

## Flood Finder Chad 2017

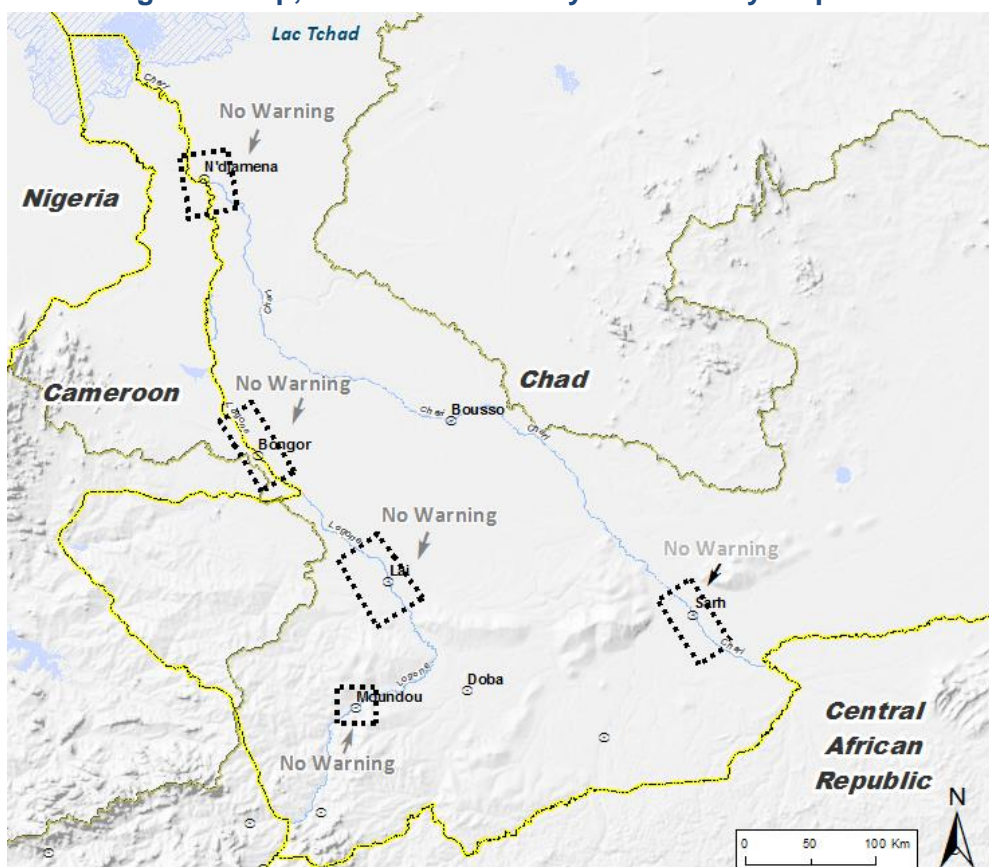
### Bulletin N°4

*23 August 2017*

This bulletin provides static maps showing the variation of accumulated rainfall and anomaly during the period 16 to 22 August and forecast rainfall and anomaly during 22 to 27 August in Chari and Logone river basin.

Flood alert system derived from Flood Finder hydrological model is not yet operational. However, we are closely monitoring the situation over Lai and Moundou regions as high rainfall has occurred during last week.

### 22 Aug to 04 Sep, 2017: Flood alert system is not yet operational

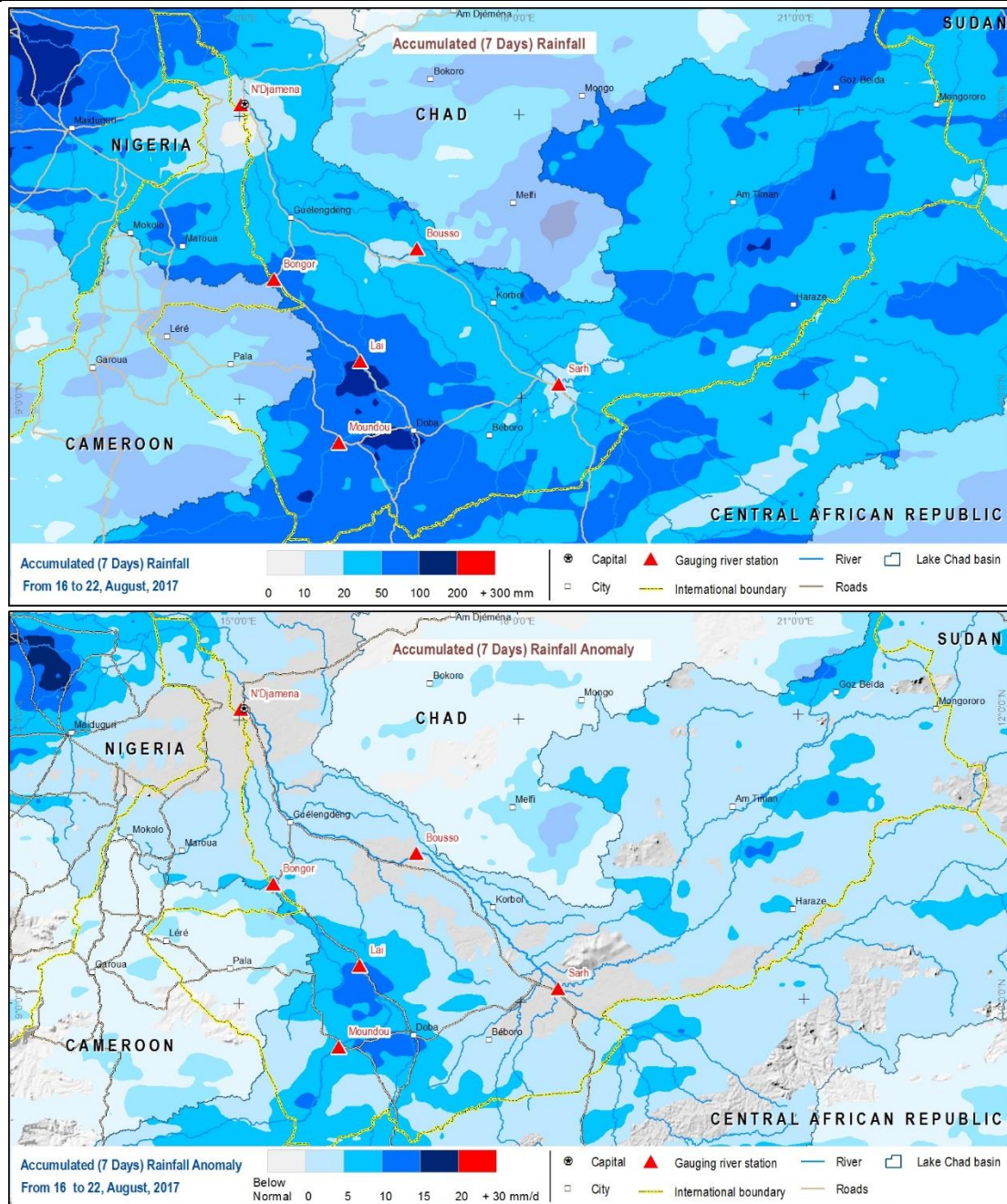


Alert Level:

- **Severe Flood Warning:** Expect serious flood and imminent danger to life and property.
- **Flood Warning:** Expect flooding that will cause disruption.
- **Flood Watch:** Possibility of some flooding.
- **No Warning:** No flood warning is in force.

### Accumulated Rainfall Analysis (16 to 22 August, 2017)

The maps below shows 1) the spatial distribution of the accumulated rainfall between 16 to 22 August over the Chari/Logone Basin, and 2) the spatial distribution of rainfall anomalies during the same period. The anomaly is shown in millimeters per day (mm/d). A value of 10 mm/d would indicate that the average daily rainfall in a given week has exceeded normal rainfall by 10mm.

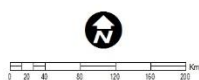
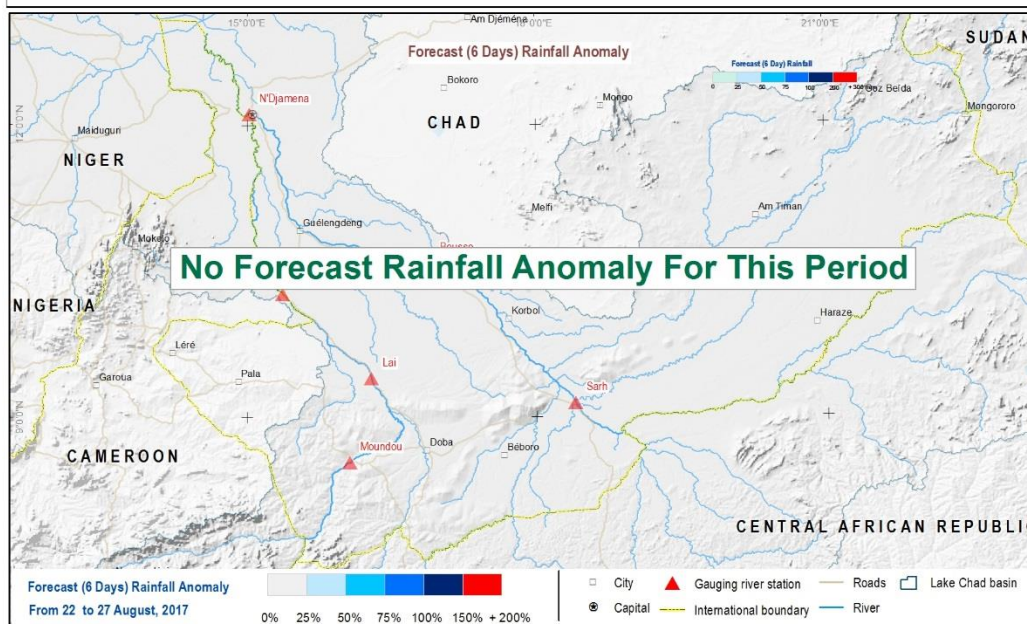
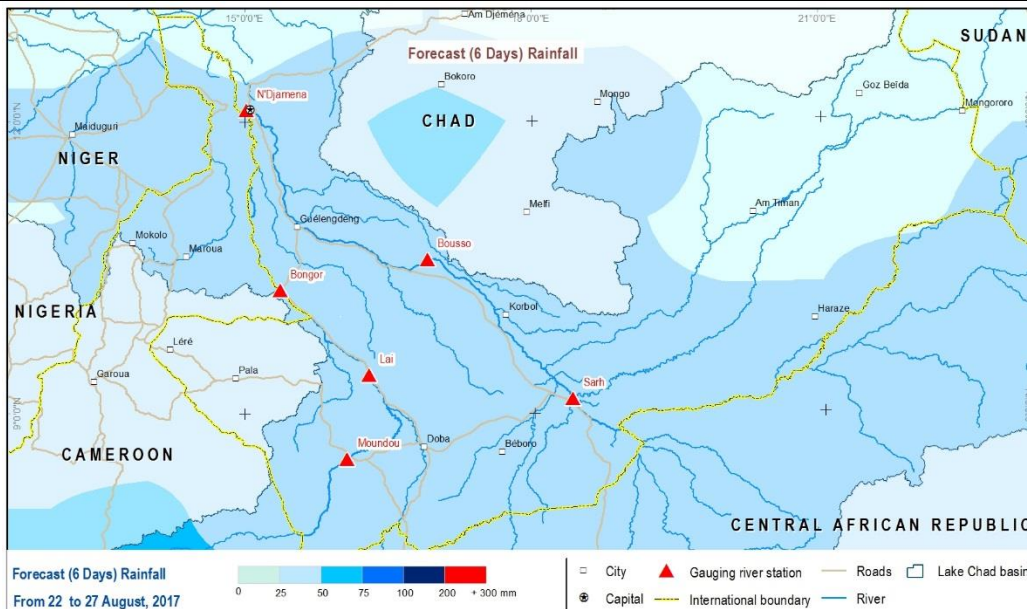


The accumulated rainfall between 100 to 200 mm as well as 50 to 100 mm has occurred in South-Western part of the basin (near Bongor, Lai and Moundou discharge gauging stations). Rainfall between 50 to 100 mm has occurred in the Eastern part. Remaining parts of entire Chad basin received 20 to 50 mm rainfall during last week, which is up to 5 mm/day above normal rainfall. The areas which received above 50 mm rainfall, indicate that it was about 5 to 10 mm/day above normal rainfall. The areas which received above 100 mm rainfall, indicate that it was about 10 to 15 mm/day above normal rainfall.



### Forecast Rainfall Analysis (22 to 27 August, 2017)

The maps below shows 1) the spatial distribution of the forecast rainfall between 22 to 27 August over the Chari/Logone Basin, and 2) the spatial distribution of forecast rainfall anomalies during the same period. A value of 100% would indicate that six-day total forecast precipitation is the same as the mean monthly total normal rainfall received during the same period. A value of 25% would indicate that six-day total forecast precipitation will be ¼ of the mean monthly total normal rainfall received during the same period.



Data sources: GPM (IMERG), NOAA, WorldClim, IRI, Columbia University, JRC, HDX-JRC, USGS  
Coordinate System: WGS 1984 UTM Zone 33N  
Contact: unosat@unitar.org



It is observed from forecast (6 day) rainfall map, about 25 to 50 mm rainfall is expected to occur in entire basin except in North-Eastern part without any forecast anomaly. North-Eastern part of the basin is expected to receive 0 to 25 mm rainfall without any forecast anomaly. As forecasted rainfall for the next 6 days is lower than the accumulated rainfall of the current week, the water discharge over the Chari and Logone rivers is expected to decrease in next week.

Data sources:

- Accumulated rainfall (16 to 22 August) (NASA)

More details are available at <https://pmm.nasa.gov/gpm/imer-g-global-image>

- Accumulated rainfall anomaly is calculated using the normal rainfall data of climate change knowledge portal of World Bank. More details are available at ([http://sdwebx.worldbank.org/climateportal/index.cfm?page=country\\_historical\\_climate&ThisCCode=TCD](http://sdwebx.worldbank.org/climateportal/index.cfm?page=country_historical_climate&ThisCCode=TCD))
- Forecast Rainfall (22 to 27 August ) (IRI, Columbia University and NWS, NOAA)

More details are available at <http://iridl.ldeo.columbia.edu/maproom/IFRC/FIC/cummrain.html?>

- Forecast Rainfall Anomaly (22 to 27 August ) (IRI, Columbia University and NWS, NOAA)

More details are available at <http://iridl.ldeo.columbia.edu/maproom/IFRC/FIC/heavyrain.html?>

Disclaimer:

*This is a preliminary analysis based on forecasting models and satellite based observations and has not yet been validated in the field. It is important to note that there are limitations in these data sources, and flood warnings included in this report should be treated with caution.*

*The depiction and use of boundaries, geographic names and related data shown here are not warranted to be error-free nor do they imply official endorsement or acceptance by the United Nations.*

*Please send ground feedback to UNITAR – UNOSAT.*

*This flood bulletin has been produced by UNITAR-UNOSAT with the collaboration of:*

- *Ministère de l'Eau et de l'Assainissement du Tchad  
(Field data)*
- *CIMA Research Foundation  
(Hydrological forecast)*
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- *European Civil Protection and Humanitarian Aid Operations (ECHO)*

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