



REPUBLIQUE DU SENEGAL  
Un Peuple – Un But – Une Foi



9<sup>TH</sup> WORLD WATER  
FORUM | DAKAR 2022

# Moving forward with improved assessment and management of transboundary aquifers

Dr Christina Fraser, World Water Forum 2022

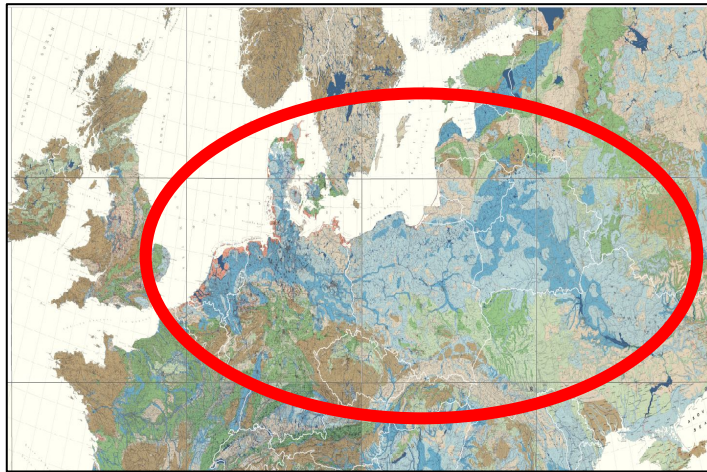
# Predicting the future...



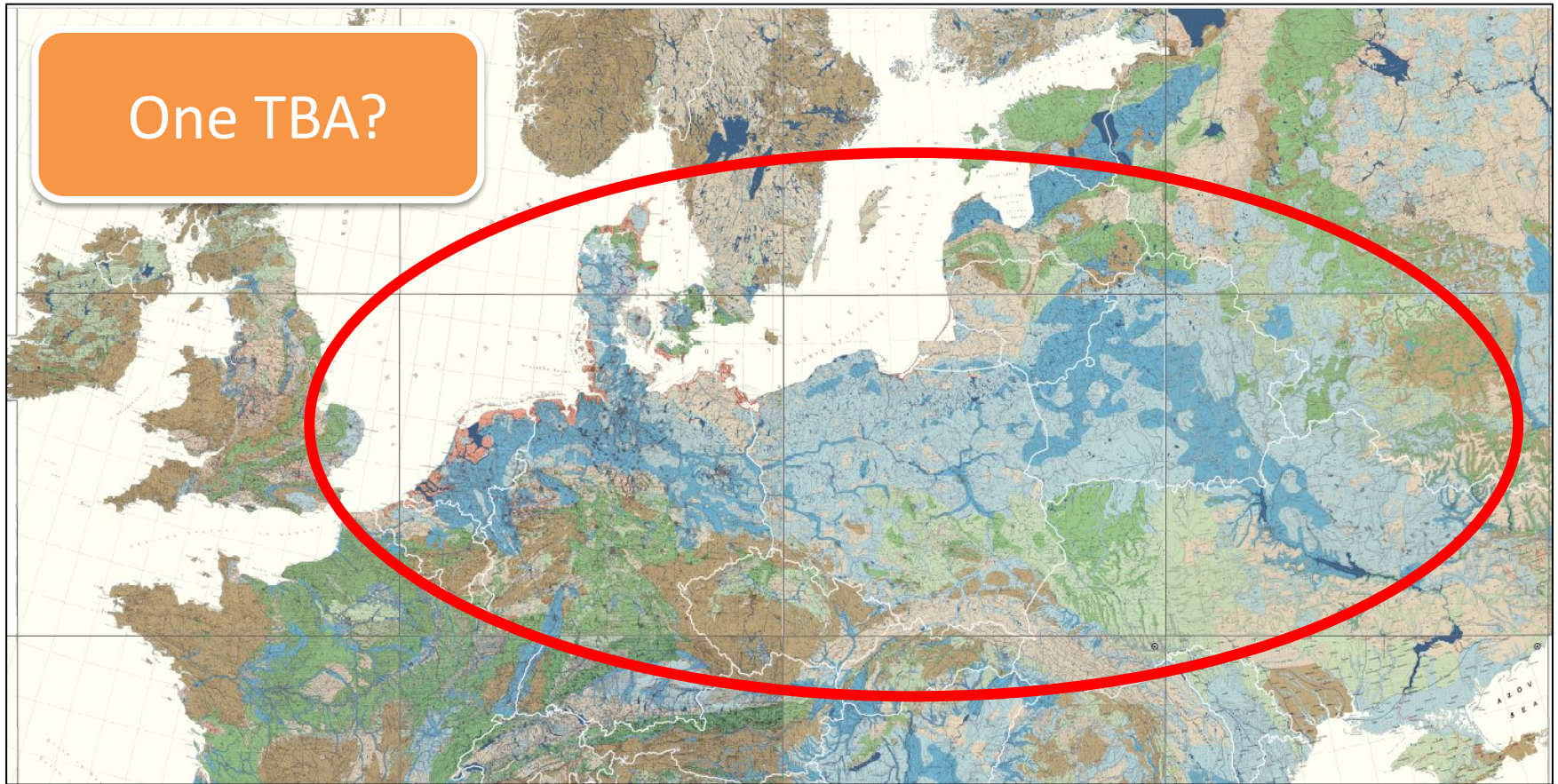
What is the future of  
transboundary aquifer (TBA)  
assessment and management?

# Main TBA challenges

- Data & information **harmonization** across borders
- Lack of **monitoring** data (quantity and especially) quality
- Selecting **priority areas, issues and/or actions** within a TBA
- The establishment of **cooperation** mechanisms and trust building

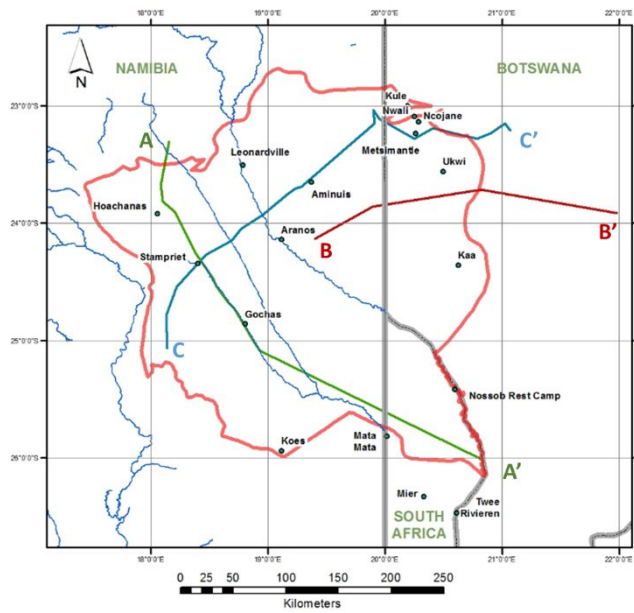


# How to define transboundary impact zones?



An issue of scale...

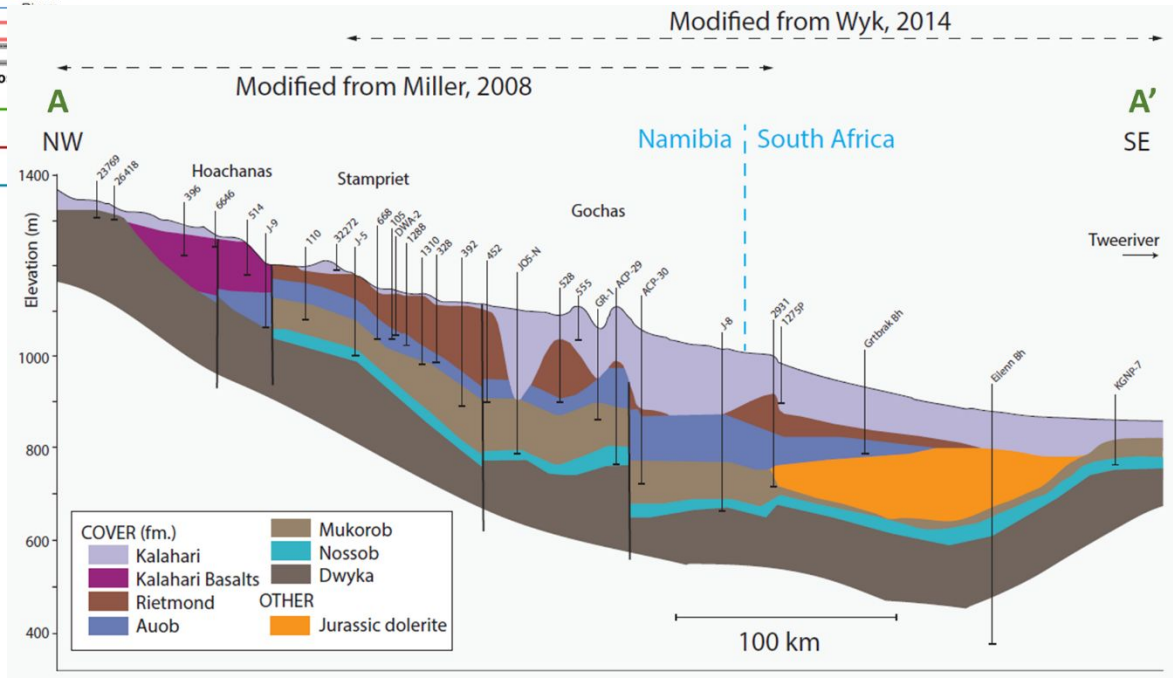
# How to define transboundary management zones?



Stampriet Transboundary Aquifer System  
Location of the cross-sections

**Legend**

- Villages and settlements
- Cro
- Auob
- NOssob
- Kalahari



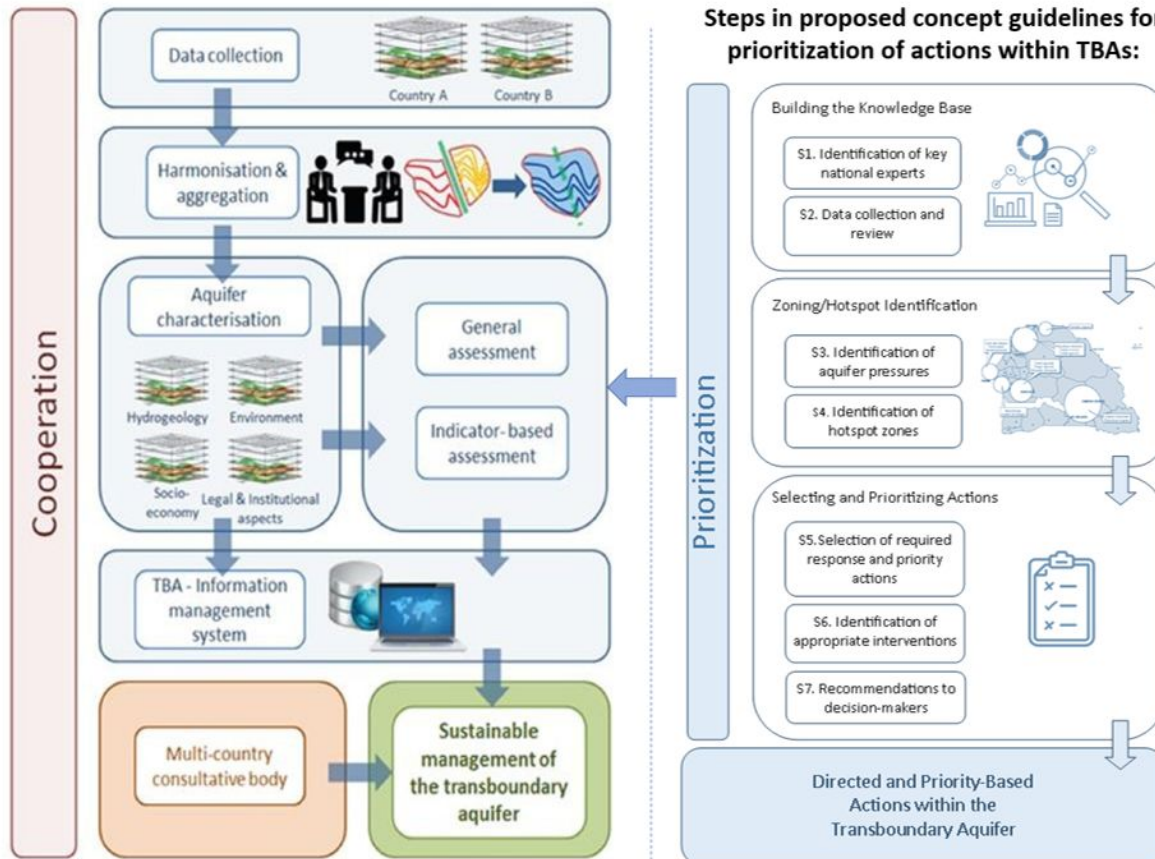
Regional aquifers (Auob and NOssob) are shown in blue colours, discontinuous Kalahari aquifer in purple.

Source: JICA, 2002; Van Wyk, 1987 in GGRETA Stampriet Report 2017.



# How to prioritise decision making within TBAs?

- Concept guidelines for prioritization of actions within transboundary aquifers



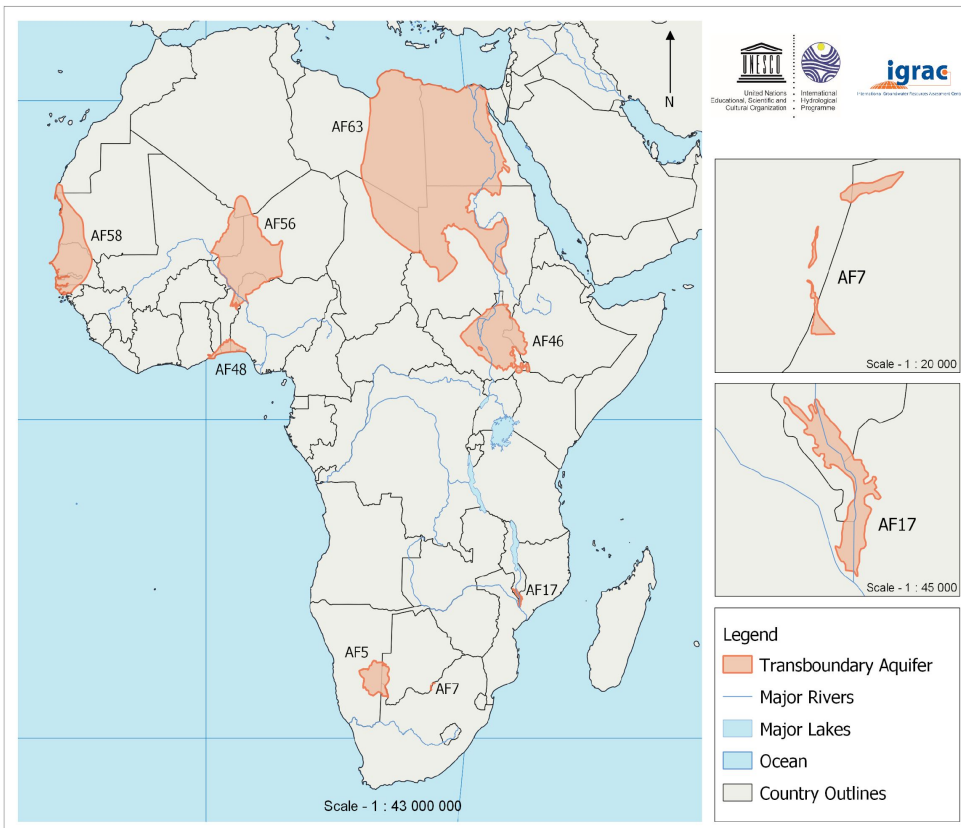
Intergovernmental Hydrological Programme



International Groundwater Resources Assessment Centre



# Purpose of the guidelines



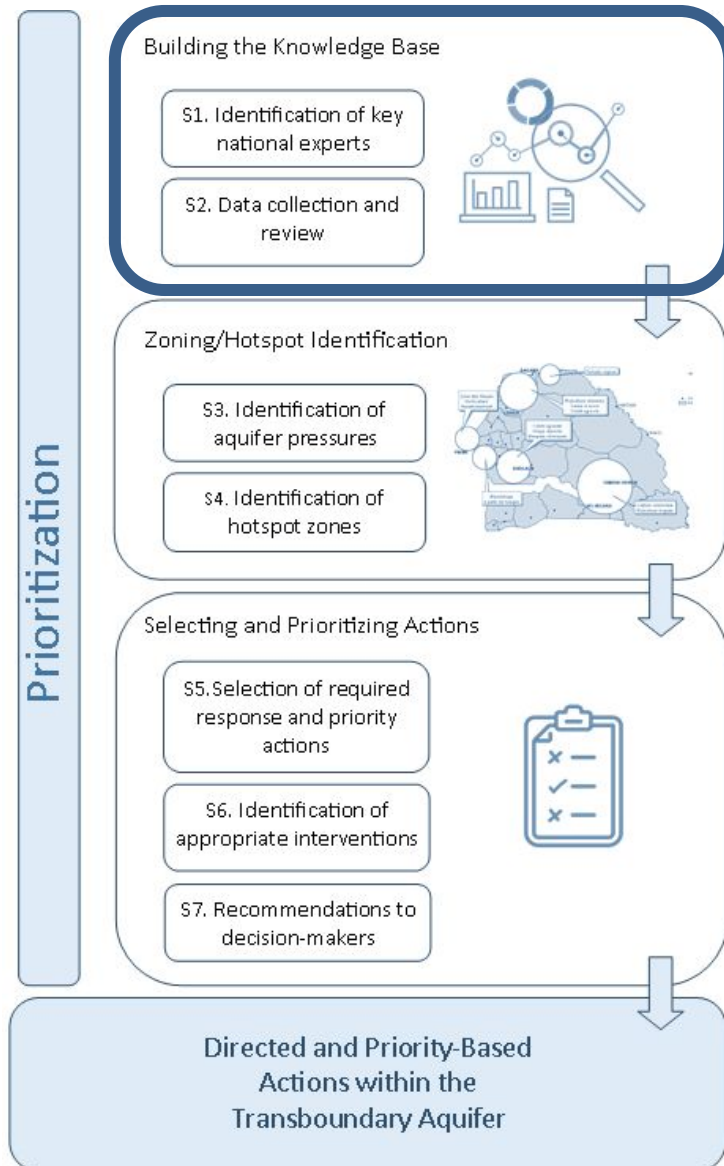
A pragmatic approach to:

- (1) Identify key pressures and concerns within TBAs
- (2) Assist countries on how to prioritize resources within their TBAs
- (3) Recommend priority actions and intervention practices

Developed in consultation with national experts from 8 TBAs across Africa



# 7 Steps....

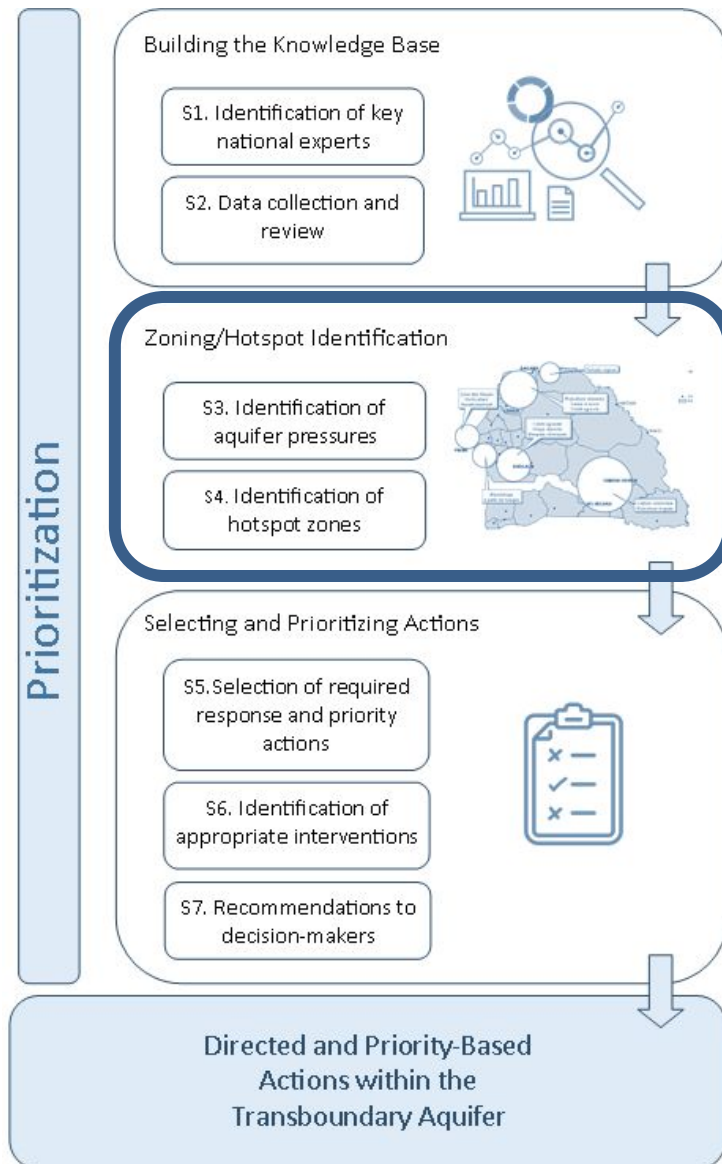


## Building the knowledge base

Step 1: Identification of key national experts

Step 2 Data collection and review

# 7 Steps....



## Building the knowledge base

Step 1: Identification of key national experts

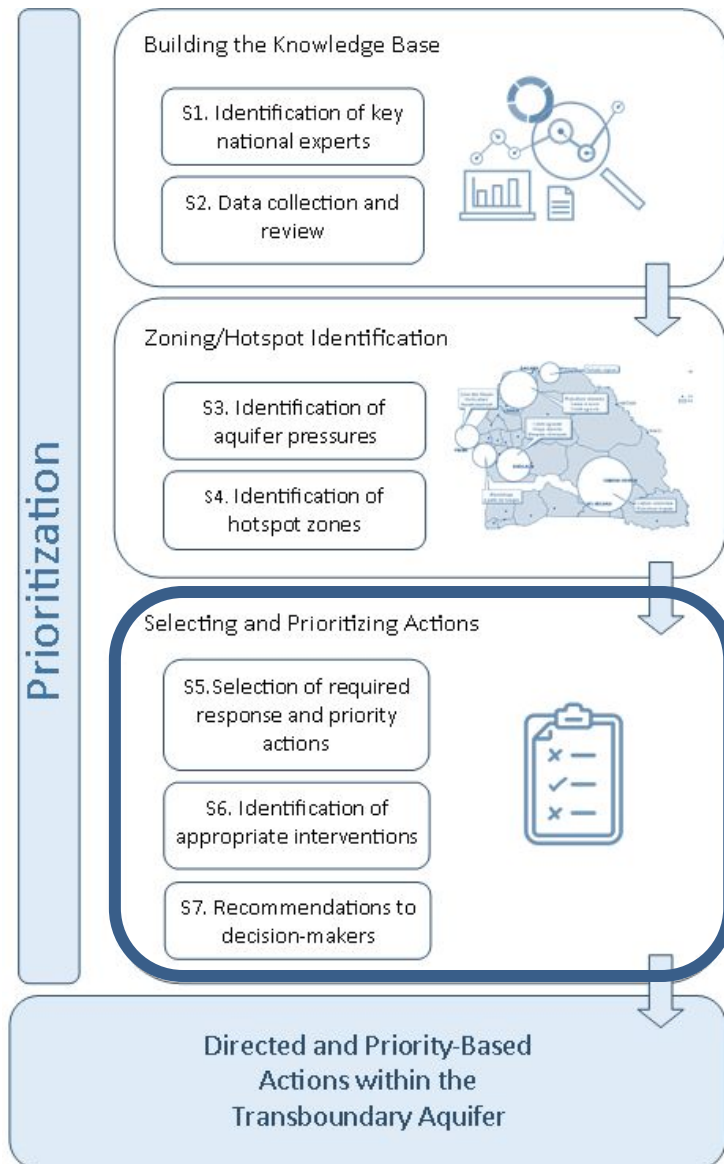
Step 2 Data collection and review

## Zoning/Hotspot identification

Step 3: Identification of aquifer pressures

Step 4: Identification of hotspot zones

# 7 Steps....



## Building the knowledge base

Step 1: Identification of key national experts

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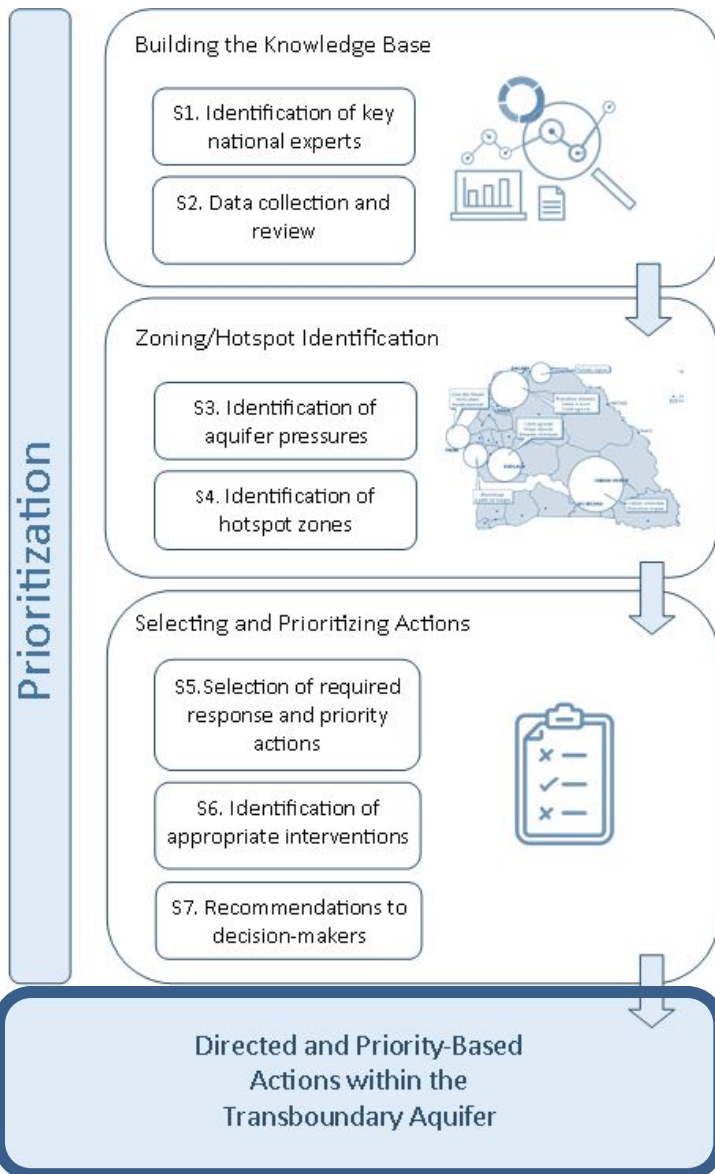
## Selecting and prioritizing actions

Step 5: Selection of responses and priority actions

Step 6: Identification of appropriate interventions

Step 7: Recommendations to decision makers

# 7 Steps....



Outcome:

Directed and priority based actions within the transboundary aquifer

# Thank you for your attention

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