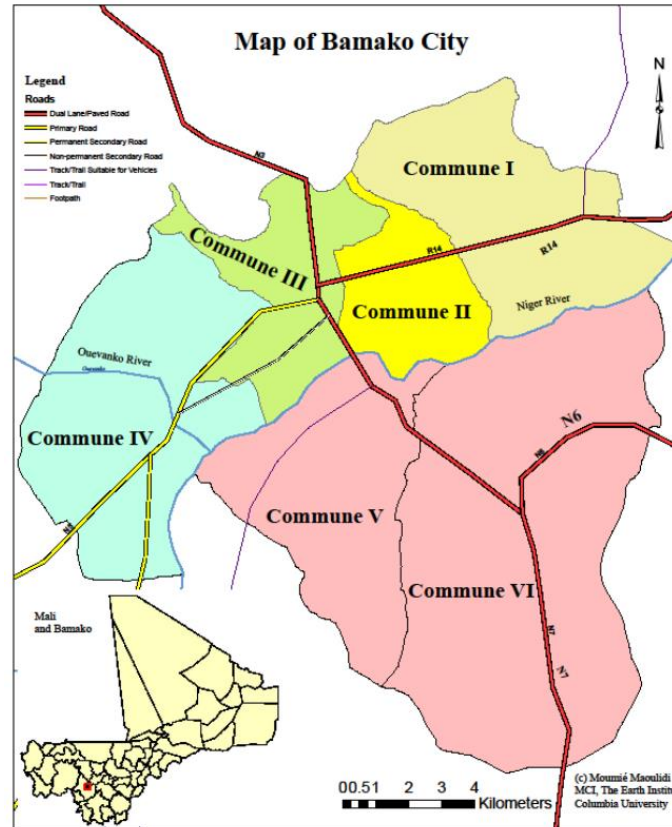


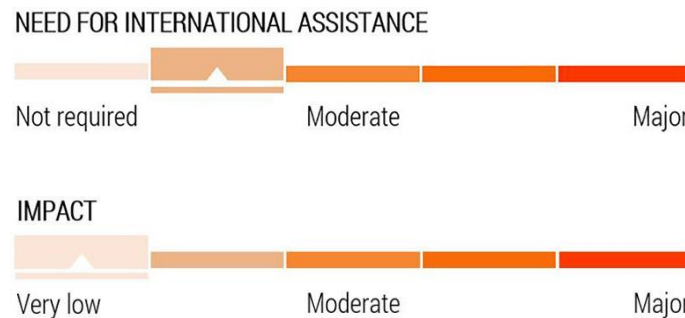
MALI

Bamako floods

Heavy rainfall in Bamako on 16 May caused flash floods in all six communes of the city, flooding streets, damaging houses and washing away property. At least 16 people have been killed and several others injured. 10 people are known to have died in Niamakoro district, one of the worst affected areas. According to initial assessments, 101 families (around 575 people) have been affected, with some of them forced from their homes and staying in temporary accommodation. Up to 300 households (around 1,710 people) may have been affected in total. According to the Malian Red Cross, food, medical care and medicine, as well as NFIs are the priority needs.



Source: Columbia University 10/2010



Limitations
There is limited information on the number of people affected, their needs and specific vulnerabilities. Most available information about the humanitarian impact is several days old and may no longer reflect the current context.

Anticipated scope and scale

Flood affected areas face an elevated **risk of disease outbreak**, including waterborne diseases such as cholera and vector borne diseases such as malaria. It is also likely that household **food insecurity will increase** due to the loss of food supplies. Around 6,000 and 4,000 people are currently estimated to be in IPC Phase 3 (Crisis) in Commune VI and IV respectively. It is the **beginning of the rainy season** in Mali (May to October) therefore, further rain can be expected, raising concerns of additional flooding.

Key priorities



Up to 575
people displaced



Shelter needs
among displaced population



Food needs
particularly communes VI and IV

Humanitarian Constraints



Floodwaters have reportedly entirely receded however damaged roads may delay the response. A bridge in Niamakoro district (one of the worst affected areas) has been badly damaged.

Crisis impact

Heavy rainfall in Bamako caused flash floods in all six communes of the city on Thursday, 16 May. 14cm of rain fell between 3am and 8am local time on Thursday morning (Garda World 17/05/2019; Malian Red Cross 17/05/2019). Water levels rose by 2.5m in some areas, flooding streets, damaging buildings and sweeping away vehicles and other property (Al Jazeera 18/05/2019; CGTN Africa 19/05/2019). The main cause of the floods has been attributed to large quantities of untreated solid waste in the streets that clogged the gutters and blocked the evacuation canals (Malian Red Cross 17/05/2019; OCHA 20/05/2019).

At least 16 people have been killed and several others injured, most of them from low-income neighbourhoods (Garda World 17/05/2019). Other sources have reported that search and rescue operations found 24 dead and some five people injured (7D News 19/05/2019). At least 10 people are known to have died in Niamakoro district, one of the worst affected areas (Al Jazeera 18/05/2019; Flood List 20/05/2019).

Up to 300 households (an estimated 1,710 people based on the average household size of 5.7 in Bamako) were affected in the six communes of Bamako according to the Health Ministry (Al Jazeera 18/05/2019). According to initial assessments, 101 families (an estimated 575 people) have been affected, with some of them forced from their homes and staying in temporary accommodation, including local schools (Malian Red Cross 17/05/2019; Al Jazeera 18/05/2019; OCHA 20/05/2019). Many of the affected neighbourhoods are also without electricity (7D News 19/05/2019). Further damage assessments are ongoing (Flood List 20/05/2019).

According to the Malian Red Cross, food, medical care and medicine, as well as NFIs are the main needs. The aid group has provided tents for those left homeless (Malian Red Cross 17/05/2019; OCHA 20/05/2019).

Shelter: An unknown number of people of the estimated 575 people affected have been forced from their homes and are staying in temporary accommodation, including local schools (Flood List 20/05/2019). There were reports that some are homeless and living in the streets (UNTV 17/05/2019). The Malian Red has provided tents for those left homeless (OCHA 20/05/2019).

Food: Food is a priority need of those affected by the flooding (Malian Red Cross 17/05/2019; OCHA 20/05/2019). Affected households may have lost their food supplies in the flood as well as the utensils required for cooking (Garda World 17/05/2019).

The most food insecure communes in Bamako are Commune VI and IV, where 6,000 and 4,000 people respectively are estimated to be in IPC Phase 3 (Crisis) between

January to May 2019 (FAO accessed on 23/05/2019). People affected in these communes may be particularly in need.

Health: Several people have been injured (Garda World 17/05/2019; 7D News 19/05/2019). This number could rise as more people seek medical assistance and information on the impact of the flooding is made available.

Injured people need access to medical care (Malian Red Cross 17/05/2019; OCHA 20/05/2019). Hospital care in Bamako is inadequate as hospitals do not meet minimum standards for sanitation and lack services, trained personnel, basic supplies, and equipment. There are two public hospitals in Bamako: Point G and Gabriel Touré.

The floodwaters may have contaminated water supplies and food which increases the risk of disease outbreaks such as cholera (Garda World 17/05/2019).

Bamako is in a situation of nutritional crisis, with prevalence of acute malnutrition total of more than 10% (and a severe acute malnutrition rate above 2%) (OCHA 20/01/2019). People suffering from malnutrition will be more susceptible to disease.

WASH: Damaged houses and the likely contamination of water sources mean that WASH needs can be expected. Contaminated water sources and stagnating floodwater increase the risk of waterborne disease outbreaks. In the past, floods in Mali have resulted in outbreaks of waterborne diseases such as cholera and diarrhoea. 85% of Bamako households handle their own sanitation – meaning they have to dispose of any wastewater and excrement themselves (Reuters 30/10/2018).

Stagnating floodwater will also provide a breeding opportunity for mosquitos. Malaria cases and deaths in Mali usually peak during the rainy season (May to October) (WHO 01/05/2017).

Bamako's garbage collection system is erratic and inadequate. Only a small area of Bamako is served by a sewage system and open sewers are common, increasing the risk of contaminating water sources and spreading disease (Private Interview 22/05/2019).

NFIs: Families are in need of household items and utensils as the floodwater took away many of the affected households belongings. People were able to rescue few of their belongings due to the timing and speed of the flooding (UNTV 17/05/2019; CGTN Africa 19/05/2019; OCHA 20/05/2019).

Education: It is possible that some schools were flooded. Classes may be disrupted as some of the displaced have been relocated to schools (Al Jazeera 18/05/2019).

Impact on infrastructure

Floodwater has receded however transport disruption and electricity cuts in some of the affected areas have been reported (Garda World 17/05/2019; UNTV 17/05/2019; CGTN Africa 19/05/2019).

A bridge in Niamakoro district (one of the worst affected areas) has been badly damaged (Al Jazeera 18/05/2019; Flood List 20/05/2019).

The clearing of roads by the Civil Protection Directorate usually takes a day (Private Interview 22/05/2019). It is therefore assumed that most roads have been cleared.

Vulnerable groups affected

Flooding disproportionately affects low-income neighbourhoods of Bamako, where houses are often constructed of mud and refuse is not managed correctly, increasing the risk of disease (Garda World 17/05/2019; Private Interview 22/05/2019). People on lower incomes are less able to prepare for, respond to and recover from flooding. They also have a lower tendency to seek out information and assistance (Climate Just 05/2019).

Women and girls in flood affected areas are known to face a heightened risk of gender-based violence, particularly those who have been displaced and are living in inadequate shelter facilities. Temporary shelter arrangements for newly displaced women (such as tents), with a lack of privacy and inadequate toilets and washing facilities, further increases their vulnerability (UNFPA 08/2016; UNDP 2013).

Humanitarian and operational constraints

Many roads in Bamako are unpaved and difficult to navigate, particularly between May and October, during the rainy season. Sudden torrential rains result in flash floods, and few roads have proper drainage, rendering even main roads temporarily impossible to navigate (Columbia University 10/2010).

The flow of traffic is reported to have resumed as of 23 May after the flood waters receded, however some areas connected by small, dirt roads may still have transportation disruptions as well as electricity cuts (Garda World 17/05/2019; News First 17/05/2019).

Aggravating factors

Location and type of housing/infrastructure

Bamako is built on the banks of the River Niger and houses have been illegally constructed on land reserved for drainage (BBC 29/08/2013). These houses are often from

low-income residential neighbourhoods with very small unpaved streets and a lot of adobe houses which are vulnerable to floods. Not all streets have draining canals but those which have are usually filled with garbage. Water cannot escape properly and this leads to flooding (Private Interview 22/05/2019).

Further rainfall

It is the beginning of the rainy season in Mali which runs from May to October. Bamako can receive more than 600mm of rain during the rainy season and flooding is common (Al Jazeera 18/05/2019). Further rain may cause flooding and landslides which will have a humanitarian impact in densely populated Bamako.

Political stability and security

On 5 April tens of thousands of people took to the streets in Bamako to protest against an upsurge of violence in the country which demonstrators say the government has failed to stop (News 24 07/05/2019).

Residents are also frustrated with the local government which they blame for not managing the areas affected by the flooding (Al Jazeera 18/05/2019). This frustration may increase in the coming days in the response to the flooding is inadequate.

Other factors of vulnerability

The last floods in Bamako occurred between 24 May and 17 September 2018. According to the Civil Protection Directorate, the government registered 15,686 households affected and 135,605 people at risk (7D News 19/05/2019). Main needs included food, WASH, shelter and NFIs (OCHA 20/01/2019). Households affected by the most recent floods may have been affected last year and so have heightened vulnerability.

Bamako key characteristics

- **Demographic profile:** Bamako city population: 1.3 million and population density of 5,300 people per km². Greater Bamako population: 3.1 million and population density of 10,000 people per km² (World Capital Cities accessed on 23/05/2019).

According to 2009 census: Male population: 50.2%. Female population: 49.8%. Children under 5: 14%. Children of schooling age (3-18): 42%. Population under 25: 63%. Population over 60: 3% (Columbia University accessed on 23/05/2019).

- **Health statistics:** infant mortality rate: 66 deaths per 1,000 births. Under-five mortality rate: 108 deaths per 1,000 births (Columbia University 10/2010).

Malaria, diarrhoea, acute respiratory infection and malnutrition are the primary diseases afflicting children (Columbia University 10/2010).

- **WASH statistics:** 36% access to drinking water (African Development Fund 09/2013).
85% of Bamako households handle their own sanitation (Reuters 30/10/2018).
- **Households using firewood fuel:** 3.6% (Knoema accessed on 23/05/2019).
- **Literacy levels:** 52% (Knoema accessed on 23/05/2019).

Response capacity

Local and national response capacity

The Direction Nationale de l'Hydraulique (within the Ministry of Energy and Water) is the governmental department in charge of monitoring water levels in Mali (Ministry of Energy and Water 22/05/2019). The Civil Protection Directorate oversees coordinating direct emergency preparedness and response (Private Interview 22/05/2019).

Malian Red Cross is one of the important partners of the Malian Government in the humanitarian field (IFRC 04/09/2018). 60 volunteers have organized themselves into emergency teams to make a quick assessment of the flood situation in Bamako (Malian Red Cross 17/05/2019).

International response capacity

There is a strong presence of UN agencies, INGOs and NGOs in Mali (23 in Bamako) (OCHA 16/02/2019).

During previous floods, MINUSMA has provided emergency relief and undertook water and sanitation projects to mitigate the impact of floods (Malinet 10/2017; MINUSMA 11/08/2015).

The ICRC has a strong presence in Mali due to the conflict situation in the northern and central regions. The ICRC can provide additional support to assist flood victims. The IFRC however is not present in country (IFRC 04/09/2018).

Information gaps and needs

Information gaps include:

- The total number of people in need of assistance and the severity of sectoral needs.
- Geographic distribution of people in need of assistance.
- Access to the affected areas.
- More detailed information about the risk of an outbreak of disease in flood affected areas.

Lessons learned

In the aftermath of floods, contaminated water and stagnating floodwater increase the risk of waterborne diseases, vector proliferation, respiratory diseases, and injuries (IFRC 18/09/2018).

Immediate and efficient WASH interventions will be crucial in the coming months once flooding increases. Monthly cleaning and disinfection campaigns should be conducted for latrines to promote improved sanitation (IFRC 05/08/2016).

Families experience different types of damage depending on their socioeconomic status, affecting their shelter needs differently. The response must be tailored to address those different needs according to levels of vulnerability and prioritise areas that have suffered the greatest impact (IFRC 18/09/2018).

Gender-specific vulnerabilities, as well as those of people with disabilities, must be taken into consideration when disseminating information. Temporary shelter arrangements for displaced women must be safe and secure, and include adequate toilets and washing facilities, in order to not further increase women's vulnerability and ensure protection (UNFPA 08/2016; UNDP 2013).

Needs in flooding emergencies can change over time and assessment results can quickly become obsolete. This means multiple assessments may be needed (ALNAP 2014).