


08 June 2022




# PRELIMINARY SATELLITE-DERIVED FLOOD AND LANDSLIDE ASSESSMENT



Northern eThekweni Municipality, Kwazulu-Natal Province, South Africa



 Status: : Increased water level and landslides/mudslides observed

 Further action(s): Continue monitoring



# SOUTH AFRICA



-  AREA OF INTEREST
-  DISTRICT BOUNDARY



# AOI 1 NORTHERN ETHEKWINI MUNICIPALITY, KWAZULU-NATAL PROVINCE

**Mudslides, increased water level and affected infrastructure along the Mdloti River**



High Water levels

Mdloti River

See inset  
for close view

Hazelmere Dam

High Water levels



Affected Road



Mudslide

Mudslide

Mudslide

Eroded riverbanks and  
increased water level



600 m

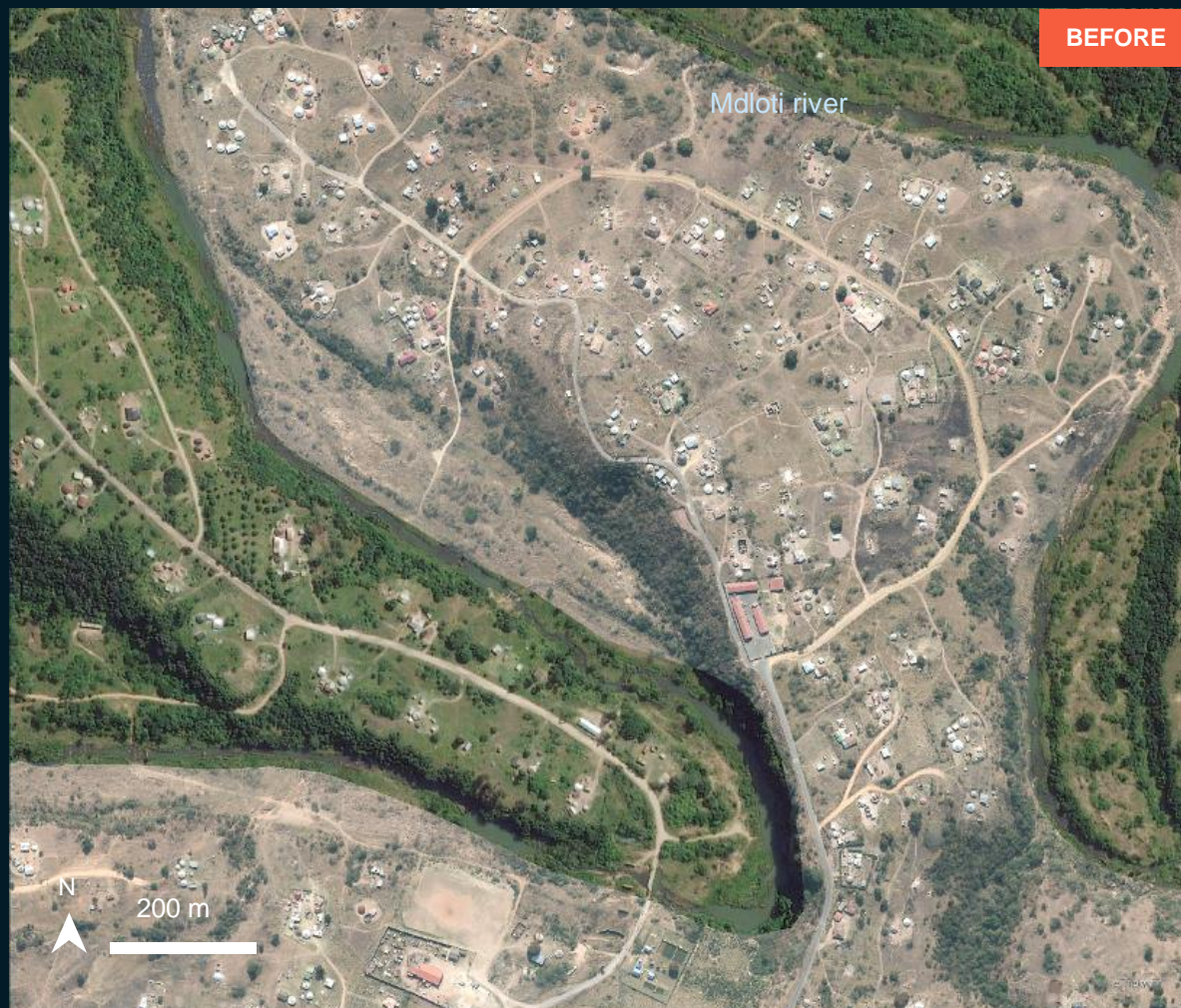
WorldView-2 image acquired on 28 May, 2022  
Image Center : 31.0009926°E 29.5963550°S



# AOI 1-1 NORTHERN ETHEKWINI MUNICIPALITY, KWAZULU-NATAL PROVINCE

## Increased water level & Inundated Road

Image center:  
30.9832800°E  
29.5866826°S



Esri Basemap / 15 Jan. 2020



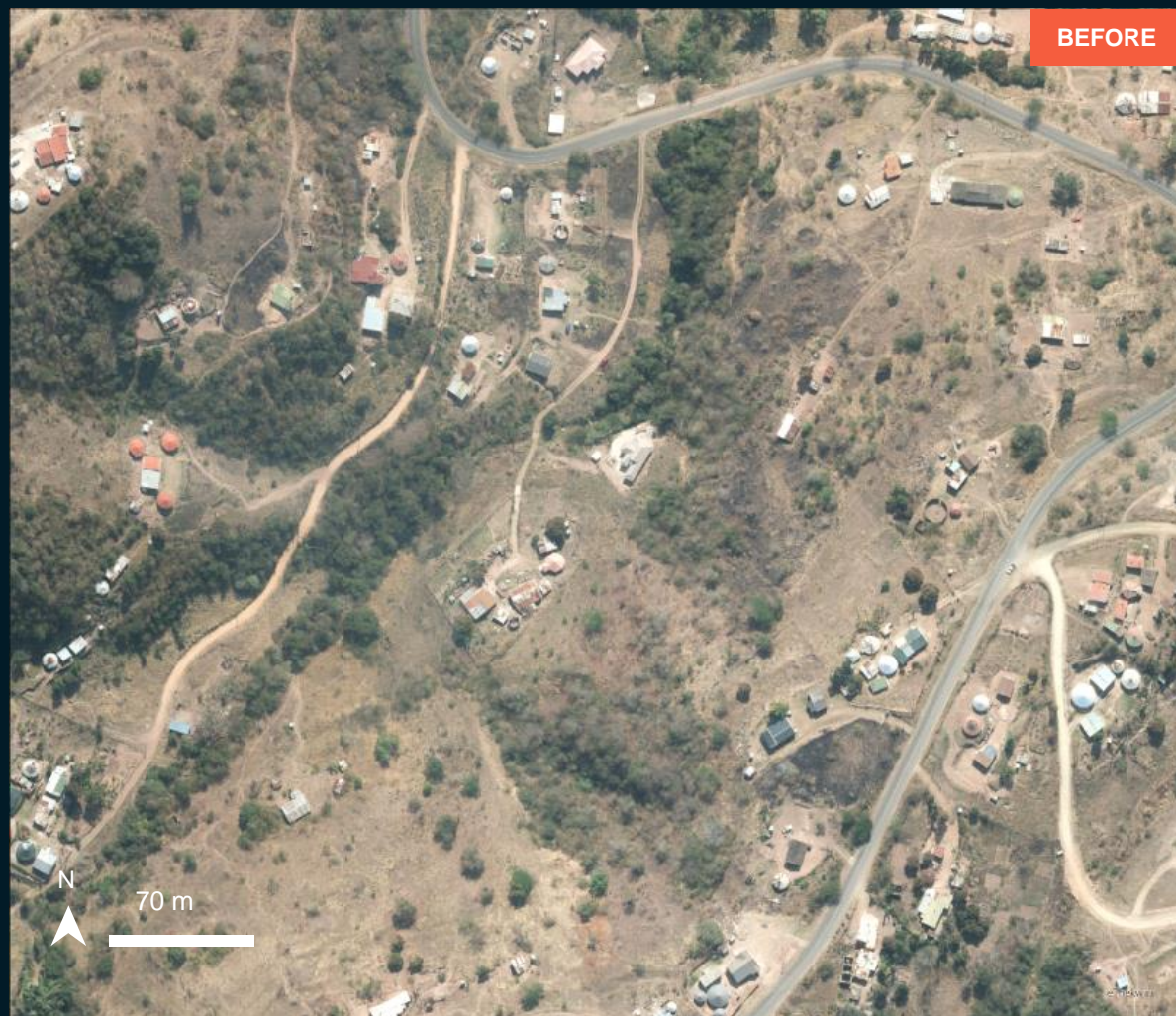
Pleiades / 25 May 2022



# AOI 1-2 NORTHERN ETHEKWINI MUNICIPALITY, KWAZULU-NATAL PROVINCE

Mudslides and potential affected buildings

Image center:  
30.9832800°E  
29.5866826°S



Esri Basemap / 15 Jan. 2020



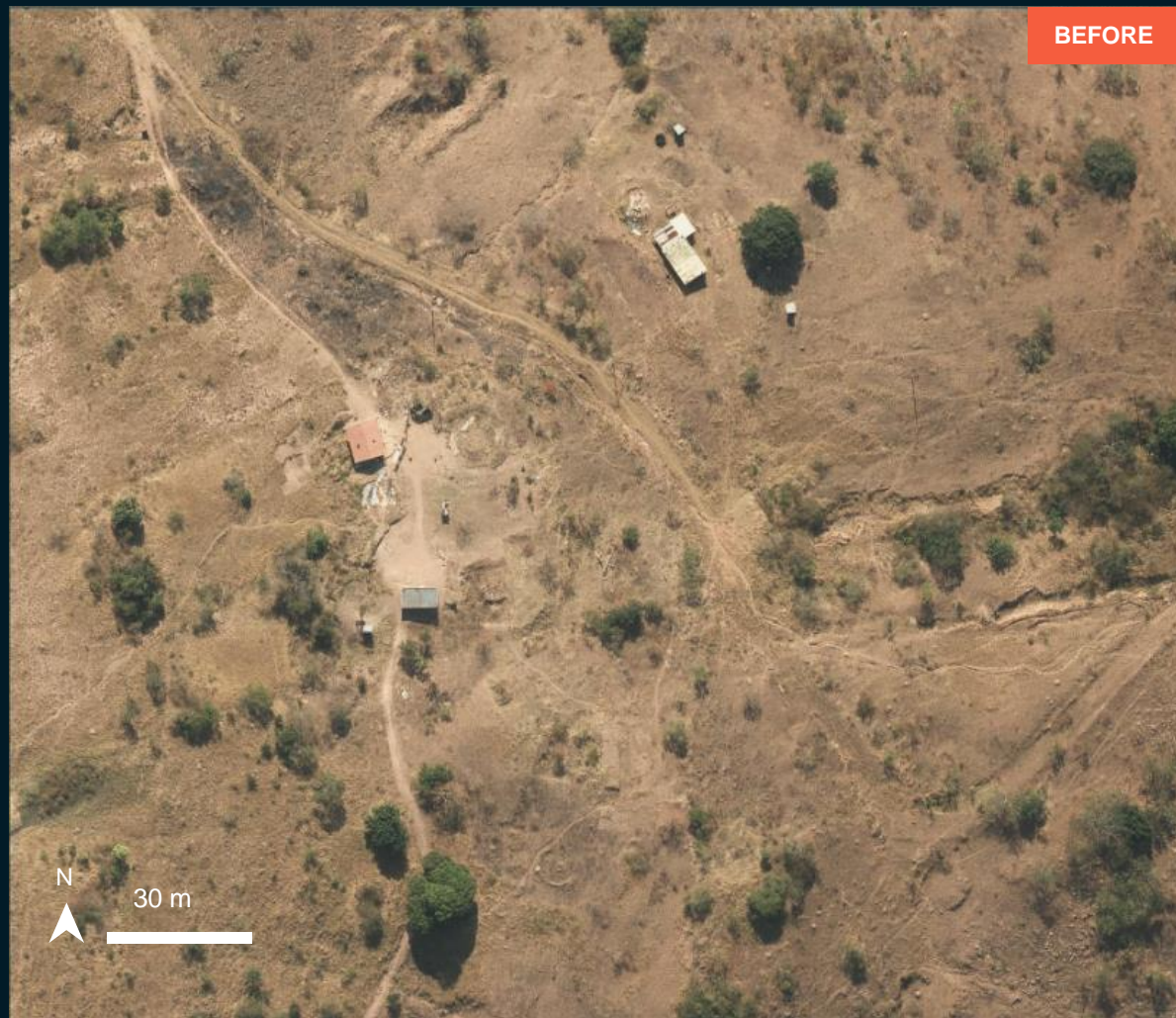
Pleiades / 25 May 2022



# AOI 1-3 NORTHERN ETHEKWINI MUNICIPALITY, KWAZULU-NATAL PROVINCE

## Landslide and destroyed buildings

Image center:  
30.9629494°°E  
29.5930369°°S



Esri Basemap / 15 Jan. 2020



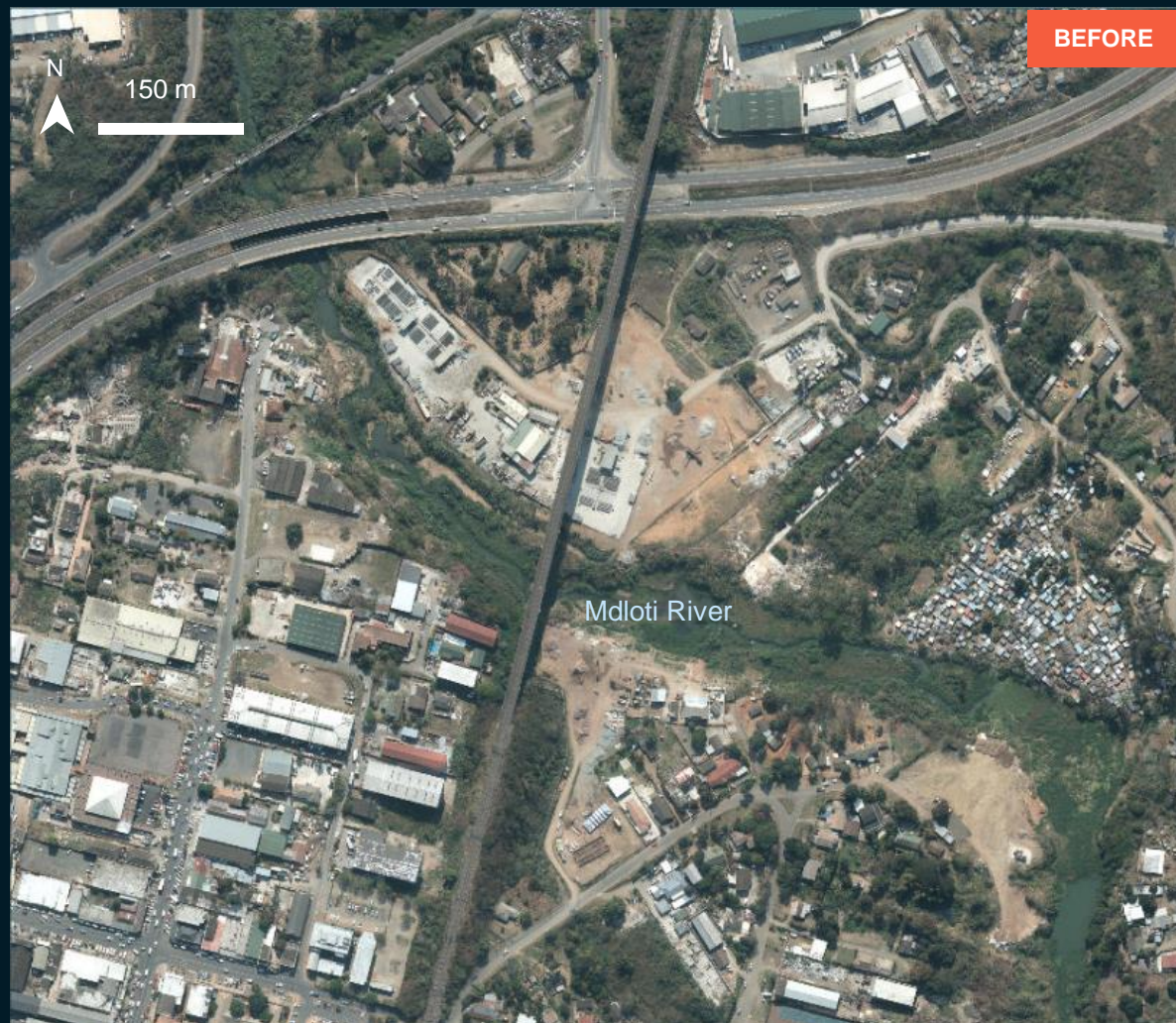
Pleiades / 25 May 2022



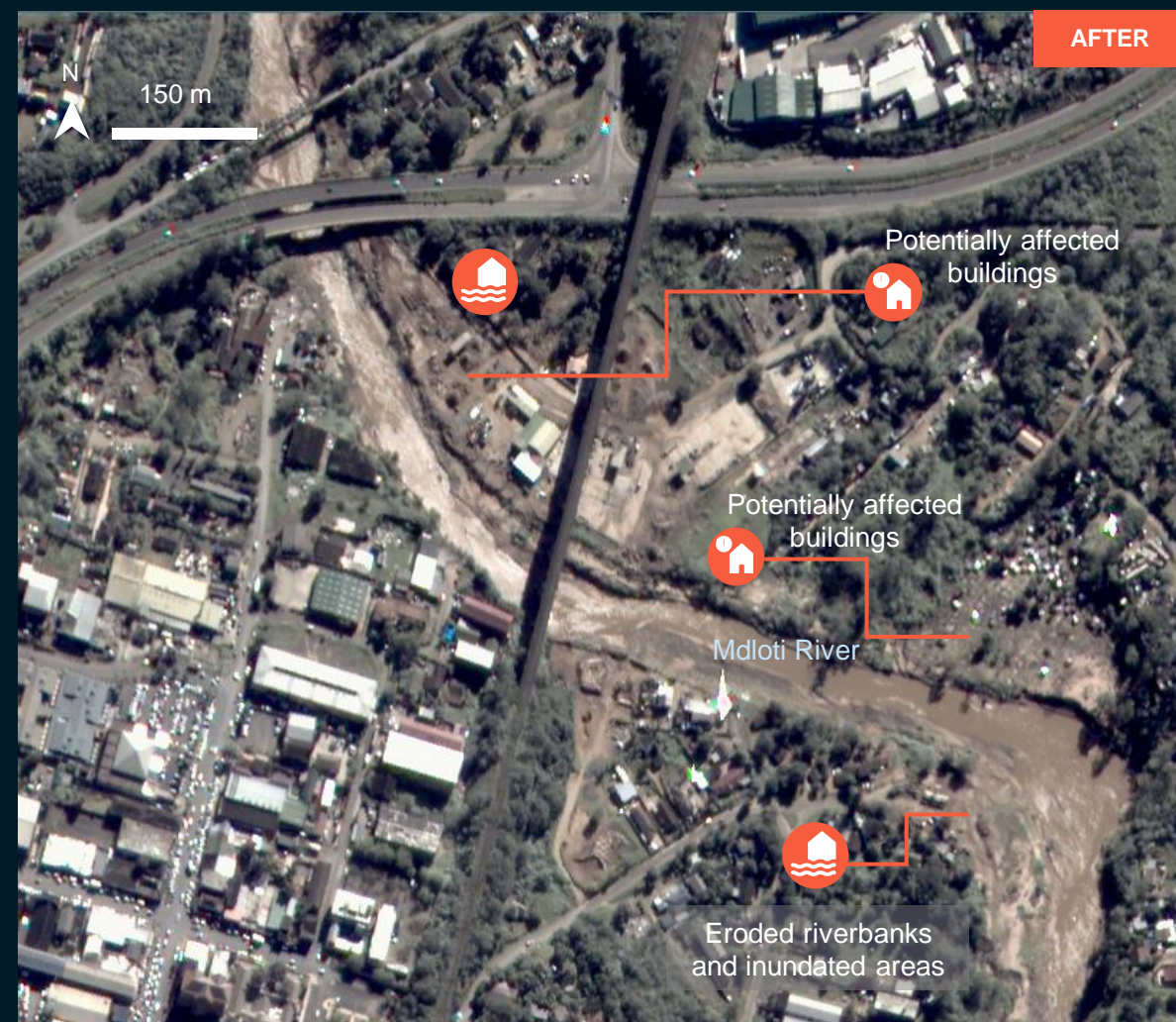
# AOI 1-4 NORTHERN ETHEKWINI MUNICIPALITY, KWAZULU-NATAL PROVINCE

Flooded areas and potentially affected buildings

Image center:  
31.0516004°E  
29.6392627°S



Esri Basemap / 15 Jan. 2020



Worldview-2 / 28 May 2022



# AOI 2 NORTHERN ETHEKWINI AND SOUTHERN ILEMBE MUNICIPALITY, KWAZULU-NATAL PROVINCE

Increased water level from the Tongati river

eThekweni

Durban

UNOSAT

Tongati river

High Water levels

High Water levels

See inset  
for close view

Increasing  
water

Eroded riverbanks and  
increased water level

N

600 m

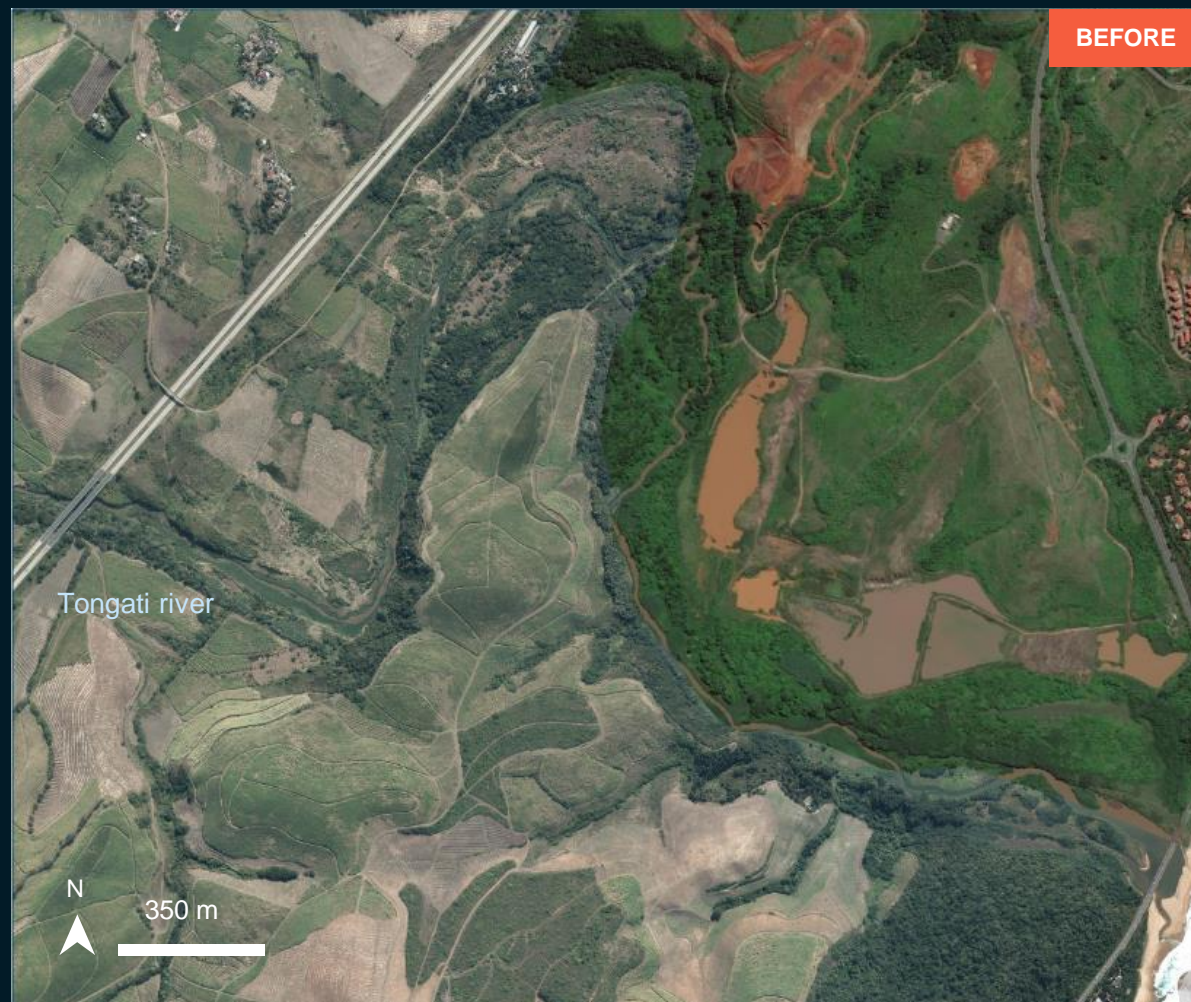
WorldView-2 image acquired on 28 May 2022  
Image Center : 31.1233937°E 29.5549215°S



# AOI 2-1 ETHEKWINI METROPOLITAN MUNICIPALITY, KWAZULU-NATAL PROVINCE

Increased water level and inundated roads

Image center:  
31.1833195°E  
S29.9312293°S



Esri Basemap / 15 Jan. 2020



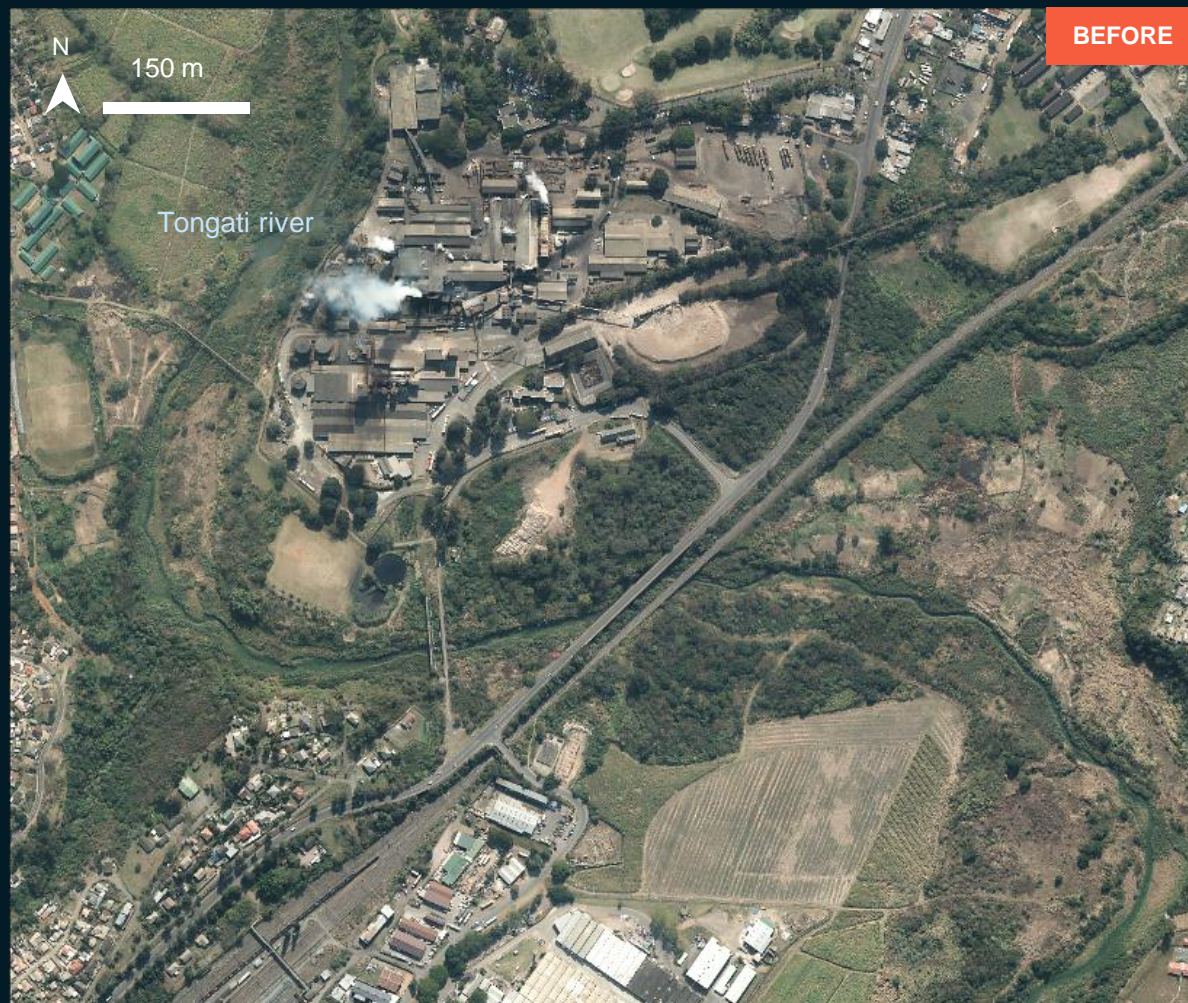
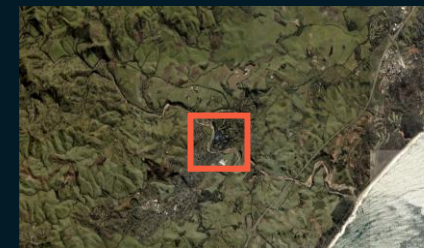
WorldView-2 / 28 May 2022



# AOI 2-1 ETHEKWINI METROPOLITAN MUNICIPALITY, KWAZULU-NATAL PROVINCE

Increased water level and eroded riverbanks along the Tongati River

Image center:  
31.1268032°E  
29.5537843°S



Esri Basemap / 15 Jan. 2020



WorldView-2 / 28 May 2022



# AOI 3 ETHEKWINI METROPOLITAN MUNICIPALITY, KWAZULU-NATAL PROVINCE

Increased water level and potentially damaged roads

N

650 m

eThekweni

Durban



Umbilo River

Hluhluwe

Potentially  
damaged road



See inset  
for close view

Potentially  
damaged road



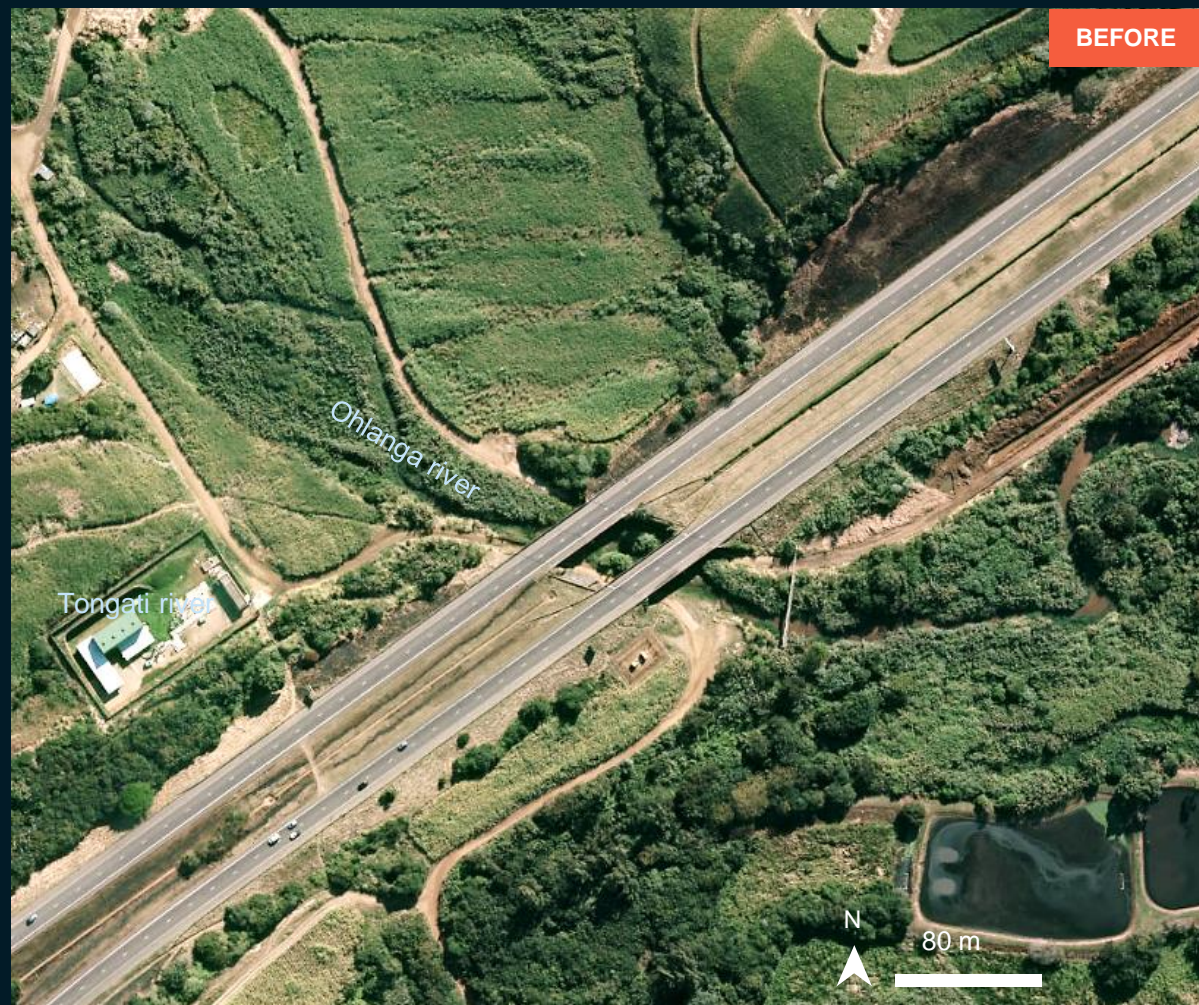
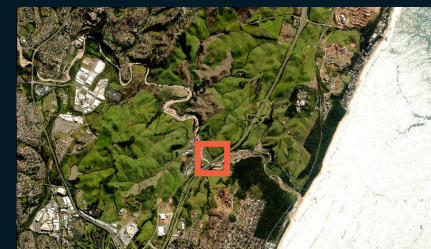
WorldView-2 image acquired on 28 May 2022  
Image Center : 31.0711426°E 29.6842336°S



# AOI 3-1 ETHEKWINI METROPOLITAN MUNICIPALITY, KWAZULU-NATAL PROVINCE

Increased water level and potentially damaged road

Image center:  
31.0774392°E  
29.6960915°S



Esri Basemap / 15 Jan. 2020



WorldView-2 / 28 May 2022



# SUMMARY OF FINDINGS

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- Increased water level and inundated roads observed along the Mdloti river as of 28 of May 2022;
- Some landslides seem to have affected houses in the northern part of eThekweni municipality as of 25 of May 2022;
- Increased water level and affected roads observed along the Tongati river as of 28 of May 2022;
- Potentially affected buildings along the Tongati river as of 28 of May 2022;
- Increased water level and potentially affected road along the Ohlanga river as of 28 of May 2022.



# COPYRIGHTS AND SOURCES

## Data sources:

### (1) Satellite Image (Post-event)

Satellite : WorldView-2  
Imagery Date : 28 May 2022  
Resolution : 50 cm  
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Source: USGS / HDDS

Satellite : Pleiades  
Imagery Date : 25 May 2022  
Resolution : 50 cm  
Copyright: © CNES (2022) , distribution by Airbus DS  
Source: Airbus DS

### (2) Satellite Image (Pre-event)

ESRI Basemap

### (3) Ancillary data

Administrative boundaries: OCHA  
Populate place: OSM  
River data: OSM

Analysis: United Nations Satellite Centre (UNOSAT)  
Production: United Nations Satellite Centre (UNOSAT)





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