

Just add water! Planning for rural livelihoods & economic activities

A case study

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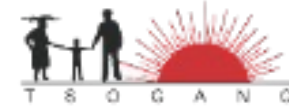
Biennial Conference and Exhibition
12 - 14 JUNE 2024, DURBAN, KWAZULU-NATAL



Context

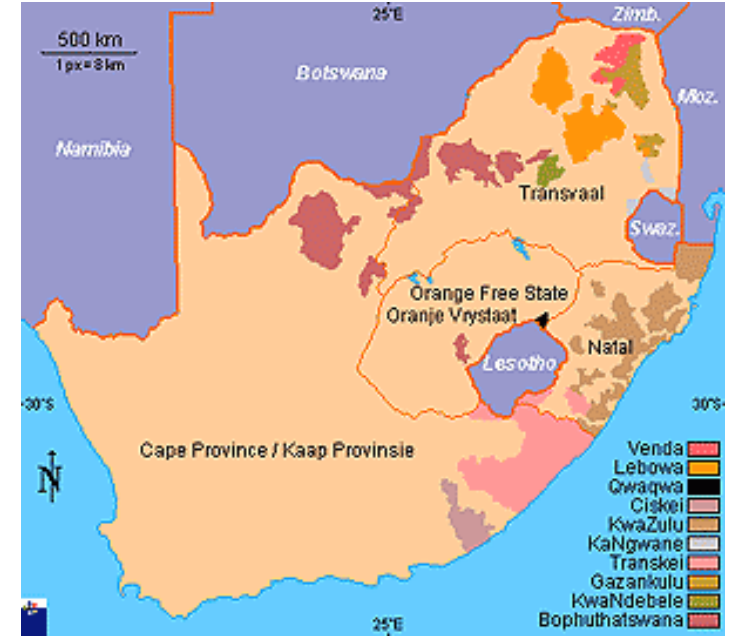


- **Giyan Local Scale Climate Resilience Programme (GLSCR):** Managed by the Water Research Commission (WRC) and funded by the Flanders government, focusing on rural water supply programmes.



Context: Rural water supply

- The provision of water in rural areas of South Africa remains an ongoing challenge, even with an enabling policy and legal environment.
- Rural communities frequently face water scarcity due to infrastructural inefficiencies, governance issues, cost, load shedding, resource availability and the impacts of climate change.
- The traditional approach to water provision, which often relies on expanding bulk infrastructure networks, is not always feasible in the short/medium run and poses significant implementation challenges (Kruger et al., 2021).

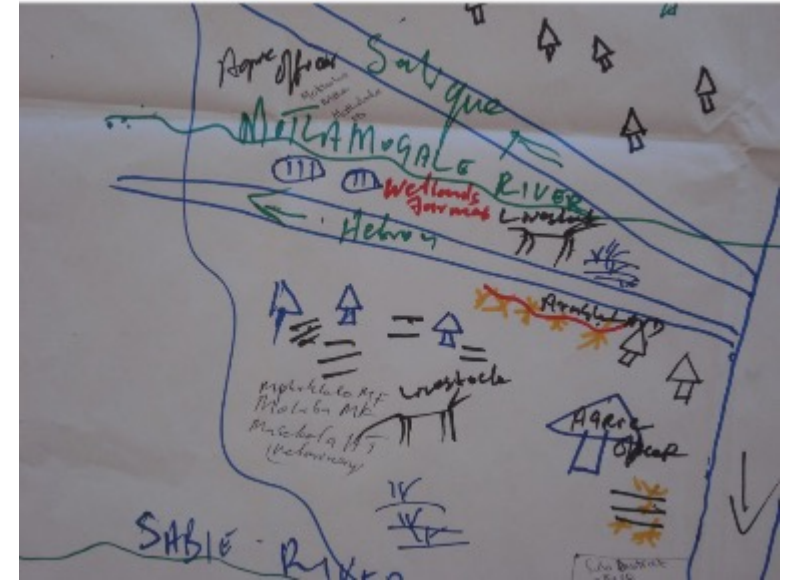
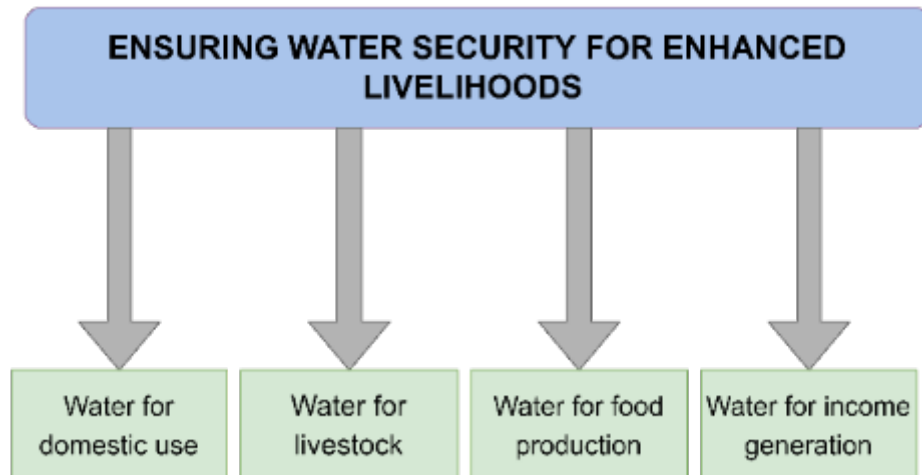


Importance of Addressing Water Challenges in Rural South Africa:

- Water is essential for both domestic use and economic activities, especially in rural areas where livelihoods depend heavily on agriculture and small-scale farming.
- Ensuring reliable access to water is critical for improving the quality of life, supporting sustainable livelihoods, and fostering economic development in rural communities.



Multiple use systems -MUS



Possible Small Scale Productive Water Uses in SA

Crops (cultivated on Private or Communal Land)

Vegetable Gardens
Fruit Trees
Wetland Crops

Stock

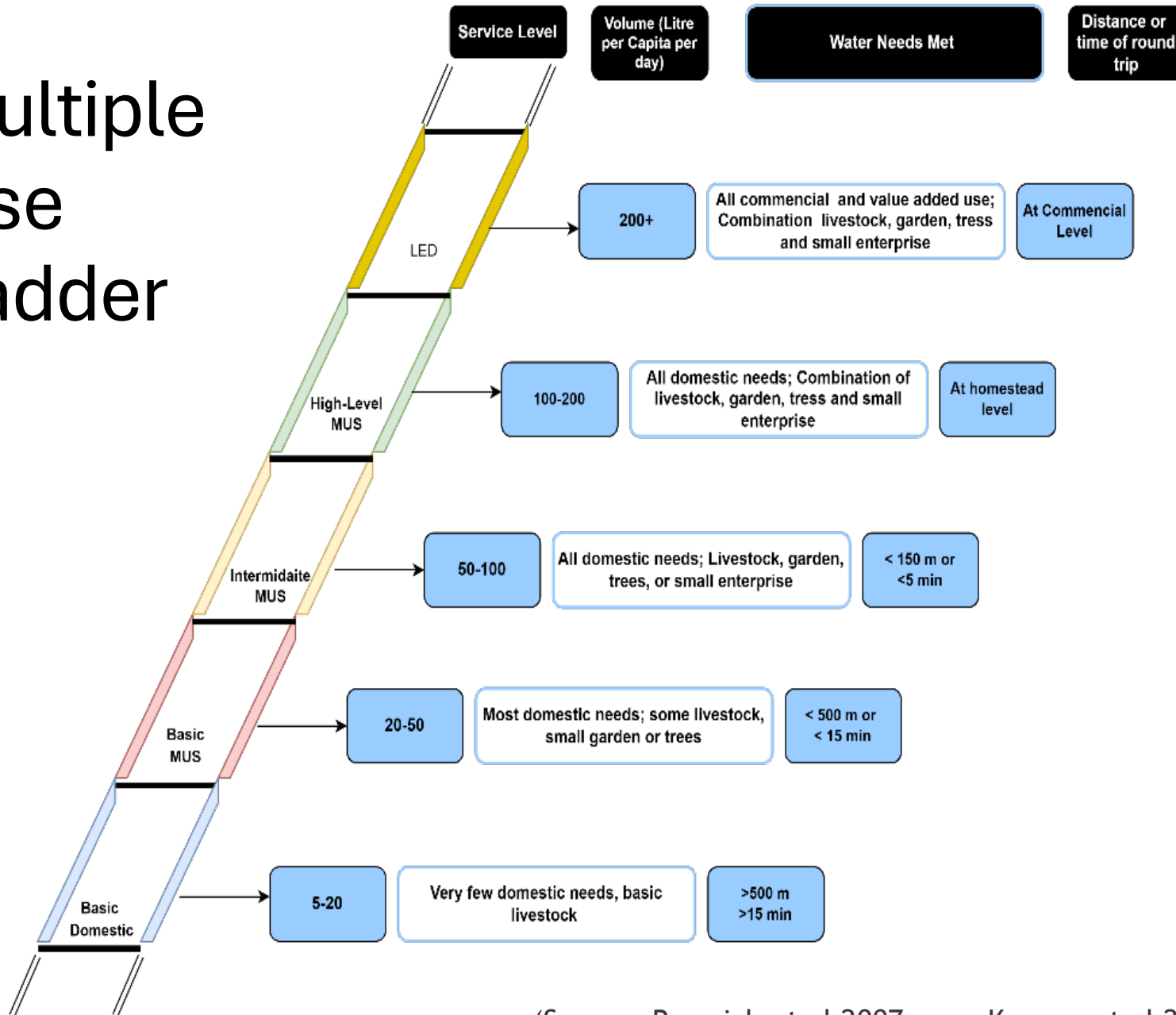
Cattle
Goats
Pigs
Sheep
Chickens
Donkeys/Horses

Other

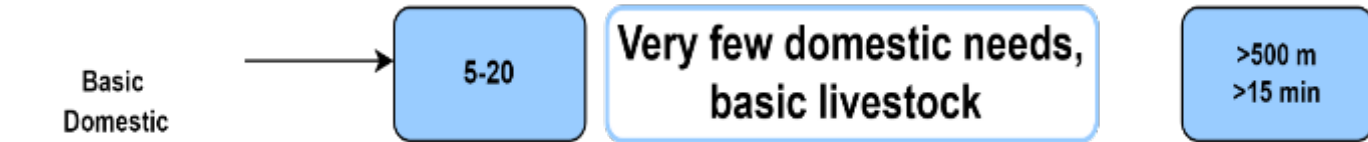
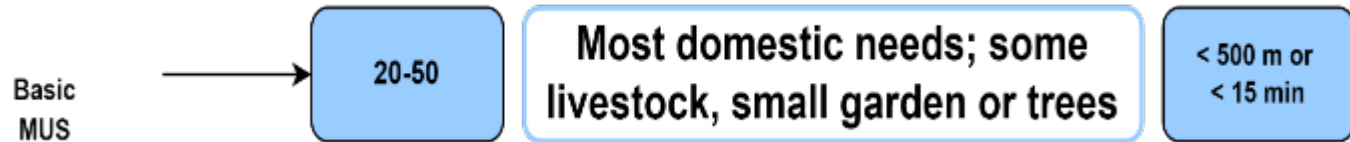
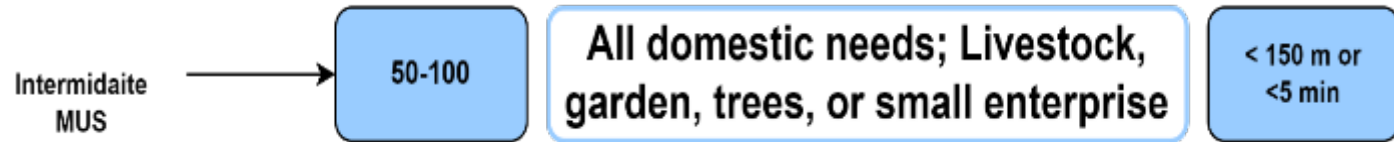
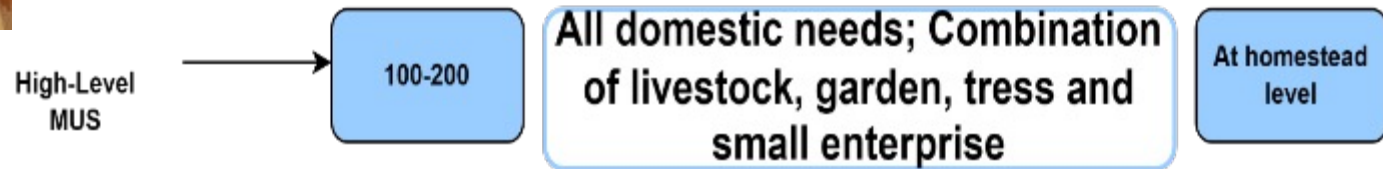
Brick Making
Ice Making
Traditional Beer Brewing
Hair Salons
Car Wash

van Koppen, B., Moriarty, P., & Boelee, E. (2006). "Multiple Use Water Services to Advance the Millennium Development Goals." Research Report 98, International Water Management Institute (IWMI)

Multiple Use Ladder



(Source: Renwick, et al 2007 ; van Koppen et al 2009)



Mayephu village: case study



Water profiles

Generally there are 4 household profiles in the village

1. Those with only 25L container storage options (roughly 700L/week) – equivalent to 18,9L/pppd
2. Those with 25L and 210L drum storage options (roughly 1400L/week) – equivalent to 37,7L/pppd
3. Those with containers, drums and JoJo tanks (roughly 3000L/week) -equivalent to 80,9L/pppd
4. Those with all of the above and their own boreholes (roughly 3000L/week plus roughly 2500L-5000l/week from their own systems)- equivalent to 200L/pppd

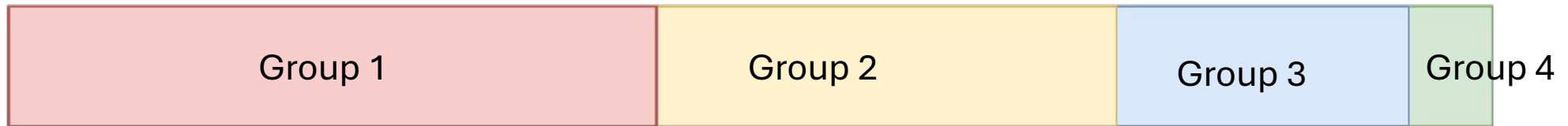


25L storage option 700L/w
18L/ppd

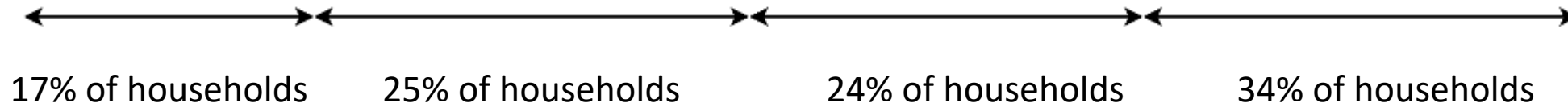
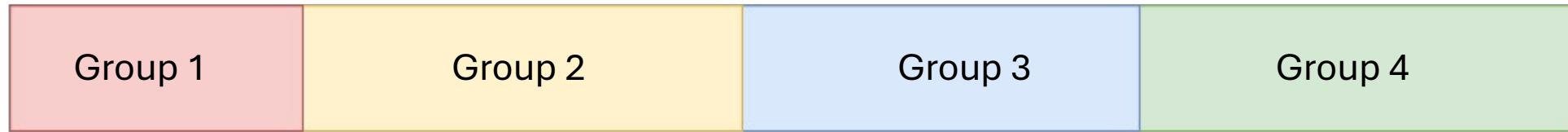
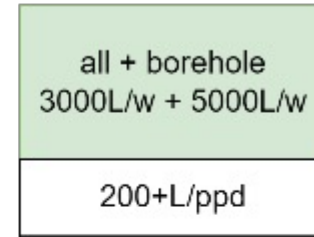
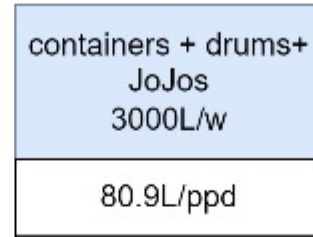
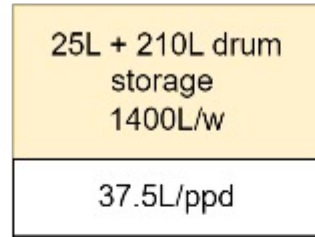
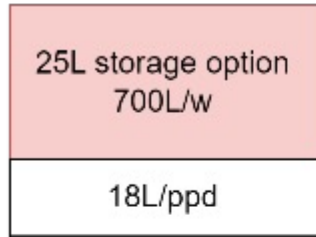
25L + 210L drum storage 1400L/w
37.5L/ppd

containers + drums+ JoJos 3000L/w
80.9L/ppd

all + borehole 3000L/w + 5000L/w
200+L/ppd



Storage in Mayephu...



What does this mean?...

- It is only those households in the 4th group, with their own boreholes who manage to maintain **reasonably sized household gardens (200-400m²)**.
- For households in the 3rd group, with JoJo tanks filled from the communal system **roughly 30% have much smaller gardens (20-100m²)**.
- The households in groups 1 and 2 are **not active in productive activities**.



Village Water Dialogues

- Communities in Giyani are resilient and have developed their own coping systems
- There are signs of Agency and stewardship.
- Village structures self regulate and manage availability according to local rules
- Access/use of storage is a major community management issue
- Villages self organise around savings for infrastructure maintenance but usually for crisis times.



What we learnt

- Storage, of any description, is an important in rural settings but often under considered
- Storage makes it possible for people to be involved in productive uses and contribute to food security
- Storage is a relatively cheap option for rural projects
- Storage needs monitoring (mostly not done) and management



- Water quality and storage are frequently not considered in rural programmes
- Rainwater harvesting is under developed
- Over specified storage, on the other hand, is a problem for groundwater and borehole over exploitation.



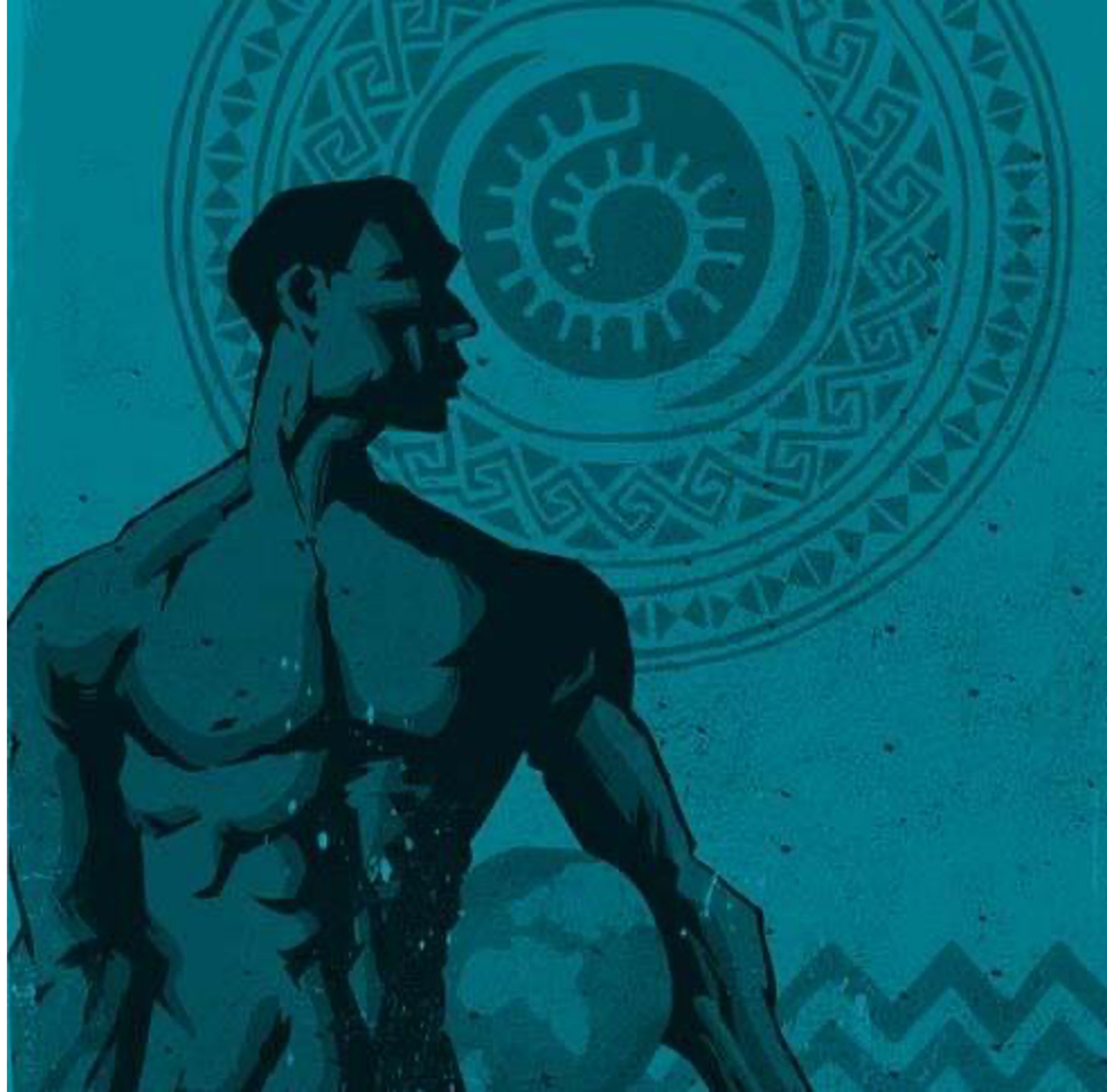


Flanders Gov and WRC are acknowledged

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Thank you