



Innovation in Every Drop: Managing Uncertainty and Building Capability Through Collaboration

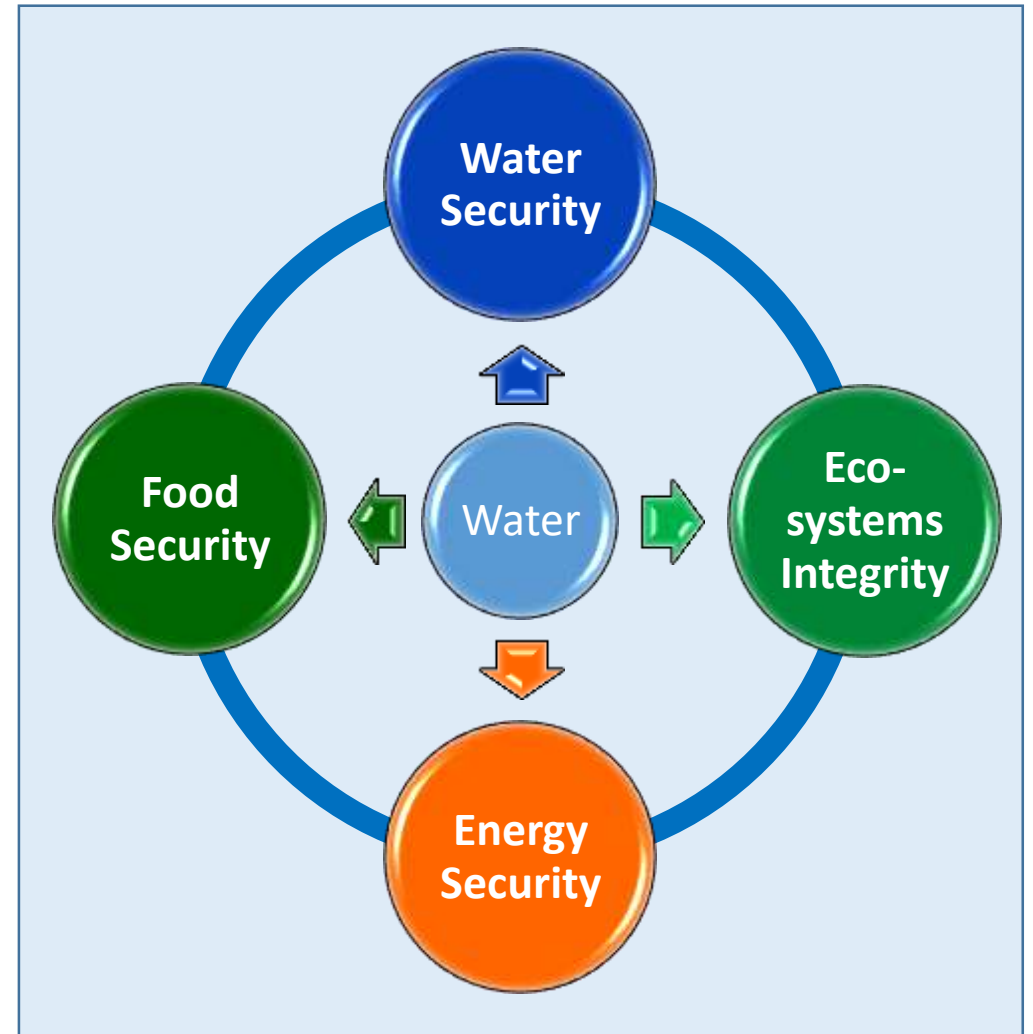
Key Note Address at the 4TH WRC Symposium 2019

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Outline

1. Framing the issue – managing uncertainties and capacity for water security: towards attaining SDGs, Africa Water Vision and AU Agenda 2063
2. Uncertainties for water security in Africa
3. Examples of collaborative approaches towards water security
4. Examples of Bank projects
5. Concluding remarks



Framing the Issue – Towards Water Security and SDGs

Water Security:

“The capacity of a population to safeguard **sustainable access to adequate quantities of acceptable quality water** for sustaining **livelihoods, human well-being, and socio-economic development**, for ensuring protection against water-borne **pollution** and **water-related disasters**, and for preserving **ecosystems** in a climate of **peace and political stability**.”, UN-Water, 2013

- In line with the Africa Water Vision and AU's Agenda 2063.
- Water impacts 15 out of 17 SDGs
- Multiple sectors, users, benefits : needs collaboration (IWRM principles)

Water Security Infographic from

<https://www.unwater.org/publications/water-security-infographic/>



Dimensions of uncertainty, amidst governance and capacity challenges

Climate change & variability

- High vulnerability and low resilience
- Low capacity to predict
- Limited adaptive capacity

Increasing pressure on water resources

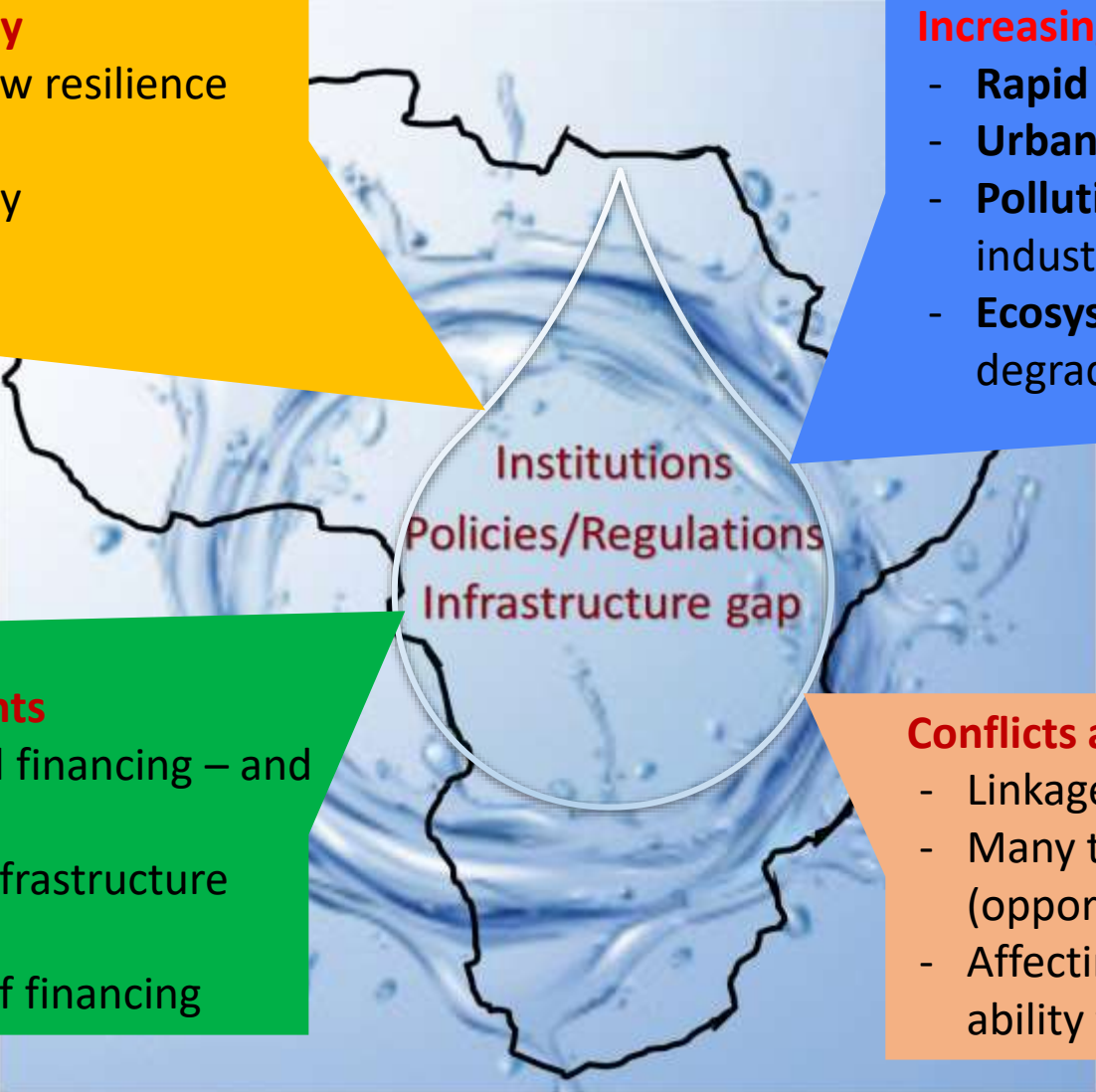
- Rapid population growth
- Urbanization
- Pollution (liquid waste, solid waste, industrial, agricultural)
- Ecosystems losses – e.g.: wetlands degradation and encroachment

Financing sources & amounts

- Dependence on external financing – and stagnating ODA
- Changing dynamics of infrastructure finance
- Emerging new sources of financing

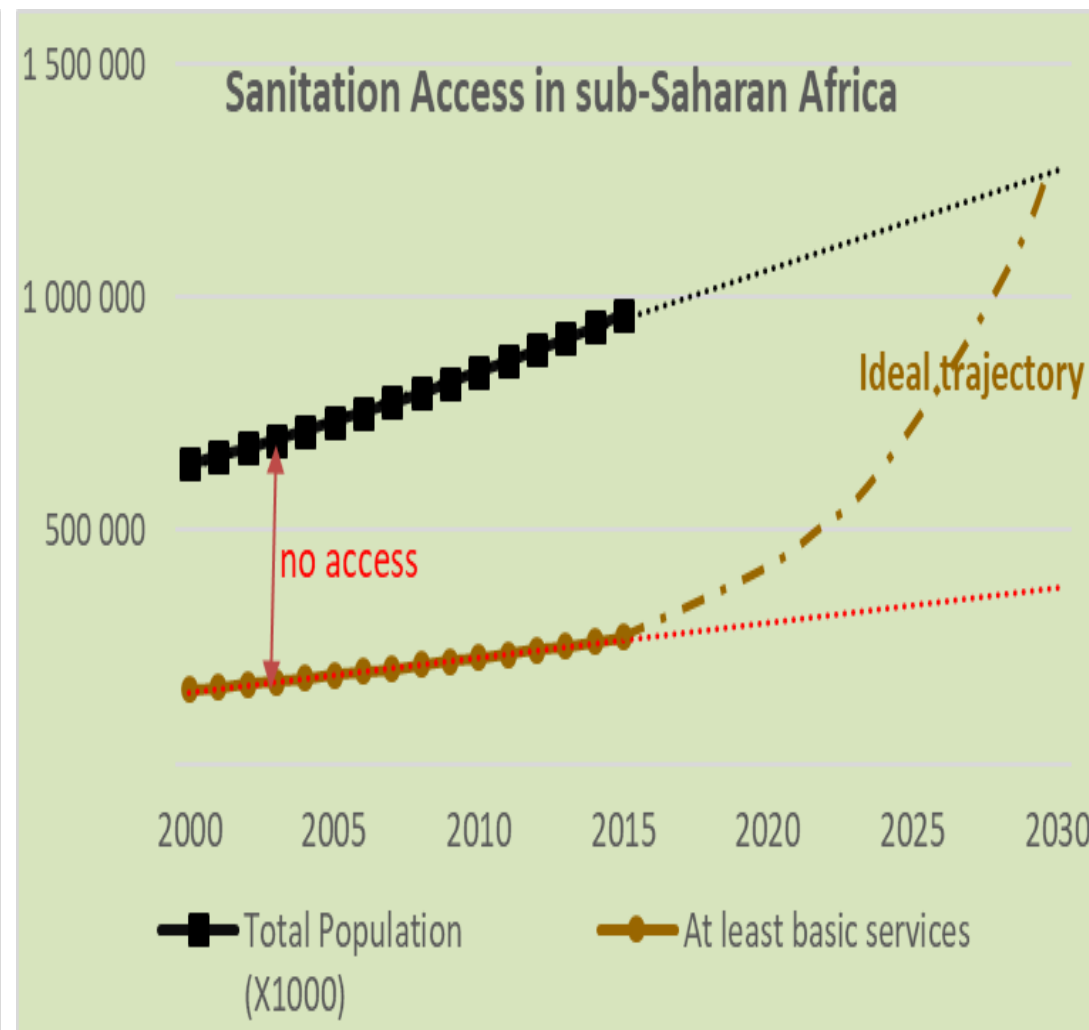
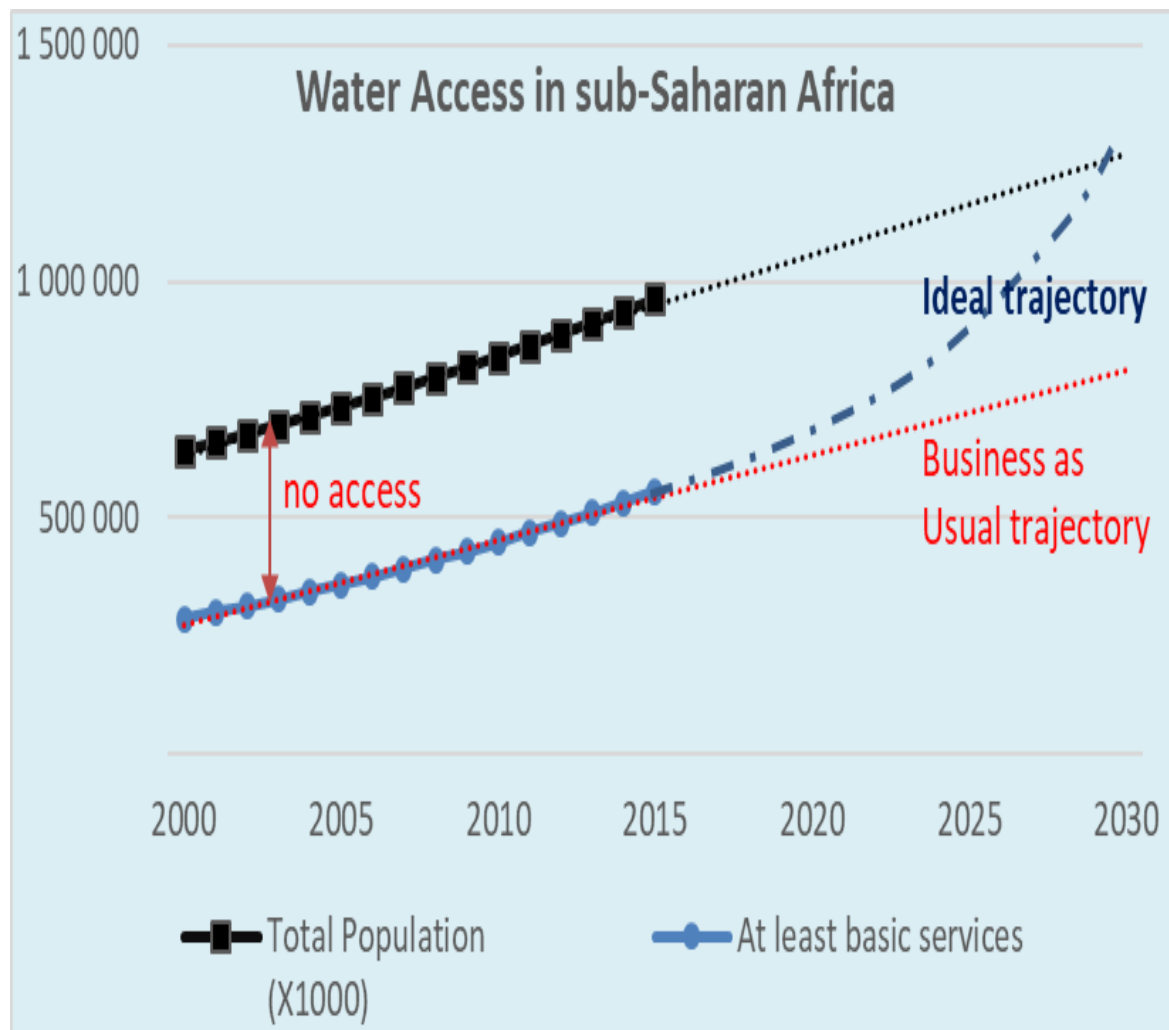
Conflicts and fragility

- Linkages with water security
- Many transboundary water bodies (opportunities and challenges)
- Affecting vulnerable groups with least ability to cope



Institutions
Policies/Regulations
Infrastructure gap

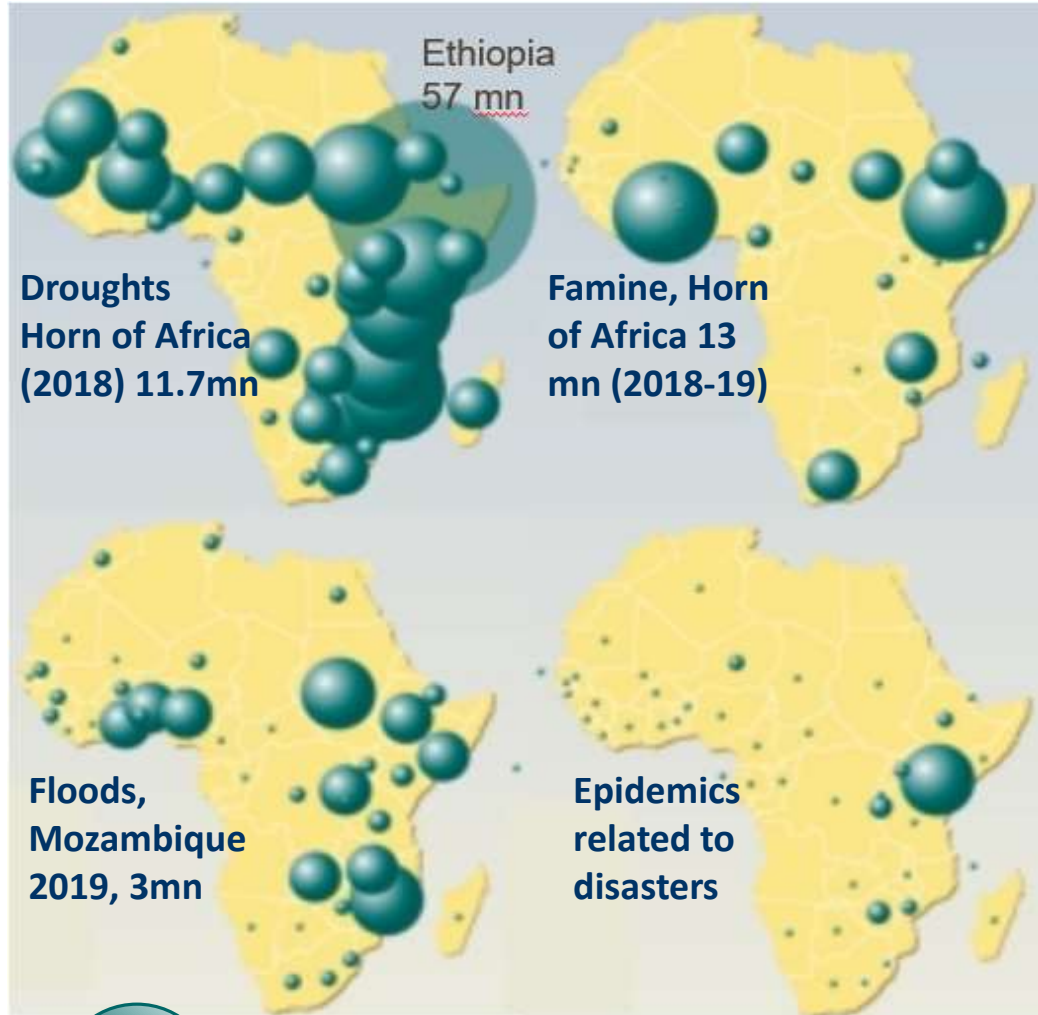
Access to WASH – increasing numbers of the unserved



JMP 2017

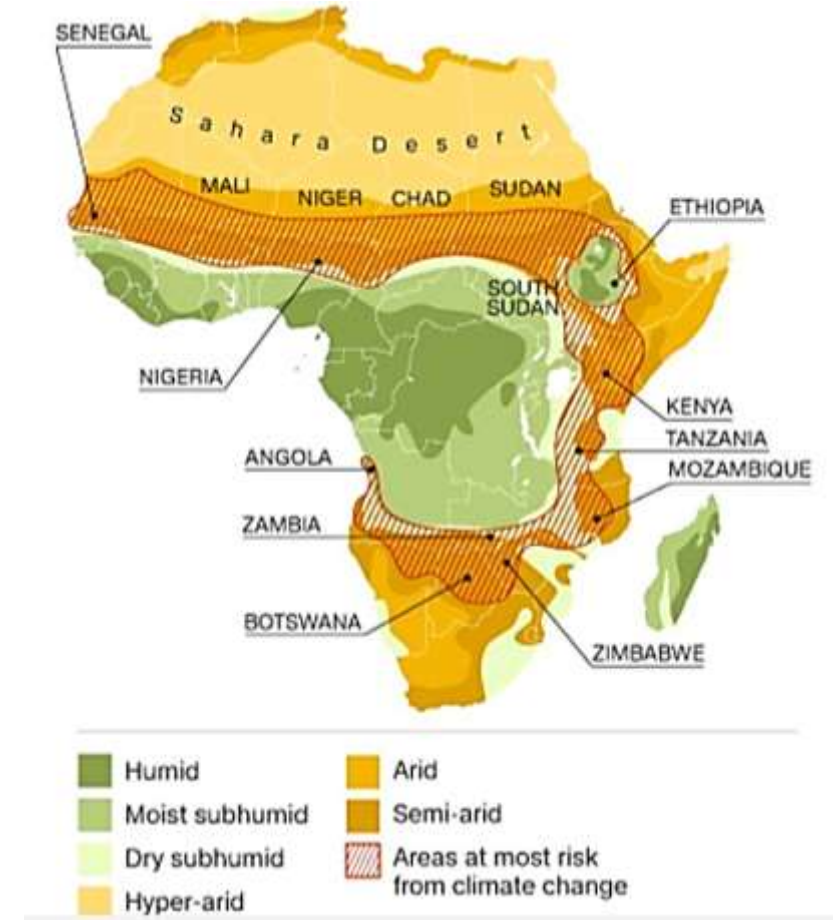
Climate Variability and Change Impose Additional Pressure

People Affected by Climatic Disasters



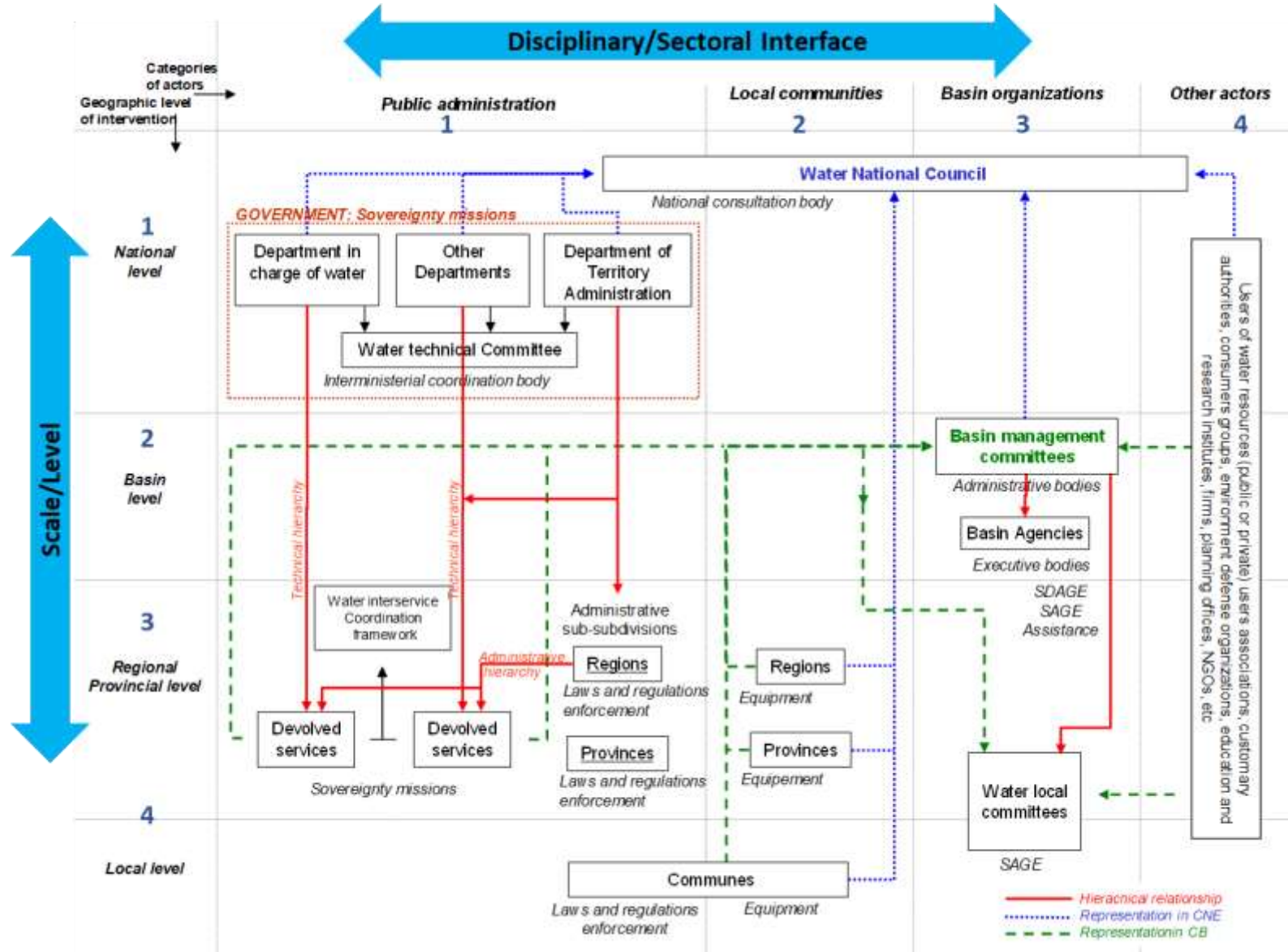
Source:
<http://www.grida.no/resources/7036>
Cartografare il Presente/Nieves
Izquierdo

Areas at Risk from Climate Change and Variability in Africa



- ✓ Extreme droughts manifest in arid & semi-arid areas e.g. the Sahel, the Horn of Africa, & amplify fragility (Mali, Chad, Somalia etc.)
- ✓ Floods are also occurring with increased frequency

1. Some Approaches to address uncertainties and enhance capacities - Institutional Framework for IWRM in Burkina Faso



Four tier framework
(national, basin, regional and local); and,
Four categories of actors

Framework shows
hierarchical relationship
between administrative
bodies and stakeholder
representatives

2. Some Approaches to address uncertainties and enhance capacities: Long-term Planning - Water Sector Vision and Strategy for 2050 for Tunisia

Challenges:

- (i) National situation below water stress threshold; there is significant risk of deterioration by 2030;
- (ii) Almost total harnessing of the country's conventional water potential

Objective: secure access to water resources for Tunisia by 2050, in an efficient, equitable and sustainable manner, following IWRM approach

Expected outputs:

- (i) Vision and strategy document
- (ii) Investment action plans

Financiers: Government of Tunisia, AWF, KfW, GIZ,

Participatory implementation involving all actors at different levels, as well as the Technical and Financial Partners



3. Multinational Collaboration for Multi-Purpose Water Infrastructure Programs: Komati Basin Water Authority; Komati-Lomati Basin



Maguga Dam: Credit, Emmanuel Olet, 2009

- **Countries:** South Africa, Eswatini, Mozambique
- **Two Dams** Constructed in basin: Driekoppies Dam South Africa, and Maguga Dam (Eswatini)
- **Phase1: Driekoppies Dam (costs 100% by South Africa)~44 million (R, 643,059,928)**
- **Phase 1b: Maguga dam (Costs :South Africa (60%) and Eswatini (40%))~77 million (R, 1,145,688,346)**
- **Benefits from Maguga Dam;** WS to Piggs Peak town, 7000 ha Irrigation; HEP 20MW
- **Cross Sectoral Collaboration:** Power, Agriculture and Water Sectors

4. Scaling up Integrated Urban Water Management (IUWM)

- African countries have some of the world's **highest urbanization rates**. Urban population to **nearly triple by 2050** (from **0.58 billion to 1.49 billion**) (*World Urbanization Prospects, 2018*).
- **Most cities unplanned, lack basic services**, including WASH and waste management. Uncoordinated implementation.
- **IUWM** - a framework for **planning, designing, and managing urban water systems in a holistic and integrated way** - addressing various water users, engaging various stakeholders
- **Many urban rivers heavily polluted, ecosystems degraded**. River clean up/environmental restoration projects in Africa emerging
 - Kebena River System Development Project, Ethiopia
 - Kinshasa, DRC - IUWM Master Plan for 2030 under development
 - Nairobi River Clean Up

IUWM more advanced in Asia and Latin America

Hydraulic Optimization and Environmental Clean-up of the Bogotá River, Colombia

Total Project cost: US\$487 millions

Loan: US\$250 millions

The Project objective is to make the Bogotá River an environmental asset for the metropolitan area of the Colombian capital through:

- The optimization and expansion of the Salitre WWTP;
- Flood control and environmental restoration works in the river, such as dredging and dike construction;
- Reclaim the riparian areas, river body and wetlands, and design parks and landscapes for recreational use;
- Prepare environmental and hydrological studies for the Bogotá river's sustainability, including: (i) Integrated water management plan in the Bogotá river basin; (ii) Solid Waste Master Plan for the Bogotá metropolitan area; and (iii) Maintenance and management Plan for the reclaimed area.



Matanza – Riachuelo, Argentina

- Supporting the Water Utility, the Environmental Agency and the Water Basin Agency
- Activities include
 - Primary and secondary sewer network, collectors and pumping stations
 - Primary treatment plant construction with sub-aquatic outfall
 - River quality monitoring and modeling program
 - Industrial discharges abatement program
 - Communication campaign
 - Strategic basin planning (urban planning, flood control)
- Phase 1: 840M USD loan (total cost 1,500M USD)
- Phase 2: A follow-up 1,160M USD loan might follow once triggers are met to complete the clean-up

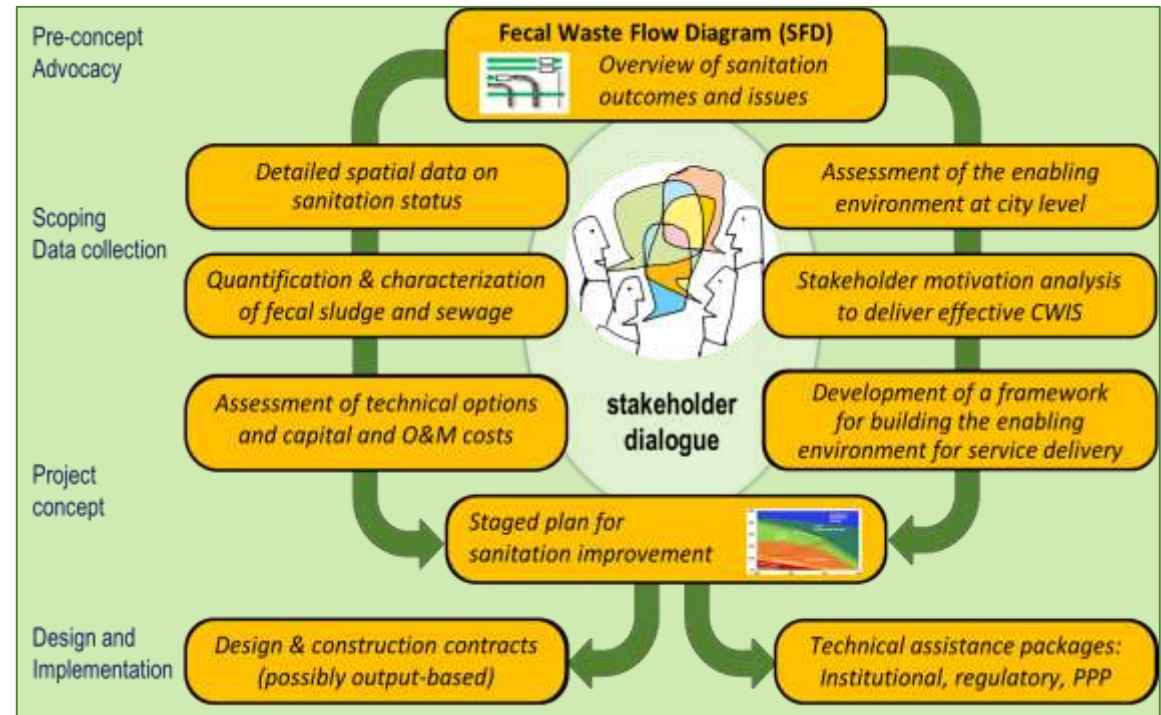


5. City Wide Inclusive Sanitation (CWIS)

Approach to urban sanitation that **involves collaboration among many actors to ensure that everyone benefits** from adequate sanitation service delivery outcomes:

- based on evidence of **how, why and where** sanitation services are failing
- addresses the **entire sanitation service chain**
- addresses an **appropriate mix of sewerred and non-sewerred sanitation** solutions
- linked with drainage, solid waste management, water supply and housing
- Includes all citizens, rich and poor, in formal and informal settlements

Project process for City-Wide Inclusive Sanitation



1. Bank-funded projects: WASH in Somalia - Calls for Even Greater Collaboration!

- ❑ Multi-pronged Bank support to **strengthen national systems** (Ministry of Water & Energy at national and federal levels) while **meeting essential services** – through strategically packaged smaller value projects.
- ❑ Since 2016, **four projects (\$39.3m)** for rural and urban WaSH; and for water for animals and agriculture
 1. Improving WSS services in rural communities - co-financing with DFID
 2. Construction & rehab of water and sanitation infrastructure
 3. Improving WSS services for urban & peri urban communities in Kismayo & Baidoa towns **in collaboration with GIZ, UNICEF and Danish Refugee Council**
 4. **Developing an integrated water resources management plan for Somaliland** – to guide future investments towards water security



2. Bank-funded projects: Integrated Rural Sanitation in Upper Egypt - Results Based Financing and Reuse (*under preparation*)

- ✓ 100 million people (about 50% live in rural areas)
- ✓ Water stressed country
- ✓ Sanitation coverage: 77% for urban areas and 14% in rural areas: Untreated wastewater is mostly discharged into the canals system
- ✓ Government launched the **National Rural Sanitation Program**, estimated at US\$ 14 billion. The NRSP has leveraged US\$ 1.15 billion so far (WB – US\$ 850m and AIIB US\$ 300m).
- ✓ Using **Results Based Financing**, AfDB contributing \$121m to the NRSP towards universal rural sanitation coverage.



3. Bank-funded projects (AWF): TOGO – Municipality of Sokodé – Community Engagement and Toilets for all through reuse/microcredit

Population:	UA 120,000
AWF:	UA 1,013,000
Plan International/ Togo:	UA 180,000
Municipality :	UA 48,000

- Household toilets: 650 units
- Emptying truck: 1 truck
- FS Treatment Plant: 100 m3/day
- Composting plant: 1

- **7 Community based enterprises (Toilet provider operating under as a private sector provider: selling toilets to HHs)**
- **1 Newly founded private operator (FS collection, FSTP operator + reuse of compost in urban agriculture)**
- Revolving fund sustaining access to services
- 40 Jobs of which 17 for women
- 5 surrounding smaller towns getting services (30.000 people)



**Replicated with EU funding in
4 other secondary towns**

Concluding Remarks

- **Governments need to prioritize** investments in sector - financing is way lower than required; new sources, partners and methods
- Develop a **pipeline of ready projects** for implementation
- **Innovation and scale up:** non-sewer sanitation, CWIS, waste to resources (AUSIF, Govts, Partners); multipurpose programs
- Strengthen stakeholder **capacities and national processes and systems**; ensure engagement of key stakeholders at all levels - government leadership, transparency and mutual accountability crucial
- **Engage with research institutions** - to harness the power of science and technology to address uncertainties and enhance impacts



“But the water problems of our world need not be only a cause of tension; they can also be a catalyst for cooperation [...]. If we work together, a secure and sustainable water future can be ours.”

(Koffi Annan, World Water Day, 2002)

THANK YOU!

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