QUANTIFYING WATER SECURITY AT REGIONAL AND GLOBAL SCALES

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PRELIMINARY WATER SECURITY ASSESSMENT FOR AFRICA - 2022

First attempt to assess Water Security in 54 African countries.

Metric principles:

- Limited to 10 components of water security, scored 1-10, having equal weighting in final National WS Index (out of 100)

- Each component ideally represented by 1 indicator, avoiding sub-indicators as most of the indicator data are already aggregated e.g. TRWR (exception 3 & 10)

- Wherever possible and logical, metrics align with SDG6 indicators and many are also indicators within AWDO Key Dimensions

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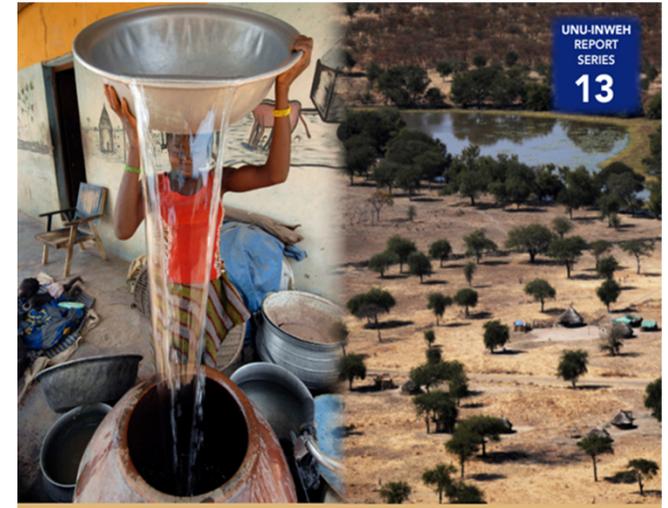
Water Security in Africa: A Preliminary Assessment

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PRELIMINARY WATER SECURITY ASSESSMENT FOR AFRICA - metrics

Ten components	Indicators	Source
1. **Drinking Water**	% pop. with 'at least basic' drinking-water service	JMP – 2015 & 2020
2. **Sanitation**	% pop. with 'at least basic' sanitation	JMP – 2015 & 2020
3. **Health & Hygiene**	# diarreal deaths/100,000 & % pop. 'basic handwashing' - equal weighting	IHME – 2015 & 2017 JMP – 2015 & 2020
4. **Water Availability**	Total Renewable Water Resources – Environmental Flow Requirement / annual pop.	FAO AQUASTAT - 2012/2017 (same) WB pop stats – 2012 & 2017
5. **Water Use Efficiency**	$ value added to water resources as utilized by different economic sectors	FAO AQUASTAT - 2012 & 2018
6. **Water Infrastructure**	Water storage (m^3) per capita	ICOLD WB pop stats - 2015 & 2020
7. **Water Quality**	% of wastewater treated	Jones et al (2021) combined multiple sources – 2015 only
8. **Water Governance**	Degree of IWRM Implementation (%)	UN-Water/UNEP – 2017 & 2020
9. **Water Disaster Risk**	Disaster Risk Index	Bündnis Entwicklung Hilft: World Risk Report – 2015 & 2020
10. **Physiography**	% Total Renewable Water Resources originating outside the country & Interannual Variability	FAO AQUASTAT - 'constant' FAO/WRI - average 1950-2010

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PRELIMINARY WATER SECURITY ASSESSMENT FOR AFRICA

Key messages

- Threshold approach to National Water Security Index: emerging > slight > modest > effective > model

- 1/3 of countries in Africa remain at the lowest measured level - 'emerging'

- Only 13 countries achieved 'modest'

- None of the 54 countries reached 'model' or even 'effective' level of water security

- 29 countries made some progress in last 5 years – 25 countries made no progress

- Data coverage is extremely poor & data limitation could be added as a water security indicator
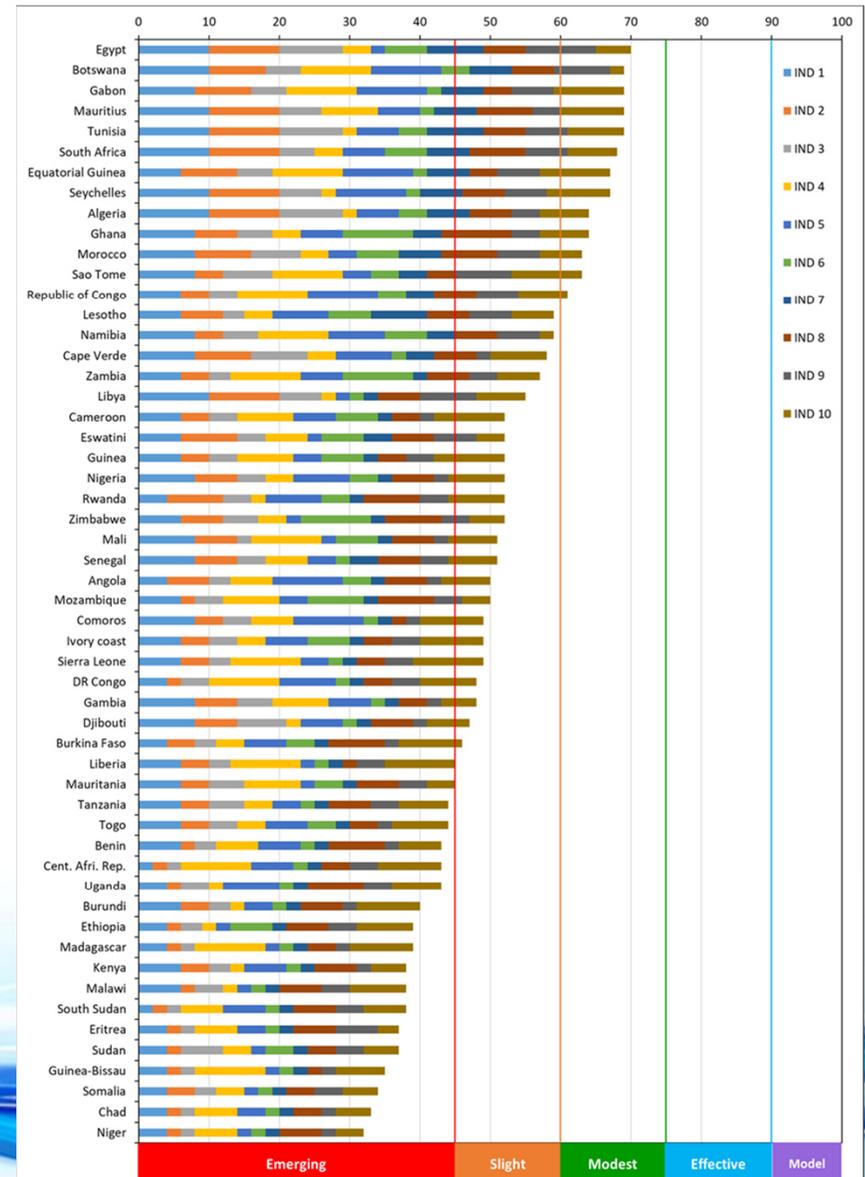
GLOBAL WATER SECURITY ASSESSMENT - ONGOING

- Maintain 'simple', universal approach, applying the same methodology to all regions allowing direct comparison

- Keep 10 basic components, while improving the metrics e.g. Dependency ratio does not make sense for SIDs

- Revise indicators as new data become available e.g. new WHO Burden of Disease stats; specific risk data, potentially from re-insurance industry;update of global dam data for the storage component

- Addressing the many data challenges e.g. water treatment and water quality; many indicators in Africa and LAC are 'no data'; how to move from 'at least basic' 'to 'safely managed' on JMP WASH service ladder

- Should 'data availability' be an component or a sub-indicator at a country level?

- What groupings should be considered in addition to specific geographies e.g. SIDS; should large countries (area) be directly compared to small countries?

- Working to incorporate country and policy-actor feedback

Thanks!