Nairobi water resources and systems of accountability: the role of data and science

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Freshwater Conservation and WASH in CoP

Water Resources

1. Water quality and quantity
2. Governance
3. Competing water users
4. Developments

Role of Data and Science

Transforming water-scarce urban settlements into water-secure settlements

Systems Accountability
# Water Quality and Quantity Issues in Nairobi County

*Analyses of root causes of waters issues*

## Root Causes
- Population pressure, Poverty and inequality, Bad governance,
- Financial Constraints, Inadequate knowledge/awareness

## Direct Causes and Underlying Sectors
- Agriculture and Forestry, Urbanisation and tourism, Mining, Transport,
- Energy Production, and Aquaculture

## Environmental Problems
- Deterioration of land, sediment/soil or water or air conditions due to presence of pollutants or pollution, quantity

## Environmental Consequences
- Effects of activities on biophysical environment: changes in species composition and mortality of organisms

## Socio-Economic Consequences
- Effects of biophysical changes on socio-economic well-being on the human population e.g., health risks, increased poverty, reduced land value, reduced fisheries, reduced tourism and aesthetic values etc

Adapted from UNEP-GEF WIO LAB Project 2008
Water quality and quantity in NC

- 95% of water needs for the NC comes from Upper Tana River Water Watershed (Thika/Chania Aberdare Mountains).
- Bore holes
- Major water issues in the watershed:
  - Water quality: sedimentation
  - Quantity
- In the NC
  - Pollution: sedimentation, chemical, nutrients etc
  - Outstretched sewer systems

Credit: TNC Upper Tana-Nairobi Water Fund
Redefined roles and responsibilities under Kenya’s 2016 Water Act
Role of science and data in sustainable management of water resources in NC and UT

- Water quality both in the watershed and NC.
- Hydrological regimes.
- Water allocations among different competing users to reduce water conflicts.
- Roles of major players to minimize conflicts/duplications, exploits opportunities and synergies.
- Carry out environmental services valuations, to support Upper Tana Nairobi Water Fund restoration and conservation initiatives.
- Support UT Aquatic Ecosystem Monitoring Programme (AEMP), through data compilation and sharing as well as identification of research gaps.
- Study success of environmental education and awareness.