



# SUSTAINABLE GROUNDWATER DEVELOPMENT & MANAGEMENT

Oudi Kgomongwe

Ministry of Water and Sanitation – South Africa

# Content

- **Water Envoy Oudi**
- **What is Groundwater?**
- **Groundwater South Africa**
- **Groundwater & my community**
- **Challenges**
- **Solution**
- **Way Forward?**

# Water Envoy



Oudi Kgomongwe



South Africa



Hydrogeologist

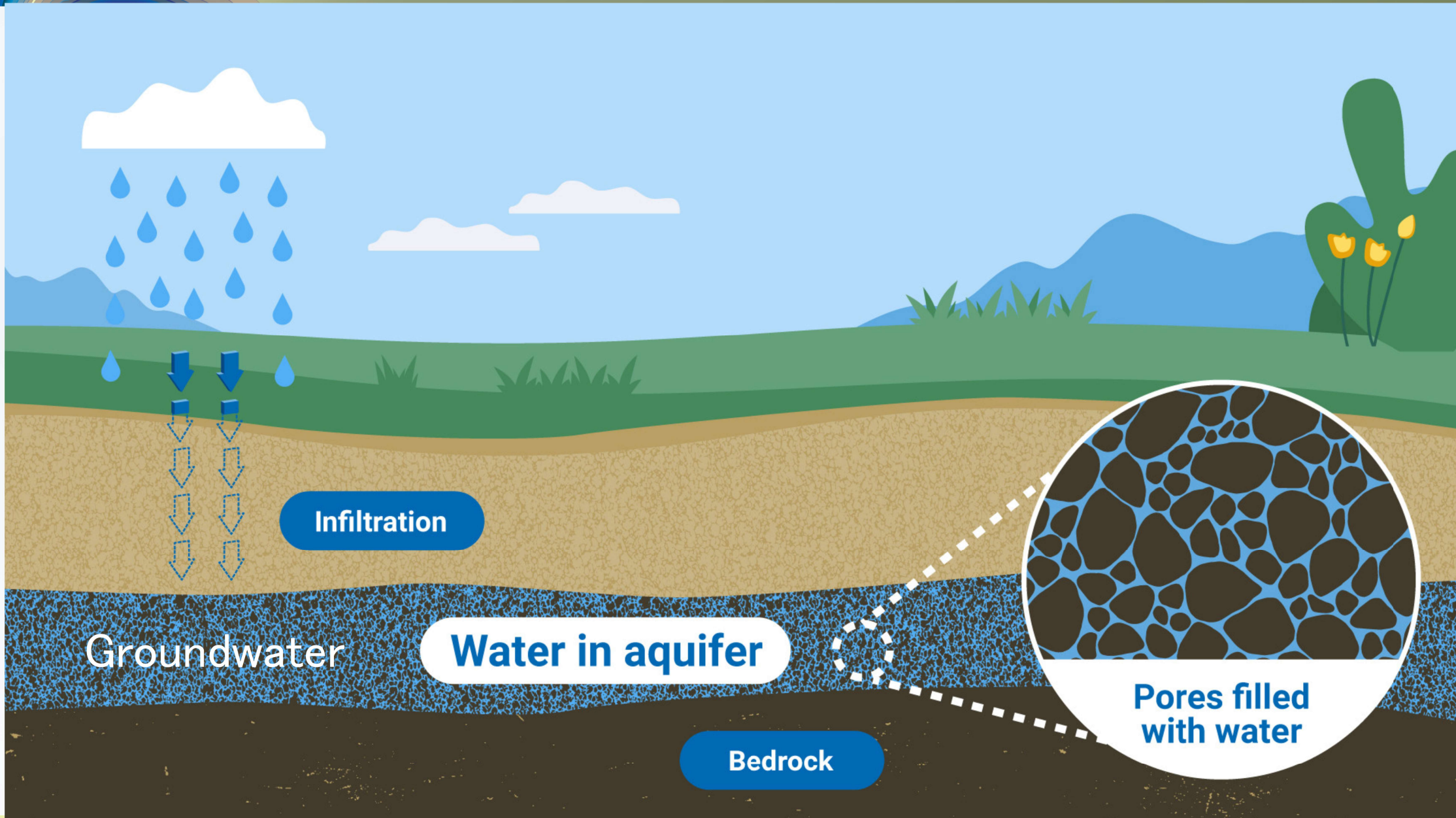


19 years



Groundwater

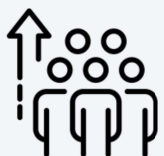
# What is Groundwater ?





**Semi Arid:** Mean annual temperature 18.23 degrees Celsius

Mean annual precipitation 463.42 mm



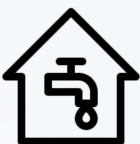
**Population:** 60 million



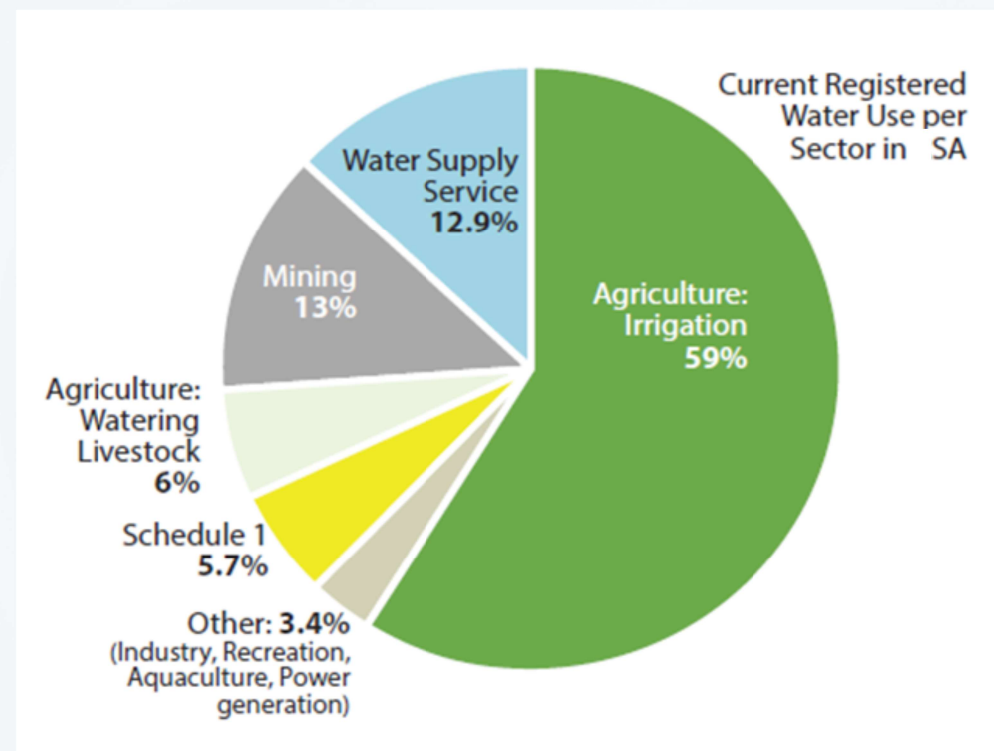
**Groundwater** constitutes 13% of Water Supply



**22% of towns** use groundwater as sole source;  
Another **34%** in combination with surface water



**Potential available groundwater 50 billion m<sup>3</sup>/a**  
6% of the available groundwater used



## Groundwater Contribution to Averting Day Zero – Cape Town (2015 -2018)

- One in 400-year drought
- 4.6 million residents
- Development of local groundwater supplies – private homes, hotels, schools, businesses





## My hometown: Mokopane

- Located along Platinum belt
- Hosts largest open pit platinum mine in the world
- One of the 300 towns relying on groundwater
- Economic Activities: - Mining  
- Agriculture





## Challenges to sustainable Groundwater development:

- Social, economic and environmental values not fully recognized.
- Large number of stakeholders involved in groundwater development
- Unscientific approaches – focus on drilling
- Connection between groundwater and sanitation not fully recognized



## Solution:

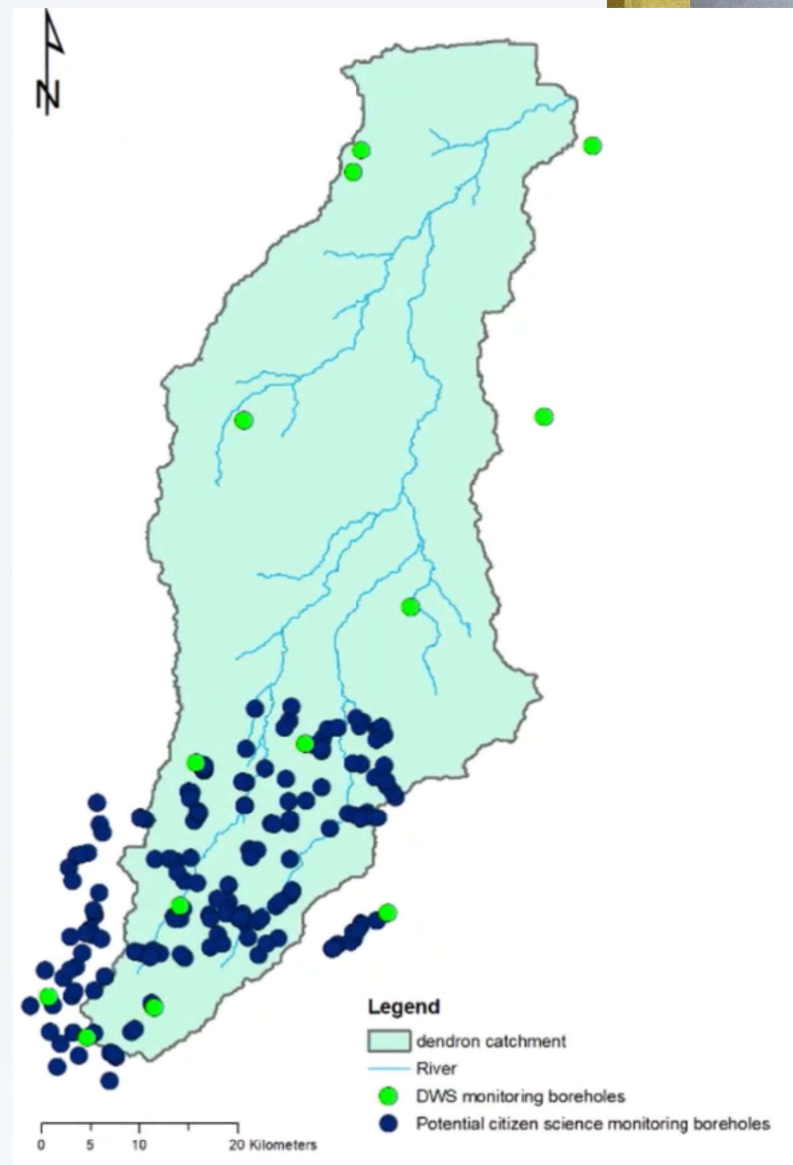


- Raise awareness
- Education, data collection & skills transfer



## Solutions:

- Focus on scientific understanding groundwater resource; Without understanding, people are often unwilling to act
- Dissemination of tools build local support for management.
- Stakeholder driven local level management



## TOOLKIT for WATER SERVICES



NORAD-Assisted Programme for the Sustainable Development of Groundwater Resources under the Community Water and Sanitation Programme in South Africa

Toolkit for Water Services  
© DWAF, March 2004

**“When the well is dry we know  
the worth of water”  
- Benjamin Franklin**





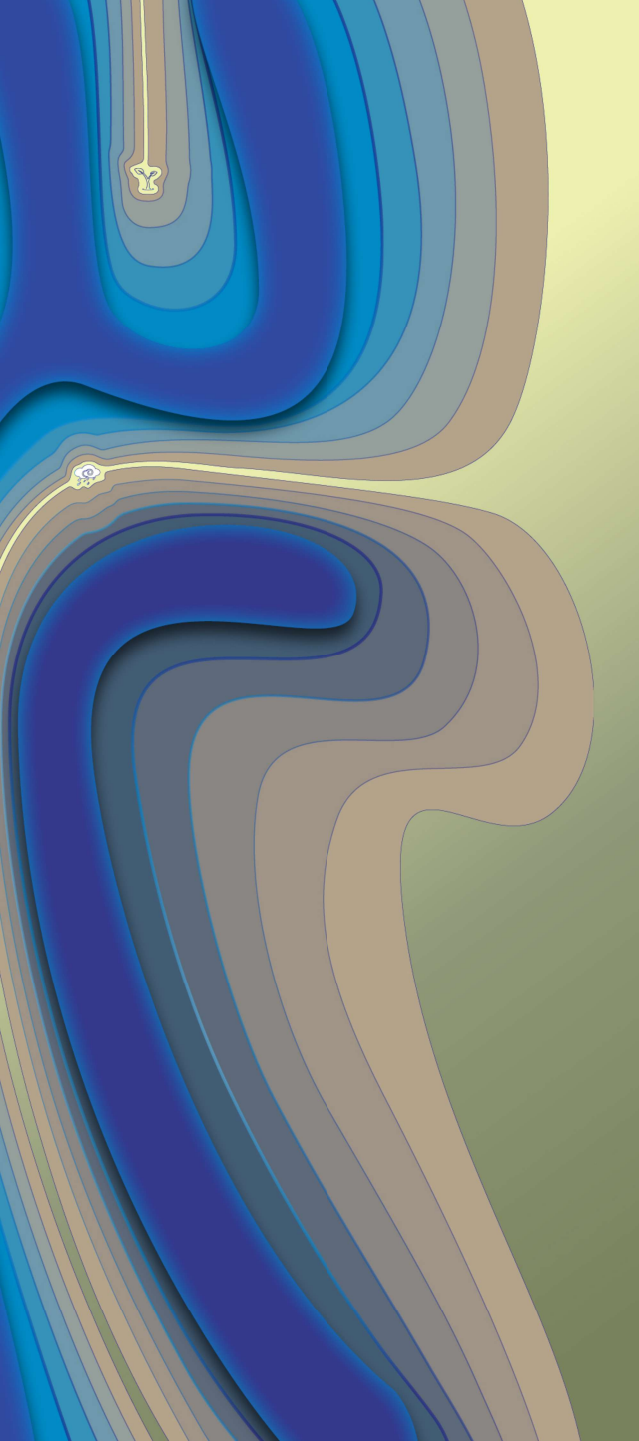
**How to make groundwater more visible in my community so its valued?**



**What Digital tools can be adopted / adapted to scale the pilot community led groundwater management model in SA?**



**How can dewatered groundwater in mining be used to augment water supply in groundwater dependent towns?**



Thank you 谢谢