



# ETHEKWINI MUNICIPALITY PERSPECTIVE ON CLIMATE CHANGE AND DISASTER RISK MANAGEMENT

**PRESENTED BY:  
MR. VB NGUBANE  
DIRECTOR: DISASTER MANAGEMENT**

**01 December 2025**

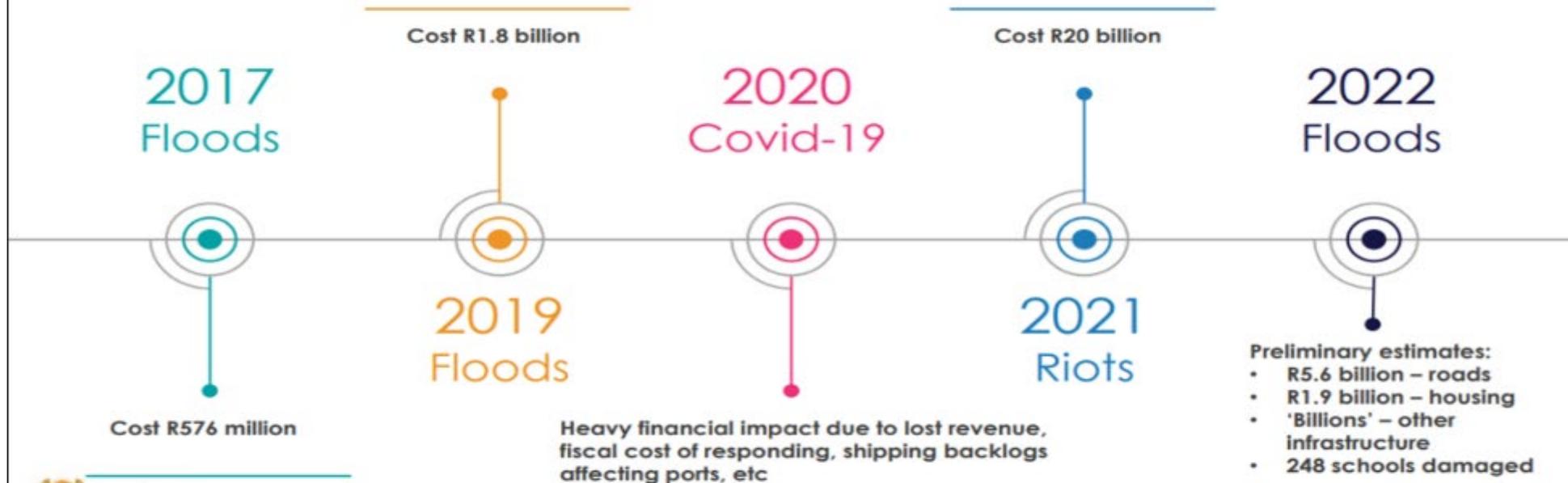


- The Disaster Management Act, seek to provide for " integrated and coordinated policy that focuses on preventing or reducing the risk of disasters, mitigating the severity of disasters, emergency preparedness, rapid and effective response to disasters and post- disaster recovery.
- South Africa's Climate Change Act (Act 22 of 2024).
- The Constitution of the Republic of South Africa, 1996.
- The Disaster Management Act 57 of 2002,
- The Disaster Management Framework of 2005.
- Public Finance Management Act 1 of 1999.
- South African Weather Services Act No. 8 of 2001, amended in 2013.
- Intergovernmental Relations Framework Act of 2005
- But not limited to the other legislations and Policies.



# IMPACTS OF MAJOR INCIDENTS (2017 to 2022)

## ETHEKWINI SUFFERING IMPACTS FROM COMPOUNDING SHOCKS



Source: World Bank Diagnostic Report on Disaster Risk Financing as commissioned by CSP

# LESSONS LEARNED EXERCISE (2022)



A Lessons Learned Exercise (LLE) examining responses to significant floods in 2019 was undertaken in 2020 as a collaborative project between the City Support Programme's (CSP) - NT, eThekweni Metropolitan Municipality, and the World Bank.



LLE examined Emergency Preparedness and Response (EP&R) systems, procedures, and policy, by looking back at the transversal response to the 2019 floods. Progress was delayed due to COVID-19.



When floods impacted eThekweni again in 2022, work was already in progress to address the multiple LLE recommendations that had been agreed. However, that work was incomplete. Work completed in 2023, with various workstreams.



# LESSONS LEARNED EXERCISE (Cont.)



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- **Four Emerging Themes:**
  - Information Management and early warning systems.
  - Improve Incident Command Systems.
  - Enhance the provision of emergency shelters and temporary accommodation facilities to safeguard individuals exposed to imminent danger or displacement.
    - Ensure sufficient disaster funding and support.
- Resulted to the revision/update of the Disaster Risk and Response Management Level 2 Plan.
- Review of institutional arrangements of the Disaster Management Directorate in accordance with the updated Municipal Staff Regulations.



# LEVEL 2 DISASTER RISK AND RESPONSE MANAGEMENT PLAN



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- Level 2 Disaster Risk and Response Management Plan: focuses on establishing processes for a comprehensive disaster risk assessment, identifying and establishing formal consultative mechanisms for development of disaster risk reduction projects and introducing supportive information management and communication system and emergency communications capabilities.
- Considered recommendations from Lessons Learned Exercise (LLE) City Support Programme's (CSP), eThekweni Metropolitan Municipality and the World Bank.
- **Level 2 Plan Considers:**
  - Disaster Risk Assessment
  - Risk reduction strategies.
  - Enhanced preparedness.
  - Effective and efficient response.
  - Integrated Institutional Arrangements
  - Building community resilience.
  - Legal and policy compliance.
  - Efficient resource allocation.
  - Effective coordination and collaboration.
  - Public awareness and education.
  - Efficient funding arrangements.
  - Post Disaster Recovery and Rehabilitation/Reconstruction.
  - Monitoring, Evaluation, Review and Implementation.



# MUNICIPAL FORUM FOR CLIMATE CHANGE



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- Section 9(3) of the Climate Change Act:
  - A Municipal Forum on Climate Change must:
    - (a) coordinate climate change response actions for those activities within the operational control of the relevant municipality in accordance with this Act; and
    - (b) Provide a report on such actions to the relevant Provincial Forum on Climate Change.
- Chaired by Mayor Xaba; Deputy-Chair Cllr Nyawose



# DURBAN CLIMATE CHANGE IMPLEMENTATION PLAN



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- FOUR THEMES

## Enabling

- Legislation, Policy and Planning
- Governance
- Research, Communication and Capacity Building
- Climate Finance

## Cross Cutting

- Economic Development
- Risk Management

## Mitigation

- Energy
- Transport
- Waste

## Adaptation

- Biodiversity
- Food Security
- Health
- Sea level rise and coastal protection
- Water and Sanitation



# DISASTER PREPAREDNESS ACTIVITIES – MAJOR INCIDENT



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- In the event of a major incident, the JOC will be activated. The meetings will be scheduled daily or as in when the need arise to update on the extent of damages and progress of intervention by Units/Departments.
- The eThekweni Disaster Management Centre will conduct an initial and need assessments to determine the magnitude of the damages.
- Immediate disaster relief interventions will be provided based on assessment findings.
- The Disaster Management Centre is also in constant communication with other critical stakeholders for further response interventions.
- Community halls are identified for evacuation purposes and temporary shelters.
- Disaster Social Relief Technical Task team is alerted to provide support where is required.
- Reports and beneficiary list on affected areas are generated and escalated to relevant stakeholders for interventions.
- All relief interventions will be coordinated through Ward Councilors.
- The City's internal soup kitchen will be activated in case of evacuation.
- Communication and alerts to evacuate are led by our Communications Unit though social media platforms radios and house of media & print advertisements.



# DISASTER MANAGEMENT ADVISORY FORUM



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- Disaster Management Act No. 57 of 2002 Section 44(1)(b) calls for an integrated and coordinated approach to disaster management in municipal areas, with special emphasis on prevention and mitigation.
- Platform for the municipality to consult and coordinate various stakeholders on matters related to disaster management.
- Meets every quarter.
- Technical Task Teams
  - Community Based Risk Assessment and Early Warning System
  - Major Hazard Installations “Off-Site” Emergency
  - Social Relief
  - Municipal Adaptation Planning
  - Post-Disaster Rehabilitation and Reconstruction



# SAWS EARLY WARNING



www.durban.gov.za

Weather Office: Ground Floor  
ATNS Building (Control Tower)  
King Shaka Int. Airport  
La Mercy  
Durban

E-Mail: tadnfc@weathersa.co.za  
Tel: 032 436 3820



IMPACT BASED WARNING issue :10:32 on Wed 12 Mar 2025

## LEVEL 6 for Disruptive Rain

WARNING valid Thu 13 Mar 17:00 Until Fri 14 Mar 00:00

### Affected DM / LM / Metro area

EthekeWini, KwaDukuza, Mkhambathini, Ndwedwe, Ray Nkonyeni, Umdoni, UMuziwabantu, Umzumbe

### Short Message

Disruptive rainfall is expected over the south-eastern parts of KZN from tomorrow into Friday, which may lead to flooding of roads and settlements, damage to infrastructure and mud-based houses.

### Discussion

A cold front is expected to pass through the eastern parts from tomorrow accompanied by a ridging high resulting in persistent widespread showers and thundershowers over the south-eastern parts until Friday evening. Significant rainfall amounts are expected which may lead to flooding of roads and settlements, damage to infrastructure and mud-based houses.

### Impacts

- Flooding of roads, bridges and settlements (formal and informal)
- Danger to life (fast flowing streams/deep waters)
- Major disruption of traffic flow due to major roads being flooded
- Disruption to essential services (Water, electricity, communication, etc).
- Damage to mud-based houses.

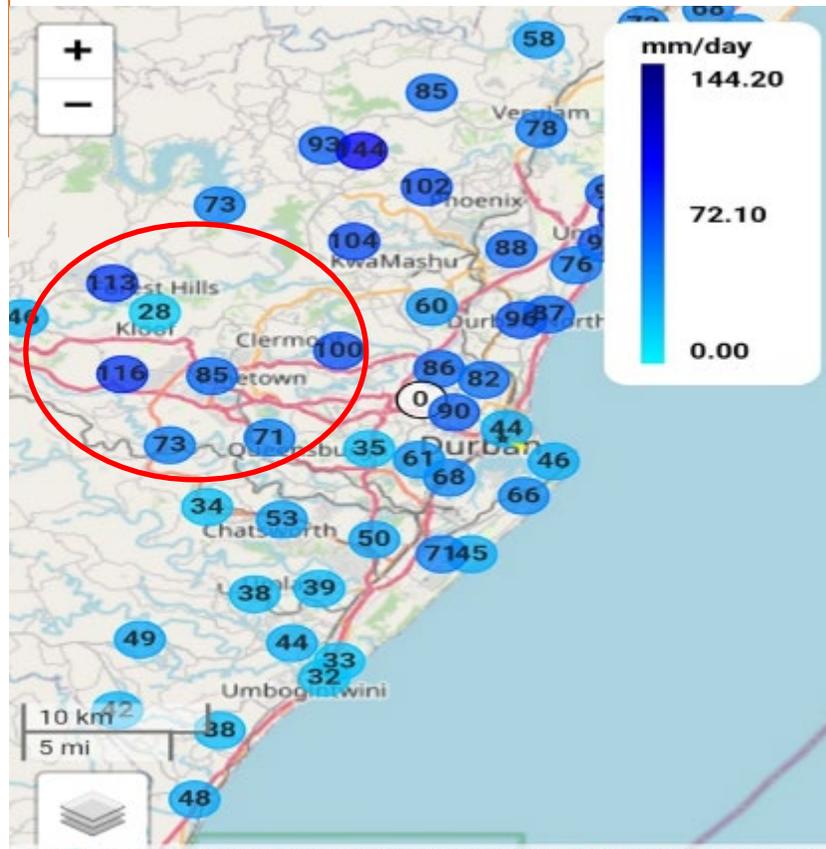
### Instruction

If possible avoid crossing rivers and swollen streams where water is above your ankles.  
If trapped in a vehicle during a flood, abandon it and climb to higher ground.  
In buildings, move valuables to a safe place above the expected flood level.  
Switch off electricity at the supply point to the building.  
In rural areas protect/relocate animals to a safe place on higher ground.

Public Document: IWF v1.0

BY 2030

SAWS has issued a **Orange** level 6 for Disruptive Rain and a **Yellow** Level 4 for Severe Thunderstorms



Leaflet | © OpenStreetMap, Map data: © OpenSeaMap contributors

Weather Office: Ground Floor  
ATNS Building (Control Tower)  
King Shaka Int. Airport  
La Mercy  
Durban

E-Mail: tadnfc@weathersa.co.za  
Tel: 032 436 3820



IMPACT BASED WARNING issue :10:44 on Wed 12 Mar 2025

## LEVEL 4 for Severe Thunderstorms

WARNING valid Thu 13 Mar 15:00 Until Fri 14 Mar 00:00

### Affected DM / LM / Metro area

Abaqulusi, Alfred Duma - Indaka, Alfred Duma - Ladysmith, Dannhauser, Dr N. Dlamini-Zuma - Underberg, eDumbe, eMadiangeni, Endumeni, Greater Kokstad, Impendle, Ingwe, Inkosi Langalibalele - Escourt, Inkosi Langalibalele - Sobabili, Mandeni, Maphumulo, Mpofana - Giants Castle, Mpofana - Mooi River, Msinga, Mthonjaneni, Newcastle, Nkandla, Nguthu, Okhahlamba, Richmond, The Msunduzi, Ubuhlebezwe, Ulundi, uMhlatuze, uMalalazi, uMngeni, uMshwathi,

### Short Message

with heavy downpours leading to flooding, excessive lightning, hail, and damaging winds are expected over most parts of KZN except over the north-eastern parts from tomorrow afternoon, into Friday.

### Discussion

A cold front is expected to pass through the eastern parts from tomorrow accompanied by a ridging high resulting in scattered showers and thundershowers over most parts of the province. Some of these thunderstorms are expected to be severe, accompanied by heavy downpours, hail, damaging winds and excessive lightning that might result in significant impacts.

### Impacts

- Flooding of settlements which may lead to displacement of affected communities,
- Danger to life due, due to fast-flowing river streams,
- Mudslides, rockfalls and soil erosion
- flooding of roads and damage to bridges which may lead to road closure and the disruption of traffic flow,

### Instruction

Where it is reasonable, stay in doors and off the road (in the road stretch where there may be sinkholes and/or potholes),  
Avoid crossing swollen rivers and streams and if trapped in floods, leave the vehicle and climb to the higher ground,  
In buildings (at home), place valuables above the expected flood level where they will be safe,

Public Document: IWF v1.0

LE CITY

- Through our Communications & Community Participation Unit, Dissemination of The Warning and Emergency contact details:

- WhatsApp Groups
- City's Facebook page
- Instagram
- YouTube
- LinkedIn
- Radio Communication
- Loud hailing/Word of Mouth
- SMS to all Cllrs



**eThekweni Municipality**

7m · 🌐

**!! URGENT ALERT: HEAVY RAINS AND THUNDERSTORMS EXPECTED ACROSS KZN !!**

Disaster management teams have been placed on high alert following severe weather warnings issued by the South African Weather Service.

Disruptive rainfall is expected tomorrow, Sunday, 20 October 2024, in eThekweni and parts of the Ugu, uMgungundlovu and iLembe Districts.

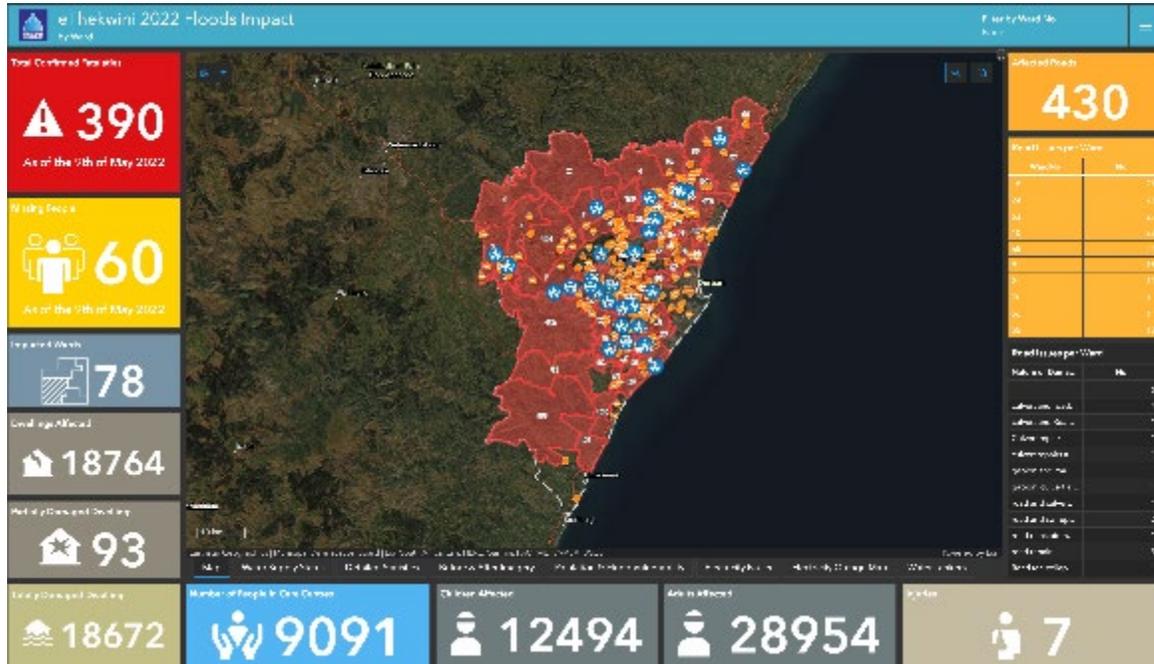
Also predicted are severe thunderstorms, which will bring excessive lightning, large hail, heavy downpours and damaging winds to the rest of the province.

Residents are urged to:

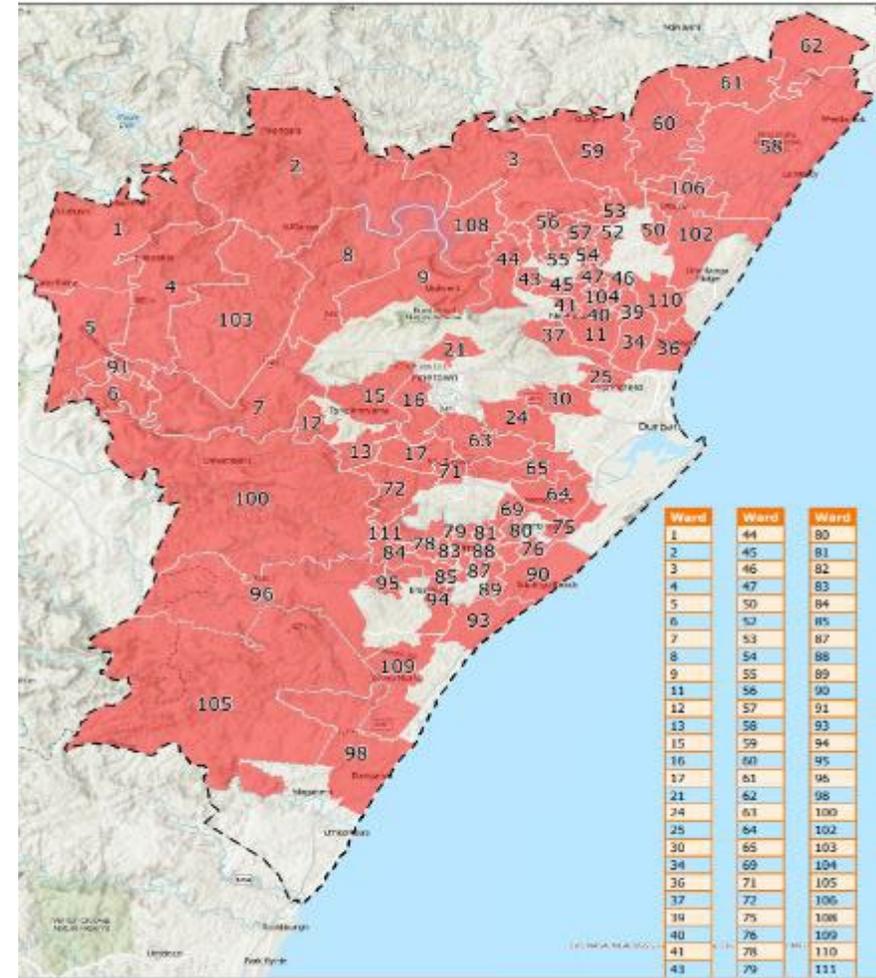
- Avoid crossing flooded walkways or roads.
- Exercise extreme caution while driving, as roads may become slippery.
- Stay updated on weather and road conditions through reliable sources.

- JOC Activated to determine state of readiness if Level 4 or Higher.

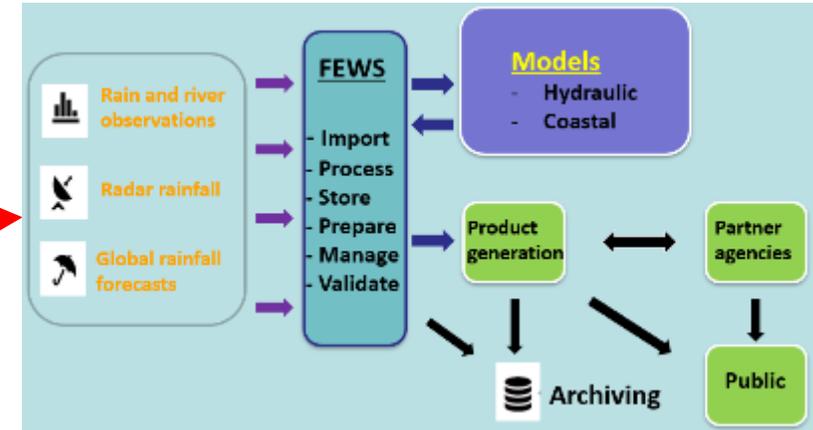
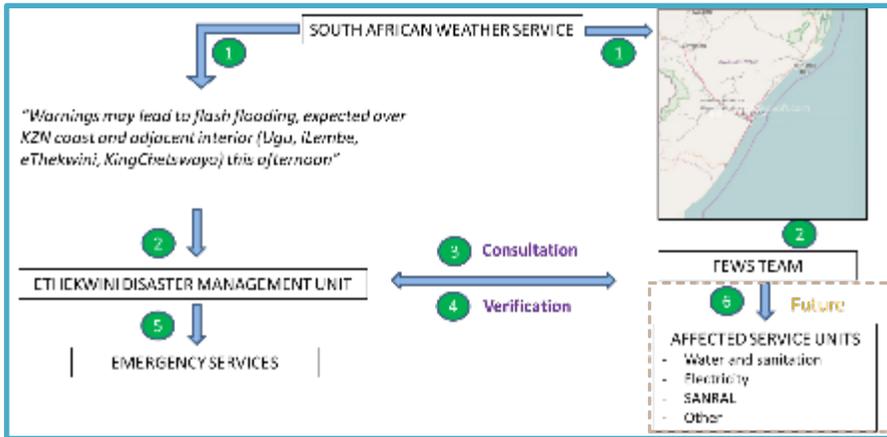
# MAPPING OF MAJOR INCIDENTS



**eThekweni Municipality - Floods Impacted Wards**

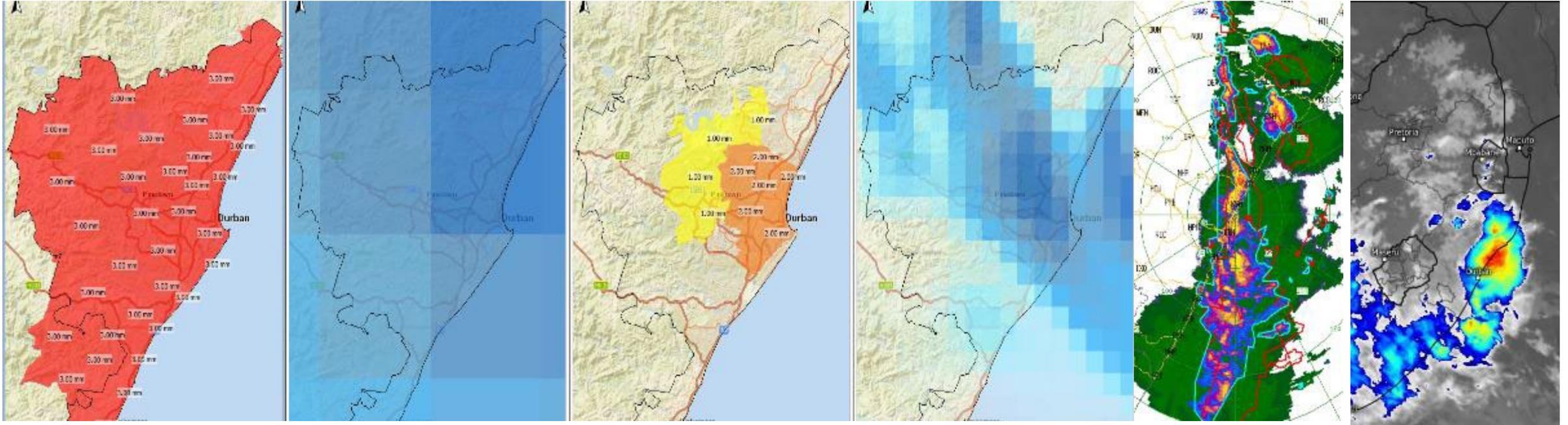


## What is FEWS?



Forecast Early Warning System

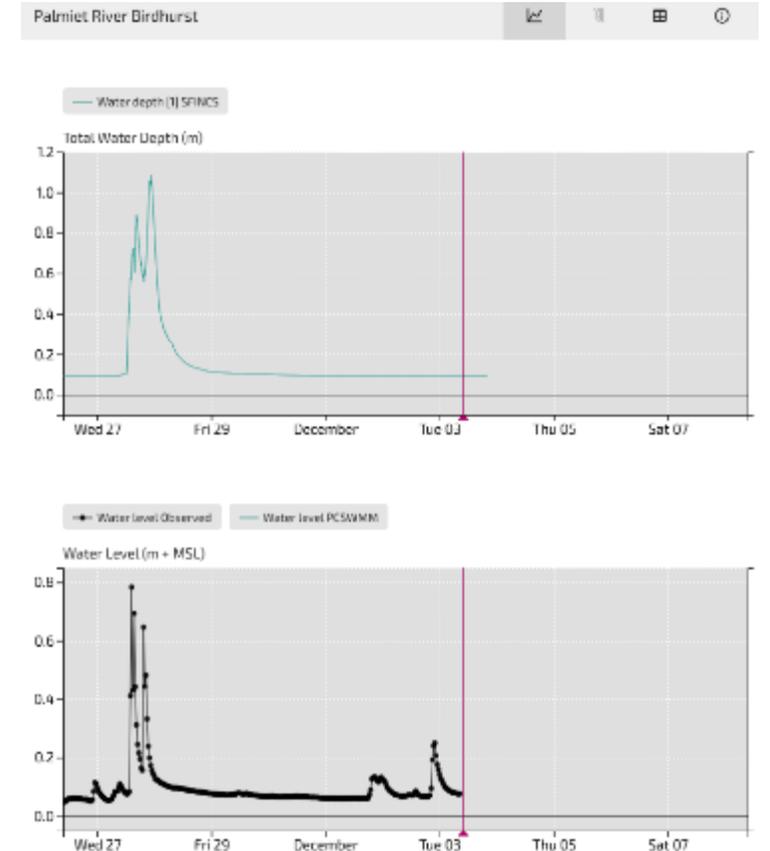
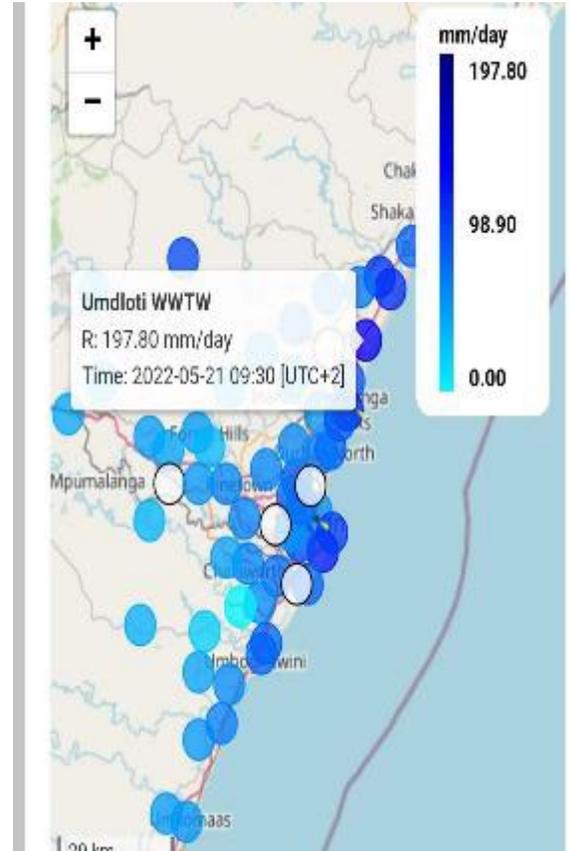
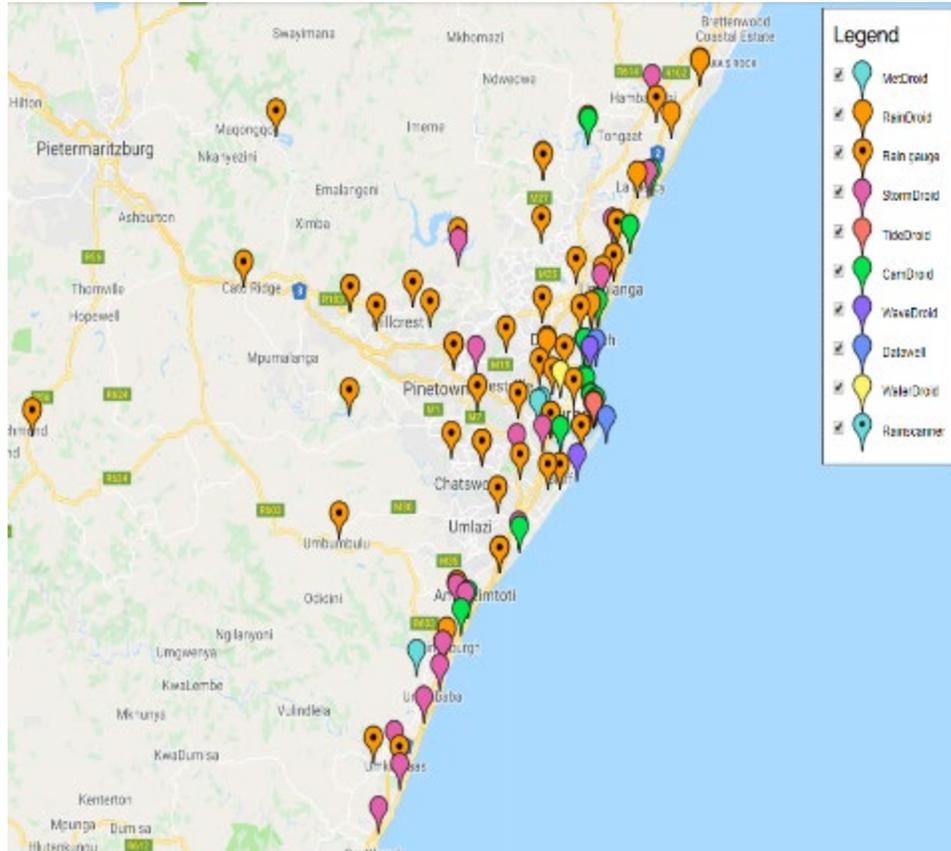




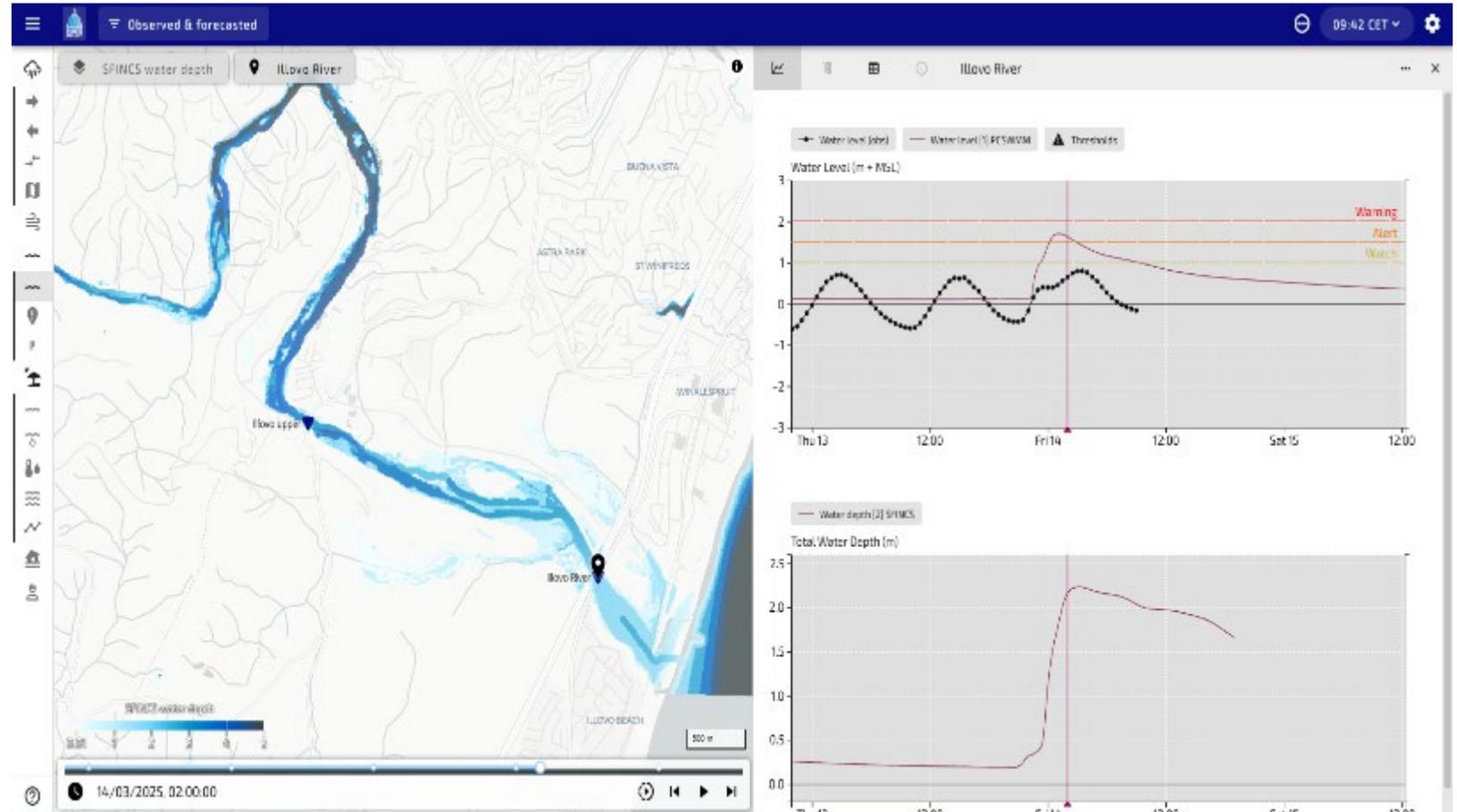
Global (GFS)

Local (SAWS)

Real Time (Radar)



# FLOOD MODELLING



## The Palmiet River and The Quarry Road Settlement

- Within 1:100 year flood line
- Prone to frequent flooding
- 1070 Informal Houses
- Collaboration between community, UKZN and FEWS



- Community understands risk of flooding and warnings issued
- Social learning and engagement between state, research institutions and citizens
- Emergency services and Disaster Management are being provided with 'real-time' detailed local knowledge which may support their efforts to manage flood risk in the city
- Not a single life was lost in this settlement in April 2022 due to flooding!!!



# PRIORITY PROJECTS



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- Implementation of the Level 2 Disaster Risk and Response Management Plan.
- Continue with Disaster Risk Assessment as a planning base for Risk Reduction measures.
- Inclusion of technology to assist with incident management and assessments in times of major incidents/disasters.
- Continue with public/private partnerships through collaboration agreements to improve disaster resilience.
- Obtain funding approval for critical vacancies.
- Development of Off-Site plans for MHI's.
- Facilitate Community Based Early Warning Systems in identified high risk areas.
- Public Awareness and Capacity Building.
- Improve on relief storage.

# ACHIEVEMENTS

BY 2030 ETHEKWINI WILL BE AFRICA'S MOST LIVEABLE CITY



# MAKING CITIES RESILIENT (MCR) 2030 ESSENTIALS SCORECARD



www.durban.gov.za

## DISASTER RESILIENCE SCORECARD FOR CITIES

MAY 2017

### RESULTS



The overall score for this assessment is 92 / 141

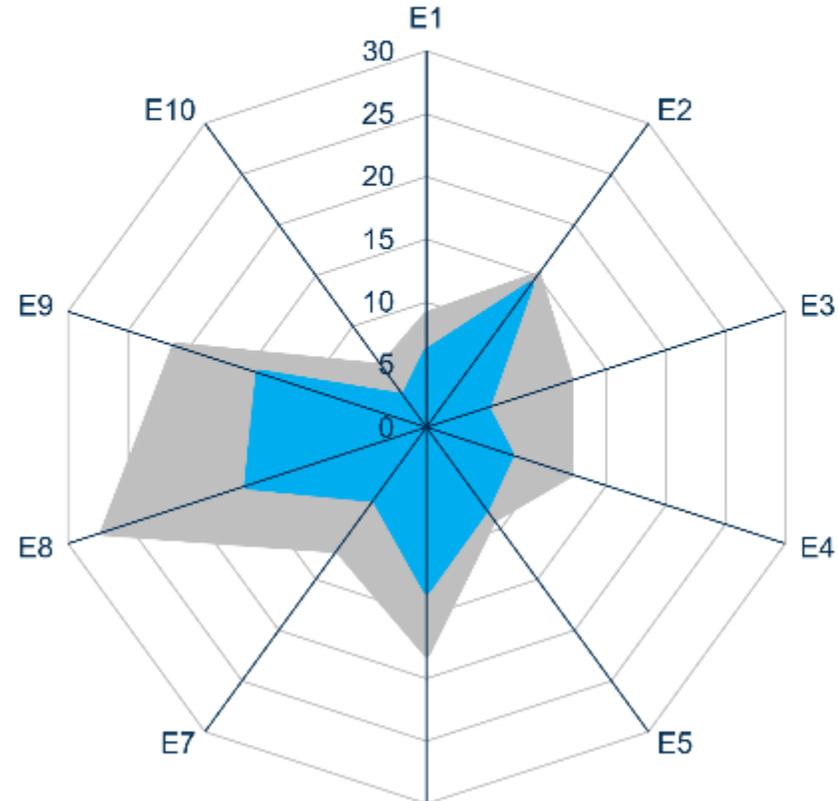
Please send the completed tool and PDF report to: [mcr2030-global@un.org](mailto:mcr2030-global@un.org)  
Disaster Resilience Scorecard for Cities - Preliminary Level Assessment Tool, v.1.0.  
© UNDRR, 2017.



Save PDF Report



Export Input Data



## C40 CDP reporting:

- Improved score to “B” from “D”
- Adaptation section ~ “A”
  
- **Leadership Standards** – confirmed achievement for 2024
- **Multiple Accelerator declarations**
- **Networks and special initiatives** include Heat, Urban Flooding, Inclusivity etc.



## ETHEKWINI MUNICIPALITY ACHIEVES GLOBAL CLIMATE COMPLIANCE WITH IMPROVED CDP RATING



The Transformative River Management Programme aims to ensure that rivers and streams are cleared of debris to allow for improved flow, less flooding, loss of life and damage to infrastructure.

its Educational Partnerships for Innovation in Communities Programme, which has delivered tangible outcomes including food gardens, waste management systems, and disaster response strategies for the Quarry Road West Informal Settlement, located in the vulnerable Palmiet catchment.

“As a City, we continue to pioneer innovative solutions to safeguard our communities and infrastructure, such as the Transformative Riverine Management Programme and the Community-based Flood Early Warning System,” noted Dr. Sean O’Donoghue, Senior Manager: Climate Change Adaptation.

In a landmark development for

## Concept Overview

- 'Building Back Better' focuses on recovery that enhances conditions beyond the original state before disaster struck.

## Physical Improvements

- Reconstruction efforts aim to improve physical infrastructure to be more resilient to future disasters.

## Social and Economic Enhancements

- Recovery also targets social cohesion and economic stability to reduce vulnerability and promote sustainable growth.





# 'BUILDING BACK BETTER' PRINCIPLE



[www.durban.gov.za](http://www.durban.gov.za)

PLAY VIDEO

BY 2030 ETHEKWINI WILL BE AFRICA'S MOST LIVEABLE CITY



# NGIYABONGA – ENKOSI – THANK YOU!!!



**END OF PRESENTATION**  
By  
Disaster Management Directorate