Financing Water Quality Management in the Nile Equatorial Lakes Region

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Introduction

- Review of financing sources for water quality management is part of a World Bank-funded project being implemented by the Lake Victoria Basin Commission under the NCCR Project
- The objective of the LVBC component is to identify key challenges for water quality management, and prepare apolicy, strategy and financing plan for implementing the key interventions
- The information was collected from literature review and from questionnaires sent to Partner State officials
- Applicable for water sector financing in general.

Algal bloom on Lake Victoria

WQM: financing what?

- Financing needs to manage water quality come from multiple sectors; and are both **recurrent** and **CAPEX**
- Policy and standards development
- Establishment and O&M of ambient water quality monitoring networks; field samplers, water craft, etc.
- Establishment and O&M of water quality analytical laboratories (equipment, instruments, reagents and consumables, etc)
- Effluent discharge permit administration and compliance monitoring
- Water borne disease surveillance
- Construction and O&M of water treatment works
- Construction and O&M of wastewater treatment works, sewerage systems, FSM systems, Fecal Sludge drying

WQM: financing what?

- Construction and O&M of common waste treatment systems industrial parks
- Promotion of cleaner production in industry
- Collection, transportation and disposal of municipal solid waste; construction of sanitary landfills; waste recycling plants
- Management of municipal stormwater
- Watershed management, soil and water conservation
- Disaster risk management
- Establishment and O&M of water information systems and knowledgebases
- Institutional capacity building

Laboratory operations

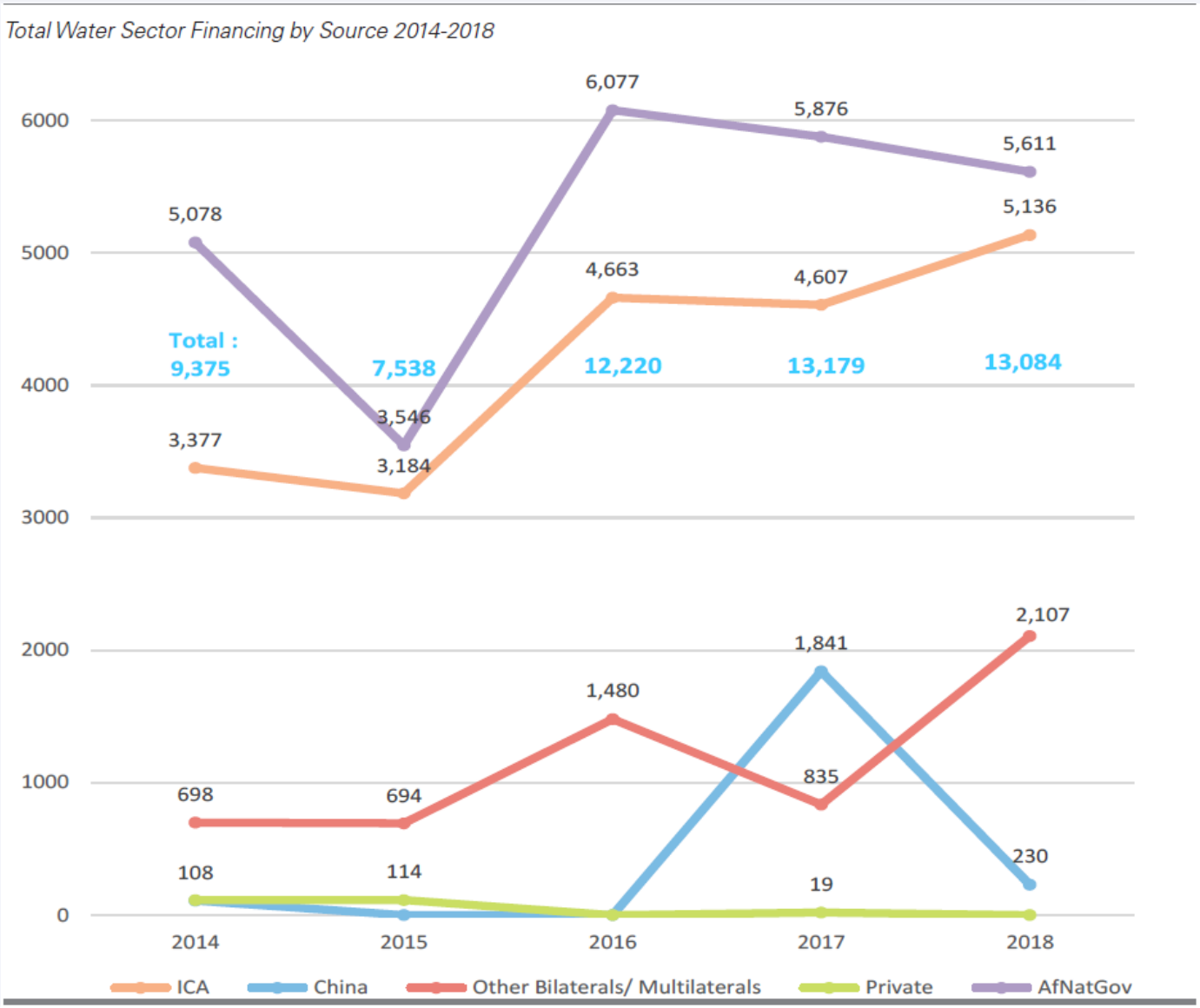
Traditional sources: the three Ts

- Traditionally, water sector financing is dominated by **public sources**
- A key reason for this is that water resources management, and to some extent access to WASH, is a public good. A **public good** is a commodity or service that is made available to all members of society. Typically, these services are administered by governments and paid for collectively through taxation
- Traditionally, the sustainable sources of WS financing are the three Ts:
  - **Taxes**
  - **Tariffs**
  - **Transfers**

Taxes

- One of the sources of water sector financing are **transfers** from **national** and local **governments** whose primary source is domestic taxation. A transfer is a one-way movement of financial resources for which no goods or services are exchanged.
- Public financial transfers are normally made to support delivery of public services by government institutions that have limited or no fiscal powers to raise their own revenues through taxation and other sources.
- Across Africa, national governments provide 42% of infrastructure investment financing for the water sector. African governments are also the dominant funders of recurrent expenditure. Their total contribution is therefore on

Transfers


Total Water Sector Financing by Source 2014-2018
6000
5000
4000
3000
2000
1000
0
2014
2015
2016
2017
2018
Total :
9,375
7,538
12,220
13,179
13,084
5,078
3,546
6,077
5,876
5,611
3,377
3,184
4,663
4,607
5,136
698
694
1,480
835
2,107
108
114
19
1,841
230
ICA
China
Other Bilaterals/ Multilaterals
Private
AfNatGov

National Taxes

- National taxes are a major source of government revenue. Common taxes in the countries include VAT, corporate income tax, exercise duty/customs duty, withholding tax, property tax, and tax for sale of immovable property, trading license, tax on mobile money, tax on air-time, tax on land transactions, etc.
- Total tax collections are **low** relative to public expenditure demands.
- Key reasons:
  - **Low tax base**
  - **Low tax rates – total tax is lower than developed countries**
  - **Moderate efficiency of collection**

Revenue Authorities

german cooperation
DEUTSCHE ZUSAMMENARBEIT

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National Taxes

- African leaders have adopted many self-set targets for financing the water and sanitation sector; but they have failed to meet them
  - **eThekwini** Declaration 2008; Ng'or Declaration 2015: allocate at least 0.5% of GDP to sanitation and hygiene.
  - **PANAFCON** 2003: Allocate at least 5% of national budget for water supply, sanitation and hygiene
  - **Sharm El Sheikh** 2008: accelerate attainment of WASH targets
- Water sector allocations are typically below 2.5-5% of the national budget
- Within the water sector, water supply takes the largest allocation; allocations to sanitation nad water resources management are **low**
- It is particularly difficult for the WRM subsector to obtain sufficient **recurrent budget** allocation to operate water resources monitoring networks

WQ monitoring network operations

Tariffs

- Tariffs are the **second 'T'**
- A water tariff is a price assigned to water (and sanitation service) supplied by a public utility.
- Water tariffs are determined by various factors, such as the costs of water production, treatment, and distribution, as well as the affordability for consumers and the financial sustainability of utilities.
- Tariffs are most times insufficient to cover capital and operational costs. Only about 50% of water utilities in Africa are able to cover operations and maintenance from their revenue collections. This makes them unattractive for private finance
- Reasons:
  - Low affordability of high rates
  - Politicization of tariffs
  - Low billing efficiency

Taxes and fees

- Public institutions, collect revenue through various fees and charges for services provided
- The collections may be retained by the user department, or remitted to central treasury and becomes part of government revenue collections
- Fees include **user fees** for water abstractions, **polluter pays** fee for effluent discharge permits; charges for **laboratory analysis** services; **sale of data**; charges for **consultancy services**, managemebt fees for projects, etc.
- These charges are only a tiny fraction of the operational needs of WRM institutions

Transfers

- Transfers (or external transfers) are the **third 'T'**
- The third T represents **Official Development Assistance.**
- The sources of external transfer include:
  - **Multilateral Development Banks** (World Bank, the European Investment Bank, the Asian Development Bank, the African Development Bank, the European Bank for Reconstruction and Development)
  - **Regional Development Banks**, (East Africa Development Bank, Eastern and Southern Africa Trade and Development Bank, Arab Bank for Economic Development in Africa; Development Bank of Southern Africa)
  - International **development cooperation organizations** (USAID, KfW, JICA, AFD),
  - **UN agencies** (UNDP, UNEP, UNICEF, etc)

Transfers

External contributions take the following forms:

- **Public grants** do not have to be repaid, but cannot be used to finance recurrent costs.
- **Loans**, have to be repaid, and accrue interest..
- **Technical assistance** refers to advisory and capacity building activities focused on building technical and human capacities of institutions.
- **Climate funds**, such as the Green Climate Fund and Adaptation Fund, are a form of external contribution. But the WQM sector has not benefited much from climate funds.

Transfers

- External transfers account for **30-60%** of the financing of the water sector
- It is getting increasing difficult to mobilize external transfers due to:
  - High debt burden, and limited credit worthiness of national governments
  - Donor fatigue
  - Emerging priorities like climate change and Ukraine
  - Global economic downturn
  - Lack of well prepared investment projects

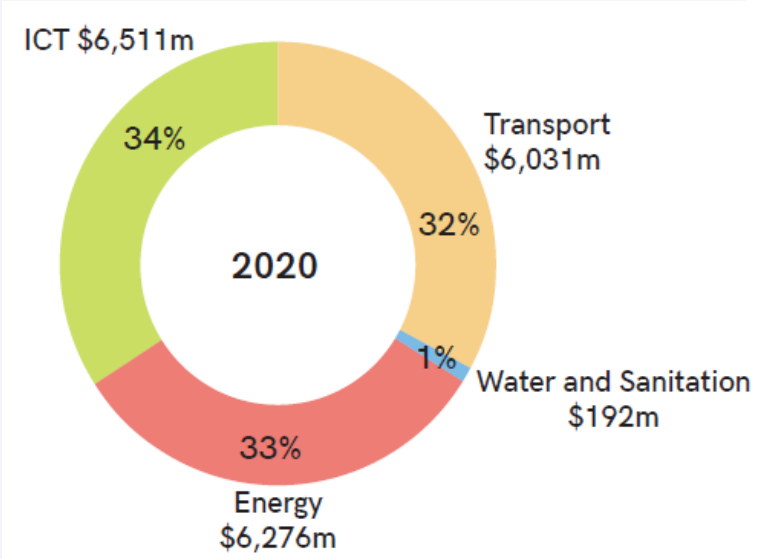
Water sector financing gap

- The traditional financing sources are **inadequate** to meet the needs of the water and sanitation sector
- Commitments to water sector infrastructure development in Africa is about **US$10-12 billion**/year
- Financing requirements to meet the SDGs in 2030 is US$58-68 billion; therefore **gap of US$48-58 billion**.
- The WHO/UNICEF JMP report on SDG6 indicators shows that, to attain the SDGs, Africa needs to increase its level of effort by 12x for water; 20x for sanitation; and 42x for basic hygiene

Private Sector Financing

- It is often suggested that the **private sector** could fill the financing gap in WRM
- However, private capital can mostly be attracted by projects that have a commercial component, or are able to **generate a return on investment** for the private financiers.
- Since WQM does not typically generate revenues, or profits, it has **limited ability** to attract private finance.

Private Sector Infrastructure Financing in Africa 2020



Private Sector Financing

Private entities that provide financing for infrastructure projects include:

- commercial banks
- private companies/businesses
- Insurance and re-insurance companies
- entrepreneurs
- investment funds
- pension funds

Private Sector Financing

Private funding mainly comes in the form of:

- **Grants** (as part of corporate responsibility; faith-based organizations and foundations, charities. Philanthropic organisations, etc.)
- **Debt** (bank loans, bonds, private placements, etc.)
- **Equity**
- **Credit guarantees** and
- **Political** risk insurance.

Public Private Partnerships (PPP) are commonly used to provide private finance to infrastructure projects through

- build-operate-transfer (BOT)
- transfer-operate-transfer (TOT)
- design-build-and operate (DBO) models

Private Sector Financing

The water sector is not as attractive

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Investment in waste recycling

Solid waste dump, Dandora, Nairobi City

Plastics recycling – an area of private sector investment

Private Sector Financing

Private Sector Financing

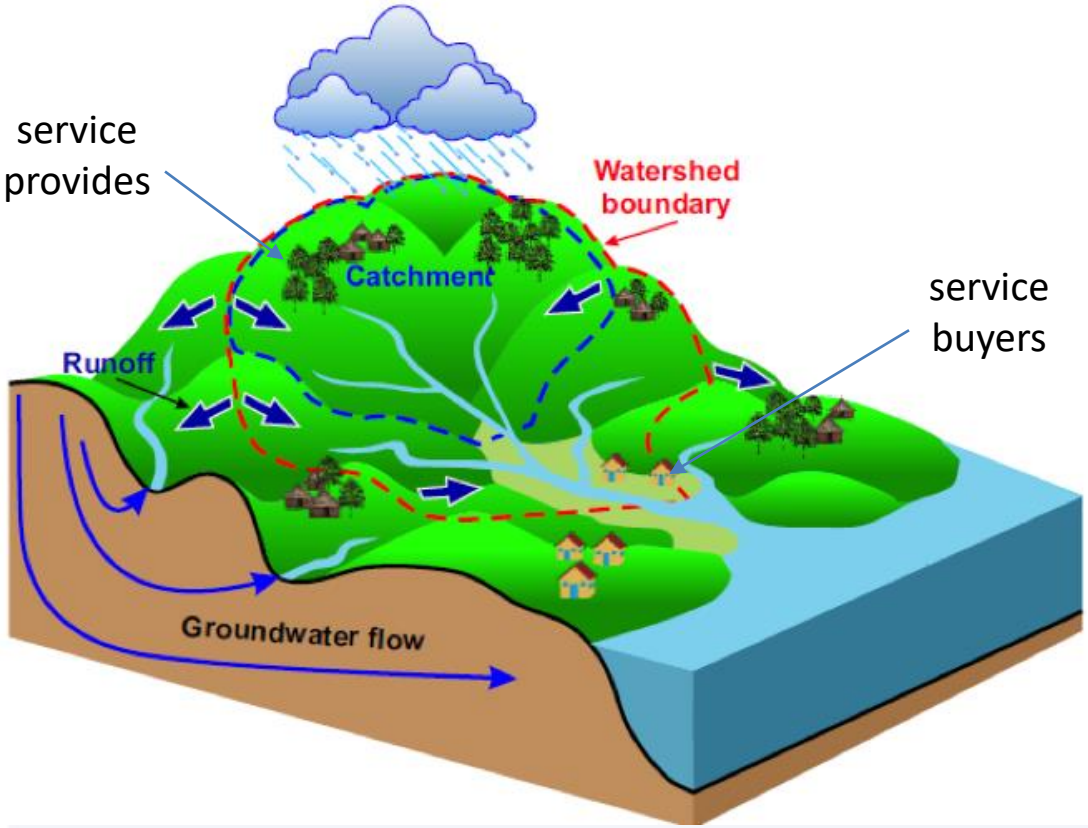
The reasons for low private sector financing of the water sector:

- poor creditworthiness of the sector;
- the perception of political and regulatory risk in Africa
- bureaucracy, red tape, corruption,
- Utilities are not commercially viable due to low tariffs and high non-revenue water

However, private sector financing in the water and environment sector is growing through

- FDI in waste recycling and renewable energy
- Corporate responsivity, greening corporations
- Payment for Ecosystem Services (PES)

Payment for ecosystem services



- **Payment for ecosystem services** (PES) schemes are voluntary arrangements between service providers (those who engage in ecosystem and watershed management measures), and buyers of the services (those who benefit from ecosystem goods and services)

Payment for ecosystem services

- The **Upper Tana – Nairobi Water** Fund PES scheme where Nature Kenya in association with the East Africa Natural History Society are facilitating financing agreements between upstream community groups in Mt. Kenya, and downstream corporate users. The upper Tana is the main source of water for the city of Nairobi
- **Amboseli ecological cottages PES scheme** – where local and international wildlife conservation organisations (African Wildlife Foundation, Tami Lodge, Birdlife Foundation, and International Fund for Animal Welfare) are leasing land from Masai, paying them to keep the land open for wildlife (no fencing, no farming, no blockage of wildlife movement, no extraction of natural resources)

Payment for ecosystem services

- **Uluguru Mountains PES Scheme** – which aims to conserve the upper catchment of the Ruvu River that supplies 90% of the water of Dar Es Salaam city.
- **East Usambara Mountains** – which aims to protect the upper catchment of the Zigi River that supplies 100% of the water needs of Tanga city.
- **Private Forest Holders in Uganda** – Receiving payment for not cutting immature trees on their private woodlots

A farmer in the Upper Tana Catchment

Testing stream water quality in Upper Tana Catchment

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Ruvu River Water Intake (Dar City main supply)

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Innovative financing – impact financing

Impact financing are investments made with the intention of generating a positive, measurable social and environmental impact alongside a financial return. Examples:

- **Green bonds**: A bond is a **loan** from an investor (private sector) to a borrower such as a government of company, and the borrower uses the money to fund its operations, while the investor receives interest on the investment. A green bond is a loan to support specific climate-related or environmental projects.
- **Blue Peace Bond**, is a special type of impact financing that blends public and private finances into a single, lower risk financing instrument used to finance projects from a regional multi-sectoral transboundary water resources development master plan. This type of financing is being piloted in the

Innovative financing – Nature Bonds

- **Nature bonds** Is a type of impact financing used to support the conservation of marine and coastal ecosystems while addressing climate goals and supporting the well-being of local communities and national economies.
- Nature Bonds provide a mechanism to leverage **debt refinancing,** which is a process where a borrower applies for a new load or debt instrument that has better terms than a previous obligation.
- The national government is assisted to re-invest the savings from the Nature Bond in conservation and climate mitigation and adaptation
- Nature bonds are being championed by the Nature Conservancy. One of the programs is on the **Western Indian Ocean**, where Seychelles, Mauritius, Kenya and Tanzania are participants.

Innovative financing – Nature Bonds

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Conclusions

- Public financing from transfers is the **dominant** source of financing, and will continue to be the dominant source of financing in the foreseeable future, for water quality management, due to the pubic good nature of WQM services.
- In all NEL countries, funding for water quality management (monitoring networks, water testing laboratories, compliance monitoring, etc.), is inadequate.
- Long-term financial sustainability therefore lies in increased government revenue collections.
- The water sector needs to better communicate its importance to ministries of **finance and national parliaments**; this can be supported by **economic valuation studies**.
- **Capacity building** is required in preparation of bankable project proposals and tapping into impact financing and climate funds


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