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AFRICA

Fundamentals of building buy-in for climate action

November 12th, 2025

Welcome!

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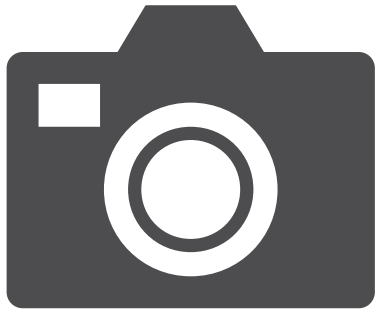
We will record this session



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Avoid distractions



Be comfortable



Use the chat for questions or raise your hand if you want to speak

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We have two special guests today!



Fitse Gelaye



Andrew McDonald
Principal Professional Officer: Catchment and Stormwater Management



Dr. Frank Annor
CEO of the Trans-African Hydro-Meteorological Observatory

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What are we going to do today?

Agenda

Opening and Welcome– Fitse Gelaye

Liveable Urban Waterways in Cape Town: Andrew McDonald

Growing a network of weather stations across Africa: Dr. Frank Annor

Closing

Today’s learning goal

Get concrete examples on what building strong buy-in for implementing and sustaining climate action can look like



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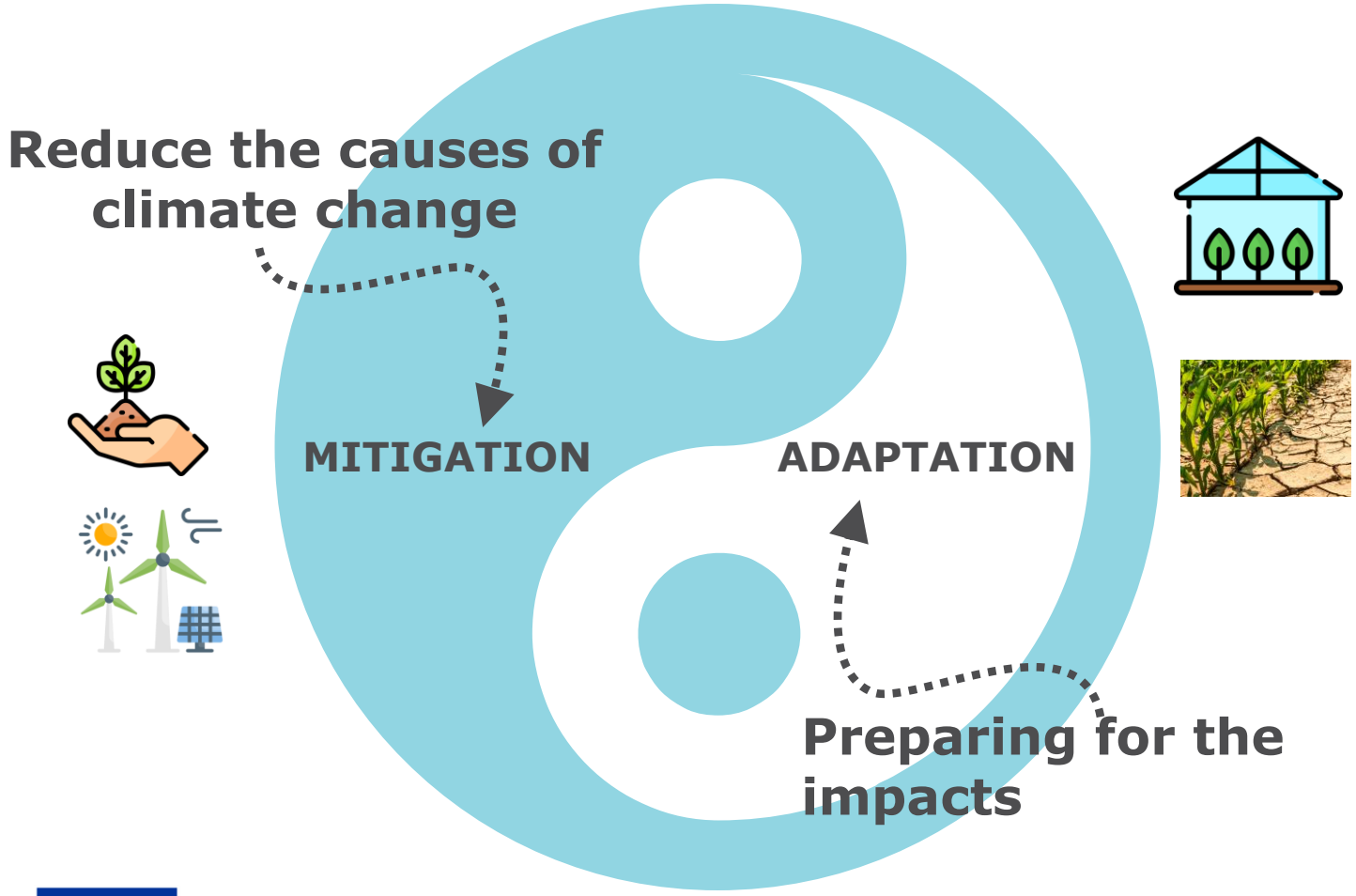
Climate action can be done through many interventions



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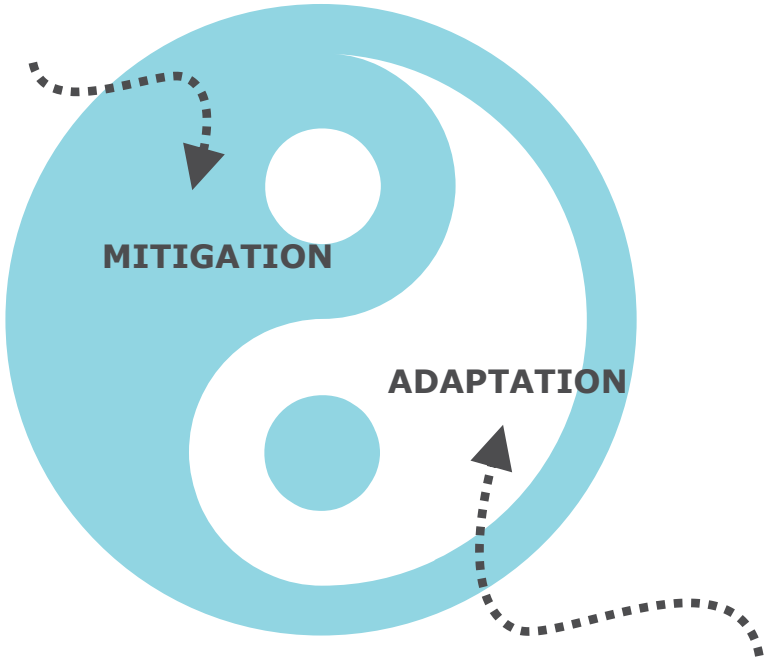
Poll: I have taken action for climate adaptation

Tell us more about the action you are taking to address climate impacts in the chat!

Climate Action need to be shared – and coordinated among many stakeholders

1. Community Stakeholders
- Community members and beneficiaries
- Community-based organizations
- Social advocates

2. Government Stakeholders
- Different local government offices
- National and regional policy makers
- National, regional, and local political leaders
- Finance / Treasury departments



3. Development and Donor Partners
- Donors and development partners
- Technical assistance providers

4. Research and Knowledge Institutions
- Research institutions and universities
- Scientific partners

5. Private Sector and Financial Stakeholders
- Private sector actors
- Private investors and financial institutions
- Contractors and technical service providers

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Poll: I needed support for the following stages of implementing my climate action

- Understanding the root problem
- Designing the climate action
- Resource allocation and raising funds
- Implementation
- Maintenance and sustainability
- Monitoring, evaluation and learning
- Scaling
- Other

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What are the qualities Resilience?

Reflective	Resourceful	Robust	Redundant	Flexible	Inclusive	Integrated
Ability to learn	…and act	…conceiving systems & assets that can withstand shocks and stresses, while using alternative strategies to facilitate rapid recovery…			… planned to take account of needs and promote coordinated actions.	

Source- Jo de Silva, Arup

Questions



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Liveable Urban Waterways in Cape Town

Andrew McDonald

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Liveable Urban Waterway Programme

SAFE4ALL Presentation

November 2025

Cape Town's Stormwater System

- 2 400 km^2 of municipal area
- 16 main drainage catchments
- 1 800 km of rivers and streams
- 560 km of canals and channels
- 890 ponds
- 10 stormwater dams
- 16 600 km of pipes and culverts
- 11 000 ha of wetlands

Providing a vital drainage function as well as services related to water quality, ecosystem health, climate adaptation, amenity, recreation and non-motorised transport

Ramsar Convention on Wetlands



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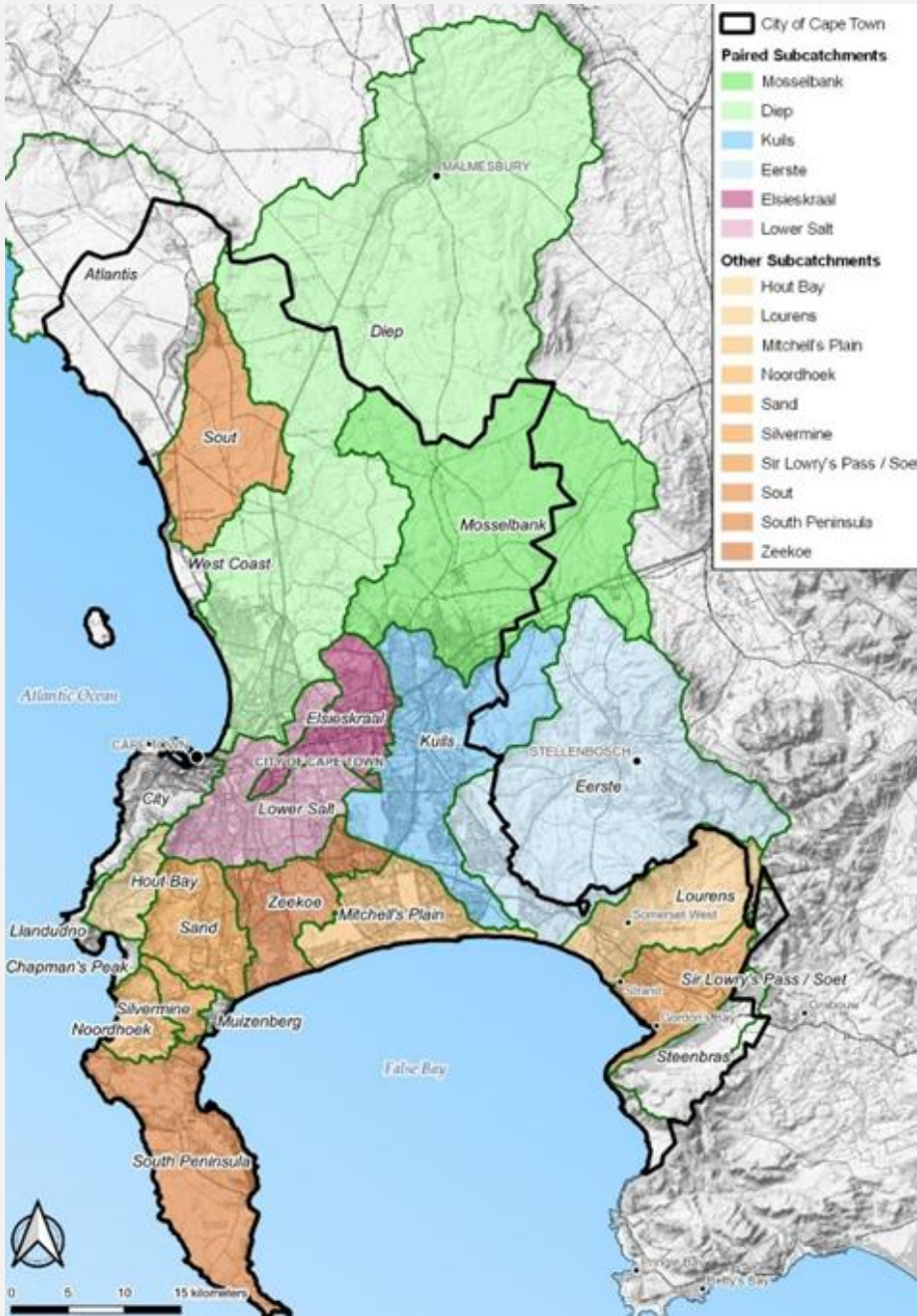

Challenges: Climate Change

Variable	Mean change signal in 2050	Direction
Annual maximum daily temp	1.8 degrees	Increase
Rainfall amount per annum	14.2%	Decrease
Extreme rainfall events per annum	1 – 2 events	Decrease
Extreme rainfall intensity	Not clear	Not clear

Climate Systems Analysis Group, 2023





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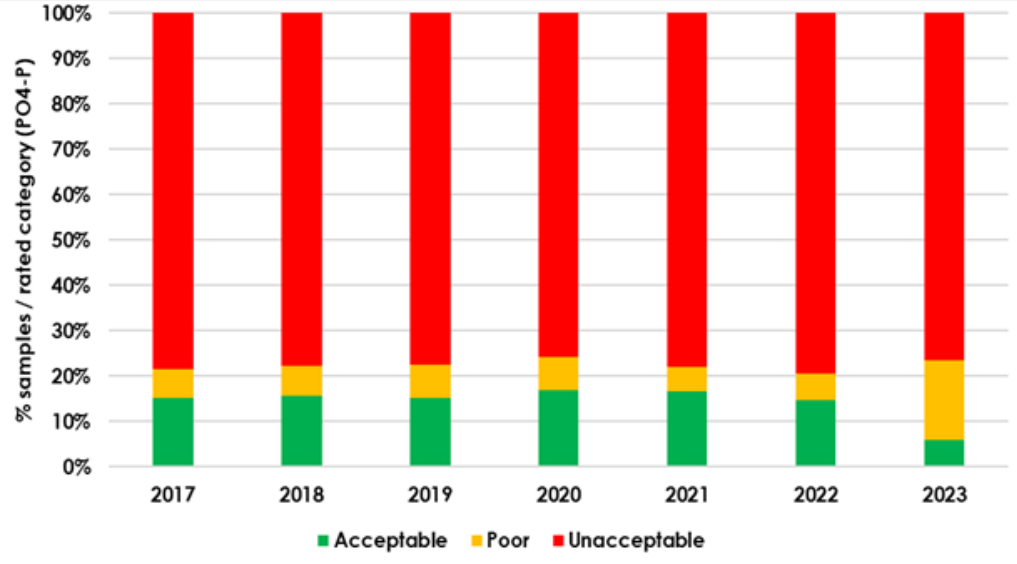
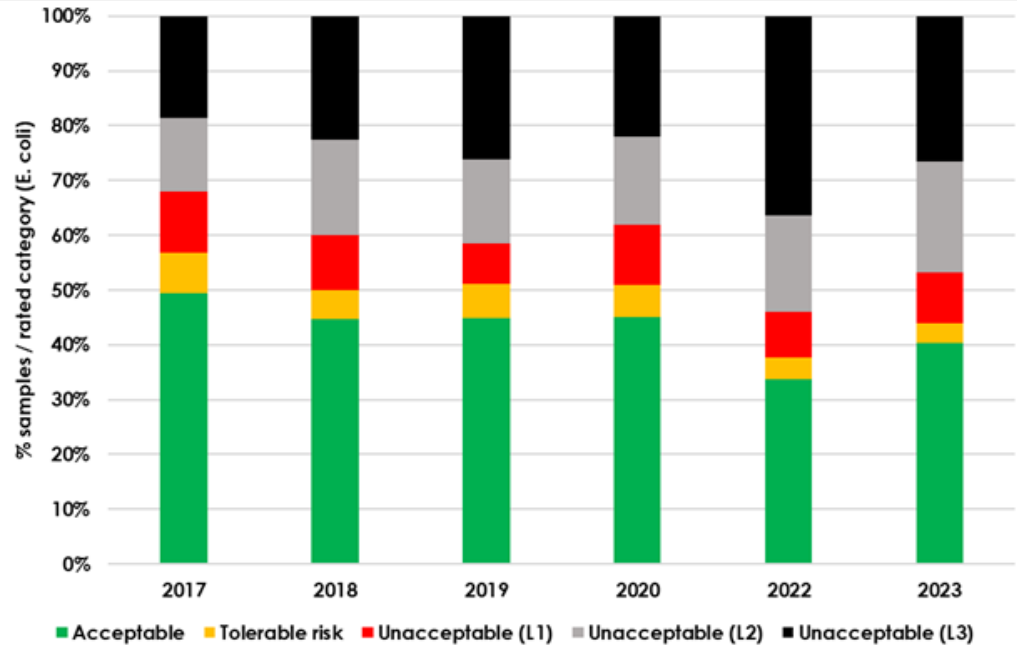
Challenges: Water Quality









Challenges: Ecosystem Loss

Many waterways are nothing more than drains.

Waterway	Ecostatus	Classification
Black	F	Critically modified
Elsieskraal	F	Critically modified
Kromboom	D	Largely modified
Vygekraal	F	Critically modified
Lower Liesbeek	D	Largely modified
Sand	F	Critically modified
Lower Kuils	E	Seriously modified
Big Lotus	F	Critically modified
Bokramspruit	C	Moderately modified
Lower Hout Bay	D	Largely modified





Poll

Generally, what is the state of the rivers and/or wetlands in the region, city or town you live in?

1. Good – rivers and/or wetlands are in a good state and are well looked after and protected
2. Poor – rivers and/or wetlands are in a poor state and are not well looked after and not protected
3. Unsure – I don't know of the state of the rivers and/or wetlands
4. There are no rivers and/or wetlands in the region, city or town I live in

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Introduction to the LUW Programme

"The LUW Programme is a strategic and transversal programme for transformative change, which systematically, proactively and collaboratively rehabilitates waterways across Cape Town using water-sensitive design, green infrastructure and nature-based approaches"



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Introduction to the LUW Programme

Definitions of a liveable waterway:

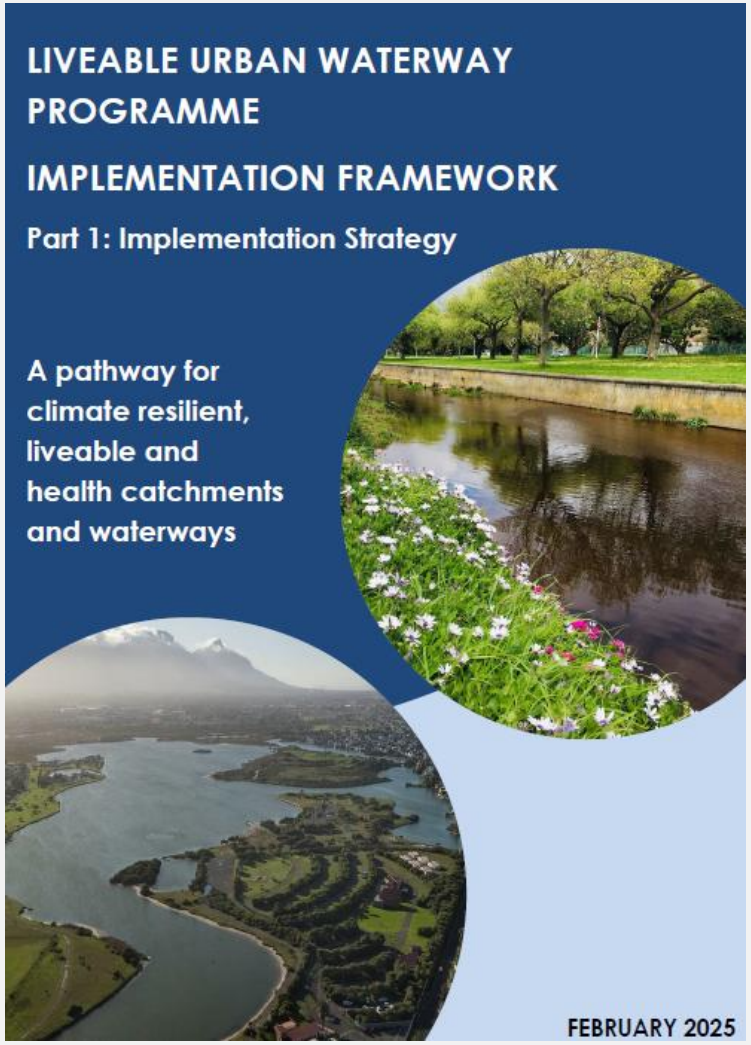
1. Has acceptable water quality
2. Makes space for the water
3. Has a functioning ecology
4. Connects the waterway to the aquifer and the floodplain
5. Connects communities; and used and enjoyed by communities
6. Provides a range of ecosystem services, economic and social benefits

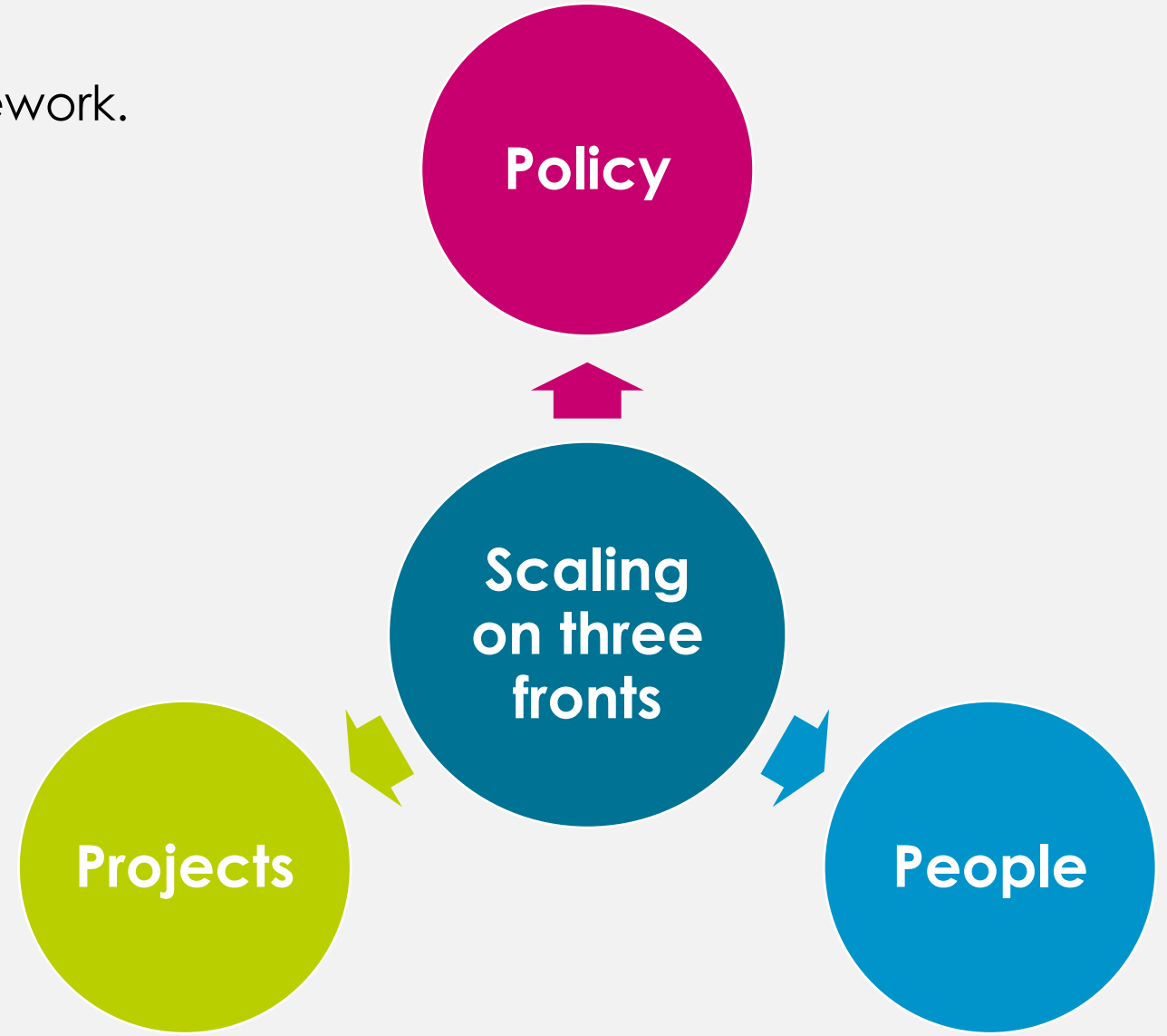
Principles to guide the programme and the projects:

1. Collaboration and partnering
2. A waterway as a connector and a catalyst
3. Design with nature
4. Design for many uses
5. Build in resilience
6. Design for attractive and usable public places
7. Post project care and maintenance
8. Catchment scale, systems thinking

Introduction to the LUW Programme

Developing a programme from nothing required a three front scaling strategy, supported by an Implementation Framework.





Implementation Framework Workstreams

GOVERNANCE AND ADVOCACY

- Programme management office
- Strategic engagements
- Advocacy
- Programme coordination and integration

STAKEHOLDER ENGAGEMENT AND PARTNERING

- Strategic engagements
- Programme communication
- Partnering opportunities

PROJECT PLANNING, IMPLEMENTATION AND FINANCING

- Project portfolio development
- Project coordination
- Financing

MONITORING AND EVALUATION

- M&E framework
- Programme evaluation
- Project evaluation
- Benefits tracking
- Reporting

LEARNING AND INNOVATION

- Partnering opportunities with Universities
- Knowledge product creation
- Capacity building
- Programme and project reflective learning
- Case studies

Scaling: Policy

VISION –

- A City of Hope – A Water Sensitive and Climate Resilient City

INTEGRATED DEVELOPMENT PLAN –

- Objectives 9, 10 and 11

STRATEGIES –

- Water Strategy, Resilience Strategy, Environmental Strategy, Climate Change Strategy and Action Plan, Local Biodiversity Strategy and Action Plan, Strategic Asset Management Plan

POLICIES –

- Floodplain Policy, Stormwater Bylaw

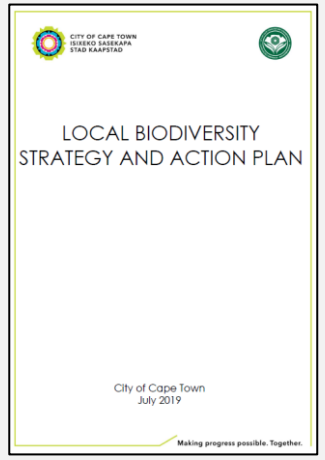
PLANS –

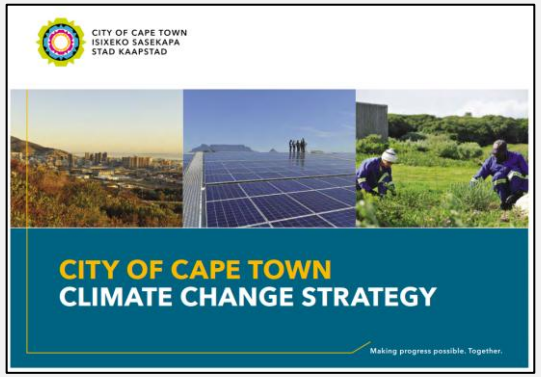
- Sector Plans, MSDF and District Plans, LSDFs, Infrastructure Report

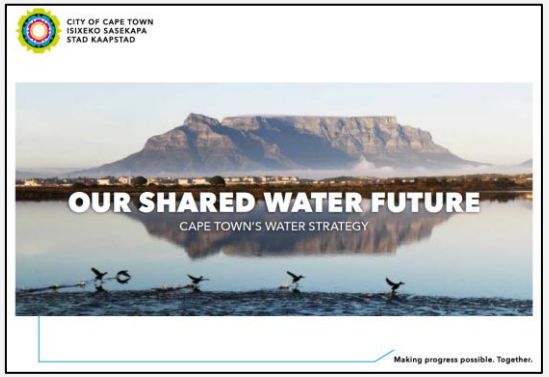




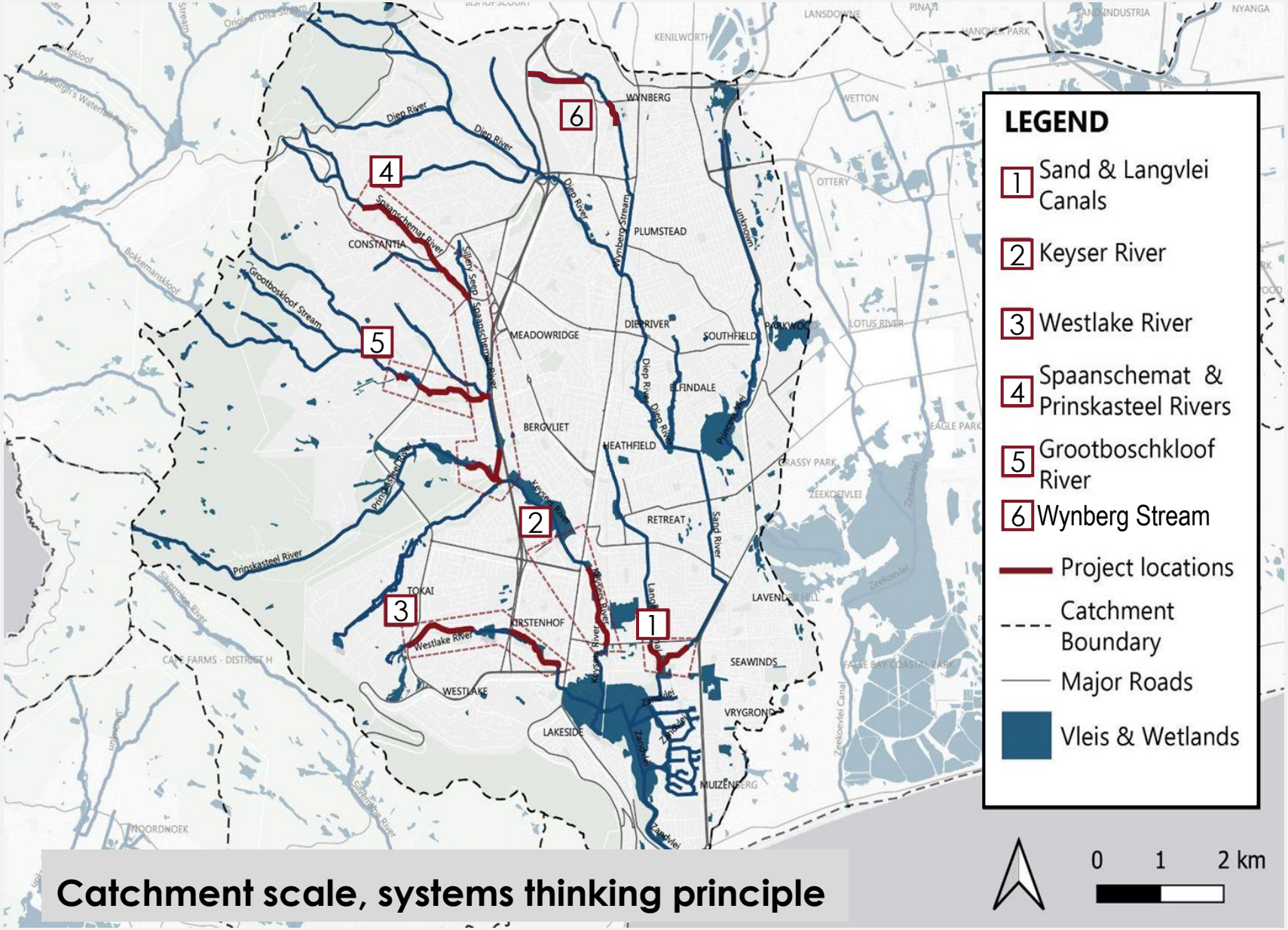








Scaling: Projects



Catchment scale, systems thinking principle

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Scaling: Projects

Projects underway	8
Year 1-3 approved capex	R99m
Year 4-5 capex	R91
Total capex required	R365m
Length of river to be rehabilitated	13.3 km
Area of new or rehabilitated wetland	8 ha
Stakeholder workshops completed	15
No. of stakeholders reached	800







Scan here to access the concept designs, navigate to public participation documents

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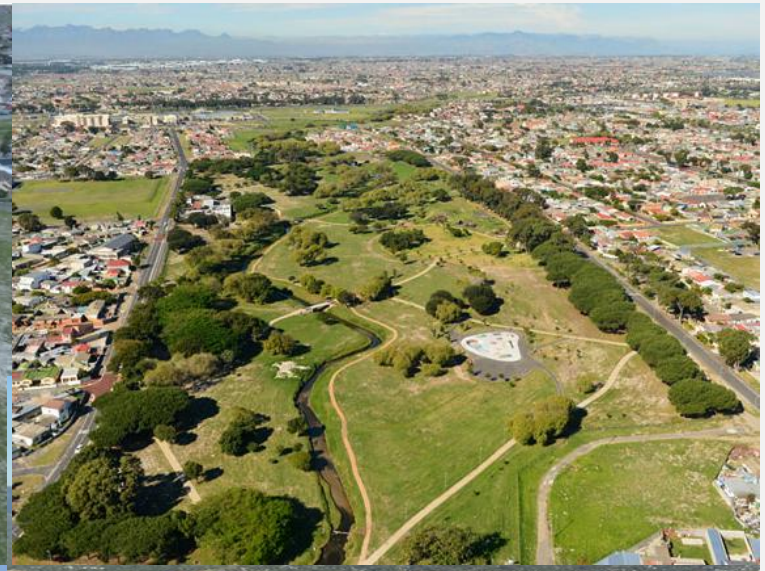
Scaling: Projects





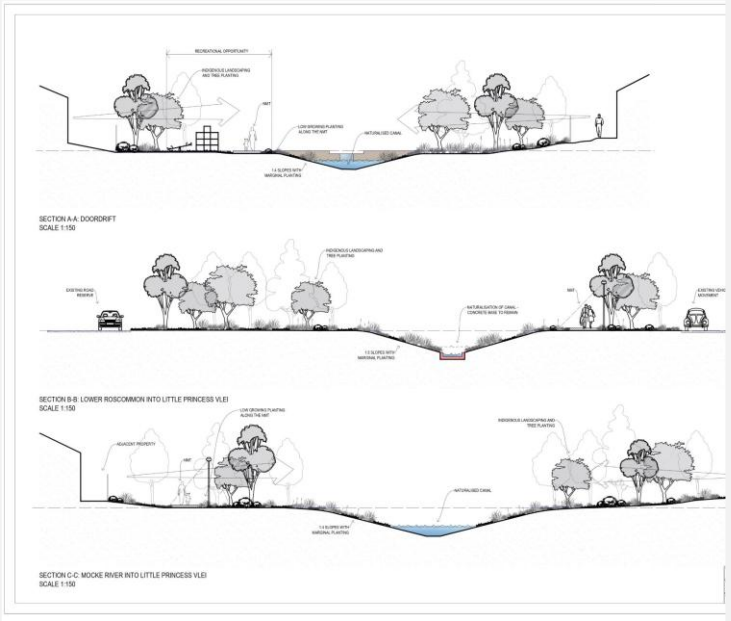


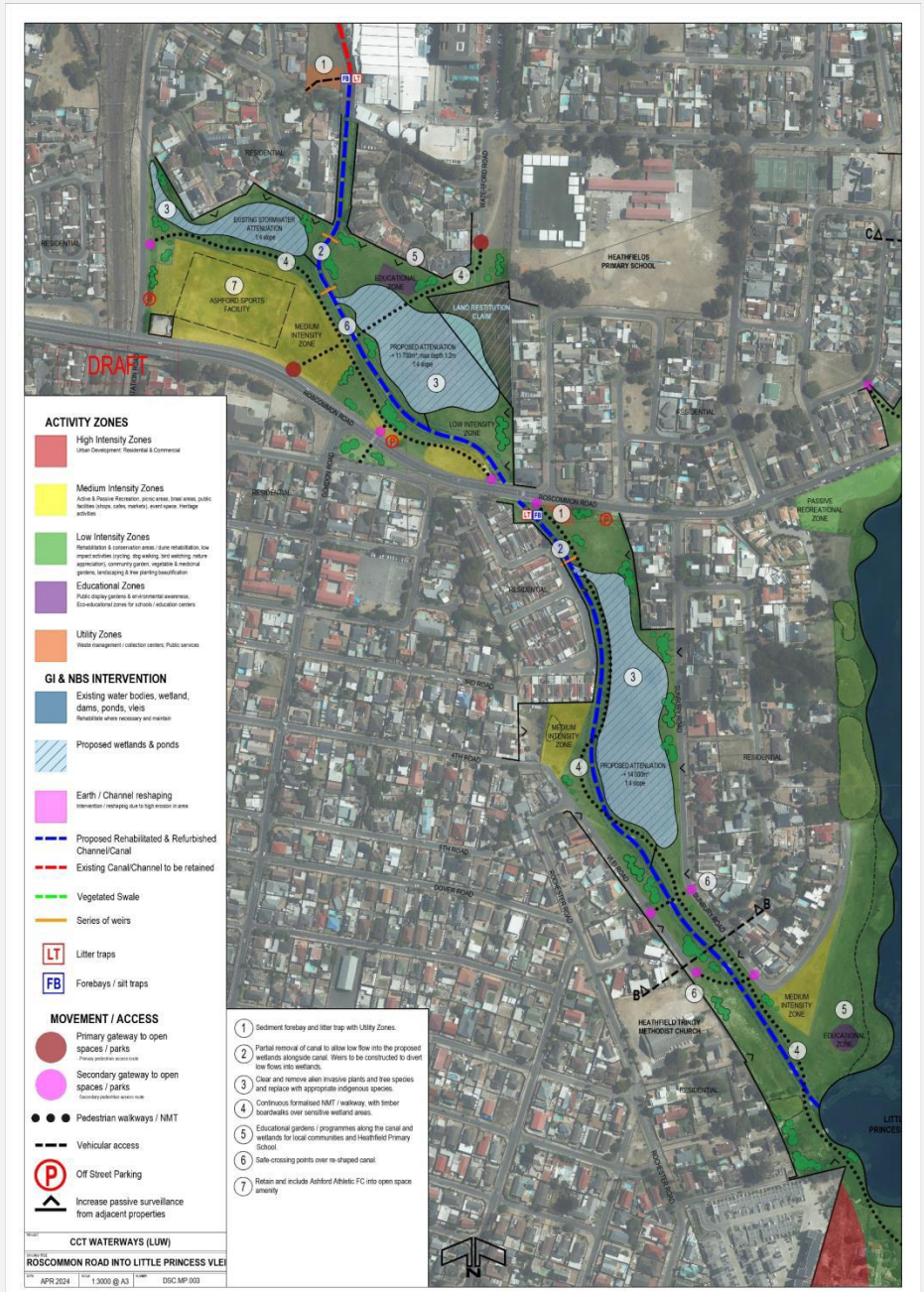

Scaling: Projects

Masterplan of waterway rehabilitation projects.

- 6 potential rehabilitation projects in the Zeekoe catchment – **R13m concept design, R200m capex.**
- 8 potential rehabilitation projects in the Diep/Sand catchment – **R9m concept design, R210m capex.**
- 6 stakeholder workshops to co-create the masterplans, establishment of the Zeekoe catchment management forum.







Designing with Nature

Remove 550m of concrete canal and replace with a naturalised river

Create 6000 m^2 of new treatment wetland and a further 2500m^2 of dune slack wetland habitat

Plant 100 000 new plants
(49 different indigenous species)

Daylight 150m of stormwater pipe and create new swales



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Designing with Nature



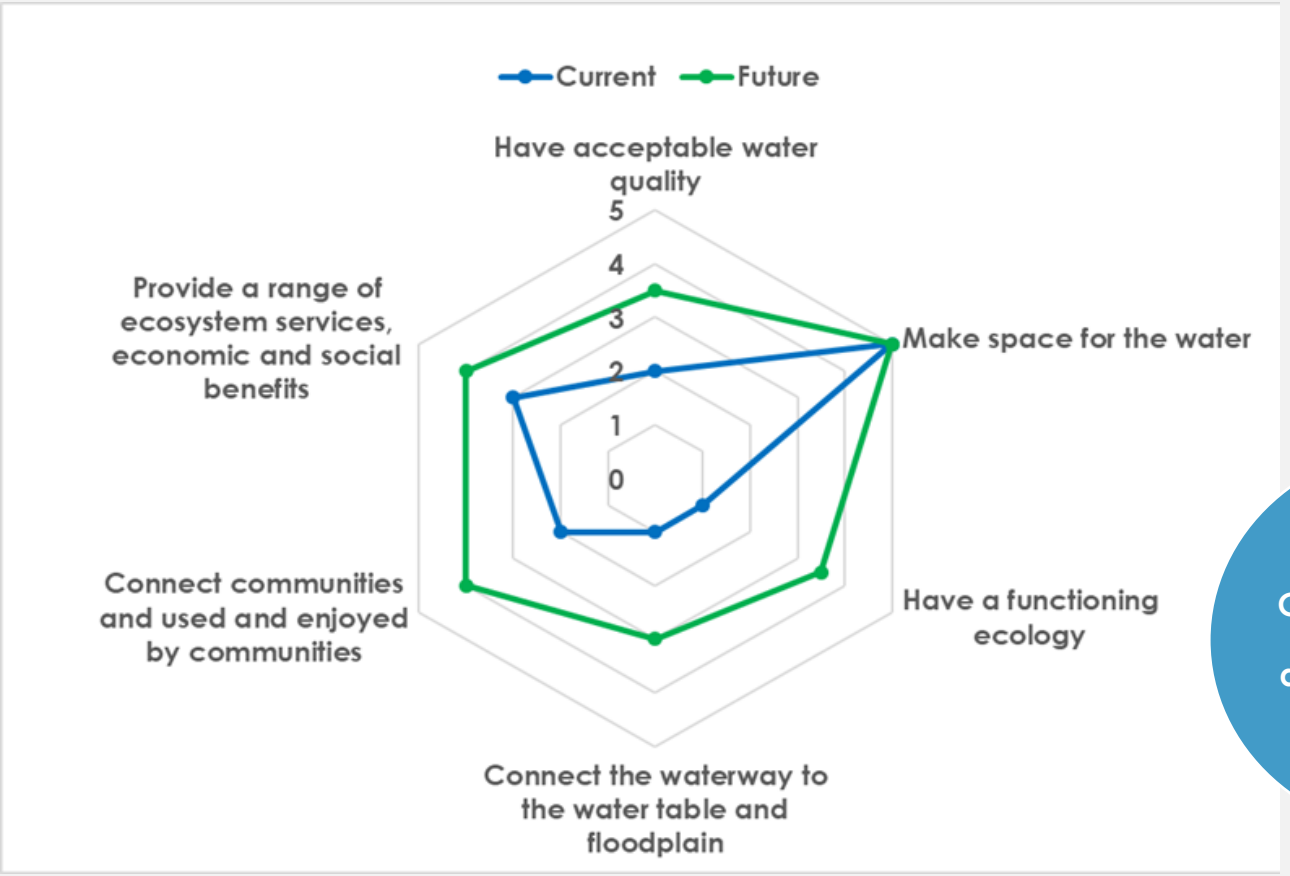
Designing with Nature

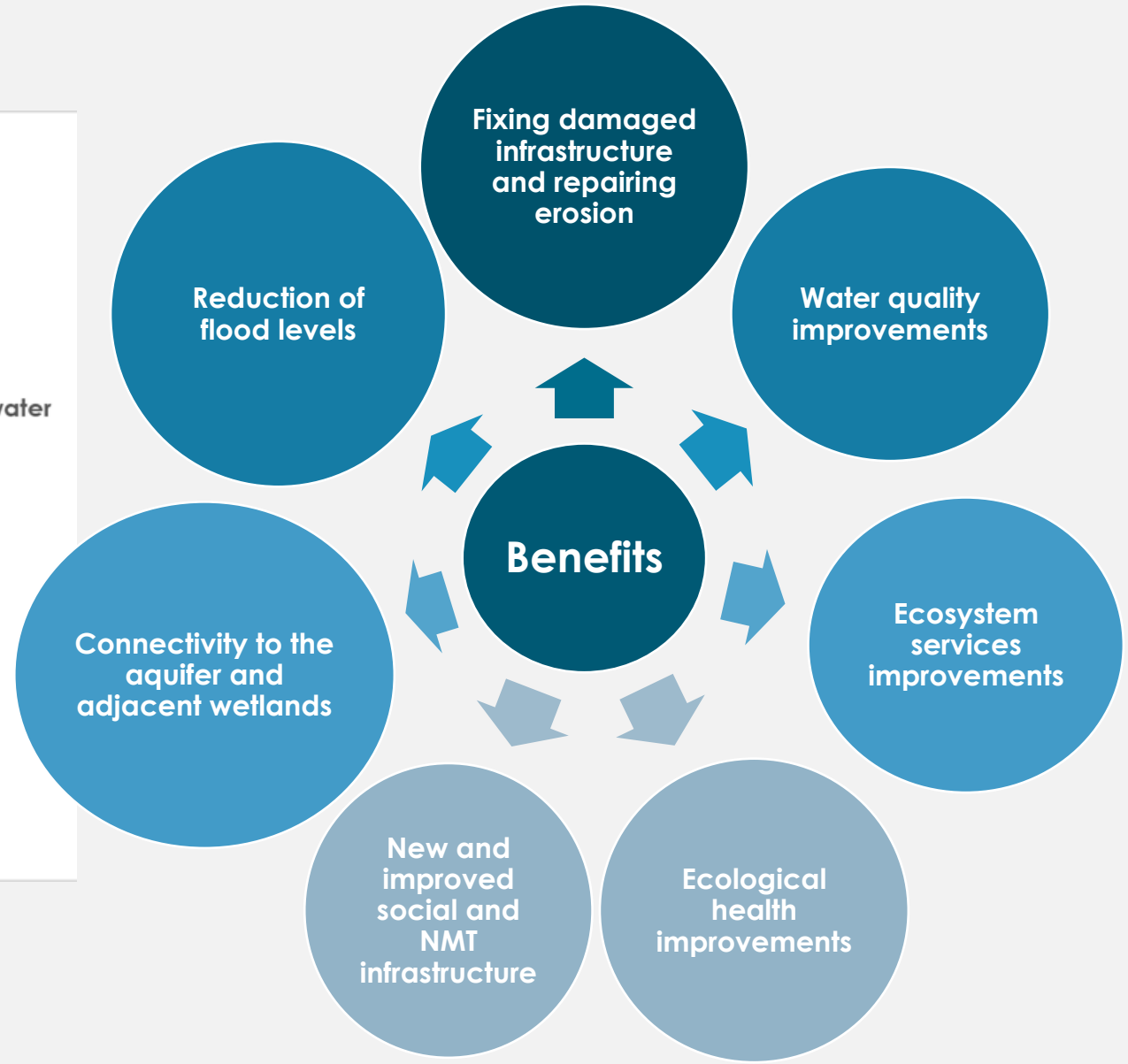


Designing with Nature



Projects: Benefits





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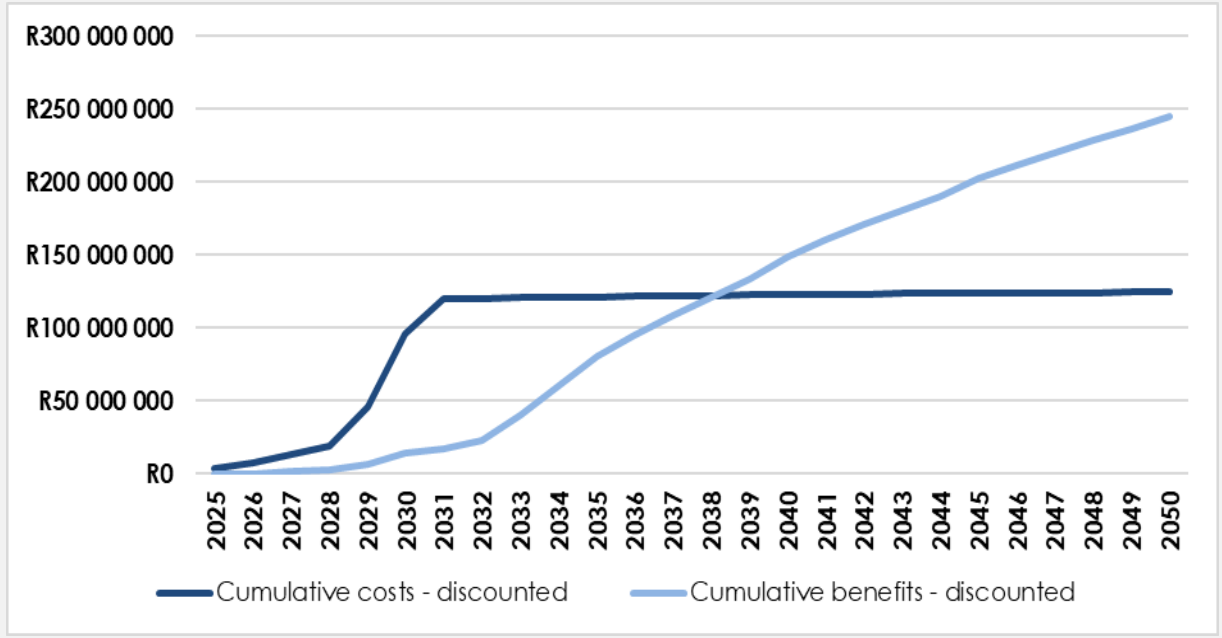
Projects: Benefits

- Benefits within the range of **R183 million to R350 million** over 25 years.
- Considered conservative as it does not account for the potential cost avoidance of a severe 1:100 year return period or greater flood.
- Over **350 construction jobs** and **2 800 green jobs** could be created.
- Approx. **12 000 households** are within 200m of the project sites.
- **R1 800 000 per annum** of sediment/water hyacinth management opex could be saved at Little Princessvlei.
- Overall a **net opex saving of about R1 400 000 per annum** is expected across the catchment.
- Payback within 13 years.

IISD
International Institute for Sustainable Development

For every R1 invested between R1.67 and R2.48 in benefit can be realised



Poll

Have you undertaken a cost benefit analysis of your climate adaptation project and/or programme?

1. No – I don't know where to start
2. No – I am considering it
3. Yes – I am working on it now
4. Yes – I have used a new methodology but not yet rolled it out widely
5. Yes – I have a proven methodology that is used widely for many projects/programmes

Scaling: People

- Partnering and collaboration is the first guiding principle and from the very beginning involving stakeholders was important.
- New Catchment Management Forums established, a critically important platform for collaboration. These need to continue and be resourced.
- Exploring partnering opportunities with WWF, Nature Connect, WESSA, Young Urbanists, UCT, DEA&DP, SANBI, Ramsar Committee, TMWP, various Catchment Management Forums and Friends Groups.

Scan here to access the report



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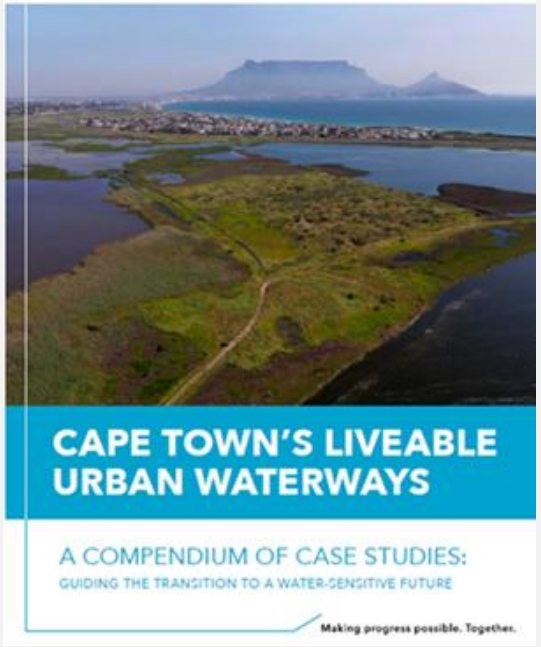
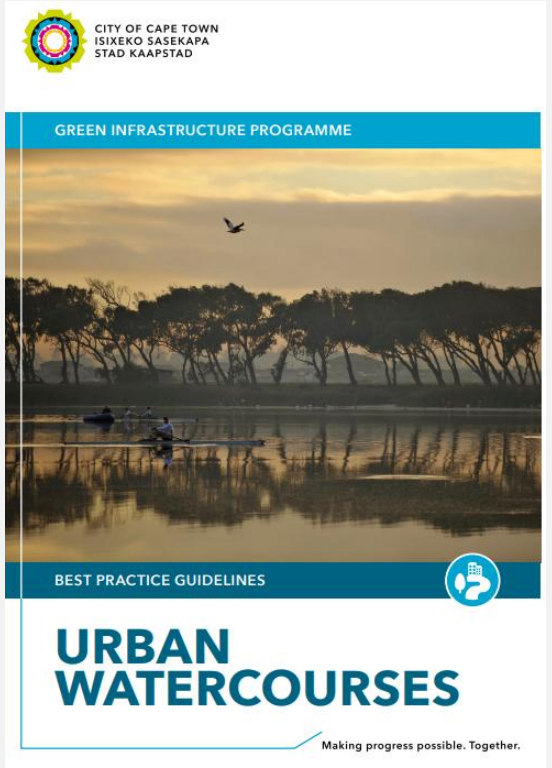
Scaling: People

- Developing case studies, tools and guidelines to support officials in LUW implementation.
- Project reflective learning and cross pollination between project teams.
- Collaborating with universities:
  - Future Water Institute – PAWS, NEU Water
  - African Centre for Cities – Black River Syndicate
  - African Climate Development Initiative
  - Science PO Paris
- Various training and awareness completed:
  - NbS online training over 8 weeks – 100 officials
  - NbS workshops – 40 officials
  - Hosted a local peer to peer City workshop – 20 officials
  - Visit to Durban for international peer to peer City workshop – 4 officials
  - Access to various webinars and knowledge products



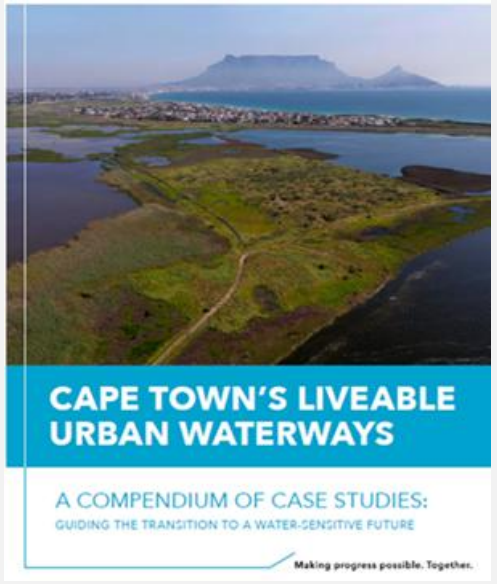


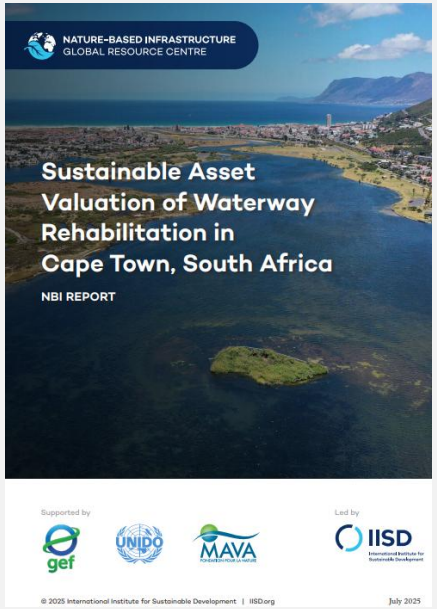


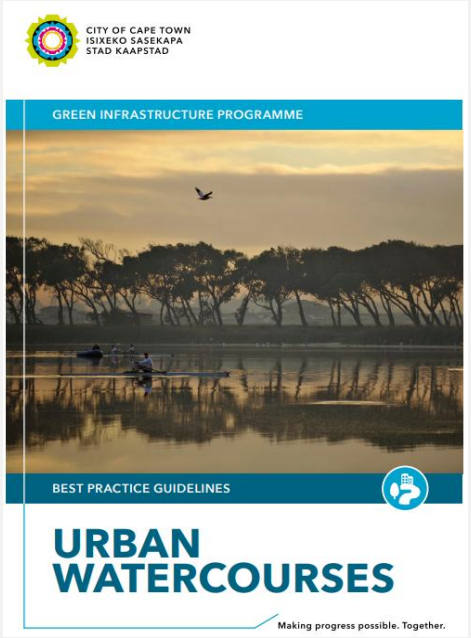
Scaling: People



Available Reports









Poll

What are the three main elements of the LUW Programme scaling strategy?

1. People, Projects, Programme
2. Process, Policy, Place
3. Policy, People, Projects
4. Projects, Price, Product

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THANK YOU | DANKIE | ENKOSI

Contact:
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Questions



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AFRICA

Partnering for Resilience: Expanding Africa's Weather Station Network

Dr. Frank Annor

The SAFE4ALL project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101137814



Partnering for Resilience: Expanding Africa's Weather Station Network

SAFE4ALL ONBOARDING LEARNING PROGRAM 2025

Frank Annor
annorfrank@tahmo.org

12 November 2025

TAHMO Core Team & Goals

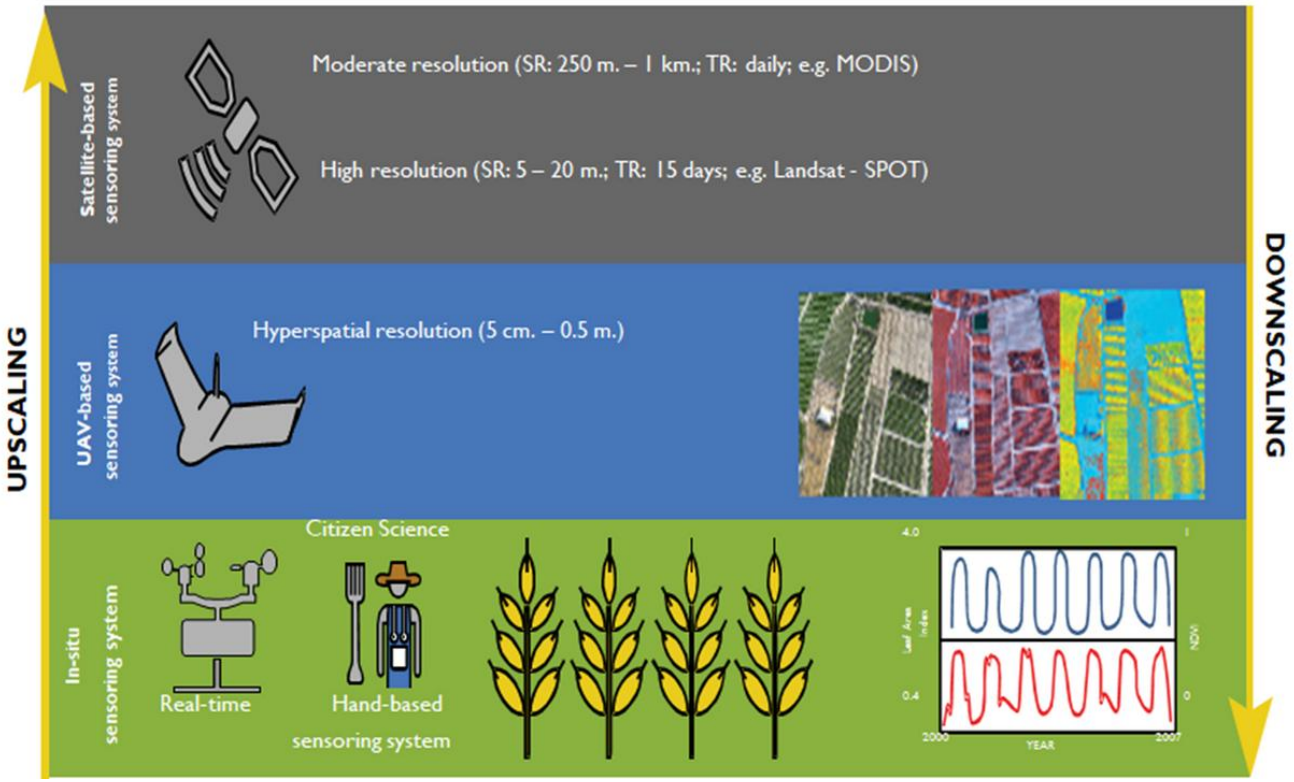


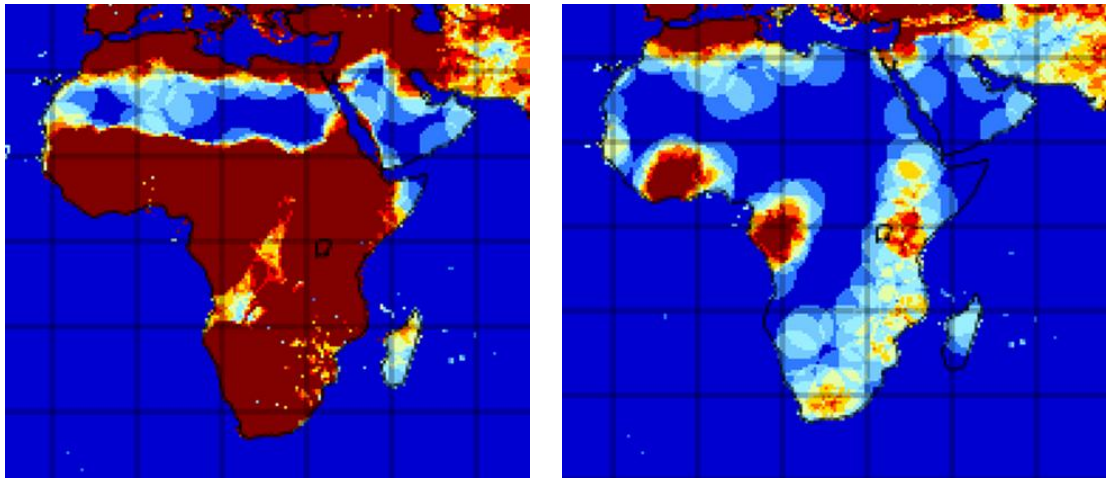
- **1 weather station every 30km!**
- Provide educational materials (School2School)
- **Hydrometeorological** data for Governments and Academia

Operations in 23 Countries ~800+ stations



Climate Services - Our Motivation





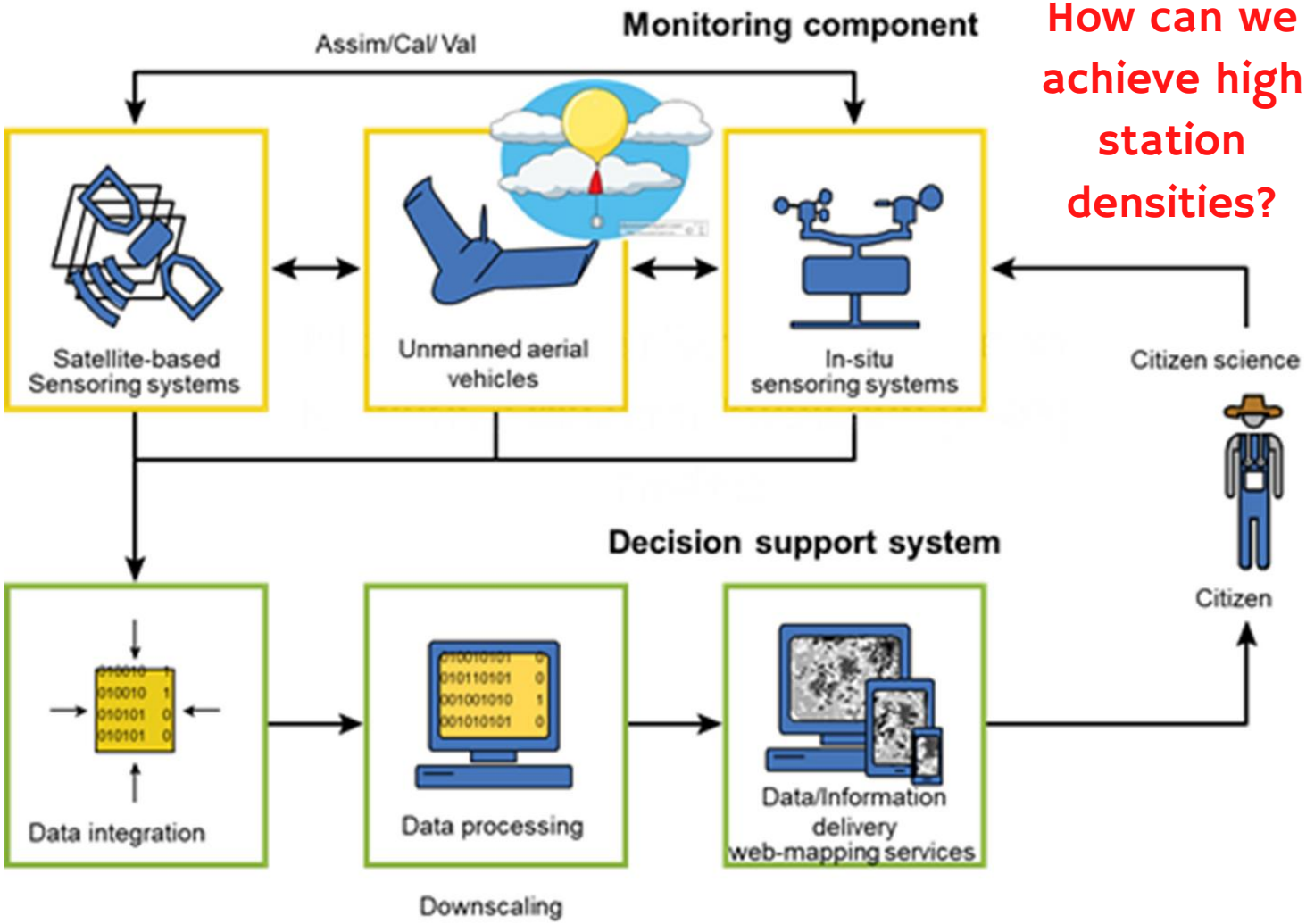
1955 2015

.0 1.6 3.2 4.8 6.4 8.

Stations reporting per 1,000,000 km^2

Univ. East Anglia

Climate Services - Data Integration



How can we achieve high station densities?



Four elements of Effective Early Warning Systems*



*Adapted from UN International Strategy for Disaster Reduction

TWIGA

TAHMO - GMET

WHO?
Key Partnerships

- TAHMO
- Farmerline
- WRC
- GMET
- HSD

Key Activities

- Provisions of weather stations & installation
- Training of Gmet & NRC staff on matinenance of the stations
- Develop Platforms for GMET & NRC, Climate info

Key Resources

- Funds for 20 weather stations + maintenance fee
- Human resources
- Equipment

WHAT?
Value Propositions

- 20 WS completed
- Reliable climate date
- Offer training opportunities in NL and USA
- Improved value chain
- Develop a user-friendly platform for GMET
- Improved yield
- Generate other sources of income to farmers

Customer Relationships

- Co-creation
- Personal

Channels

- Web based platform with weather data

WHO?
Customer Segments

- People in the white volta basin
- Government
- MMDA's
- Intermediaries
- Smalll scale farmers

HOW?
Cost Structure (Financial)

- Installation costs 10.000/station, 200.000 USD total
- 2 workshops @ 10.000 US.
- ??? Training @ 100.000 US.
- KBIO? US $300.000?

HOW?
Revenue Streams (Financial)

- What are we asking?
- WBOc
- IGF??
- TAHMO (30% cofunding)

Social Costs

- Competition with other providers

Ecological Costs

Social Revenues

- Education employement

Ecological Revenues

- Climate adaptation

© Business Model Canvas from Alexander Osterwalder (www.businessmodelgeneration.com) adapted by Esther Blom & Boukje Vastbinder

Connecting to Services - Bundling



Input Services From Partners

- Insurance API
- Market Access API
- Agricultural Advisory API
- Weather API
- Input Supply API
- Others API

APP (Smartphones, Feature Phones)
FarmerSupport

Data Integration | Blockchain

Database

Data Analysis
& localized actionable information gathering

Web
FarmerSupport

Services

- Weather Services Data Mart1
- Agricultural Advisory Services Data Mart2
- Input Supply Services Data Mart3
- Insurance Services Data Mart4
- Market Access Services Data Mart5

- USSD
- EMAIL
- SMS
- IVRS
- APIs (Blockchain)
- Reports & Analytics

End Users

- Farmers
- Fishermen
- Livestock Producers
- Startups, Companies
- Organizations
- Governments

GHANA AGRICULTURAL INSURANCE PROGRAMME

TWIGA

Digital Platform for Insurance





DIGITAL PLATFORM

Farmerline

FARMERS PHONE

TWIGA

• AI Data e.g rainfall, soil moisture content, yield etc.

• Farm size, farm GPS coordinates, type of index insurance



TAHMO



GHANA AGRICULTURAL INSURANCE PROGRAMME

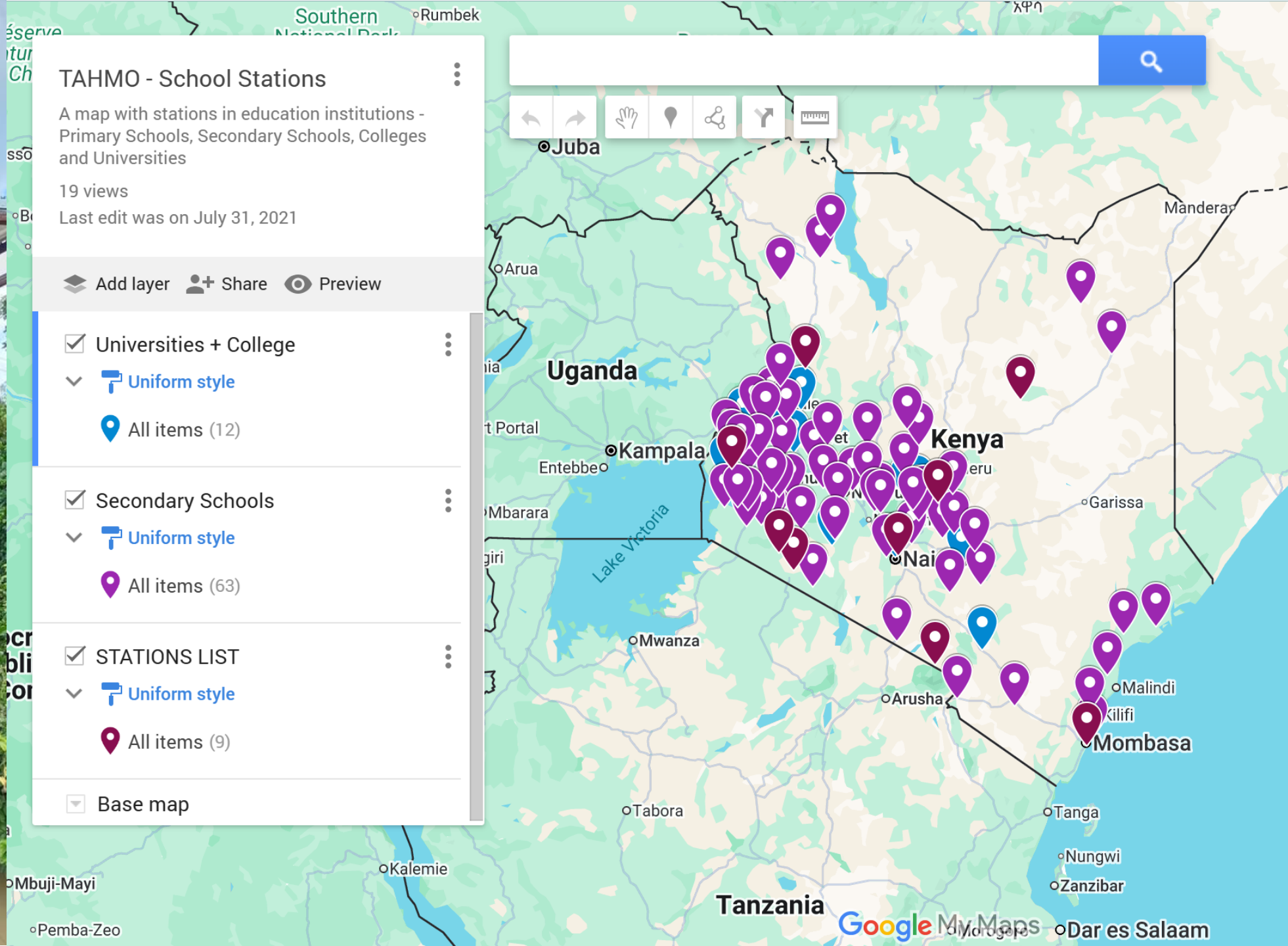
TWIGA

Reflections!

https://ahaslides.com/RT1S4






TAHMO - School Stations
A map with stations in education institutions - Primary Schools, Secondary Schools, Colleges and Universities
19 views
Last edit was on July 31, 2021
Add layer
Share
Preview
Universities + College
Uniform style
All items (12)
Secondary Schools
Uniform style
All items (63)
STATIONS LIST
Uniform style
All items (9)
Base map
Southern
Rumbek
Juba
Arua
Uganda
Kampala
Entebbe
Mbarara
Lake Victoria
Kenya
Mandera
Garissa
Mwanza
Arusha
Malindi
Mombasa
Tabora
Tanga
Nungwi
Zanzibar
Kalemie
Mbuji-Mayi
Pemba-Zeo
Tanzania
Dar es Salaam
Google My Maps

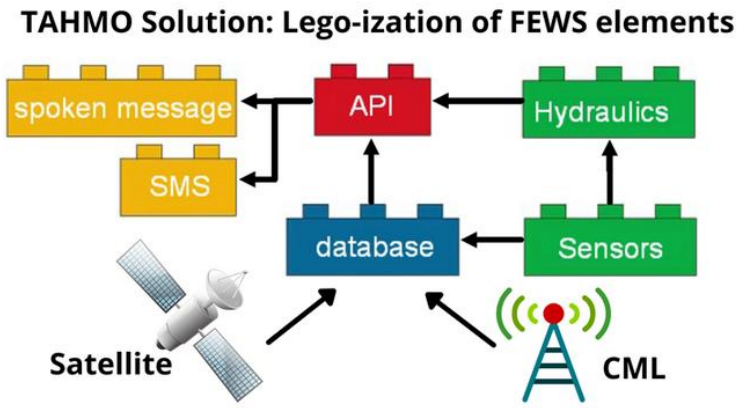

TECNO
CAMON 18

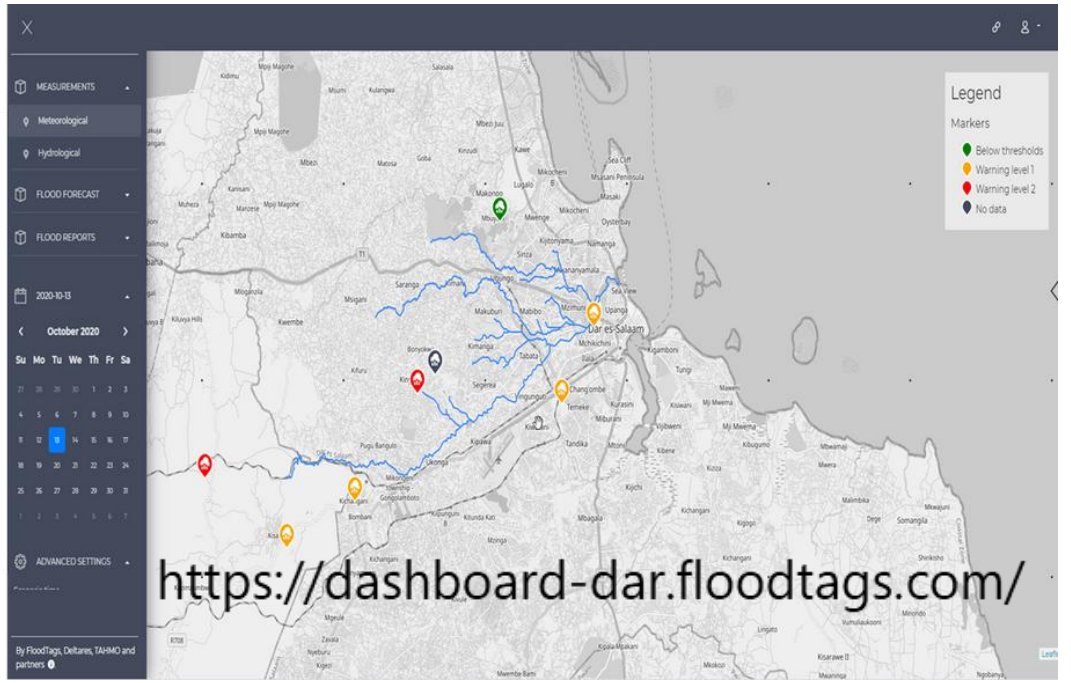
Flood Early Warning Systems

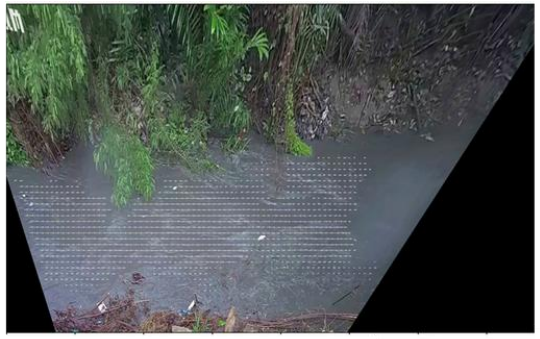
Working with local people,
local Knowledge
& local devices

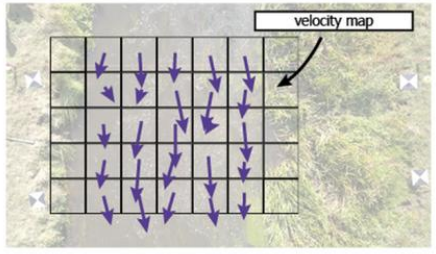


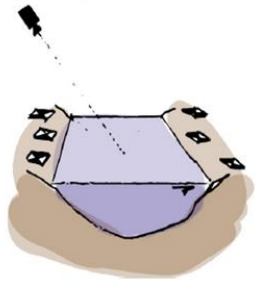




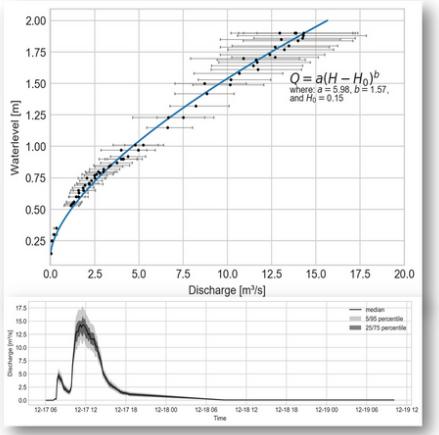








http://openrivercam.readthedocs.io



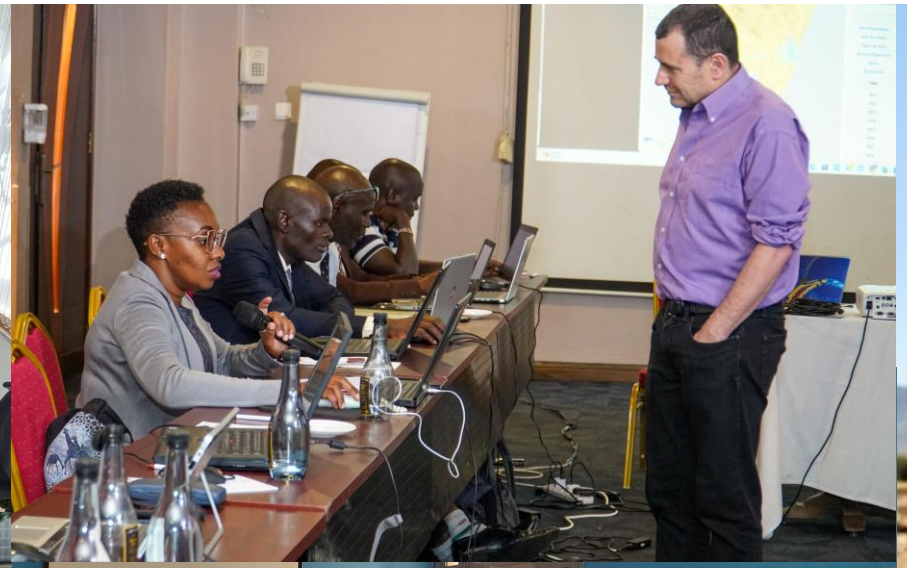
TAHMO

WMO HydroHub

RAINBOW SENSING

SOUTH-SOUTH KNOWLEDGE & LEARNING EXCHANGE WORKSHOP ON CLIMATE ADAPTATION IN AFRICA









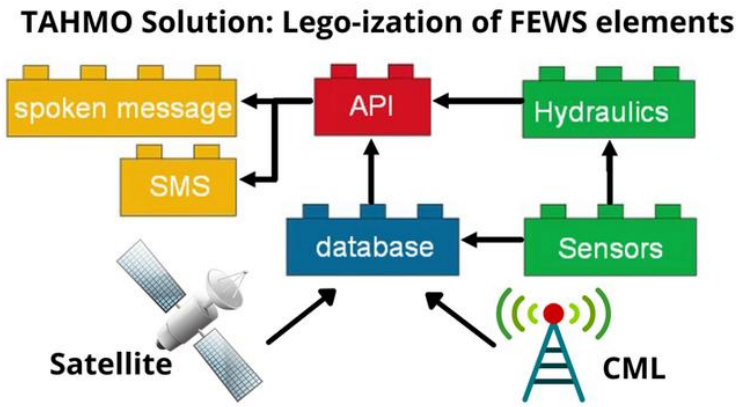


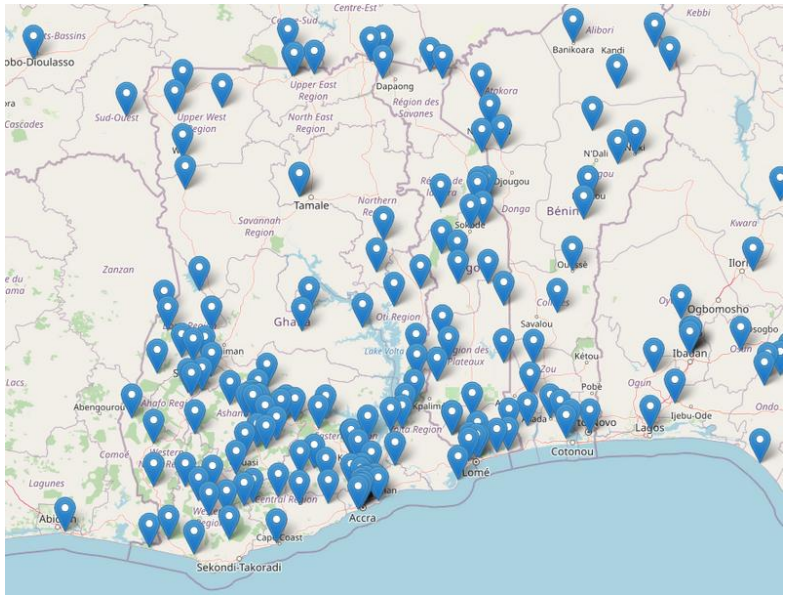
TAHMO HKV LIJN IN WATER Deltares IRI

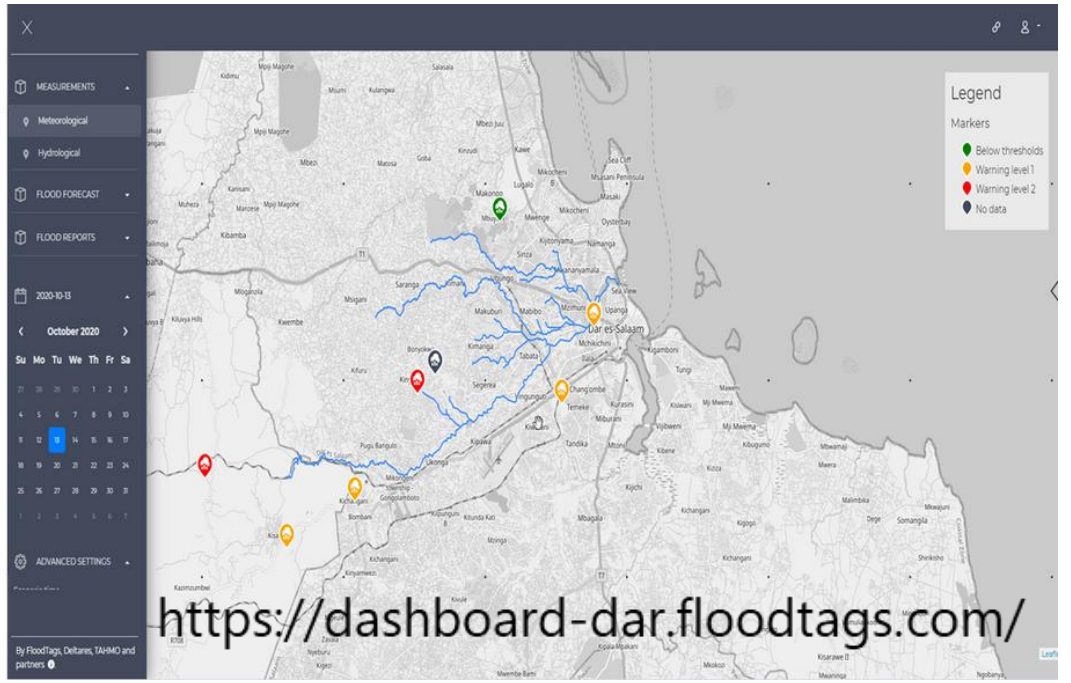
Conclusion











Cost efficient solution for high density climate services from which NHMS profit from extra data and local relevance

Transparency, Trust and Accountability

Reflections!

https://ahaslides.com/RT1S4



Questions



SAFE4ALL AFRICA

ONBOARDING

LEARNING PROGRAM



TIME

9 AM Greenwich Mean Time

11 AM Central Africa Time

12 PM East Africa Time

SCHEDULE

April - November, 2025

Empowering local practitioners in Ghana, Zimbabwe, and Kenya with knowledge, tools, and resources to strengthen climate resilience.

Climate Adaptation Services

RESILIENT CITIES NETWORK

Funded by the European Union

Project 101137814

Thank you for having been part of our first ever onboarding learning program!

We will give a certificate of attendance for those who joined us for at least 4 of the 7 sessions!

Recordings will be posted on: https://kenya.safe4allafrica.eu/



Our lessons will continue next year!

We are curating more in-depth trainings around specific topics you have told us you want to learn more on!

We hope to see you then!

SAFE4ALL
AFRICA

See you next year!