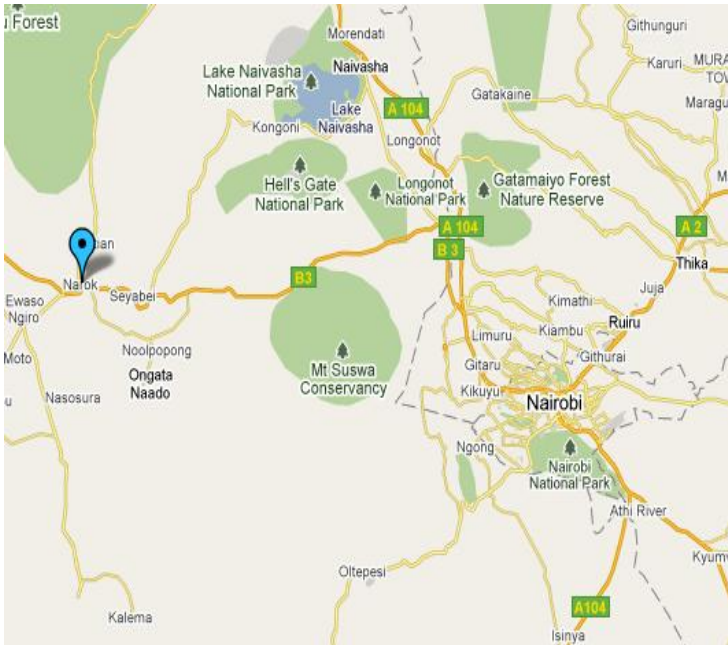


Project location



1 Project Background

Kenya is a chronically water scarce country, which is likely to get worse due to the growing needs of a rapidly increasing population (3.8% p.a. growth), as well as serious water resources degradation. In 2004, on average, about 38% of Kenya's population, or some 17 million people, lacked access to clean drinking water; while 21 million (about 62%) others have no access to adequate sanitation. Land degradation, especially due to inadequate watershed conservation and management, have in the past contributed to soil erosion and consequently silting of many water pans. The situation is worse in marginalised areas such as Narok South, where a lack of water and sanitation leads to poor human health (water borne disease) and high rates of child mortality.

Due to environmental factors, life is extremely hard for poor families in Narok South. The main challenge in the target area is the recurrence of and increased frequency of droughts as a result of climate change and a fragile ecosystem. Unsustainable economic activities, such as charcoal production, result in land degradation that eventually leads to low productivity and desertification. Surface crusting and hard pans reduce infiltration thus inhibiting pasture growth.

Type of project:

Community Eco-sanitation toilets, Open Rainwater Reservoir, Environmental Conservation, Tree Nursery and Livelihood support.

Project period:

Project start: September 2010
 Project completion: October 2011
 Project monitoring reports: Six month progress report (submitted April 2011). Twelve month project completion report.

Project scale:

Number of inhabitants covered: 3,000 (plus 6,800 livestock)
 Total investment: £42,633
 Investment from The Headley Trust, The Wingate Foundation and private donors: £42,633

Address of project location:

Ildungisho, Narok South, Ongata Naado, Kenya.

Executing institution/Partner NGO:

Kenya Rainwater Association (KRA),
 Hurlingham, Rose Avenue, P.O. Box 10742-00100, Nairobi, Kenya.

Masai women and children, beneficiaries of the project



When there is a drought women, children, milking cows and weak animals are left at the settlement while men migrate with the herd in search of water and pasture. However, without alternative sources of fodder, the survival rate of the animals left behind is low. This results in low milk production in a context where the current staple diet is made up of maize meal and milk. Vegetables are not traditionally consumed, frequently unavailable and/or are unaffordable. Thus children suffer from inadequate protein and vitamins. The death of livestock can have catastrophic results for the long and short-term prospects of a family (high rates of malnutrition and child mortality related diseases, frequent migration and low rates of enrolment of children in schools).

The situation is aggravated by migration of farming communities from the neighbouring areas due to population pressure on limited land. Migrant farmers have settled on the better endowed areas, thus denying the pastoralists their 'safety dry season' grazing land. The migrant farming communities have also been affected by the harsh climatic conditions. Crop failure is a far too common occurrence.

Unfortunately, malnutrition and diarrhoea are mutually reinforcing conditions. Malnutrition weakens a child's immune system and diarrhoea reduces the absorption of nutrients. The target districts have in the past not attracted much support, except during emergency and humanitarian situations, such as extreme droughts and floods. These short term interventions include food relief, water trucking, and provision of human and livestock health services. These interventions have led to an over-reliance on food relief that this project seeks to break.

Objectives/Outcomes: The project will reduce incidence of water borne disease, by providing a sustainable water supply and effective eco-sanitation; improve food security and variety (especially child nutrition); improve the environment through tree planting and demonstration rangeland rehabilitation; improve the availability of livestock feed through hay baling and storage; help protect the environment, by installing fuel efficient stoves (reducing the quantity

of firewood needed). The project will help reduce poverty, through livelihood support.

2 The Project

Construction of Water Pan:



Narok South water pan, already filling after the short rains - after the long rains, the supply will be sufficient to sustain the community for the whole year



Water pans are low-cost and environmentally friendly and they are appropriate for providing sustainable water supply for communities in marginal areas. This Rainwater Harvesting structure will provide water for domestic use and livestock watering for about 3,000 people and over 6,800 livestock. The construction of the reservoir includes a water filtration system, and water is piped underneath the base of the dam, feeding standpipes and water troughs. The whole reservoir is fenced, to prevent contamination by animals.

Project Completion Report
Community Eco-sanitation Toilets, Water, Livelihoods and Tree Nursery
Narok South, Ongata Naado, Kenya
(December 2011)

During Wherever the Need's (WTN) monitoring visit in October 2011, the reservoir was already filling, and water was being used by livestock and the local residents. This has already made a profound change to their lives, as they were no longer having to walk many miles to collect water for their consumption or to provide water for their livestock.

Grass has been seeded on the dam banks to prevent erosion, and drought resistant trees planted in the catchment area. As this planting becomes established, the trees will bind the soil and prevent silt washing into the reservoir.

A tree nursery has been established next to the reservoir, providing trees for future planting around the area.



Livestock water troughs, supplied from the reservoir



Tree seedlings



Beehives have been established in the catchment area, providing a much needed livelihood for the youth of the community. The hives are located in a fenced area of acacia trees, protected from livestock and migrating animals.



Collecting water, supplied from the reservoir



A youth group manages the honey production livelihood



A shamba (market garden) has been established behind the dam, with drip irrigation



The Shamba (market garden) has been planted, which will provide much needed vegetables to supplement the community diet of maize meal, meat and milk.

A rangeland rehabilitation plot has been established, and manure from cattle is being collected to improve the pasture. A manual hay baler has been provided for the project, and this will be used to bale hay and store fodder for the dry season.



Eco-sanitation:

Prior to construction starting, a meeting was held with the whole community, and the consensus was clear that there was a need for secure washing areas as well as toilets. So the design of the toilets was adapted, to incorporate an enclosed washing area within the ecosan toilet. To respect Masai culture, the male and female ecosans are separate units, to ensure privacy.



Community meeting, to discuss the project



A project monitoring visit was made in October. The construction of the ecosan toilets is now finished, with initial ecosan commissioning, correct use and hygiene training completed. A further training is scheduled for December, where correct use and hygiene will be reinforced. From this training, a leading man and woman from the community will be identified, to act as caretakers of the ecosans and to provide regular training updates on ecosan benefits, use and hygiene practice. This training will be supported and monitored by WTN and KRA.

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Once established, the compost generated and diluted urine from the ecosan chambers will be used on the nearby Shamba, fertilising crops and increasing yields.



Male ecosan, with small rainwater harvester for hand washing



Female ecosan



Interior of ecosan, chamber on left in use, sealed on right



Ecosan, showing washing area and (sealed) access to composting chambers

Fuel efficient (Jika) stoves:

One hundred fuel efficient stoves have been installed in village houses. These offer many benefits, including reduced smoke emissions and greatly increased fuel efficiency. During our visit in October, one woman said: "I used to have to walk great distances every day to cut and collect firewood for cooking. Now I only need to collect firewood once a week". Not only does this improve the quality of lives, but it will also greatly reduce the amount of trees cut for firewood, and therefore help to protect the environment.



Masai village houses – using the Jika stoves greatly reduces the smoke from cooking fires



Fuel efficient (Jika) stoves



3 Further/Ongoing Project Development

There are many challenges working in this remote area of Kenya, particularly the logistics of acquiring and transporting building materials. However the project has been completed successfully, and considering these difficulties, we are particularly pleased with the quality of construction of the dam and the finish of the ecosan toilets. Some construction faults were previously identified, but these have all been rectified.

Ongoing support and training will be given in rangeland rehabilitation, fodder production and preservation. This is critical for the long term success of the project, to ensure that the environment is conserved and improved, to give a future for the young people of the community in their traditional way of life. Training updates will also regularly be given in hygiene and correct use of the ecosan toilets, to make sure that the benefits of the compost can be used on the local Shamba, to increase crop yields.

There is still work to do to further support the community in Narok South, but what has been achieved so far is already making a profound impact on the community.

On behalf of all the people of Narok South, we would like to thank The Headley Trust, The Wingate Foundation and individual private donors for their generosity and kindness in supporting this project.



4 Project Costs

Project Details	No	Unit Cost (£)	Total (£)
Water and Sanitation			
Construction of water pan	1	25,000	25,000
Construction of ecosan units	2	2,750	5,500
Health and hygiene training		750	750
Transport		750	750
Sub Total			32,000
Environmental Conservation			
Sub soiler	1	100	100
Plough	1	250	250
Tinned harrow	1	75	75
Yoke	1	40	40
Demonstration training - tree nurseries	1	150	150
Grass seeds		35	35
Pots for tree seedlings		350	350
Fuel efficient stoves	100	15	1,500
Technical staff time (monthly)	12	355	4,257
Sub total			6,757
Contingency and Admin 10%			3,876
TOTAL			42,633





Project Completion Report
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5 Contact

Richard Napper
Wherever the Need
Limpley Mill
Lower Stoke
Bath
BA2 7FJ

T: +44 (0)1225 723673
M: +44 (0)7768 770303
E: richard@whenevertheneed.org.uk
www.whenevertheneed.org.uk



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