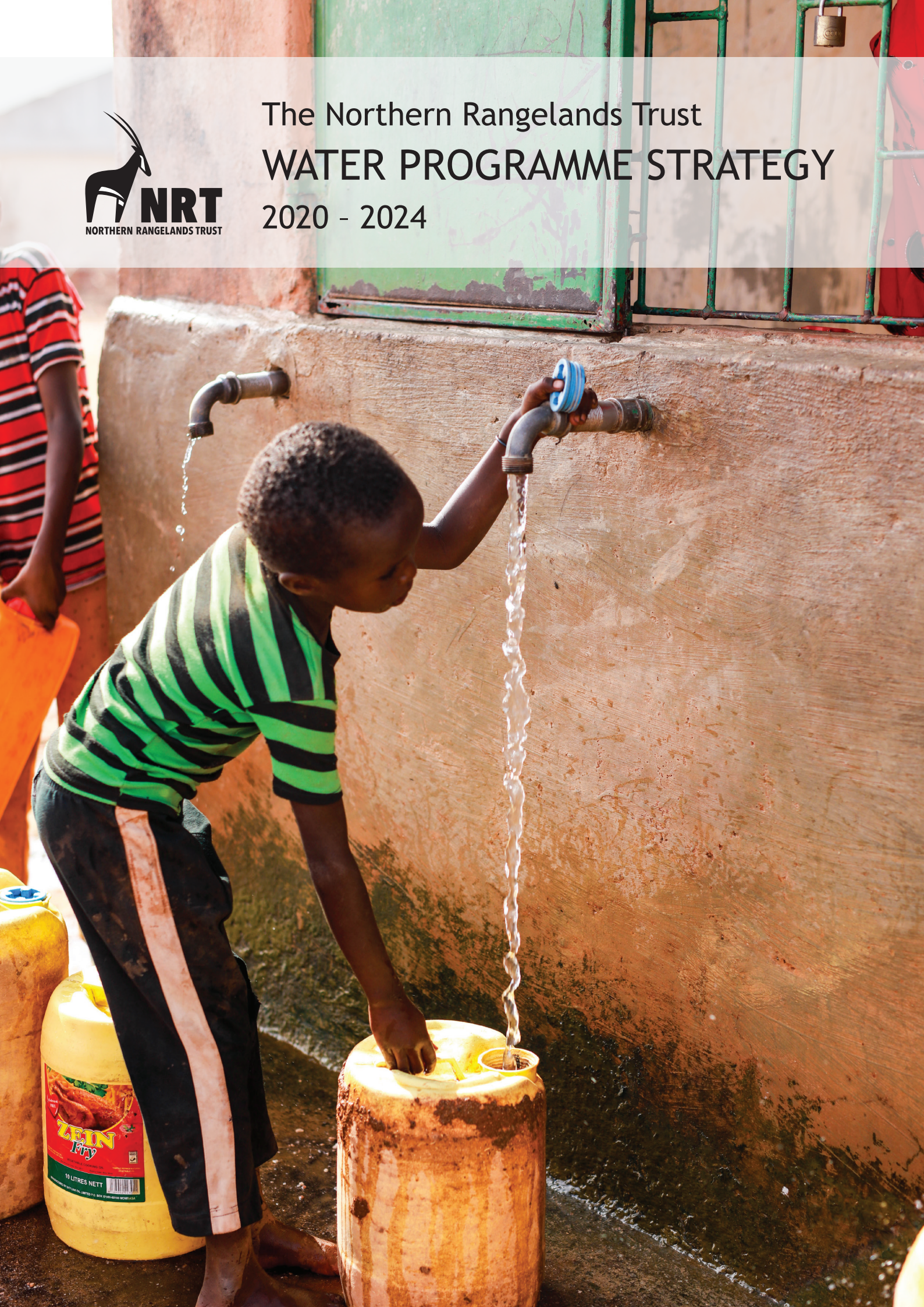
NRT
NORTHERN RANGELANDS TRUST

The Northern Rangelands Trust

WATER PROGRAMME STRATEGY

2020 - 2024



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Cover photo: Tatiana Karanja
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SUMMARY

NRT has recently established a water programme with dedicated staff to implement it. This builds on almost a decade of NRT's investment in water development in member conservancies.

This strategy outlines a new approach to NRT's water development that is shifting from project-type infrastructure to a more integrated approach. This involves water resource planning, management, and infrastructure development, with conservancies as the entry point for all aspects of the programme.

The aim is to ensure water is developed holistically with environmental, technical, and financial sustainability built into the design and management of water supplies at a conservancy level.

The overall aim of the water programme is to ensure water investments are planned holistically, address community priorities, take into account social and environmental considerations and build conservancy-level governance and management capacity.

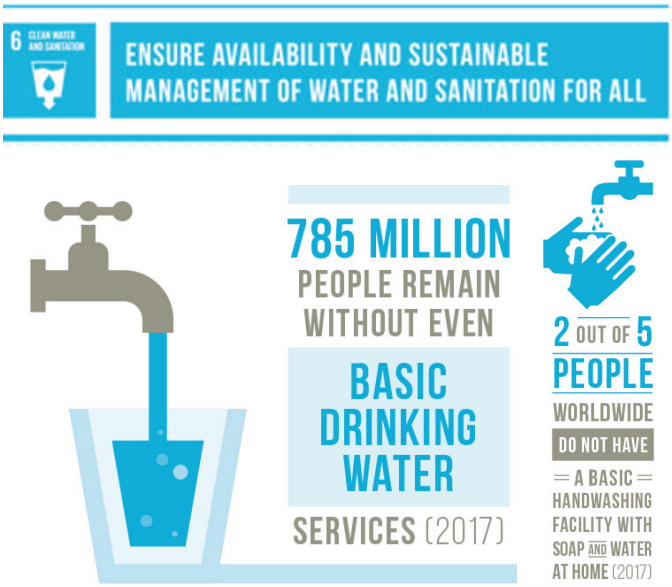
This will be achieved through the following objectives:

1. **Conservancy water resource management strategies:** development of strategies for each conservancy that capture the status of water resources and community priorities for water development.
2. **Conservancy water governance:** develop capacity for effective water governance and management the conservancy level, and to build the trust of partners in the capacity of conservancy institutions to plan and manage water resources.
3. **Water infrastructure development:** provide strategic and sustainable water supplies for domestic use, livestock, wildlife, irrigation, conservancy staff and tourism facilities.
4. **Water, sanitation and hygiene (WASH) for health:** increase household access to safe drinking water and improve good sanitation and hygiene practices to reduce disease and malnutrition
5. **Stakeholder coordination & partnerships:** strengthen coordination and partnerships with stakeholders working on water and lobby for recognition of conservancies as the entry point for water development in their areas.

This strategy provides a road map for the NRT water programme for the next five years. The water programme does not work in isolation but is interlinked with the work NRT and conservancies are doing on rangeland and wildlife management, settlement planning, conservancy governance, infrastructure and enterprise development.

INTRODUCTION

Water Development in Kenya



Kenya is categorised as a water scarce country with the renewable water per capita at 647m^3 against the recommended 1000m^3 by the United Nations. Safe drinking water, sanitation and good hygiene are fundamental to health, survival, growth, and development. However, these basic necessities are still a luxury for many of the world's poor people. **Access to safe water and improved sanitation services are key pillars for Kenya's development.** The pillars are in tandem with the United Nations' Sustainable Development Goal (SDG) No. 6 and Kenya's Vision 2030. The Kenya Vision 2030 goal on water and sanitation under the social pillar is **access to water and sanitation for all by 2030.** Legislation in Kenya takes cognisance of the importance of access to safe water supply and sanitation. For example, 'The Bill of Rights' in the Constitution of Kenya (CoK) gives the right to clean and safe water in adequate quantities and to reasonable standards of sanitation (Article 43).

Various reports present figures of the national water and sanitation coverage in Kenya between 56-60% for safe water and between 40-50% for adequate sanitation. These figures drop as low as 20% for sustainable water coverage in settlements of the urban poor and up to 40% in the rural areas. Missing baseline data and lack of reliable information systems inhibit the ability to obtain a clear nationwide picture, especially in the rural areas. The estimate of community members with access to sustainable, safe water and basic sanitation in NRT's member conservancies has not been comprehensively documented, but is expected to be below the national average for rural areas as most are found in arid and semi-arid land (ASAL) areas.

Research in Samburu County established that water insecurity is higher in rural pastoralist households, with 91% of rural households categorised as insecure or highly insecure in the dry season. At the height of the 2016/17 drought, women in some parts of Samburu were travelling up to 15km per day to find water, leaving them with little or no time for other chores including childcare and feeding the family. Water scarcity in northern Kenya is compounded by climate change which is causing rising temperatures, irregular and unpredictable rainfall and more frequent droughts.

A review of water investments in much of northern Kenya highlights the reality that many water projects cease to function just a few years after establishment, largely due to poor planning, design and management of water supply systems. A major issue is failure to put in place sustainable systems of management after completing the infrastructure, which leads to the collapse of infrastructure within a few years.

Water projects are often established with political motivation rather than being demand driven or in response to the priorities of communities. They also often lack input from women, who are predominantly the ones responsible for provision of domestic water. The emphasis on water development is also happening at the expense of good water governance and fails to recognise environmental and social considerations or sustainable rangeland management practices. New water points are placed without consideration for livestock wet and dry season grazing areas or pastoral mobility patterns, leading to the over-use and degradation of pastures.

> 'The solution to the problems facing the ASALs is too often assumed to be the provision of more water. While there may be localised problems of inadequate permanent water, and while the availability of underground water has not been fully assessed, the more pressing concern is better management of existing sources. Over-abstraction in up-stream areas outside the ASALs is affecting downstream users within the ASALs; boreholes are in disrepair and dams and pans have silted up; inadequate use of rainwater harvesting technologies means that the rain that falls, often in flash floods, is lost. Moreover, new water can create rather than solve problems, particularly when it is poorly sited in critical grazing areas, or leads to sedentarisation and localised degradation of range resources.'
>
> Vision 2030 Development Strategy for Northern Kenya and other Arid Lands

To achieve Kenya's Vision 2030 goal of ensuring access to safe and affordable drinking water by 2030 will require investment in adequate infrastructure, provision of sanitation facilities and encouraging hygiene at every level. It also needs investment in protecting and restoring water-related ecosystems such as forests, mountains, wetlands and rivers to mitigate water scarcity, and support and emphasis on water efficiency and water treatment technologies. Water investments must be planned holistically, taking into account social and environmental considerations, addressing community priorities and building robust community-level water governance.

History of NRT's Water Development in Member Conservancies

NRT has invested in water provision in its member community conservancies over the years to promote access to safe and reliable water for people, wildlife and livestock. This includes, for example, water supplies in villages and schools, water pans for wildlife, water supplies for conservancy headquarters, ranger outposts and tourism facilities. Specific water infrastructure projects have included drilling boreholes, shallow protected wells, pipeline extensions, spring protections and investment in rainwater harvesting though guttering and storage tanks, and rock catchments.

Access to water during emergencies has also been a component of NRT's support to member conservancies and their communities. This has focused on vulnerable communities in the most arid areas and has included provision of generators for pumping water, drilling of emergency boreholes for livestock and in other instances lobbying to have water trucking by the government.

NRT has worked with conservancies especially around the Mathews (Namunyak) and Ngare Ndare forests to enhance protection of water catchment areas. This has largely been achieved through community sensitisation and collaboration with community

forest associations (CFAs). The grazing committees within the conservancies in these areas work in collaboration with the CFAs in protection of water catchment areas aiming to ensure sustainable grazing management practices and protection of spring heads.

More recently NRT, with technical support from Rural Focus Ltd, has invested in developing water resource management strategies for conservancies which clearly set out water needs and priorities for these communities and map existing water resources. In four conservancies, NRT has supported construction of water infrastructure in line with the community's priorities. This includes construction of several sand dams in partnership with Excellent Development.

While NRT water projects have had a positive localised impact, and have been implemented on a case by case basis, there has been little investment into the governance and management of these systems at a community level, which continue to rely on NRT support for ongoing maintenance.

Water Challenges in NRT Conservancies

Across the NRT landscape there are several challenges that affect the provision of adequate water in the conservancies. They include:

- **Competing demands for water from livestock:** Livestock are the largest water demand in all conservancies, with their needs taking precedence over water for domestic and/or institutional use (schools, clinics etc).
- **Scattered settlements**: Across the conservancies, scattered settlements present a challenge to the provision of clean water. People (primarily women) often travel long distances to collect water, which means more time is spent fetching water than on other important chores.
- **Unreliable seasonal water sources:** Seasonal wells, water pans and rivers are unreliable water sources which have low volumes or dry out completely in the dry season, thus further increasing the distance to the next available water source, and increasing pressure on permanent/perennial water sources.
- **Climate change:** This is driving increased water scarcity in most NRT conservancies through rising temperatures (reducing surface water through evaporation and increasing salinity), irregular and unpredictable rainfall and more frequent droughts which reduces water availability and replenishment of underground aquifers.
- **Environmental degradation and loss of vegetation and ground cover**: This leads to faster run-off and reduced infiltration of rainwater into the soil. Unsustainable harvesting/mining of sand in dry riverbeds for the construction industry is reducing sub-surface water storage capacity in seasonal rivers that are critical dry season water sources.
- **Poor water quality in most water sources in the conservancies**: The open nature of water sources makes them prone to contamination. The chemical composition of the underlying rocks in some instances also leads to poor water quality. There are also increasing problems with salinity, related to the over exploitation of ground water and the expansion of settlements into areas where water quality is poor.
- **Poor management of most water sources**: This includes financial mismanagement, a lack of capability for proper book-keeping and basic operation and maintenance at a community level, and weak or non-existent systems for supporting rural water supply provision from county governments.
- **Inaccessibility of water**: With large distances to water sources and other socio-economic factors including insecurity, cost of water, and cost of transportation, many families are left with little choice but to use unsafe domestic water.
- **Lack of knowledge:** A lack of awareness of water availability, water production and hydrological systems in most conservancies leads to over-abstraction at some water points and inability to plan for sustainable management of water sources.

Water Development in NRT's Strategic Plan

Water development is highlighted within **NRT's Strategic Plan** under **Objective 3 Livelihoods and business, Output 5 Equitable and responsive livelihood investments in conservancy communities**. This will be achieved by ensuring better governed and integrated water resource management in conservancies, based on assessment of current water infrastructure and operations, water potential and need, options for technical solutions and optimal water governance systems to conserve, use and manage water.

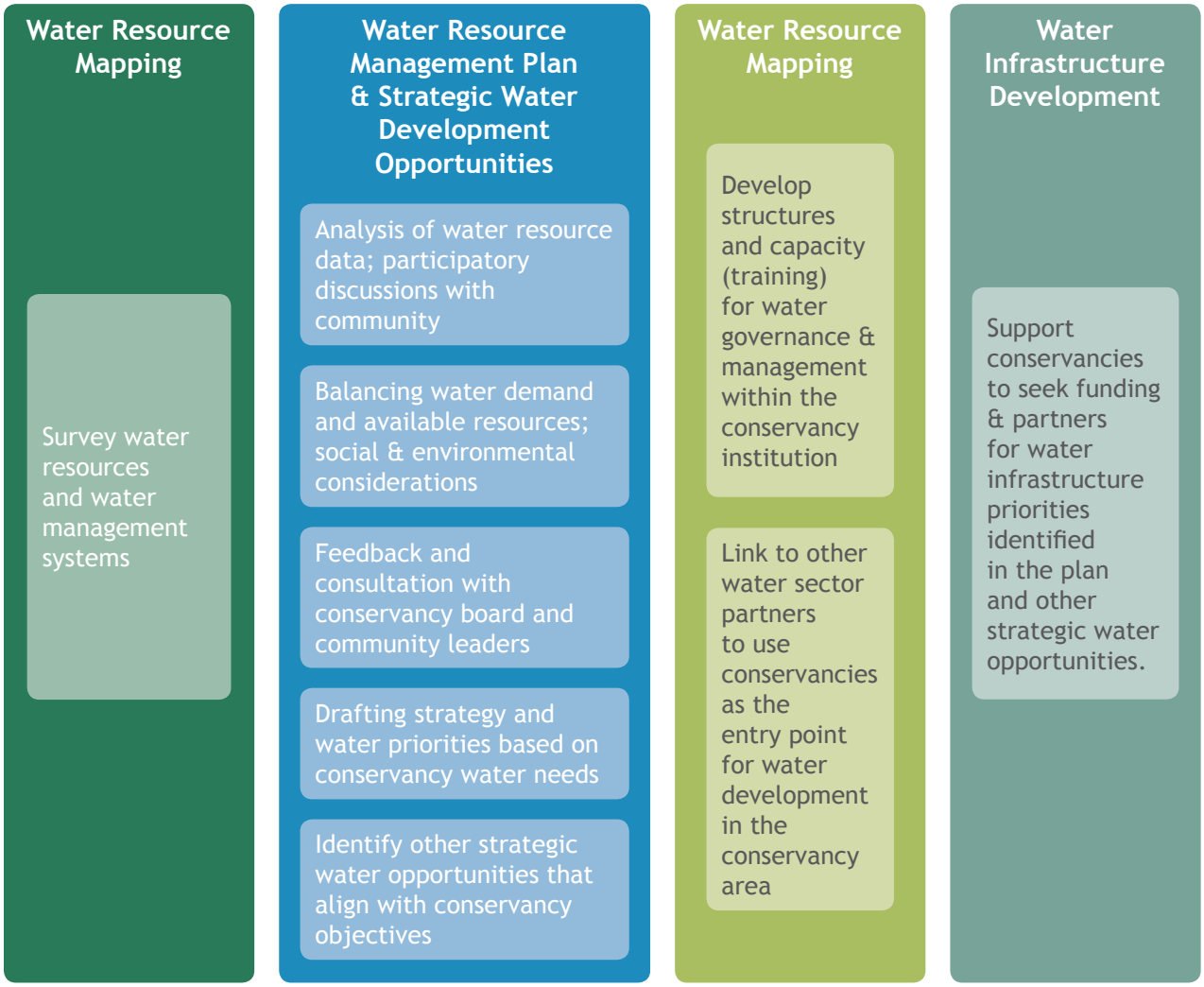
Sustainable management of water resources is also an integral part of NRT's **Objective 4 to stabilise and improve productivity of grasslands for livestock, and the health and diversity of the wildlife and natural resources which underpin the economy of northern Kenya.** This will be achieved by building on local knowledge and practices that can address environmental degradation and reduce competition and conflict for water and grass, and improve forage for livestock and habitat for wildlife

Water development is identified as a priority in each of the NRT member conservancy management and community development plans, focusing on improving access to water for people, livestock and wildlife. In arid northern Kenya water is intricately linked to human livelihoods (pastoralism and agriculture), human well-being, inter-communal conflict, and wildlife conservation. NRT's approach to water development therefore needs to be holistic, and consider all aspects of people, their livelihood systems and wildlife in the design, implementation, and management of conservancy water projects.

NRT WATER PROGRAMME (2020-2024)

Integrated Water Development

In 2019, NRT formally established a Water Programme and recruited a water engineer to lead this programme, with additional personnel funded by Excellent Development Ltd. Technical support to this programme is provided by NRT's long-term water partners Rural Focus Ltd & Centre for Humanitarian Change. With dedicated staff in place and technical support from partners, NRT is changing its approach to water development in conservancies shifting from project-type infrastructure to a more integrated approach. This involves water resource planning, management, and infrastructure development, with conservancies as the entry point for all aspects of the programme. The aim is to ensure water is developed holistically and managed together with all other resources in the conservancy.



This integrated and holistic approach to water development will include collaboration with other water actors in the NRT landscape, attention on water quality of supplies being developed, catchment protection, and sustainable water development and an understanding of water stress and critical water supplies during the dry season.

The programme builds on lessons from NRT's own investments in water in member conservancies, and historical failures in water development across northern Kenya and other water scarce regions. NRT's water programme looks at the water resources and water demand across the landscape and integrates:

- **Water for people:** Provide clean and reliable water closer to settlement areas to reduce time spent to collect water for domestic use. Water development provides an opportunity to strategically realign settlements using water.
- **Water for livestock:** Provide strategically located, reliable and adequate water for livestock to support sustainable utilisation of rangelands, with adequate control of contingency water sources in the dry season. Water for livestock will balance fodder and water availability and consider seasonal grazing patterns.
- **Water for wildlife:** Provide reliable water supply for wildlife across the conservancy; ensure sufficient water for wildlife inside fenced sanctuaries; reduce competition with livestock and people for water and mitigate human wildlife conflict.
- **Water for tourism & conservancy infrastructure:** Ensure tourism facilities have access to sufficient, clean, and reliable water throughout the year, with strategically located wildlife water close to tourism facilities. Ensure sufficient, clean, and reliable water for conservancy headquarters and outposts throughout the year.
- **Water for irrigation:** To support irrigation in areas zoned for agriculture within the conservancy to increase food security in communities. Irrigation projects will ensure sustainable off-take of water and avoid conflicting with conservation objectives through proper zoning of land-use in the conservancy.

Water Programme Objectives

NRT's water programme aims:

To ensure water investments are planned holistically, address community priorities, take into account social and environmental considerations, and build conservancy-level governance and management capacity.

Outcomes	Outputs
• # households benefiting from improved access to safe water • # conservancy staff with improved access to safe water • # children benefiting from improved access to safe water at school • Average time spent to fetch water in the dry & wet season (Social-CoMMS data)	• Investment (Ksh/$) in improving access to water and sanitation in conservancies • # conservancy water resource management strategies completed • # community and institutional (school, health clinics) new water infrastructure projects completed • # community and institutional (school, health clinics) existing water infrastructure projects repaired/rehabilitated • # strategic livestock and wildlife watering points established • # conservancy water management groups established and trained • # community members trained in operations & maintenance of water infrastructure • # community members provided with critical information on WASH (Water, sanitation and hygiene) • # households with access to improved sanitation facilities

OBJECTIVE 1: Conservancy Water Resource Management Strategies

Conservancy water resource management strategies include mapping water resources, capturing information on status and condition of water points, including use and users, seasonal variations in users, water quality and existing management systems. Participatory discussions with conservancy boards and community members are held to discuss findings from the mapping and to develop community priorities for water development. Discussions should ensure water development plans are integrated with livestock grazing plans and consider preserving livestock grazing areas and critical wildlife zones, ensuring future water development does not conflict with the conservation objectives of the conservancy, or contribute to degradation of rangelands in critical livestock grazing areas. The strategies highlight gaps in water resources and are used as a road map for water development in the conservancies which can be shared with other partners including county government. NRT aims to have WRM strategies for each conservancy by the end of 2024.

Specific activities include:

- Mapping of existing water sources, and documenting status of each source.
- Community prioritisation of water infrastructure development.
- Identifying strategies for sustainable management of water resources.
- Consideration of water distribution impacts on settlement planning, land-use, grazing management, conflict and wildlife areas.
- Establishing baseline data for household and institutional (schools, health facilities, conservancy infrastructure) access to clean, safe drinking water in each conservancy.

OBJECTIVE 2: Conservancy Water Governance

The aim is to build the capacity for water governance and management at the conservancy level, building on the model for governance being piloted with support from Rural Focus Ltd in Meibae, Melako and Ol Donyiro conservancies (Annex 3.1). Governance structures at a conservancy level (e.g. conservancy water management group) can become the entry point to the conservancy area/community for all partners working in water development. Eventually, registering as a water service provider will also enable conservancies to directly access water supply development funding from national and county governments. Conservancies can also aim to be registered as a water resource user association (WRUA) and take responsibility for water resource governance. Developing the capacity in conservancy-level water resource governance and supply management is a crucial step in ensuring water development is holistically planned and implemented in the conservancy area and takes into account social and environmental considerations.

The conservancy water management groups can provide support to individual water project management committees and act as an umbrella to cluster water supplies and harmonize approaches to management, including financial management, with the aim of each water project becoming self-sufficient in terms of basic repairs and maintenance. Building financial sustainability into the management of individual water projects is critical to ensuring long-term sustainability of water infrastructure.

Key in the development of conservancy water governance will be to build the trust of partners in the capacity of conservancy institutions to plan and manage water resources.

Specific activities include:

- Establishing conservancy water governance models in 8 conservancies by 2024 (one in each NRT county)
- Coaching conservancy water governance groups as water service providers (including building technical knowledge, leadership, and management (using the Integrity Management (IM) toolbox etc.)
- Training water project committees in basic management and operations of respective projects and accountable revenue collection
- Identifying and training community members and conservancy rangers as water technicians and plumbers through vocational training
- Establishing a water fund or other financial mechanisms for operations and maintenance of conservancy water infrastructure
- Lobbying for recognition of conservancies as the entry-point to water development by external organisations including county government; registration of conservancies as WRUAs/Water Service Providers (if appropriate)

OBJECTIVE 3: Water Infrastructure Development

Water infrastructure aims to provide strategic and sustainable water supplies for domestic use, livestock, wildlife, irrigation, conservancy staff or tourism, and may include construction of new supplies or rehabilitation of existing infrastructure. Infrastructure development in general will follow water development priorities identified by the conservancies within their strategies, however, there may also be strategic opportunities for water infrastructure that are outside of the water strategies. Priorities should be identified through periodic reviews with the conservancies and should focus on meeting the objectives of safe, reliable water for domestic use, as well as water for livestock and wildlife. New donor-funded water projects should be guided by the conservancy water resource plans and strategic water development opportunities. Costing and design of individual infrastructure projects, including technical solutions to provide clean water (such as solar water pumps and de-salination plants etc), will form part of funding proposals.

Infrastructure development will include:

- Water infrastructure to serve conservancy headquarters, outposts, tourism facilities, wildlife sanctuaries
- Water supply for schools and health clinics
- Water supply for villages/settlement areas
- Water supply for irrigation
- Crisis water supplies to provide water for people/livestock/wildlife during drought or other crisis periods (e.g. disease outbreaks in communities etc.)

OBJECTIVE 4: Water, Sanitation and Hygiene (WASH) for Health

Households within the conservancies should have safe drinking water and practice good sanitation and hygiene to reduce disease and malnutrition. NRT will encourage conservancy water groups to work with partners including community health volunteers and health facilities to; (i) increase understanding of links between water, sanitation, hygiene and health/malnutrition, (ii) increase use of household water treatment and improve sanitation and hygiene practices. Where necessary, NRT will facilitate purchase of household water storage containers (tanks) to improve water security and reduce women's workload.

This component of the strategy will seek to collaborate with WASH actors working in the conservancy areas to:

- Raise awareness and promote uptake of good WASH services and hygiene practices among community members, schools, and health facilities.
- Advocate for standard hand washing stations at schools and access to standard sanitation facilities.
- Undertake water quality monitoring and advocating for household/point of use water treatment to provide safe water for domestic use.

OBJECTIVE 5: Stakeholder Coordination & Partnerships

NRT aims to strengthen coordination and partnerships with stakeholders working on water in the conservancies. This includes county governments, who have the mandate for water provision within their counties, national government agencies including WRA, NEMA, KFS, KWTA, NDMA and other development partners (NGOs) working in the landscape. NRT and conservancies will advocate for a landscape approach to water development and management and lobby for recognition of conservancies as the entry point for water development in their areas. This will include ensuring community water priorities are captured in County Integrated Development Plans (CIDPs). Conservancies will participate in county-based WASH coordination mechanisms such as the Water and Environmental Sanitation Coordination mechanism (WESCOORD), Partnership for Resilience and Economic Growth (PREG) and other county sector groups to inform planning for water development and avoid duplication and unplanned water infrastructure.

FINANCIAL & TECHNICAL SUSTAINABILITY

With significant growth in water infrastructure investments by NRT, sustainability of water services and long-term functionality of water infrastructure remains a challenge. It is critical to ensure existing water systems continue running beyond the initial development period if long-term access to safe water for community members and conservancy staff is to be sustained. Integrating financial and technical sustainability plans in all new infrastructure development is therefore critical to keep the water supplies running with limited need for external support. This may include:

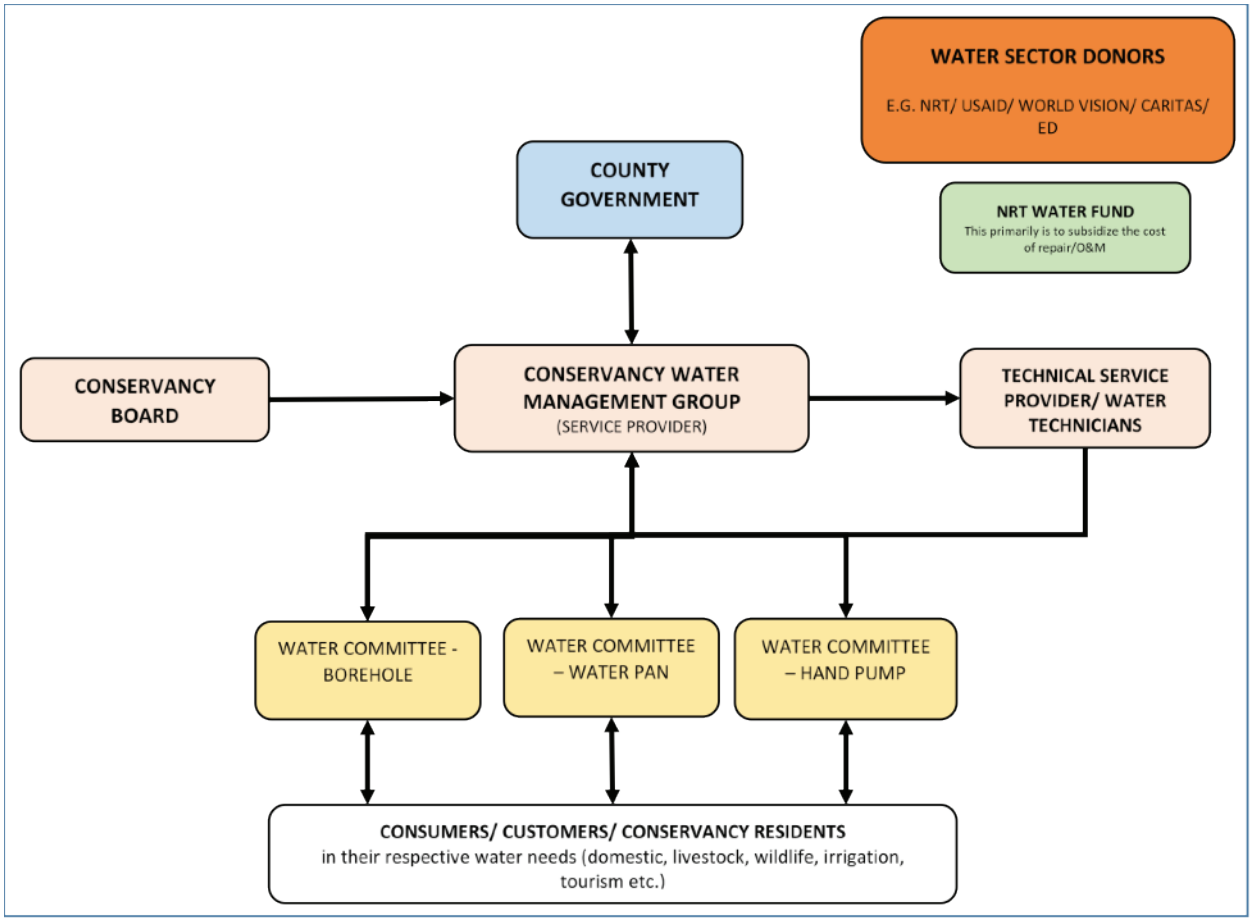
- Embedding the conservancy water programmes into the county funding structures to ensure yearly allocation of funding to maintain and improve water supply systems
- Establishment of a Water Fund (Annex 4.1) to pool funds for operations and maintenance. The Fund includes a % contribution from development partners as part of each infrastructure project, to be used for managing and improving water supplies within the conservancies.
- Establishment of conservancy and project level financial mechanisms to ensure long-term maintenance of water infrastructure projects (e.g. community payments schemes, link to NRTT SACCO)
- Continuous capacity building of the conservancy water management groups in management of water supply systems including financial management, operation and maintenance and technical skills, to strengthen self-governance
- Ensure conservancy water management groups are trained with the necessary skills to access opportunities from development partners through proposal writing and joint partnerships.

Collaboration with a range of partners will be critical for the effective implementation of this ambitious NRT water programme. NRT will continue to work with existing technical partners on water development in the conservancies, including Rural Focus Ltd., Centre for Humanitarian Change, Excellent Development and Jomo Kenyatta University of Agriculture and Technology. Other partners may be identified in future.

ANNEX

Proposed Conservancy Water Governance Model

The following model has been developed by Rural Focus Ltd and is being piloted in two NRT member conservancies. Lessons from this pilot will inform appropriate governance models that can be expanded into other conservancies.



Conservancy water governance model includes:

1. Service delivery
2. Monitoring of service
3. Financing

Service

1. Conservancy water management group/ service provider

The water management committee is an umbrella body which draws its mandate from the conservancy board and is headed by the conservancy water coordinator[1]. Its composition will include:

i) Representatives from water supply committees in the conservancy

ii) Board members (subcommittee of the main board),

iii) Other water actors within the area

Role of the water management group

iv) Strengthening water supply management

v) Coordinating the water governance at the conservancy level

vi) Possessing basic technical services through community members and conservancy scouts trained as plumbers/basic troubleshooting officers in all water systems

vii) Liaise with the technical service providers – major repairs and coordinate their mobilisation and payment for services

viii) Liaise with the CG on major infrastructure development within the conservancy

2. Technical Service Provider/ Water Technician

This is a pool of identified technical persons/companies that are contracted to offer their services for maintenance/repair of any broken system within the conservancy. They could be qualified fundis, technicians who are on call to fix problems that the technical skills within the conservancy water management group do not possess.

i) They are contracted by the conservancy water management group for their technical skills for which they are paid for.

3. Water committee – at water point

These are the existing committees at the various water points. Their continued existence is subject to passing the performance and compliance of the IM toolbox.

i) They have duties and tasks associated with the daily running of the water points including managing users, mode of use of the water point

ii) Report the repairs of the water points to the conservancy water management group

iii) Provide a 'service' of water provision to the conservancy members/consumers

iv) Sign off the repairs undertaken by the service provider

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1 Initially this role could be taken by the conservancy rangeland coordinators

v) Collect and manage revenue

vi) Pay 'subscription' fee to the conservancy water management group.

4. County Government

The county government has a constitutional mandate and requirement to provide water and sanitation services to its residents. This has however not been fully realised. The CG should acknowledge the gap and the role the conservancy and other water actors are undertaking to support delivery of the services.

i) Understanding the CG policy for rural water supply

ii) Working on undertaking major infrastructure development but within the structure/strategy of the conservancy.

Financing

5. WATER FUND

The focus of this fund is primarily to supplement the cost of services provided by the service prover. This is taking recognition that the conservancy is in most cases in a non-commercially viable area. This fund cautions major repairs that are out of reach of the committee. This fund should be properly administered by the conservancy/NRT and purposely set aside for O&M.

i) All development partners undertaking water infrastructure development in the conservancy (ED, WV, Caritas, Red Cross etc.) will be required to contribute to the fund to ensure that the infrastructure is maintained.

ii) Other contributions into this fund should be potentially – NRT, Group ranch, Water users committee (from charging water fees).

Monitoring and Evaluation

Monitoring will be based on;

i) Service delivery by the water point committee – are the committee delivering on the service?

ii) Conservancy based water management group on the efficiency of the service provider delivery of services to ensure functioning of water points to facilitate service delivery by the water point committee

iii) Conservancy board on the delivery of the conservancy water management group.

iv) Consumer satisfaction on services delivered by the point water sources