

Senegal: Floods



Need for international assistance	Not required	Low	Moderate	Significant	Major
Expected impact	Very low	Low	Moderate	Significant	Major

Crisis overview

On 24 July, high amounts of rainfall (between 100-200mm at various locations) caused heavy flooding in some parts of Senegal. The districts Kaffrine and Kolda have reportedly been the heaviest affected, with Kaolack and Matam also receiving above average rainfall. Throughout Kaffrine district some 1,500 houses have been destroyed and 7,500 people affected. Because no independent assessment has been carried out yet the actual amount of damage and sectoral needs are not yet known.

The number of people potentially at risk throughout the 2016 flood season is estimated at 210,000 (OCHA 29/07/2016).

Table of most affected areas, vulnerable people likely to be affected (estimate):

Source (Geohive 11/2013)

Affected areas	Resident pop.	No. people affected	Killed
Kaffrine	567,000	(Kaffrine dist.) 208,000	0
Kaolack	961,000	-	0
Kolda	662,000	(Velingara) 278,000	0
Matam	563,000	-	0

Key findings

Anticipated scope and scale

The flooding in Senegal was triggered by heavier than usual rain starting around 24 July, at the onset of the rainy season. Flooding continues in the affected areas, particularly in Kaffrine, Kaolack and Kolda as the rainy season continues. Crops have been destroyed and houses flooded, leading to a heightened risk of food insecurity and shelter needs. Preparedness measures throughout Senegal are good and contingency plans to deal with floods of this scale are in place.

Priorities for humanitarian intervention

- Food Security – because of underlying food insecurity in the area and destruction of crops
- WASH – 210,000 people at risk of needing WASH interventions
- Shelter – some 1,500 houses have been destroyed so far

Humanitarian constraints

While flooding usually leads to access constraints, no significant access constraints nor damage to essential infrastructure have been reported. National emergency surge capacity is currently responding.

Limitations

There is little to no information on the current situation. Therefore, sectoral needs in this briefing note have been deducted from lessons learned and pre-crisis sectoral information. There is a profound need for a local rapid needs assessment to affirm the amount of damage and to find out what the local populations actually needs.

Crisis impact

Abundant rainfall across West Africa in the past weeks has caused flooding in many regions of Senegal as well, including the most affected - Kaolack and Kaffrine counties in central Senegal. In Kouthia Thiambene, some 30km from Kaffrine town, 200mm of rainfall was recorded on 24 July alone. In a normal August, the average rainfall in a single location across the entire month of August is 235.88mm (Climate Change Knowledge Portal). The most affected regions are Kaolack, Kaffrine, and Matam, in the central and northern parts of the country, and Kolda (Velingara town) in the south (Floodlist 16/08/2016).

Food: Food security in most parts of Senegal is between IPC1 (Minimal) and IPC2 (Stressed) levels. As of 30 June, 485,000 people are in need of food assistance (WFP 30/06/2016). The agricultural lean season lasted 20 days longer than usual this year impacting Fatick, Kaolack, Diourbel, Kaffrine, Louga and Saint Louis counties. However, the supply of food commodities is sufficient in markets across the country (FEWSNET 25/07/2016).

Kaolack and Kaffrine are among the areas hardest hit by flooding, leading to a potentially higher level of food insecurity as the crisis progresses. In the most affected regions some people have lost their livelihoods as they are mostly farmers living off of the yields of their farms. Fields have been flooded and seeds destroyed, as farmers and meteorologists alike were surprised by the heavy flooding on 24 July (Floodlist 16/08/2016).

WASH: Recurring floods throughout the rainy season put some 210,000 people at risk of needing WASH interventions across Senegal (OCHA 29/07/2016).

Shelter: Some 1,500 households have been affected and 7,500 people have been left without shelter in Kaffrine (Floodlist 16/08/2016).

Impact on critical infrastructure

Sewage systems in Kaffrine are not suited to absorb large amounts of water and have been flooded shortly after the onset of heavy rainfall (Floodlist 16/08/2016).

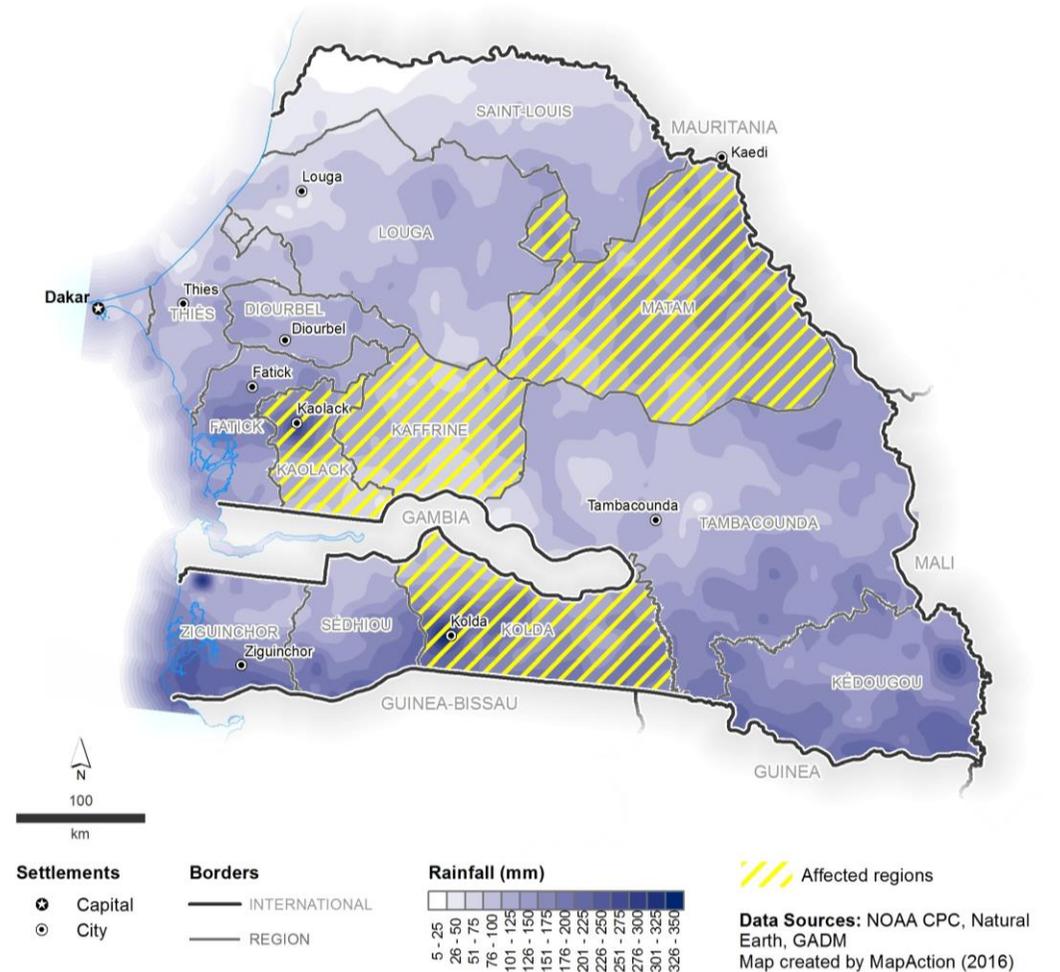
Vulnerable groups affected

The key groups affected by the flooding are farmers whose crops have been washed away and whose livelihoods have in turn been put in danger (Floodlist 16/08/2016).

Humanitarian and operational constraints

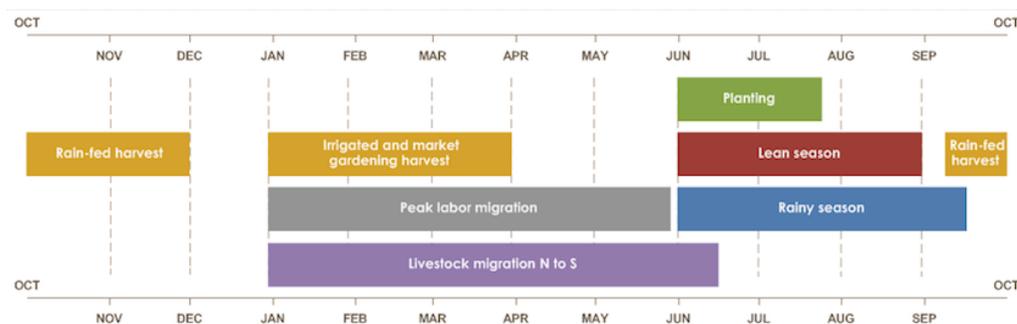
There is mostly very good access and government support mechanisms are in place (Floodlist 16/08/2016).

Senegal: Regions affected by flooding with estimated rainfall (mm) between 24 July and 15 August 2015



Aggravating factors

Weather/Lean Season



Source: FEWSNET 2016

The onset of the rainy season was delayed this year and heavy rainfall in above-normal quantities then fell within a matter of days, flooding areas in central and south Senegal. The situation remains tense overall because the rainy season is still ongoing. It will likely continue till at least mid-September and possibly longer due to the later onset of rainfall this year (Floodlist 16/08/2016).

Preparedness

The National Agency of Civil Aviation and Meteorology reported it is lacking the equipment to reliably predict the duration and the quantity of rainfall. In this particular case farmers were unable to save their crops and belongings from the heavy flooding (Floodlist 16/08/2016).

Location and type of housing/infrastructure

The city of Kaffrine is flooded regularly, with the poorer districts of Diamageune and Kaffrine 2 usually most affected. These districts are located in flood-prone areas, without sewage or drainage systems (Floodlist 16/08/2016).

Other factors of vulnerability

Destroyed livelihoods of farmers and underlying poverty in combination with food security levels between IPC 1&2 could be the basis for a deteriorating food security situation, especially for the rural population in Kaffrine district (FEWSNET 25/07/2016, Floodlist 16/08/2016).

Key characteristics

Demographic profile: Population: 566,992 in Kaffrine, 960,875 in Kaolack (Agence nationale de statistique et de la démographie, 2013)

Food security: Across the country, 265,899 people are in IPC Levels 3-5 (Cadre Harmonisé, 31/03/2016).

Nutrition: 9% of children are moderately malnourished (MAM) countrywide (Cadre Harmonisé, 31/03/2016).

Health: Infant mortality rate: 59.4 in Kaffrine and 57.5 in Kaolack. Under-five mortality rate: 88.9 in Kaffrine and 81.1 in Kaolack (Agence nationale de statistique et de la démographie, 2013). Maternal mortality rate: 315/100,000 live births countrywide (CIA World Factbook, 2015).

WASH: 51% have access to improved sanitation countrywide, 73% have access to water countrywide (Global Alliance for Clean Cookstoves, 2016). 76% of households have an improved water source: 90% urban, 63% rural (Government 07/2013)

Lighting and cooking: 56.5% countrywide have access to electricity (World Bank, 2012)

Literacy rate: 57.7% of population over 15 years. 69.7% of males; 46.6% of females (CIA World Factbook, 2015)

Response capacity

Local and national response capacity

The Civil Protection Directorate – CPD, is the main institution in Senegal responsible to respond in emergencies of any kind. They design contingency plans, do capacity building on a national level, monitor critical developments, and engage in inter-sectoral preparedness activities. Along with the National Committee for Flood Management they hold weekly meetings to determine the course of action in case of flooding (Government).

International response capacity

There is an international steering committee in place to deal with flooding. The Ministry of Interior collaborates with WFP, World Bank, the EU and the Japan International Cooperation Agency on flood preparedness and monitoring measures (Government). A considerable amount of money is being allocated from the World Bank's Global Facility for Disaster Reduction and Recovery (GFDRR) Disaster Risk Management and Climate Change Adaptation project to support flood preparedness activities in Senegal on a yearly basis (Rural Research Institute 12/2013).

Grassroots organisations such as IED Afrique are active in the area and focus on building resilience and adaption to climate disasters (Floodlist 16/08/2016). On 15 August the Chinese embassy donated 500 bags of rice to 250 flood affected families in Kaolack (CRI Online 17/08/2016).

As of 8 April, ACF Espagne, ACTED Africare, ALIMA, Caritas Child Fund, CICR Croix Rouge Française, CRS, IOM, Plan International Senegal, UNFPA, UNHCR, UNICEF, UNWOMEN, and World Vision are also operating in Senegal (OCHA 08/04/2016).

Population coping mechanisms

In previous flooding events, where warnings came earlier or precipitation fell over a longer amount of time, people had enough time to evacuate their belongings to places located at a higher level (Floodlist 16/08/2016).

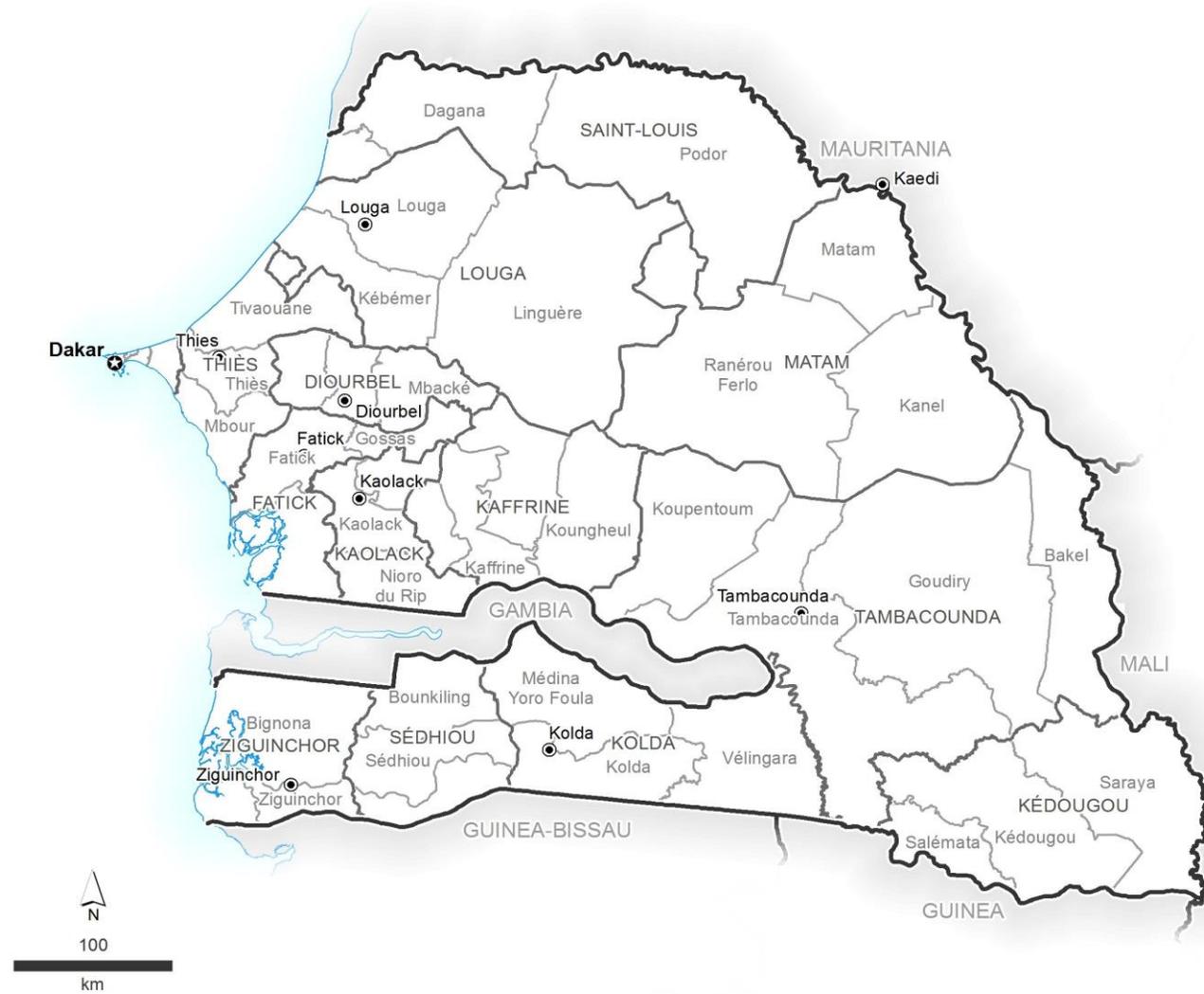
Information gaps and needs

There is very little information available on the flooding situation that began in July. Apart from a comprehensive news item by Reuters, which was picked up by other news outlets, there is no more in-depth information on what is happening in the flood affected regions. Most information available refers to previous flooding and lessons learned rather than the current situation. There is a need to bridge the information gap by carrying out a rapid needs assessment in the affected areas.

Lessons learned

- The Senegalese government is undertaking several projects dedicated to improving flooding preparedness activities. The political will to learn from previous disasters and ask for international assistance has been demonstrated. (World Bank 08/2014)
- Readjusting institutional mechanisms is necessary as contingency plans are sometimes outdated or not adjusted to an all hazard approach. (World Bank 08/2014)
- A national communication plan for effective prevention should be put in place to allow the involvement of all relevant stakeholders such as local representatives, administrative authorities, civil society, the private sector and local population (World Bank 08/2014)

Reference map of Senegal



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|--------------------|-----------------|--------------|
| Settlements | Borders | — REGION |
| ★ Capital | — INTERNATIONAL | — DEPARTMENT |
| ○ City | | |

Data Sources: Natural Earth, GADM
Map created by MapAction (2016)