



# uMngeni Resilience Project Overview

16 February 2018



## District Climate Change Response Strategy found that:

- KZN Midlands area is an area of high climate change risk.
- Predictions:
  - warmer future,
  - increased frequency and intensity of severe storms and flash flooding,
  - Lightning strikes are predicted to increase as a result of climate change,
  - Increased potential for drought events
- Impact likely to be severe:
  - many vulnerable communities which are heavily dependent on natural resources

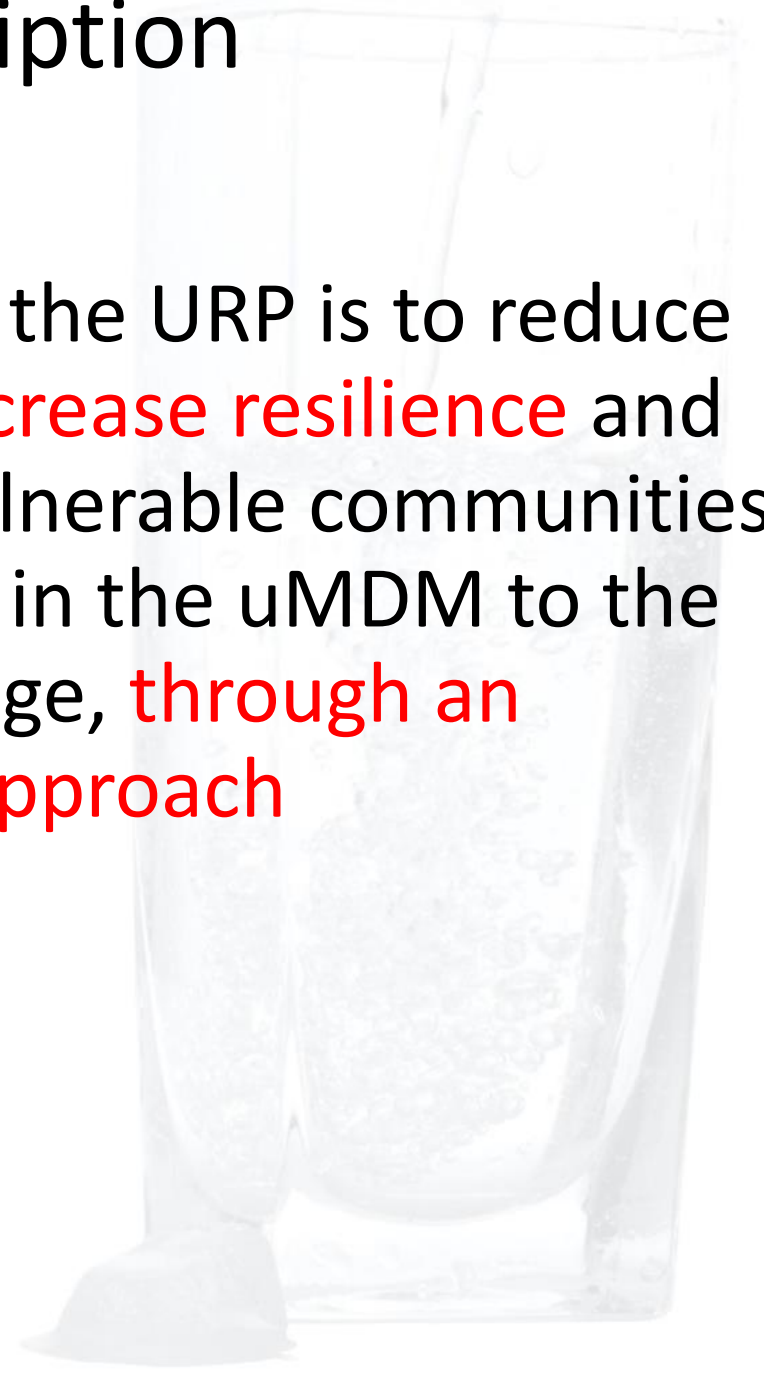


## uMDM Vulnerabilities

- Housing located close to river watercourses or on flood plains
- Housing located on steep hillsides
- Traditional and formal building methods not designed to withstand the new reality (increased magnitude and frequency of storms & floods)
- Heavy reliance on natural resources
- Unsustainable practices on communal grazing lands (grasslands)
- Small scale farmers using crops and methods that increase vulnerability (eg: monocropping)
- Triple threat of poverty, inequality and unemployment
- Population that is young and significant percentage (30%) in traditional and informal housing

# Project Description

The overall objective of the URP is to reduce the vulnerability and **increase resilience** and adaptive capacity of vulnerable communities and small scale farmers in the uMDM to the impacts of climate change, **through an integrated adaptation approach**



# Objective

**Reduce the vulnerability & increase resilience to the impacts of climate change**

**Capacitating communities to find the means to continuously adapt to ever changing weather patterns.**

**Practical**  
Household  
/farm  
Community  
Ward

**Policy**  
Local  
municipality  
District  
Municipal  
Province  
National





# URP- integrated approach to adaptation

Component	Objective
Component 1	<b>Early warning systems</b> <a href="#">Early warning and response systems</a> improve preparedness and adaptive capacity of local communities and small scale farmers, drawing on and integrating scientific and local knowledge.
Component 2	<b>Climate-proof settlements</b> A combination of <a href="#">ecological and engineering solutions</a> reduces vulnerability of communities to existing and anticipated impacts of climate variability and change.
Component 3	<b>Climate-resilient agriculture</b> <a href="#">Small scale farmers</a> have improved resilience and reduced vulnerability to existing and anticipated impacts of climate variability and change.
Component 4	<b>Capacity building and learning</b> <a href="#">Capacity building</a> and <a href="#">sharing of lessons</a> and <a href="#">policy recommendations</a> facilitates scaling up and replication.





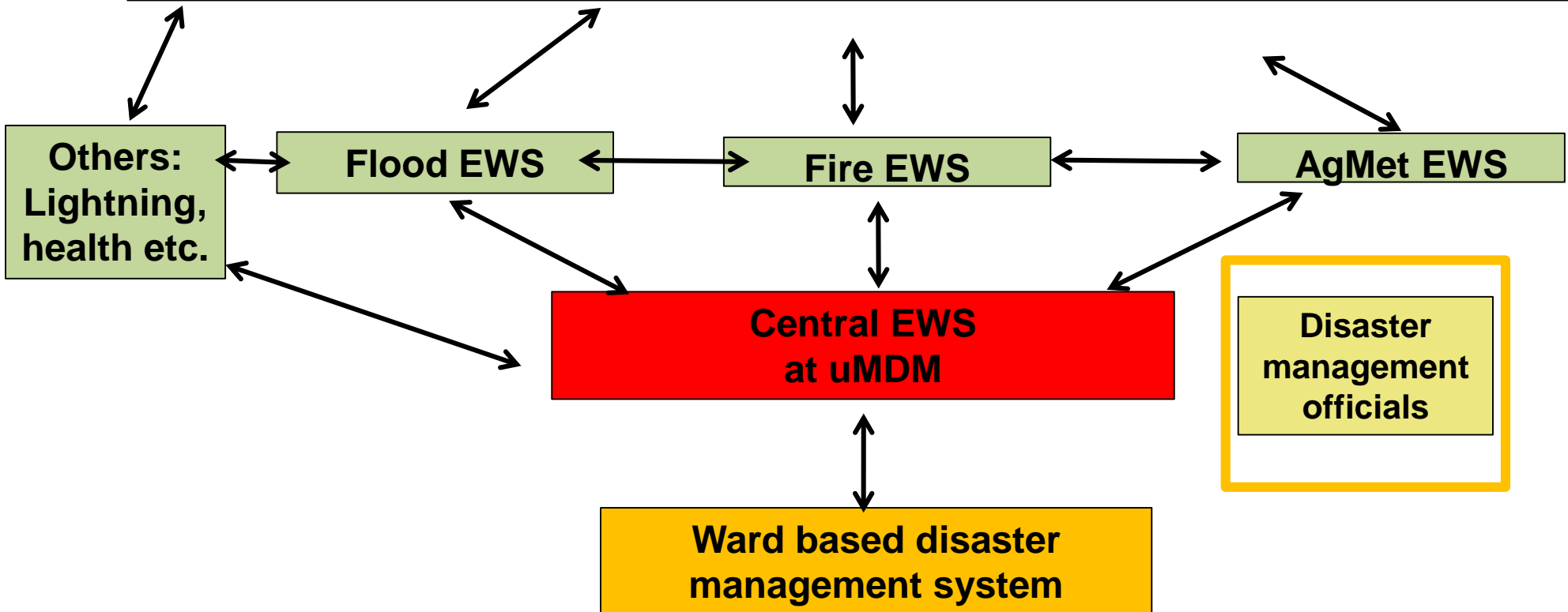
## **Component 1: Early warning systems**

Combining indigenous knowledge and scientific knowledge to improve preparedness of communities and officials

# Ward-based Integrated EWS

**Information from partners through different ports:**

E.g.: Umgeni Water, SAWS, COGTA, ARC-ISCW, CSAG, FPAs, Municipalities, Communities, IKS



Community champions, schools, spaza shops, ward councilors, induna etc

To community: SMS, Two way Radio system, Word of mouth, Flags, whistles, loud hailers etc.

# Climate-proof settlements (engineering solutions)

Critical settlement **infrastructure**, community facilities and homes will be strengthened and stabilised



# Climate-proof settlements (ecological solutions)

Ecological infrastructure will be rehabilitated to buffer communities against increased extreme weather events.



- restored **grassland**
- rehabilitated **riparian zones**
- **alien vegetation removed** to prevent bush encroachment
- **Firebreaks**
- **rangeland management plan**



# Climate-proof settlements

Tools for mainstreaming adaptation considerations into municipal planning processes

community

## Sustainable livelihoods training:

- household risk reduction,
- environmental awareness,
- food security & nutrition,
- basic financial management (eg budgeting & saving)

Policy

## mainstreaming

mainstreaming tool



uMGUNGUNDOVU  
UMASIPALA WESTFUNDA  
DISTRICT MUNICIPALITY  
DISTRIK MUNISIPALITEIT

# Climate Resilient Agriculture

Reducing  
vulnerability at  
**farm level**



- Build **climate resilient farming methodologies** into farming practices for small scale farmers:
  - (re)introduce high drought and heat tolerant crops (eg: canola, cowpea)
  - Look at crops with stable yields
  - Look at crops with good nutritional value
- Combining **scientific** methods and **local knowledge**
- **Increase yields** and **access to markets**



# Climate Resilient Agriculture

Reducing  
vulnerability at  
**policy** level

- Working to LED departments to support and formalise co-ops
- Providing training to DARD Extension Officers
- Ensure mainstreaming into DARD practices



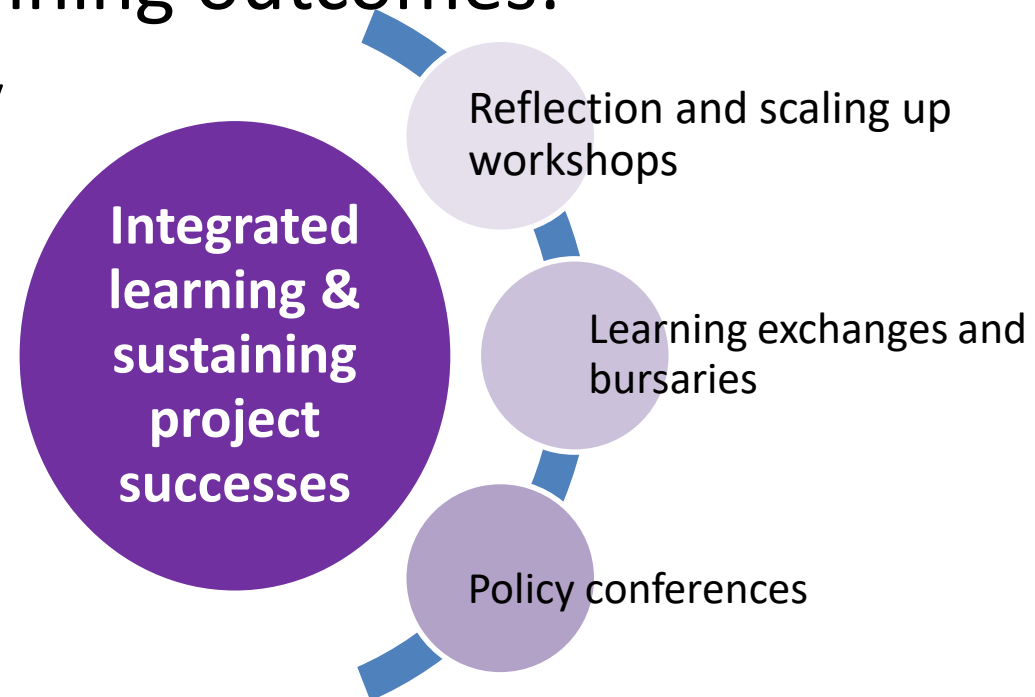
# Improving capacity and sharing learnings

- Community champions, councilors and officials
- Community Resilience Committees
  - support and guide the implementation of URP and advocate for a more climate-resilient community.
- Schools' Programme



# Improving capacity and sharing learnings

- Developing research agenda:
  - Top- up bursaries for Masters and PhD studies
  - Internships
- Sharing lessons and sustaining outcomes:
  - Community to community
  - Across uMDM
  - Across and beyond KZN



# Highlights Y1 and Y2

- National workshop on early warning systems
- EWS component a pilot for the NFCS-SA
- Facilitated MOUs for cooperation and data sharing: SAWS & UKZN; SAWS & Umgeni Water
- Established a Steering Committee for Component 1: uMDM, UKZN, SAWS, DEA, uMngeni Water, Central University of Technology and University of Cape Town.
- Data collection of indigenous knowledge for integration into EWS



# Highlights Y1 and Y2

- Partnerships with provincial departments:
  - DARD: training programme for EO's and scientists
  - EDTEA: climate change module in schools' programme
- 221 farmers: 163 women 20 youth
- Farmer learning exchange
- Supplying cabbage, spinach, carrot and green pepper to local Spar (Wartburg)



**Thank you!**



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