

# Mapping Floods in Nigeria using Sentinel-1 Satellite Images



In a recent report on the humanitarian situation in West and Central Africa Region Weekly, the UN Office for the Coordination of Humanitarian Affairs (OCHA) said that 302,000 people in 10 Local Government Areas have been affected by flooding in the Nigerian state of Adamawa since 30 August 2015.

For post-flood impact analysis, three satellite images from Sentinel-1 was used. The following images were preprocessed including 10 and 22 September, 2015 and 04 October, 2015. Images were layerstacked to identify areas that are still inundated and receded for decision making process.

Dark areas (black) determines standing water between Sept 10 - Oct 4 and Green areas were mainly flooded on September 22. In total an area of 2,062 sq.km were inundated as viewed by Sentinel-1 satellite images taken on 10 September 2015. Agriculture extent was analysed using Global MERIS Land Cover Product. Approximately 1450sq.km of Agricultural fields were flooded. The impact of flooding on agriculture in divisions are Adamawa (513 sq.km), Taraba (362 sq.km), Gombe (56 sq.km).

**Legend**

Flood Dates : 10 Sept, 22 Sept & 4 Oct 2015

Disaster Image : SENTINEL-1

**Flood Duration**

10 Sept. 2015


22 Sept. 2015


10 - 22 Sept and 04 Oct




State Map

Road

Cities/Town

Map Prepared by:  
  
International Water Management Institute

Data Provided by:  


Supported by:  


The analysis excluded permanent water bodies including reservoir, tanks and ponds and this reflects only the inundation extent. Please note the surface water extent mapped has not yet been validated in the field.

The depiction and use of boundaries, geographic names and related data shown in these maps are based on the sources they have been drawn from and quoted. These are neither error-free nor do they imply official endorsement or the position of IWMI.

0 5 10 20 30 40 Kilometers

