

A Holistic Approach to Sustainable Groundwater Development in Africa

Une approche holistique pour l'exploitation durable des eaux souterraines en Afrique

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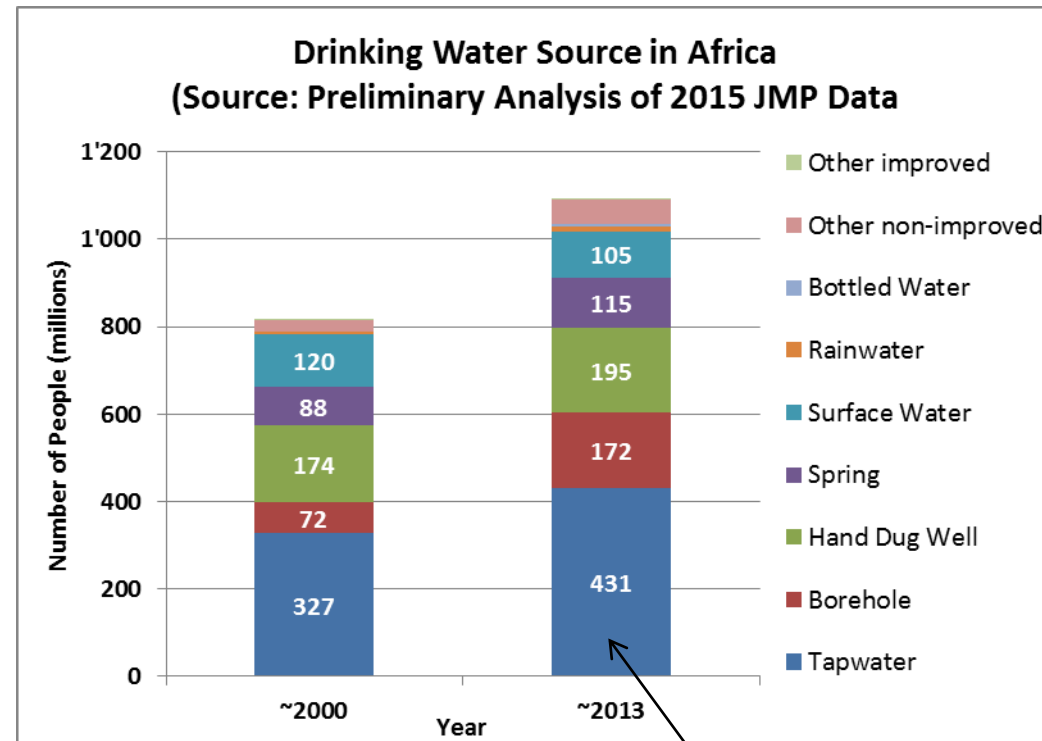
Rural Water Supply Network (RWSN)
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Background



Growing groundwater use in Africa

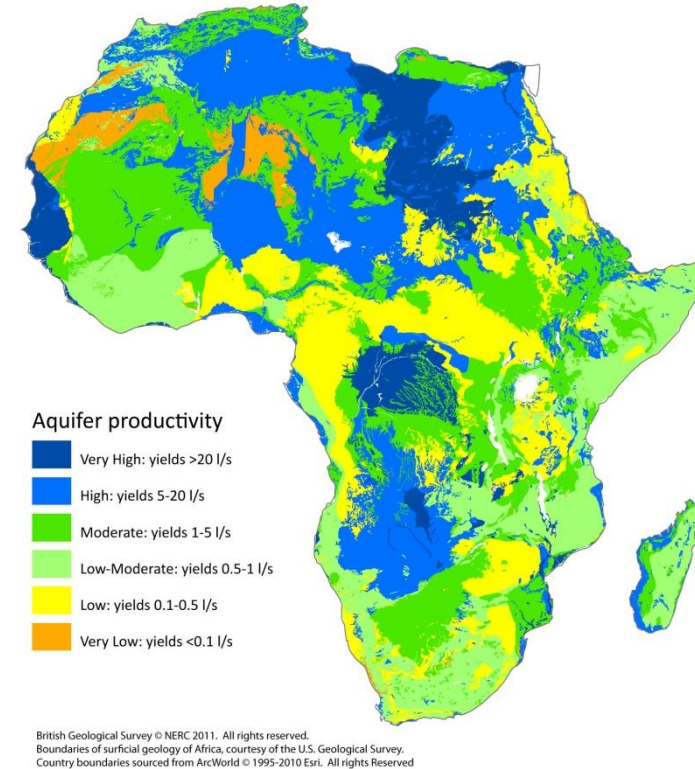
- Groundwater is the main source of **drinking water** for > 170 million people in Africa
- Groundwater often a **complementary** source
- Very **reliable resource**
- Use for **irrigation** forecast to increase
- **Understanding** of groundwater resources throughout Africa limited.



Note - no comprehensive data on sources of tapwater.

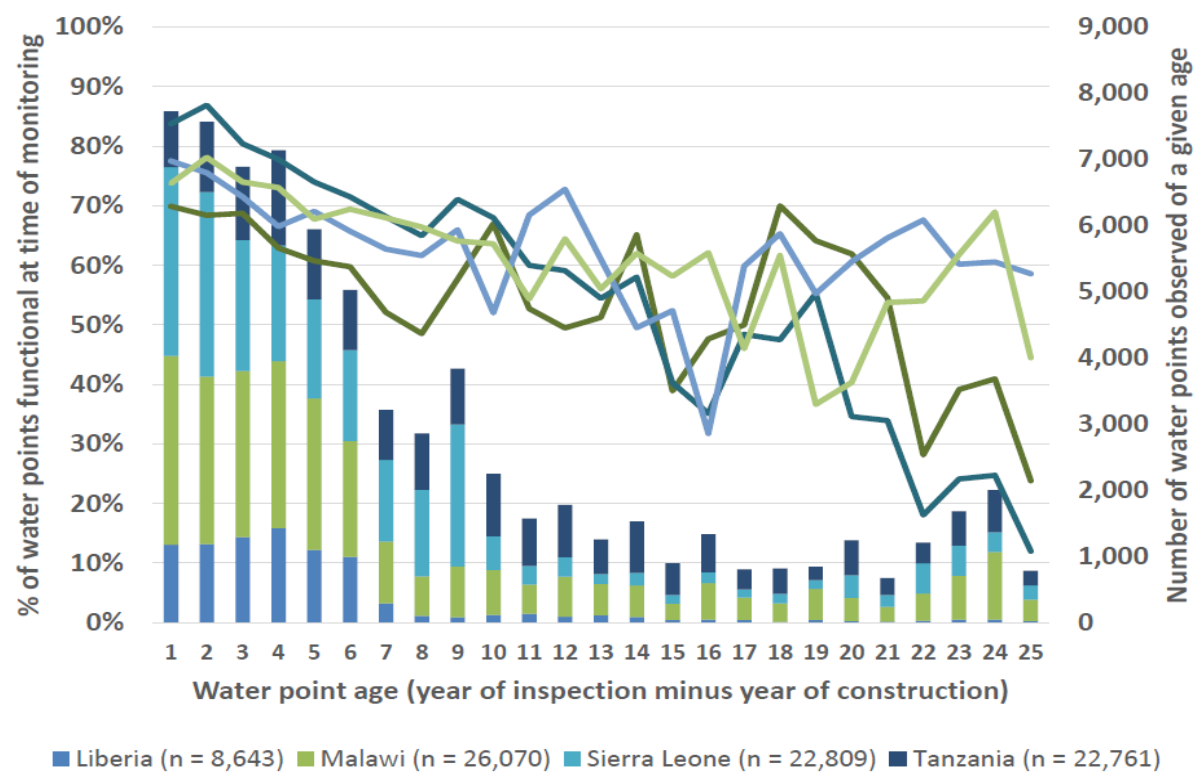
Aquifer productivity

- Continent-wide maps of aquifer storage and potential published in 2012
 - 0.66 million km³ of storage (not all available for abstraction)
- Uneven distribution
- Varied yields



Aquifer productivity
(Source: MacDonald et al, 2012)

Water Point Functionality

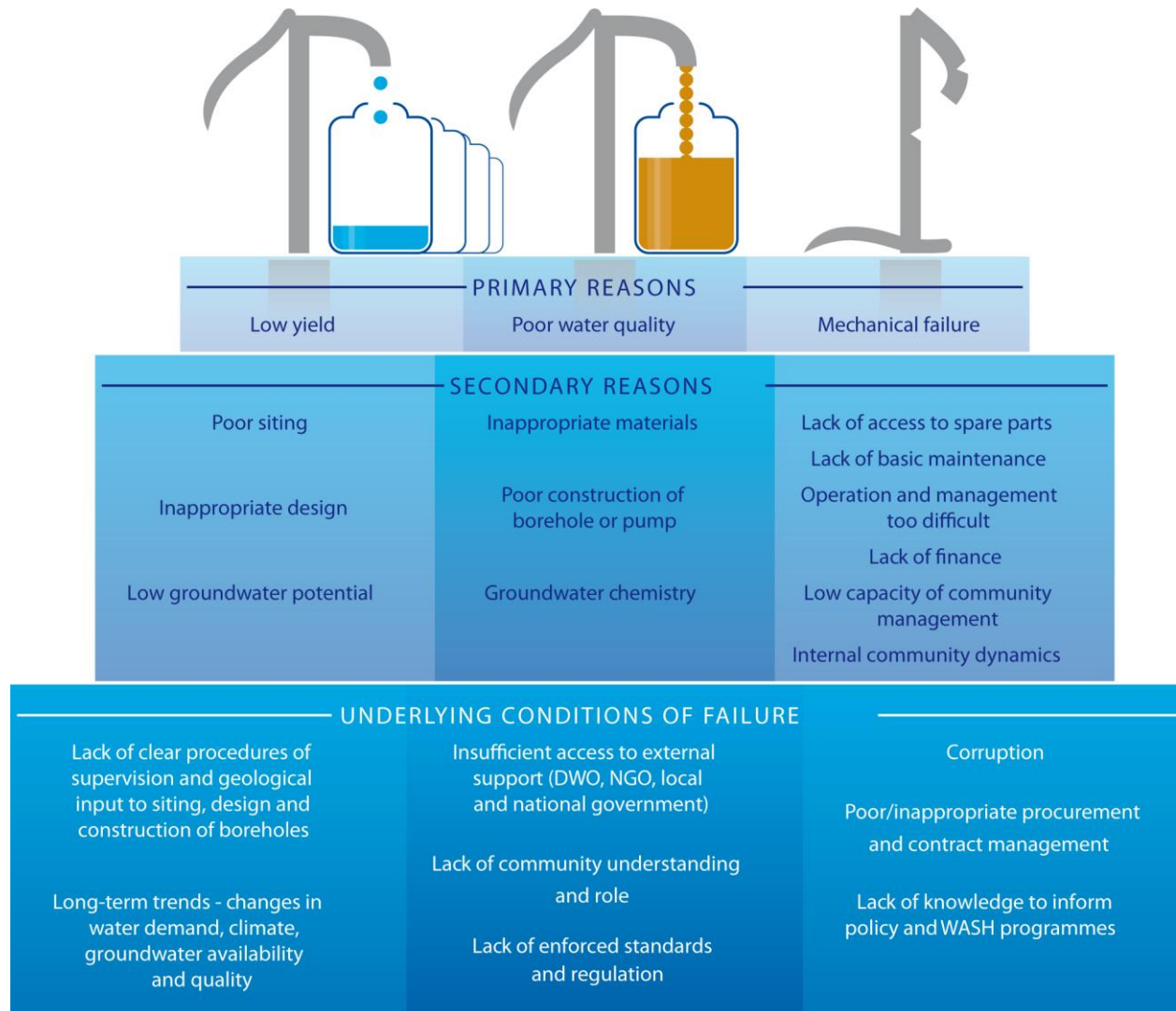


Cumulative cost estimated to be \$1.2bn
(Source: *A Hidden Crisis: unpicking the causes of failure of handpump boreholes* - John Chilton, RWSN Webinar 9th Dec 2014)

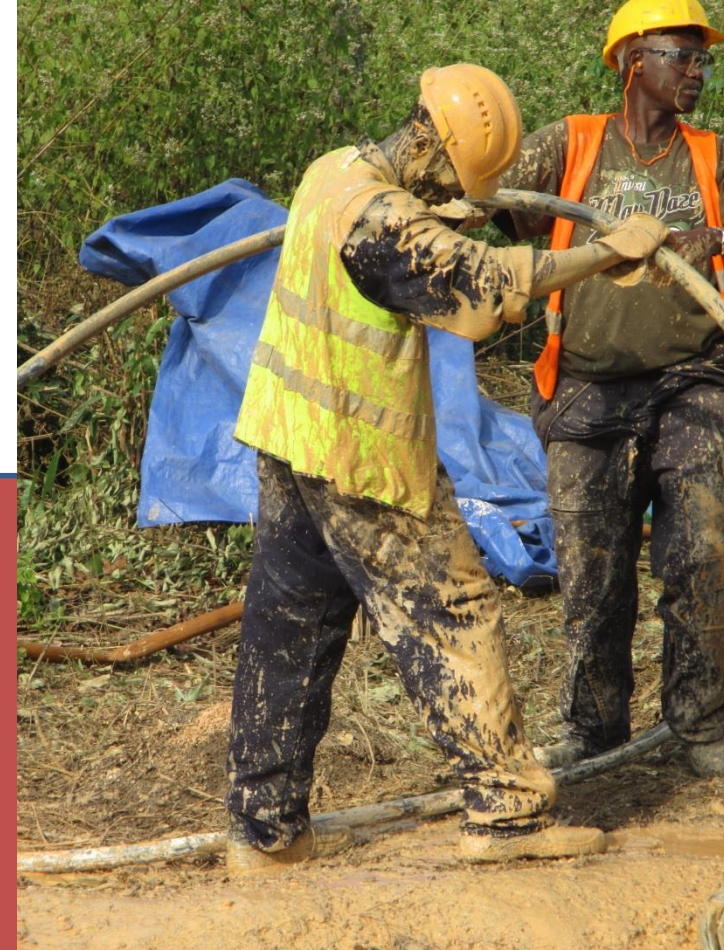
TINCANI ET AL, 2015

- Drop in functionality to 70-85% in the first year!
- Problem of site selection, borehole design, construction, user demand or vandalism.

Underlying Causes



Improving the Professionalism of Groundwater Development



Six areas of engagement



**Professional Water Well Drilling and Rehabilitation:
A UNICEF Guidance Note (in press)**

Six areas of engagement



**Professional Water Well Drilling and Rehabilitation:
A UNICEF Guidance Note (in press)**

References

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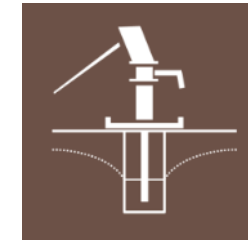
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Schweizerische Eidgenossenschaft
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Swiss Agency for Development
and Cooperation SDC



UKaid
from the British people

www.rural-water-supply.net

<https://vimeo.com/channels/drilling>

<http://upgro.org/>

<https://dgroups.org/rwsn>

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Thank you!

How to get involved?

- Visit the RWSN website: <http://rural-water-supply.net/en/>;
- Become an RWSN member: <http://rural-water-supply.net/en/rwsn-members>;
- Join one (or more) of the thematic groups of your interest to share and discuss with your peers;
- Join an RWSN events.
 - E.g. join the **upcoming webinar series**, starting 6 October 2015 with a 1 hour webinar on going “From building infrastructure to creating support mechanisms for rural water supplies”. See <http://rural-water-supply.net/en/projekts/details/79>.

Special interest in Sanitation? Check out the **Sustainable Sanitation Alliance** SuSaNa : <http://www.susana.org/en/>.