

Performance improvement in water cycle management

In our peer-to-peer partnerships, we work towards sustainable water services for all



Amsterdam, The Netherlands, 2023





Mission

World Waternet and alliance partners work with water cycle experts to support public water organisations all over the world.

Water cycle management

Performance improvement

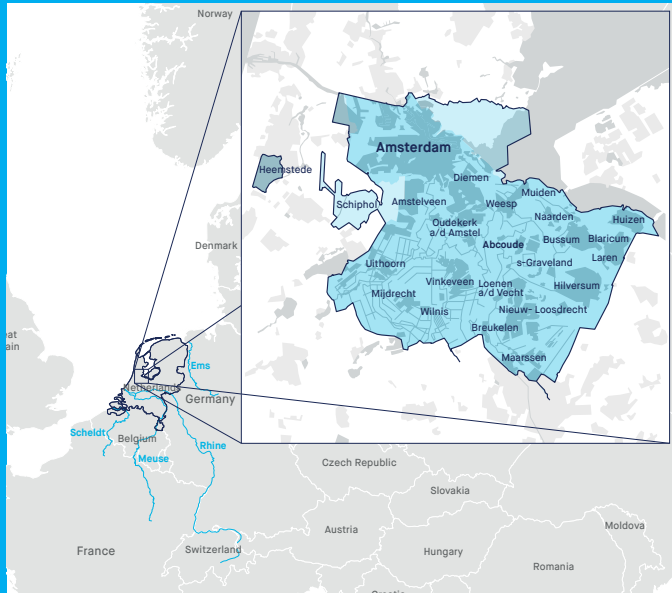
Peer-to-peer

Waternet experts

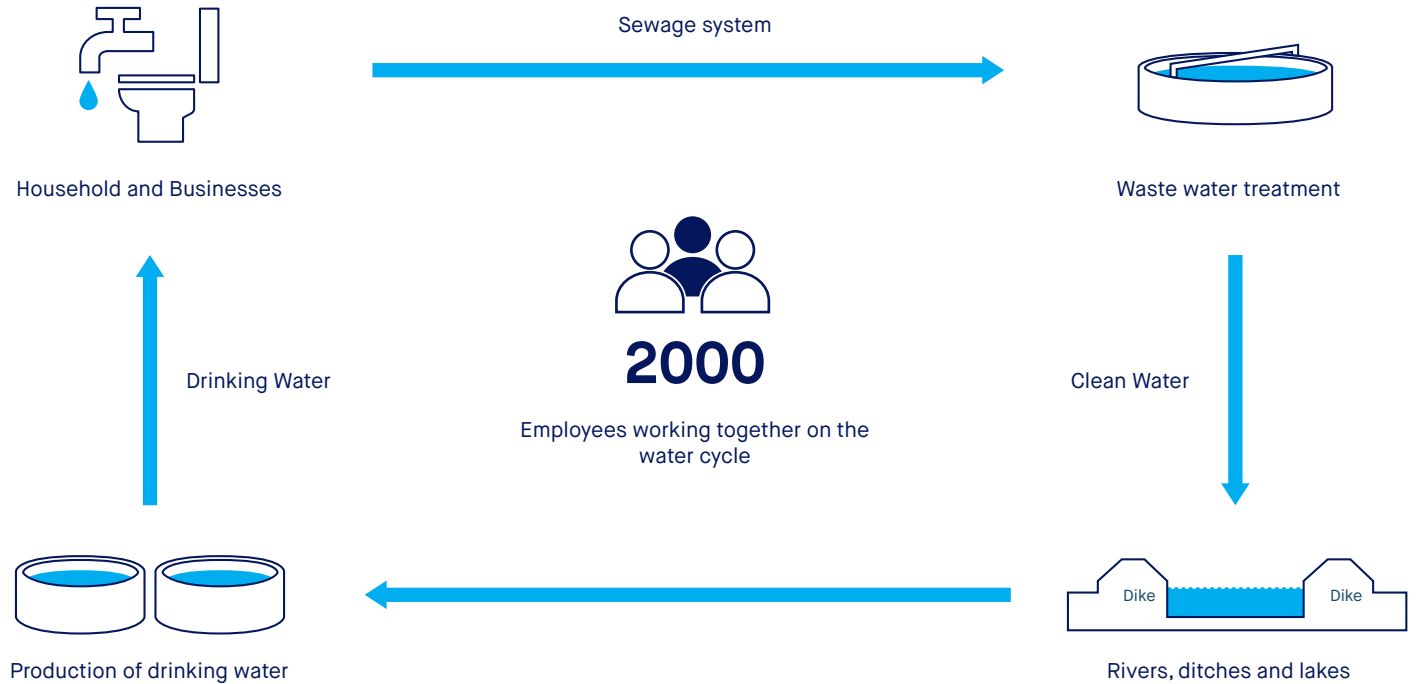


Waternet is the Amsterdam public water organisation

We provide water services to 1.3 million people in an urban delta area, on behalf of the City of Amsterdam and the Regional Public Water Authority Amstel, Gooi & Vecht.



Waternet is the only water organisation in the Netherlands that covers the entire water cycle



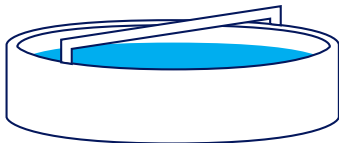
An integrated water cycle approach has many benefits

 Average **93M** cubic meters per annum drinking water production

 **3-5%** non revenue water

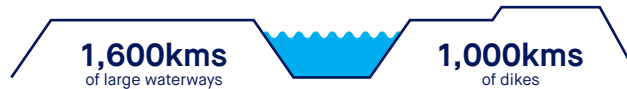
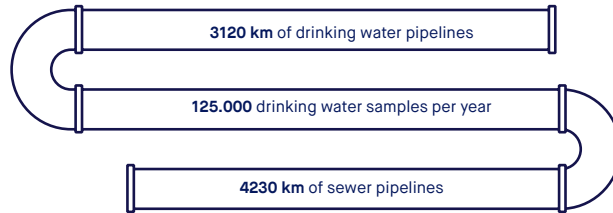
 **€ 1.03 per m³** drinking water tariff

12 Waste water treatment plants



373
Million euros annual turnover


190.841
drinking water connections



A 4 person household in 2023 has to pay

Water management levy: **€136**

Waste water treatment levy: **€187**

Drinking water charge: **€419**

Sewage levy: **€52**

Annual water bill: **€749**

= total cost recovery
= 2% of average annual income

Our unique water cycle management expertise



Climate adaptation

Waternet anticipates the adverse effects of climate change and takes appropriate action to prevent/limit the consequences of flooding and droughts, with e.g. the Amsterdam Rainproof programme.



Managed aquifer recharge

Two-third of Amsterdam's drinking water is pre-treated in the Amsterdam Water Supply Dunes. This natural filter produces 60 to 70 million m³ drinking water annually. Water from the river recharges the groundwater and continues its journey to become tap water. This process takes about 3 months.



Amsterdam City Swim

This event attracts thousands of swimmers yearly for a 2-kilometer open water race through the canals of Amsterdam. This event is now possible because of Waternet's extensive efforts to improve surface water quality.



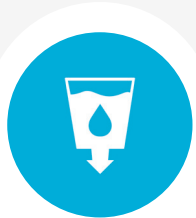
Research & Innovation

The world is changing, and we are preparing for the future. To find new solutions we introduce new technologies, improve operations, and respond to societal challenges through our powerful Research and Innovation programme.

Knowledge partnerships

Waternet is preparing for the future with a powerful research and innovation programme. We introduce new technologies, improve operations, and respond to societal challenges. At the same time, the programme

offers excellent opportunities to exchange knowledge and best practices with water cycle companies abroad: our 'knowledge partners'. This allows us to tackle the same challenges together.



Water quality and technology



Energy Transition



Climate & adaptation



Data & Sensoring



Soil subsidence



Circular economy



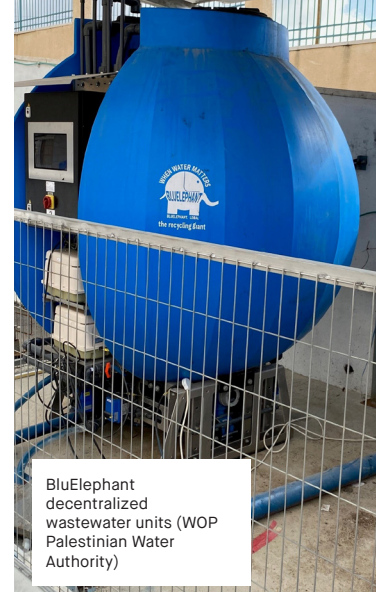
We are preparing for the future, with practical and innovative solutions



Mobile Water Management App for the Tana River (WOP Water Resource Authority)



Prepaid water kiosks (WOP Morogoro Urban Water Supply and Sanitation Authority)



BluElephant decentralized wastewater units (WOP Palestinian Water Authority)



Wetlands as nature-based solution septic tanks overflows (WOP Ethiopia Waste Water and Water Supply Oromia)

We strive towards sustainable water services for all

- 💧 Increase access to water and sanitation services for all people (SDG 6.1 and 6.2)
- 💧 Promote integrated water resources management, focusing on the water cycle (SDG 6.4, 6.5 and 12.2)
- 💧 Maintain and conserve the water supply sources in a sustainable way (SDG 12.2, 13.1 en 15.1)
- 💧 Govern and cooperate with all stakeholders involved in water cycle management (SDG 5.5 and 17.7)
- 💧 Triple investments in water infrastructure by 2030 (SDG 17.1 and 17.9)
- 💧 Raise awareness for behavioral change (SDG 6.4, 13.3 and 15.3)
- 💧 Collaborate to boost innovations, new technologies, methods, concepts and financing (SDG 17.6)



What makes our partnerships unique?

Waternet's leading water cycle expertise

Long-term, public-to-public relationships

Demand-driven performance improvement

Proven to catalyse investments

Peer-to-peer learning

Non-profit exchange

On-site, hands-on, specialised on-the-job training



We collaborate in strategic programmes and match funding to increase our impact



In a public-private collaboration until 2030, 10 Dutch water companies, together with the Dutch Ministry of Foreign Affairs, and local partner companies in Africa, Asia and Latin America contribute to increasing access to sustainable water services.



In the international programme of the Dutch Ministries of Foreign Affairs, and Infrastructure & Water Management, the 21 Dutch Water Authorities are helping 20 million people in 40 catchment areas around the world to gain access to clean, sufficient and safe water by 2030.



Ministry of Foreign Affairs of the Netherlands



Netherlands Enterprise Agency



Ministry of Infrastructure and Water Management

InvestInternational



Operational excellence of water organisations depends on 4 critical success factors

Autonomous governance and accountability

Water organisations have the leadership and staff to run their operations and finances autonomously and hold themselves accountable.



Integrated Water Resources Management

Water organisations are capacitated to manage the whole water cycle and address climate change, food security, gender equality and partner with all stakeholders.



Operational efficiency

Water organisations achieve efficiency by targeting customer satisfaction, 100% collection rate, reduction of non labour costs, reduction of NRW and energy efficiency.

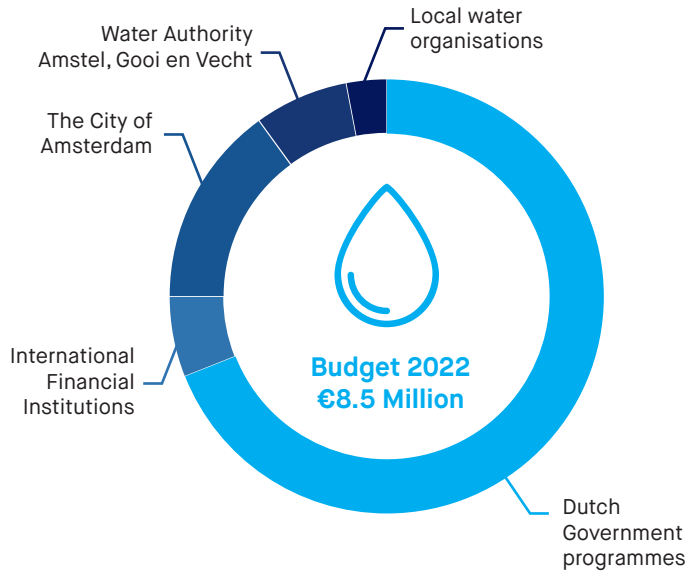


Financial sustainability

Water organisations cover their operational costs at 120% through revenues.



How do we finance our projects?



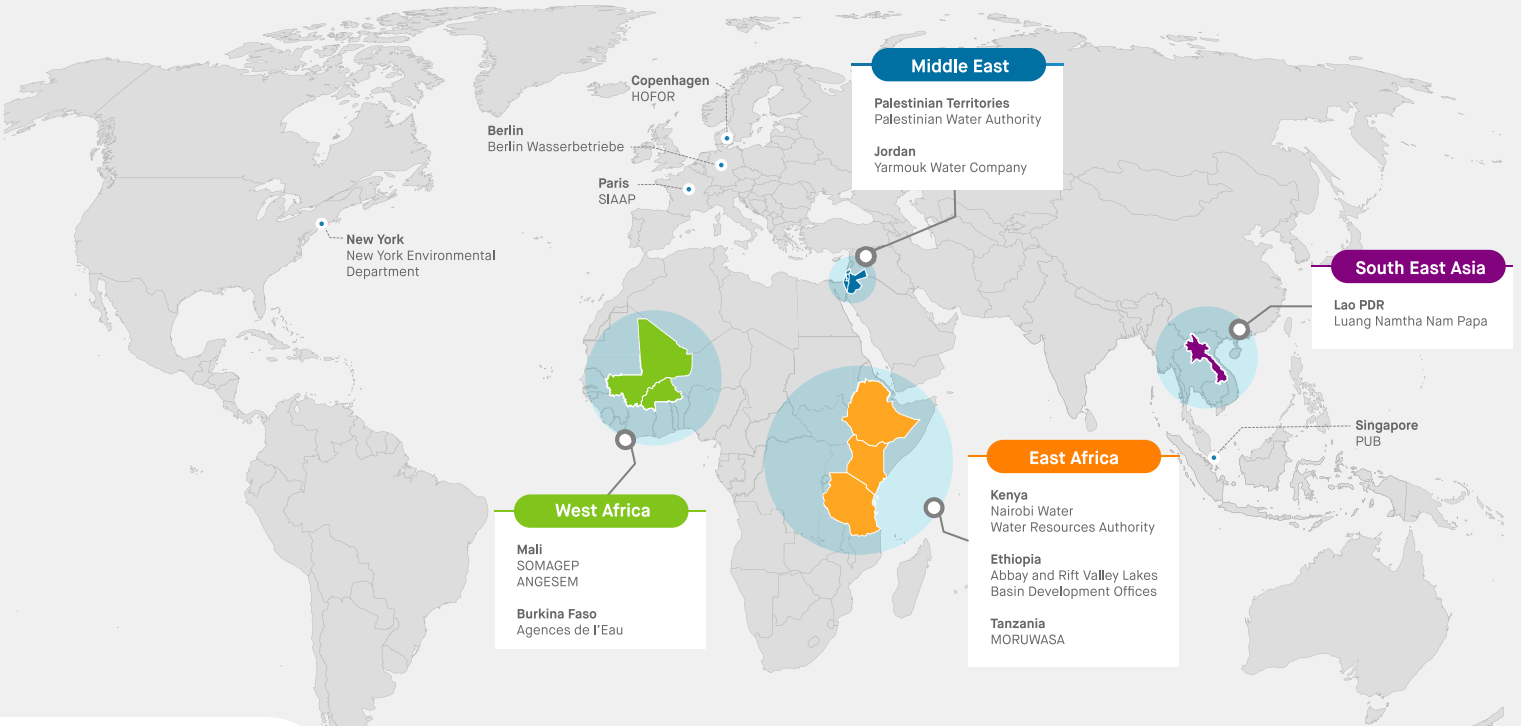
Water Operators' Partnerships

WOPs are peer-support partnerships between water and sanitation service providers. WOPs work by harnessing the skills, knowledge and goodwill within a strong water utility to build the capacity and improve the performance of another water utility that needs assistance or guidance

1 % impact aspiration

To support water organisation in developing countries to increase their service delivery, and thus support the SDG agenda, the motion Wiegman and Koppejan (2009) has ensured that all national drinking water companies and water authorities in the Netherlands are allowed to spend a maximum of 1% of their annual turnover on international activities.

Our Water Operators' Partnerships






Mali

Société Malienne de la Gestion de l'Eau Potable

Water Operators' Partnership to improve water quality in 90 cities in Mali

 **Region:** Southern Mali





 **Period:** 2018 - 2030

 **Partners:** Société Malienne de Gestion de l'Eau Potable (SOMAGEP), Société Malienne de Patrimoine de l'Eau Potable (SOMAPEP), aHet Waterlaboratorium, Waterproef and Direction Nationale de l'Hydraulique de Mali




 **Financier:** WaterWorX Programme, EU-WOP Programme, Young Expert Programme, Entrepreneurial Development Bank (FMO), Netherlands Enterprise Agency (RVO)



Topics

-  Non-revenue water reduction
-  Efficient complaint handling
-  Pro-poor and social connections programme
-  Water safety planning

Results

-  Create District Metered Area (DMA) network
-  Set up of water balance to improve technical operations of the network
-  Promote efficient water use and water conservation




Mali

Agence Nationale de Gestion des Stations d'Épuration du Mali

Performance improvement in the wastewater sector in Mali

 **Region:** Southern Mali




 **Period:** 2018 - 2030

 **Partners:** Agence Nationale de Gestion des Stations d'Épuration du Mali, Dutch Water Authorities, Rijn & IJssel, De Dommel, Rivierenland and Wetterskip Fryslân




 **Financier:** Blue Deal Programme



Topics

-  Improved management and monitoring of WWTPs within the IWRM-WASH nexus
-  Strengthening organisational capacities
-  Support financial independence and revenue diversification

Results

-  Analysis of WWTPs' water quantity and quality
-  Improved stakeholder management, internal leadership and communication skills
-  Capacity building in business case development, financial management and long-term strategy management




Burkina Faso

Agences de l'Eau

Supporting five Burkinabe water authorities with the implementation of integrated water resources management

 **Region:** Burkina Faso nationwide

 **Period:** 2019 - 2030

 **Partners:** Agences de l'Eau du Nakanbé, du Gourma, du Mouhoun, des Cascade and du Liptako, Secrétariat Permanent pour la Gestion Intégrée des Ressources en Eau (SP-GIRE), Dutch Water Authorities Drents Overijsselse Delta, Noorderzijlvest, Hunze & Aa's, Association Faso Koom and APAF-Burkina Faso

 **Financier:** Blue Deal Programme, Nederlandse Waterschapsbank- fonds, Waterschap Hunze & Aa's and EKN-OUA/ SNV



Topics

- 💧 Technical assistance and support for climate proof integrated water resources management
- 💧 Institutional support for organisational development and financial sustainability
- 💧 Relational support on cooperation and communication

Results

- 💧 Improved monitoring, maintenance and renovation of essential reservoirs, including nature-based solutions for water harvesting
- 💧 Developed water quantity and quality monitoring systems
- 💧 Implemented reforestation project to prevent riverbank erosion and promote ecosystem recovery
- 💧 Promotion of IWRM in gold panning
- 💧 Establishment of local water committees for IWRM
- 💧 Enhanced capacity for stakeholder management & communication



Jordan

Yarmouk Water Company

Water Operators' Partnership to improve service delivery and increase access to improved sanitation and clean, sufficient and safe water.

 **Region:** Northern Jordan

 **Period:** 2020 - 2024

 **Partners:** Yarmouk Water Company, Jordan Ministry for Water & Irrigation and Water Authority Jordan

 **Financier:** Dutch Ministry of Foreign Affairs



Topics

- 💧 Sewer operations & maintenance planning
- 💧 Asset management training for WWTPs

Results

- 💧 Piped water supply distribution and sewerage system for every household in the refugee camp
- 💧 Rehabilitation sewer lines in 6 streets of Irbid
- 💧 Operations & maintenance plans for three WWTPs
- 💧 Donation of three vacuum -and high-pressure trucks for improved sewer maintenance
- 💧 Trained staff on operations & maintenance and asset management



Palestinian Territories

Palestinian Water Authority

Support in national water sector reform:
from 300 to 4 water service providers

 **Region:** Salfit, North Hebron, Ramallah

 **Period:** 2019 - 2030

 **Partners:** Palestinian Water Authority, Joint Service Council North Hebron, Salfit Municipality, Hoogheemraadschap Hollands Noorderkwartier, Jotem Water Solutions, Waterschap Rivierenland, Waterproef

 **Financier:** Blue Deal Programme, WaterWorX Programme, Netherlands Representative Office, Young Expert Programme, Nederlandse Waterschapsbank (KIWI/YEP), NUFFIC, Jotem B.V.



Topics

- ◆ GIS, NRW, Asset management capacity building by on-the-job training
- ◆ New cost-recovery mechanisms & 3-step approach towards sustainable sanitation
- ◆ Improving financial sustainability through cost-recovery and bankable proposals
- ◆ Institutional capacity building, organizational development and human resource management

Results

- ◆ Water sector reform bylaw implementation
- ◆ Construction of an improved regional laboratory with adjoined trainings
- ◆ PPP innovation; BluElephant, decentralized mobile WWTP
- ◆ GIS and Water Cycle Management training
- ◆ Shit Flow Diagram development and integration




Laos

Provincial Nam Papas

Supporting water utilities to improve water services

 **Region:** Throughout Laos

 **Period:** 2017 - 2030

 **Partners:** Eight provincial water utilities (nam papas), Laotian Ministry of Public Works and Transport (Department of Water Supply)

 **Financier:** Asian Development Bank & WaterWorX Programme



Topics

- 💧 Capacity building on the use of IT, geographic information system (GIS), and data management for sanitation and water use
- 💧 Support of investment proposal preparations

Results

- 💧 Implementation of a GIS and asset management
- 💧 Improved customer satisfaction
- 💧 Improved access to safely managed sanitation services
- 💧 Improved drinking water production
- 💧 Climate change mitigation, adaptation and impact reduction



Ethiopia

Basin Development Offices

Improved water allocation, water quality and sustainable irrigation



Region: Abbay Basin & Rift Valley Lakes



Period: 2019 – 2030



Partners: The Abbay Basin Authority, the Rift Valley Lakes Basin Authority, Dutch Water Authorities Hollands Noorderkwartier & Rijnland, Waterproof, Wetlands International, Acacia Water BV, Meki Batu Cooperatives Union and Joytech Plc.



Financier: Blue Deal programma & Sustainable Water Fund (FDW)



Topics

- Implementing sustainable river basin management and water allocation
- Data collection and management with new monitoring equipment
- Preparations for introduction of water tariffing

Results

- Draft Water Allocation Plan for Tana/Beles sub basin, including extensive training on WEAP establishment of a desk study on groundwater mapping
- Identified gaps in hydrological and basin information and specified needs for hydrological data management
- Trained experts in laboratory skills
- Awareness raising for the water pricing pilot in the Kunzilla development near Bahir Dar
- Water resources management implemented
- Functional water monitoring program in Ziway-Shalla basin area (quantity and quality)




Ethiopia

Ethiopia Waste Water and Water Supply Oromia

Efficient & effective faecal sludge management and improved water supply

 **Region:** Oromia

 **Period:** 2019 – 2030

 **Partners:** Water utilities of Adama, Shashemene & Hawassa, Heban Nagelle Siraro Water Supply & Sewerage Services Enterprise, Dutch Water Authorities Aa & Maas, Vallei & Veluwe and Rivierenland, Ethiopian Ministry of Water and Energy (MoWe), Woord & Daad, Siraro Water Enterprise, WASTE and BBBC

 **Financier:** Blue Deal Program, NWB Fund, Woord & Daad



Topics

- 💧 Improvement and expansion of water quality and sewage collection/treatment
- 💧 Improvements in operational efficiency
- 💧 Capacity building to ensure city-wide inclusive sanitation and faecal sludge treatment in Adama, Shashemene and Hawassa
- 💧 Increase and improve water supply to customers
- 💧 Wetlands as nature-based solution for combatting overflows of septic tanks

Results

- 💧 On-the-job-trainings for the utility staff on contract management, project management and financial management
- 💧 Dedicated team for sanitation and wastewater management at the three utilities (Adama, Shashemene and Hawassa), with increased mandates for the three utilities
- 💧 Non-revenue water improvement plan
- 💧 Asset management plan
- 💧 Study on faecal sludge transport.
- 💧 Constructing and monitoring wetlands



Kenya

Nairobi Water

Improve drinking water supply and sanitation services



Region: Nairobi City



Period: 2017 - 2030



Partners: Nairobi City Water and Sewerage Company Ltd (Nairobi Water)



Financier: WaterWorX Programme



Topics

- Enable NCWSC to grow and provide more sustainable, safe and clean drinking water and sanitation for the inhabitants of Nairobi
- IWRM for future water volumes in Upper Tana catchment.

Results

- Improve drinking water production at Ngethu Treatment Plant
- Support establishment of Wastewater Management Plan
- Introduce and improve application of Asset Management throughout NCWSC
- Reduce NRW by modelling and selected interventions
- Develop investment proposal, e.g., for additional water production and energy reduction
- Improve the enabling environment and cooperation with other (water) institutions



Kenya

Water Resources Authority

Sustainable water management in the Upper Tana Basin



Region: Upper Tana basin



Period: 2019 - 2030



Partners: Kenya Water Resources Authority (WRA), Dutch Regional Water Authorities Aa & Maas, de Stichtse Rijnlanden and Embassy of the Earth



Financier: Blue Deal Program, NWB fund



Topics

- Ensuring sustainable water management
- Water availability/scarcity
- Water allocation in Upper Tana catchment

Results

- Water allocation plan
- Revised existing sub-catchment management plans
- Upscaling to other geographical areas
- Improved water quality
- Search conference on Searching, learning, planning and adapting our way to a climate resilient future of the Thika River Basin



Tanzania

Morogoro Urban Water Supply and Sanitation Authority

Improve drinking water supply and sanitation services



Region: Morogoro



Period: 2018 - 2030



Partners: Morogoro Urban Water Supply and Sanitation Authority, Dutch Water Authority Hollands Noorderkwartier, Waterschap Rivierenland, Brabantse Delta, Nederalndsse Waterschapsbank-fonds and Kinara for Youth Evolution



Financier: WaterWorX Programme

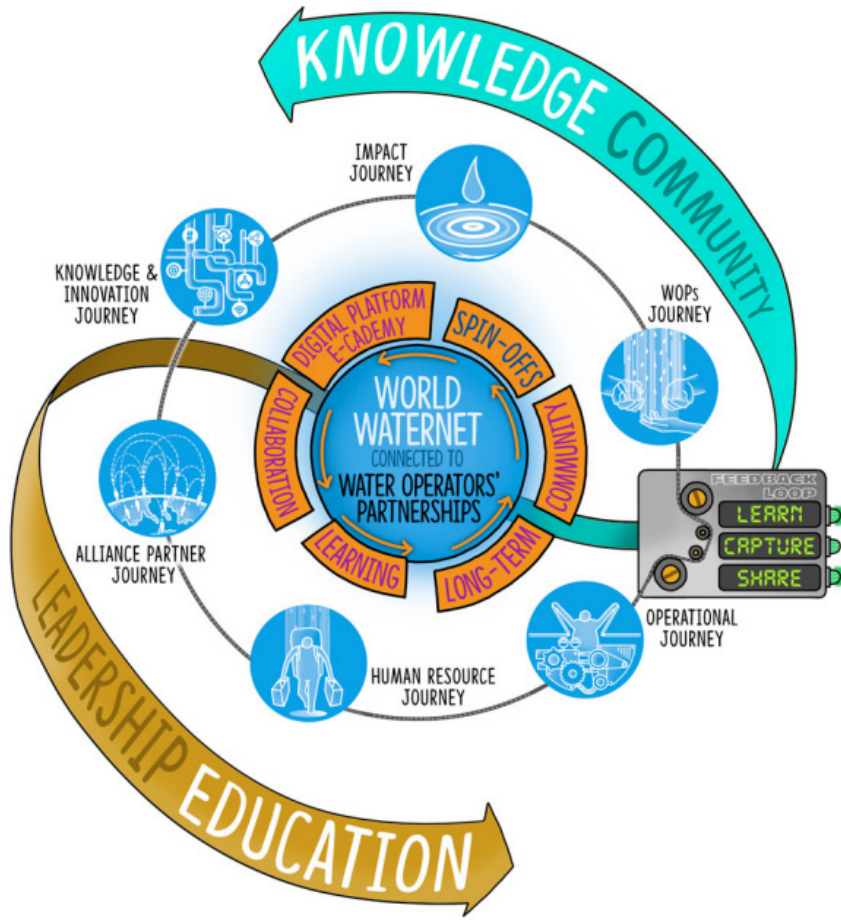


Topics

- Non-revenue water reduction
- Pro-poor and social inclusion to WASH
- Climate proof watershed management to ensure sustainable access to drinking water

Results

- GIS registration of the network
- Create District Metered Area (DMA) network and water balance to improve technical operations of the network
- Improved cost recovery measures
- Improved water services in low-income areas by rehabilitating water kiosks
- Preserved water resources and catchment areas by planting trees and awareness training
- Organisational development in the field of human resources (including gender equality and social inclusion)





www.worldwaternet.com