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# Groundwater for rural water supplies:

with an emphasis on self-supply and handpump sources for households and communities

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Side Event on Groundwater for Rural Water Supply  
@ UN Water Groundwater Summit 2022

Paris - 6<sup>th</sup> December 2022





As a global community, we are striving to ensure that **everyone** has access to a drinking water source that is **available, accessible, affordable & safe.**

**This is a human right.**

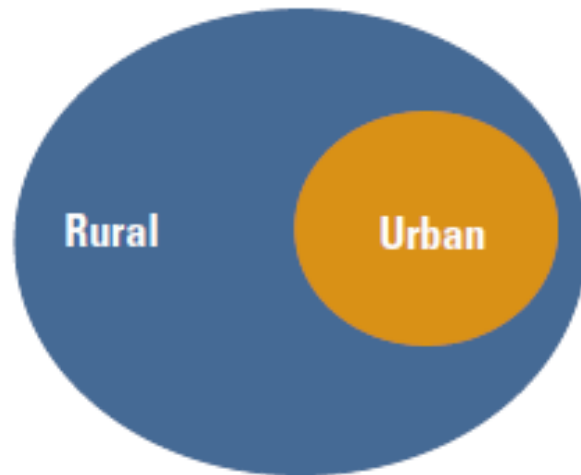
Driller in Ogun State, Nigeria cools himself down on the job (Source: Kerstin Danert, 2014)



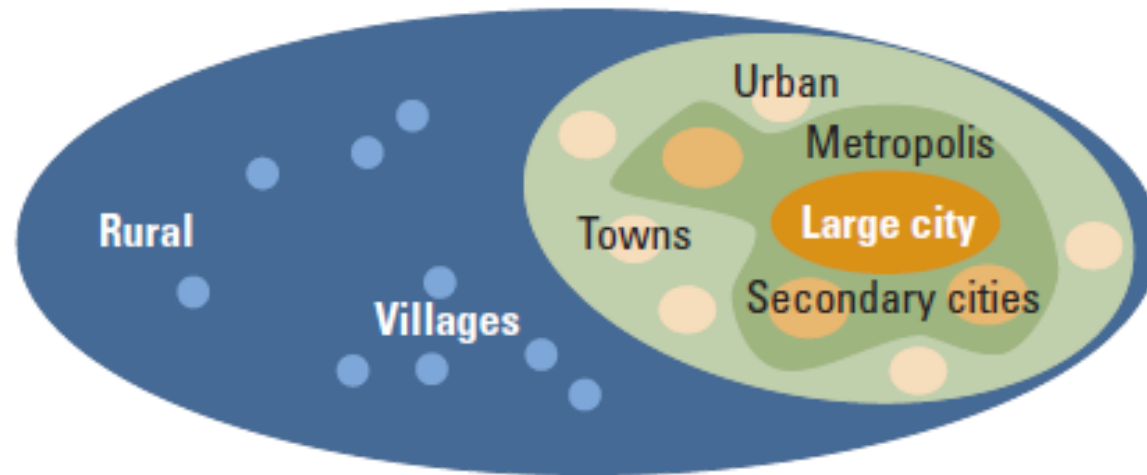
# What does *rural* mean?

- *Rural* tends to be defined as what is not *urban*
- Rural settlement patterns & population densities vary enormously
- Different development approaches adopted and needed
- in this side event we use national definitions of rural/urban

**The simplified area economy**



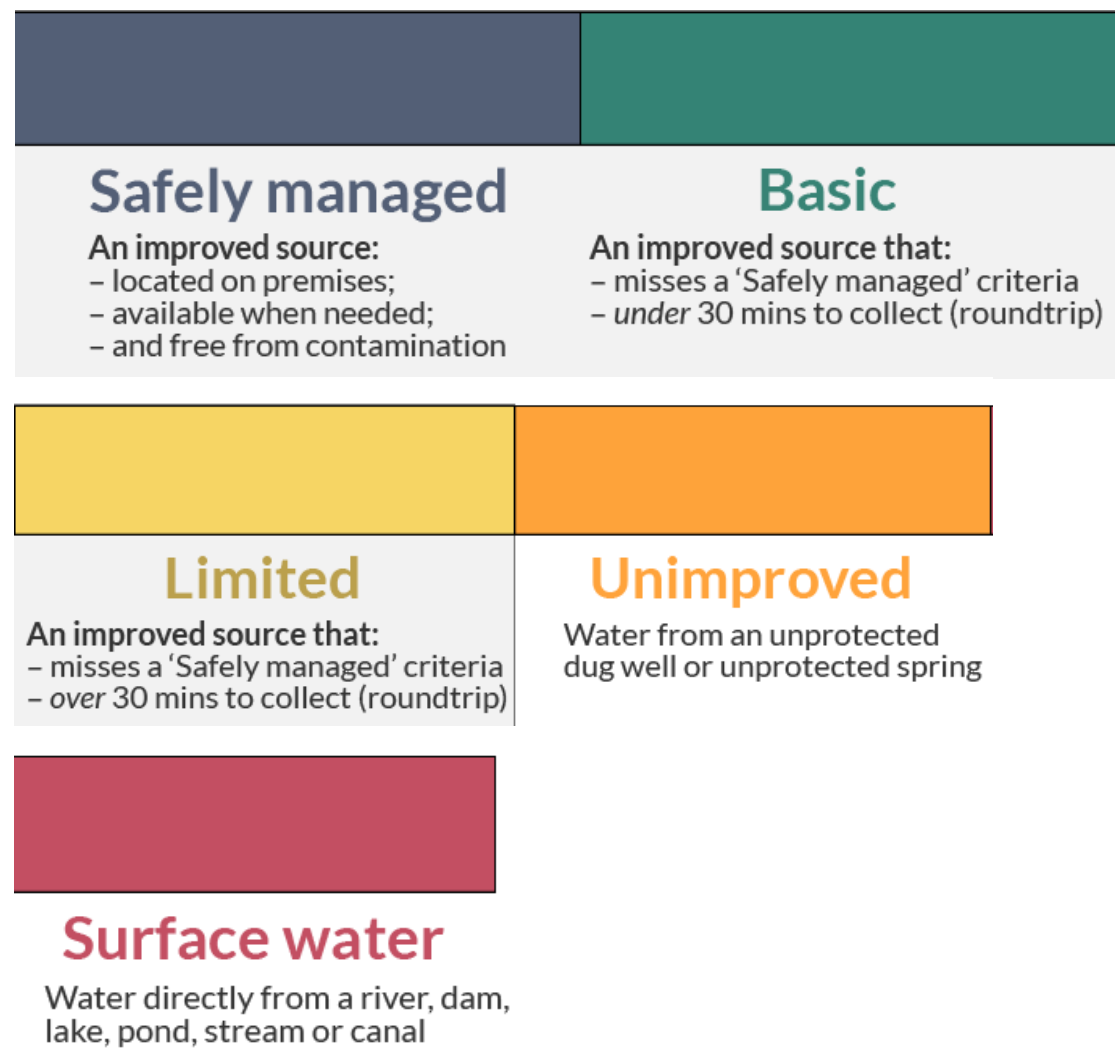
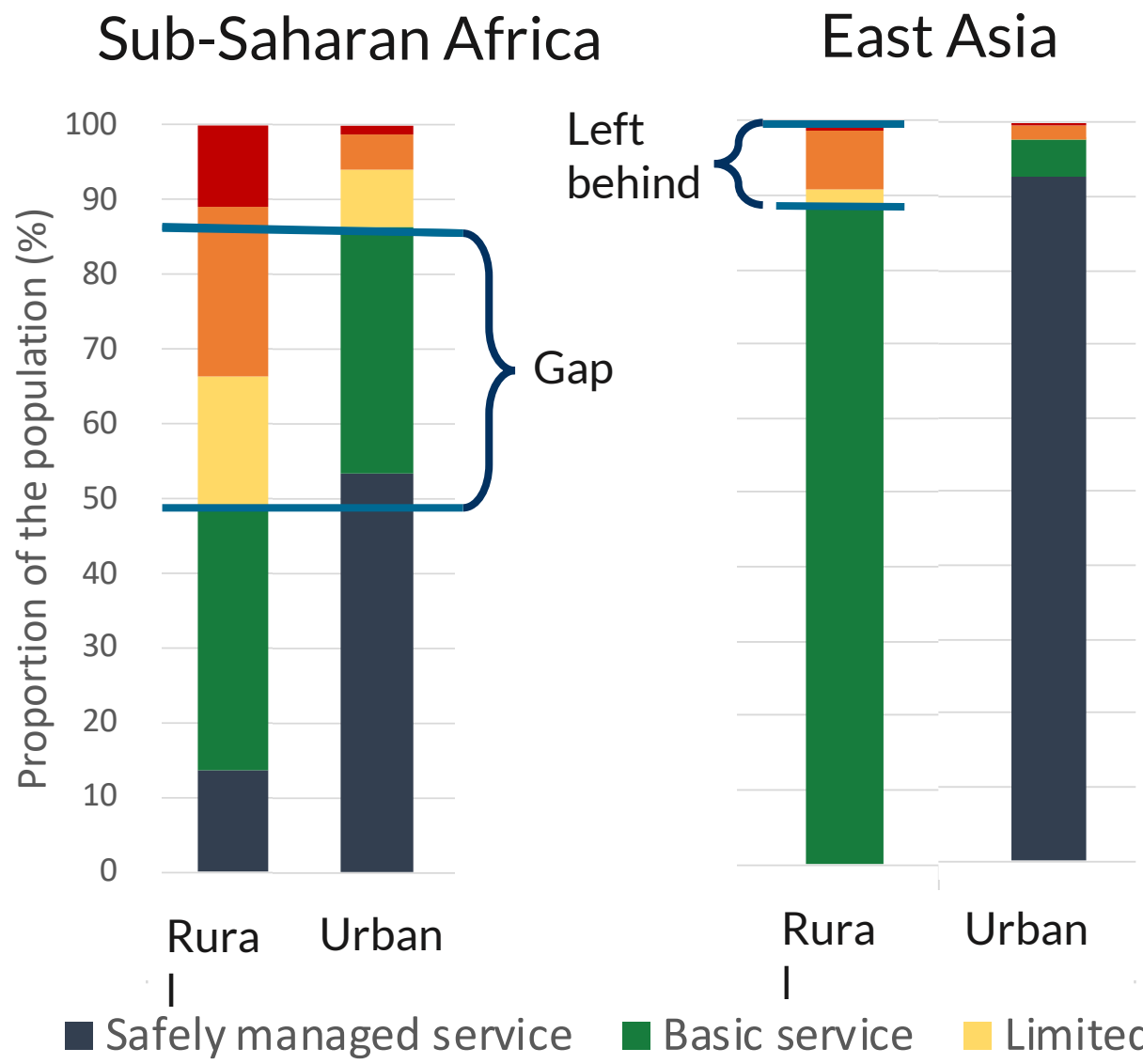
**and a more realistic representation**



## **From dichotomy to a continuum: a portfolio of places**

World Development Report 2009 – Reshaping Economic Geography, Washington DC: World Bank

# Estimated drinking water access in 2020



## Groundwater for rural water supply: Two key aspects

**Borehole & handpump quality**

**Self-supply**

Both are largely overlooked & politically neglected.

### Key messages

- Boreholes and handpumps should **always** be properly designed & constructed.
- Self supply can unlock household investments in water supply, and should be acknowledged, supported & enabled.



# Developing groundwater - mechanised & manual drilling



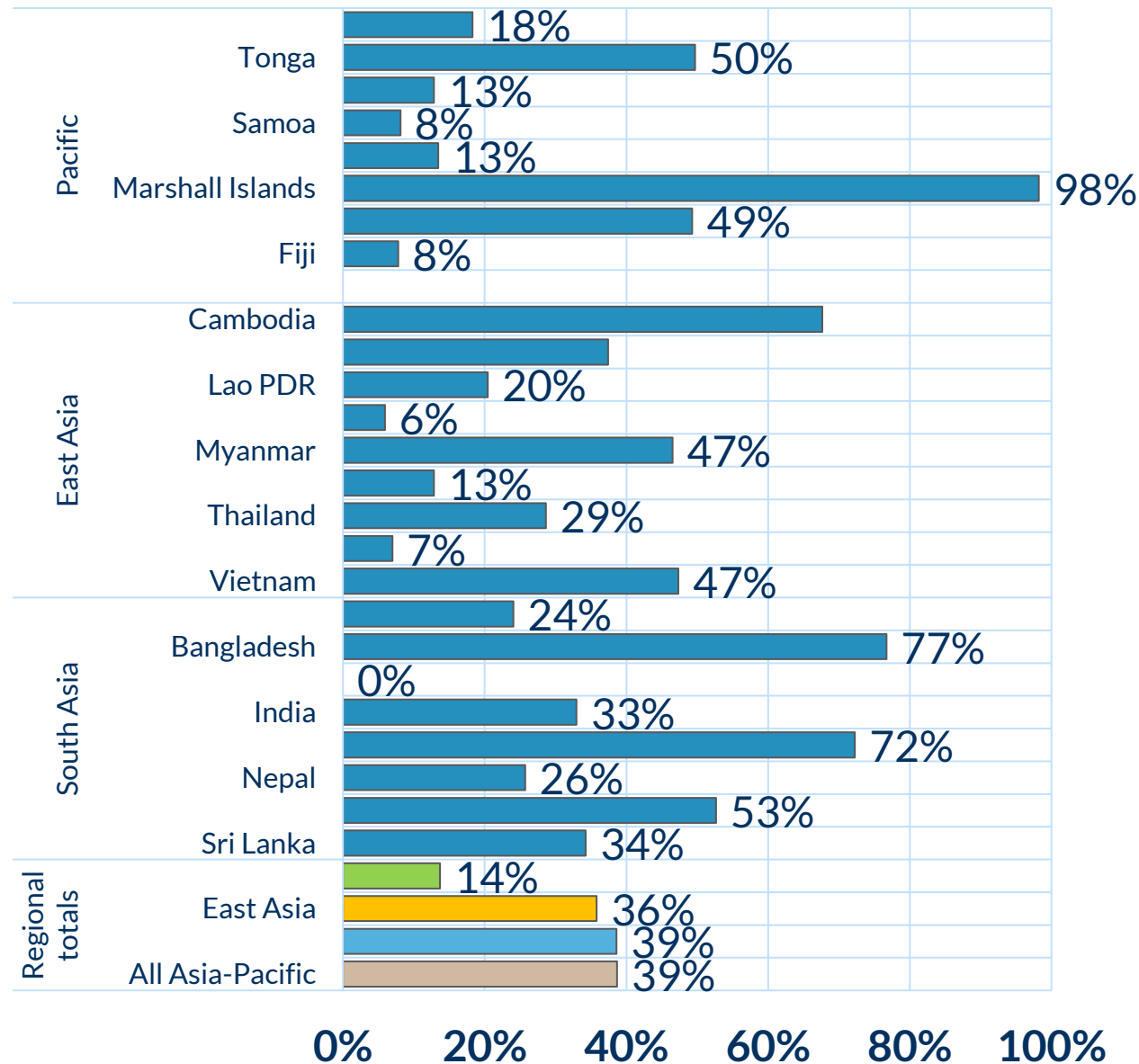
A range of mechanised rigs (Photos: Erich Bauman/Kerstin Danert)



Different manual drilling techniques in use in urban Nigeria and rural Niger (Photos: Kerstin Danert)



## Proportion of the Rural Population relying on a household self-supply source

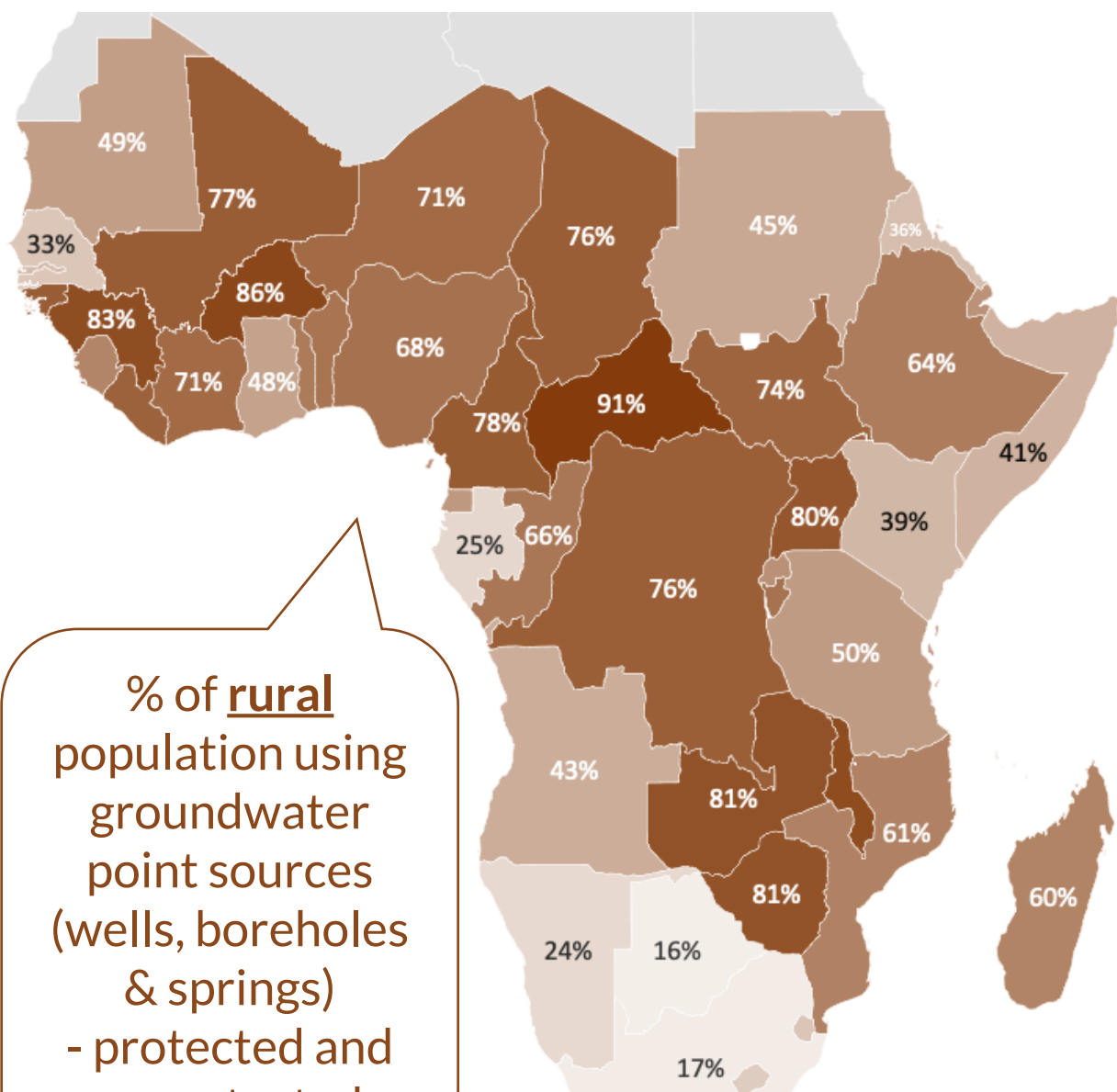


A **third** of households in **Asia and the Pacific** self-supply their drinking water, with prevalence highest in rural areas

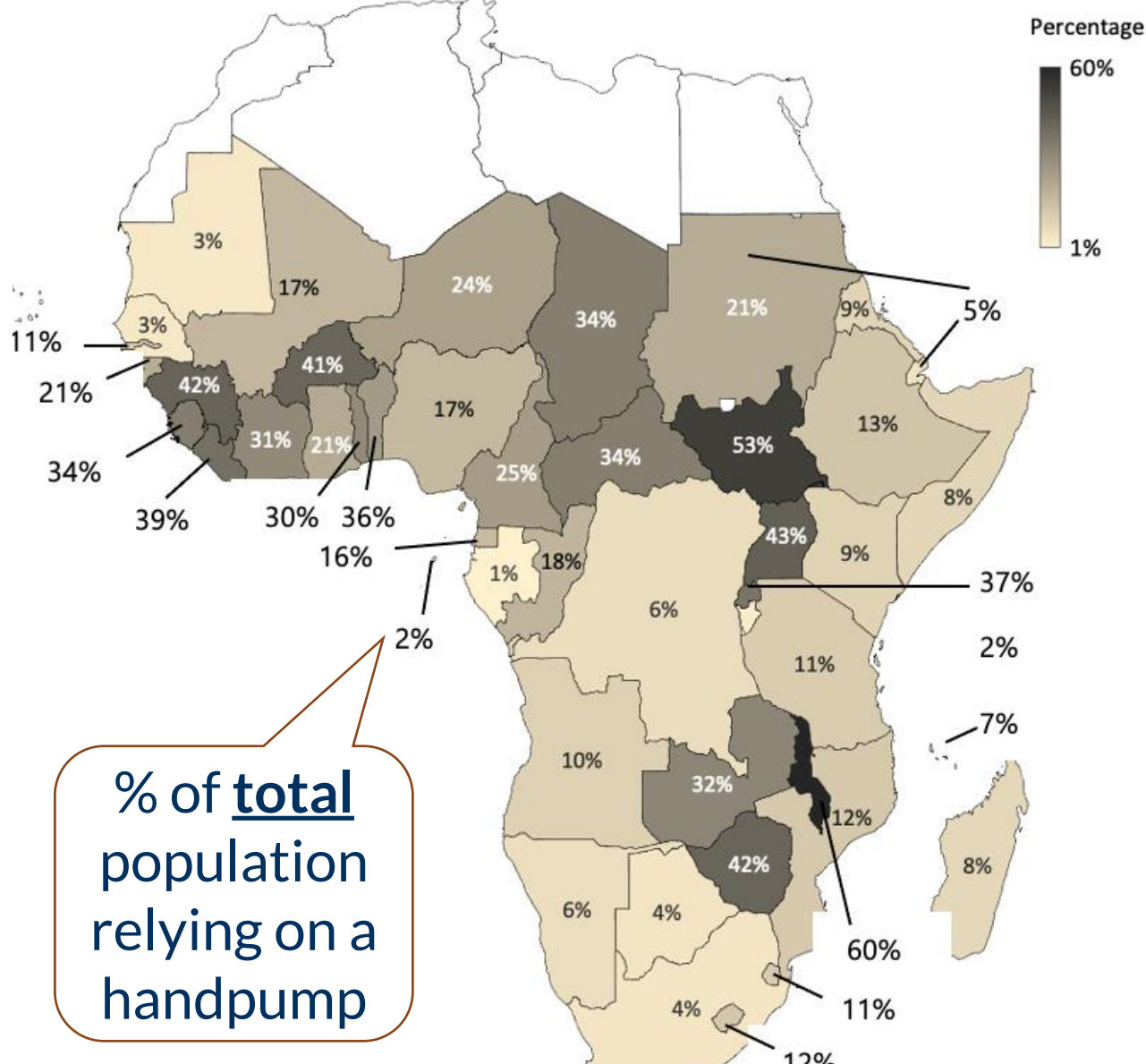




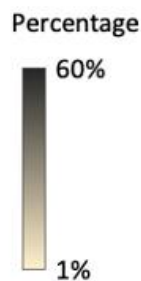
# Main drinking water sources in sub-Saharan Africa



**% of rural population using groundwater point sources (wells, boreholes & springs) - protected and unprotected**



**% of total population relying on a handpump**



Source: Danert, K. (2022a) 'Stop the Rot Report I: Handpump reliance, functionality and technical failure. Action research on handpump component quality and corrosion in sub-Saharan Africa'. Ask for Water GmbH, Skat Foundation and RWSN, St Gallen, Switzerland. <https://doi.org/10.13140/RG.2.2.19733.81121>



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Thank you for listening!

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