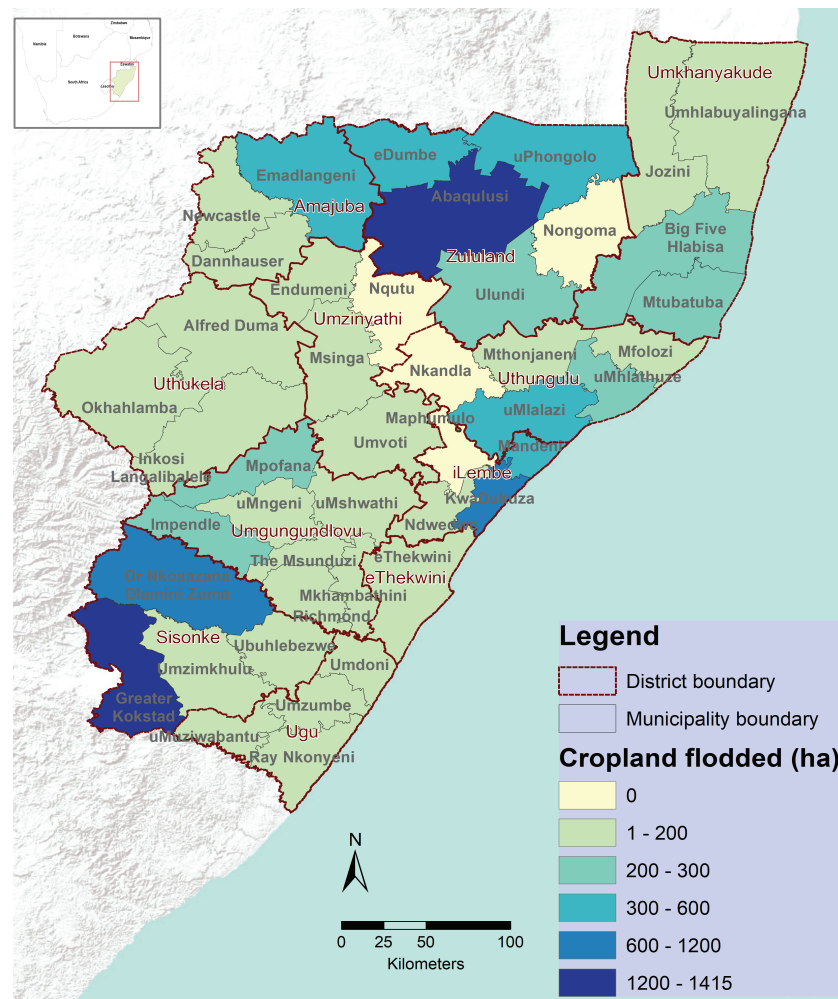


Impacted cropland

An analysis to assess the impacts of floods on cropland in KwaZulu-Natal province was performed using existing data, GIS and remote sensing. The crop mask was derived from the South African National Land Cover map (SANLC, 2018). The water mask was derived from the Joint Research Centre (JRC) water body data (2020). Sentinel 1 SAR was used to assess flood extent.

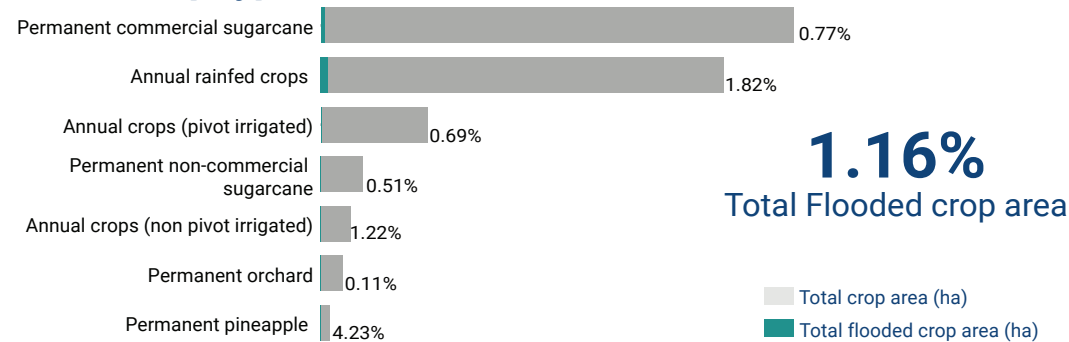
Most impacted districts by inundated cropland

- 2 375 ha (4.15%) Zululand
- 688 ha (2.37%) Umkhanyakude
- 2 387 ha (2.37%) Sisonke
- 1 000 ha (1.37%) iLembe
- 899 ha (1%) Uthungulu



Source: UN, 2020. Inundated cropland in KwaZulu-Natal province of South Africa at municipality level (admin unit 3)

Inundated crop type area

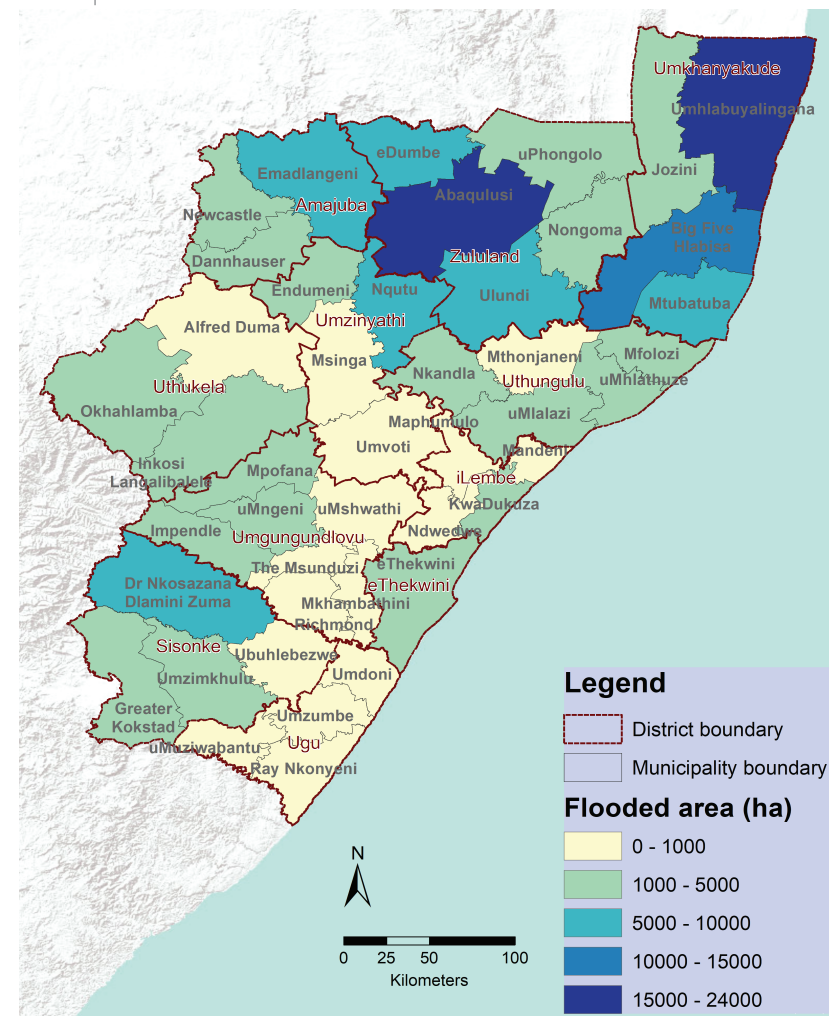


Flood extent

Sentinel 1 (SAR) and 2 (optical) data were used to delineate the flood extent. Regular water bodies were removed using long-term Joint Research Centre (JRC) water body data (2020), and outliers were removed using the slope based on Shuttle Radar Topography Mission (SRTM) elevation data.

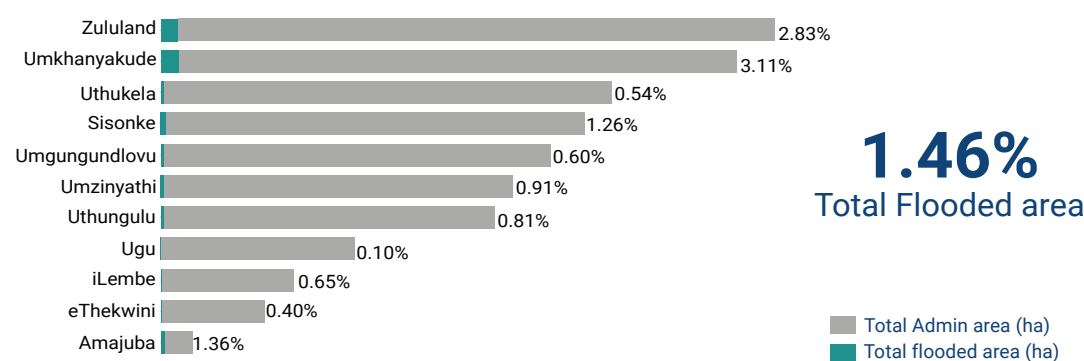
Most impacted municipalities by flood extent

- 23 259 ha (5%) Abaqulusi
- 22 693 ha (5%) Umhlabuyalingana
- 12 606ha (4%) Big Five Hlabisa
- 6 576 ha (3%) Mtubatuba
- 6 108 ha (3%) Nqutu



Source: UN, 2020. Flood extent in KwaZulu-Natal province of South Africa at municipality level (admin unit 3)

Flood extent at district level

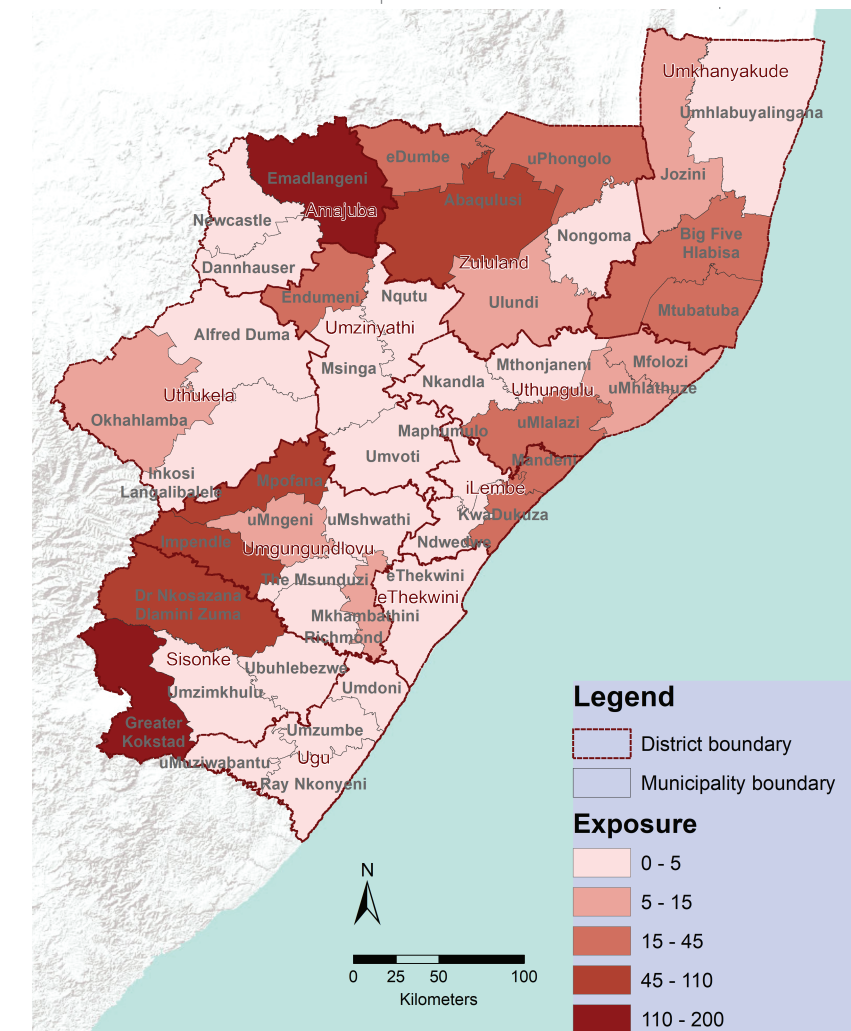


Exposure of people to inundated cropland

People's exposure to inundated cropland was calculated by superimposing a crop-mask extracted from the South African National Land-Cover map (SANLC, 2018), the flood extent layer, and World-population data. The statistics were computed using administrative boundaries from UNOCHA-HDX.

Municipalities with the highest exposure of people to impacted cropland

- 194 m²/person Greater Kokstad
- 114 m²/person Emadlangeni
- 97 m²/person Dr Nkosazana Dlamini Zuma



Source: UN, 2020. Population exposure (m²/person) to inundated cropland at municipality level (admin unit 3)

The exposure of people to impacted cropland is expressed as the ratio of impacted cropland and population. Therefore, higher values indicate a higher impact exposure.

Disclaimer: The boundaries and names shown and the designations used on this/these map(s) do not imply the expression of any opinion whatsoever on the part of FAO concerning the legal status of any country, territory, city, or area or of its authorities, or concerning the delimitation of its frontiers and boundaries. Dashed lines on maps represent approximate border lines for which there may not yet be full agreement.