,000 (UNICEF 14/09/2023)
Projected population density (in 2020)	6.399/km ² (City Population accessed 14/09/2023)	4.135/km ² (City Population accessed 14/09/2023)
Multidimensional Poverty Index – average intensity of poverty in Derna (in 2022)	36% (OPHI 10/2022)	37.1% (OPHI 10/2022)
Migrants and refugees (as at February 2023)	21,460 (IOM 24/05/2023)	706,060 (IOM 24/05/2023)
IDPs (as at August 2023)	2,801 (IOM 24/08/2023)	125,802 (IOM 24/08/2023)
Returnees (as at August 2023)	45,050 (IOM 24/08/2023)	705,426 (IOM 24/08/2023)

Humanitarian access overview

Roads: as at 13 September, only two of the city's seven entrances were navigable, and all three inner-city bridges were destroyed (OCHA 13/09/2023). The two southern entrances require travellers to use long and winding routes through mountains (AP 14/09/2023). As at 13 September, the 50km coastal road was damaged to the west of Derna city, and the road towards the town of Sousse was damaged for 60km (LibyaHerald 13/09/2023). The only remaining southern road to Derna, the Dhahr al-Hamar road, has sustained damage that may cause collapse and completely cut off access to Derna (OCHA 13/09/2023). As at 14 September, the road between Derna and Benghazi had opened (IOM 14/09/2023). As at 13 September, the Tripoli-based Roads and Bridges Authority had conducted a survey of roads within Derna and found that approximately 30km of roads had collapsed, along with five downstream bridges (LibyaHerald 13/09/2023). As at 14 September, flooding had split Derna into two roads (MSF 14/09/2023).

Blocked or missing roads have trapped residents of Derna trying to flee the city, although some roads had been cleared as at 14 September, enabling some flood-affected individuals to leave (IOM 14/09/2023). The Government of National Unity announced that a ship with 700 rooms will dock for at least 60 days in Derna port to house both rescue workers and flood-displaced people (Alwasat 14/09/2023).

Airports: the closest functioning international airport to Derna is Al Abraaq International Airport, which is 99km away. It is the main entry point for international aid to affected areas (CBC 12/09/2023). Some aid is being sent to Benghazi airport, which is approximately 180mi (290km) from Derna. Roads from the airport to Derna have been damaged.

Sea: the Derna City Council has called for the opening of a maritime passage to the city (NYT 12/09/2023; LibyaHerald 14/09/2023).

Electricity and internet: power has been intermittent in Derna. Phone and internet networks have been disrupted, increasing the risk of family separation and preventing rescue operations (IFRC 13/09/2023). As at 12 or 13 September, the electricity grid had been partially restored in western and eastern Shiha (LibyaHerald 13/09/2023; The Libya Observer 12/09/2023). As at 12 September, Al-Madar Al-Jadeed technicians had restored internet service (The Libya Observer 12/09/2023).

Bureaucratic barriers: there are several bureaucratic and administrative constraints to the humanitarian response. Since March 2022, the Libyan Directorate for Passports operating under the Tripoli-based Government of National Accord has not issued any visas for international staff (Serbia MFA accessed 13/09/2023).

Priority needs

Health

Emergency health services, including ambulances, medical supplies, and personnel, are urgently needed to treat the injured (OCHA 14/09/2023). Bodies are “everywhere” on the streets of Derna and in the ocean, posing a potential health risk over the coming days and weeks (Al Jazeera 13/09/2023 c). The Mayor of Derna has called for teams specialising in recovering bodies, fearing an epidemic because of the large number of bodies (Al Jazeera 13/09/2023 b). There is also a high risk of waterborne diseases because of water stagnation and contamination (IFRC 13/09/2023).

On 14 September, UNICEF reported that Derna’s rural hospital was completely out of service. A temporary field hospital has been established to address urgent needs (UNICEF 14/09/2023). On the same date, IOM reported that Derna’s Al-Wahda hospital in the neighbourhood of Bab Tobruk was still operational but lacked a generator, medical staff, life-saving medications, and other medical equipment (IOM 14/09/2023). Other reports state that either one or two of the previously functioning hospitals in Derna are being used exclusively as morgues (The Guardian 14/09/2023; BBC 13/09/2023 a). Rescue workers have also reported a shortage of nurses in Derna (BBC 13/09/2023 b). At least three secondary rural hospitals and ten primary health facilities are in need of significant repair (UNICEF 14/09/2023).

Shelter and NFIs

At least 25% of the city of Derna is destroyed, with an estimated 2,217 buildings exposed to rushing floodwaters (UNOSAT et al. 13/09/2023; AP 14/09/2023). Accommodation is a pressing need for affected people. Egypt has established temporary shelters in the coastal area neighbouring Libya (Al Jazeera 13/09/2023 c). Some families have been taking shelter in schools and other public facilities in Al-Bayda, Benghazi, and Shahat and in three schools in Derna (Medical College, Alamal School, Al-Intefada School) (Al Jazeera 13/09/2023 b; UNICEF 14/09/2023; IOM 14/09/2023).

WASH

As at 13 September, there was no water, electricity, or petrol in Derna (Al Jazeera 13/09/2023 c; BBC 13/09/2023 a). Flood damage to WASH facilities and irregular electricity have disrupted the water supply, leading to a shortage of clean drinking water (UNICEF 14/09/2023; REACH 13/09/2023). Access to potable water in Derna was already poor prior to the floods (REACH 29/11/2022). Sanitation is also a pressing concern given the destruction of sanitation facilities and sewage systems (IMC 14/09/2023).

Food

The storm has severely disrupted local food supply chains, making immediate food unavailable and requiring the prioritisation of distributions. The provision of ready-to-eat meals, dry rations, and nutritional supplements for infants and young children is essential to prevent malnutrition (OCHA 13/09/2023).

Mental health and psychosocial support

There is a need to provide support addressing distress and trauma for those affected by the floods (OCHA 14/09/2023).

Livelihoods

Libya heavily relies on oil exports, 85% of which are sent to Europe. Flooding and damage in Derna port will likely disrupt exportations, affecting the economy, supply chains, and livelihoods tied to the oil trade (CNN 12/09/2023; AA 13/09/2023).

Protection

Among the 500 families staying in three schools in Derna, there is a small number of children separated from their families. There are reports of an increasing number of children being separated or unaccompanied across the city. Specialised child support, along with support for people with disabilities and the elderly, is urgently needed (UNICEF 14/09/2023).

Humanitarian response and funding

The Libyan Red Crescent Society is leading the humanitarian response in all eastern cities (UNICEF 14/09/2023). On 14 September, International Medical Corps reported being the only international organisation with permission from the authorities to enter Derna (IMC 14/09/2023). On 14 September, Médecins Sans Frontières sent an emergency team from Misrata city in northwestern Libya (MSF 14/09/2023). As at 13 September, large government convoys with equipment from western Libya had arrived in the eastern flood-affected areas (Al Jazeera 13/09/2023 c).

In a Flash Appeal on 14 September, humanitarian organisations requested USD 71.4 million to address the most pressing needs of 250,000 out of the estimated 884,000 total number of people in need (OCHA 14/09/2023). As at 13 September, Libya's interim Government of National Unity had allocated LYD 2.5 billion (approximately USD 515 million) to affected areas, LYD 2 billion (approximately USD 413 million) of which will go to the existing Benghazi and Derna Reconstruction Fund and the remainder of which will go to affected municipalities (LibyaHerald 13/09/2023).

COMPOUNDING FACTORS

Exposure to climate hazards: Libya is one of the world's most exposed countries to natural hazards (EC accessed 13/09/2023). Predicted temperature rises, the heightened occurrence and severity of extreme weather events, reduced rainfall, and sea level rise present a significant threat to coastal population hubs, which house approximately 70% of the nation's residents (UNDP accessed 14/09/2023).

Vulnerability to climate hazards: land degradation, desertification, poor infrastructure management, and the impact of years of conflict make Libya particularly vulnerable to the effects of climate hazards. The country's coping capacities are some of the weakest in the world (EC accessed 13/09/2023). The lack of functional weather services and early warning systems, such as evacuation plans, contributed to the heavy impact of this flood event (Reuters 14/09/2023; Heatmap 13/09/2023).