

ROTARY INTERNATIONAL DISTRICT 1145 AND SAND DAMS



Providing safe water and
opportunity for life for
£10 per person

Rotary
Great Britain & Ireland



Our subcontractors:

 **Excellent** | Pioneers of
Sand Dams

INVESTING IN OPPORTUNITY

Dedicated Rotarians all around the world and Excellent Development are very proud to work together to promote peace, prevent disease, provide access to clean water and sanitation, enhance maternal and child health, improve basic education and literacy, and develop communities. District 1145 and RIBI have chosen Excellent Development and African Sand Dam Foundation as their suppliers for this sustainable programme of building sand dams and developing climate-smart agriculture.

More about Excellent

Excellent is an award winning UK charity accredited to the UN Convention to Combat Desertification. The charity supports some of the world's poorest people to transform their own lives through soil and water conservation in drylands.

Over 40% of the earth's surface consists of drylands (hyper-arid, arid, semi-arid and dry sub-humid areas with concentrated periods of seasonal rainfall). These drylands which cover large areas of Africa, Asia and South America are home to around 2.3 billion people, mostly living in rural poverty trying to eke out a living in a tough climate.

Working with local partners, Excellent supports rural communities to build sand dams - the most cost-effective method of catching and storing rainwater in drylands. Sand dams sustainably provide safe water for life and the opportunity to grow enough food to eat, store and sell. It is our vision that millions of the world's poorest people will transform their own lives with sand dams.



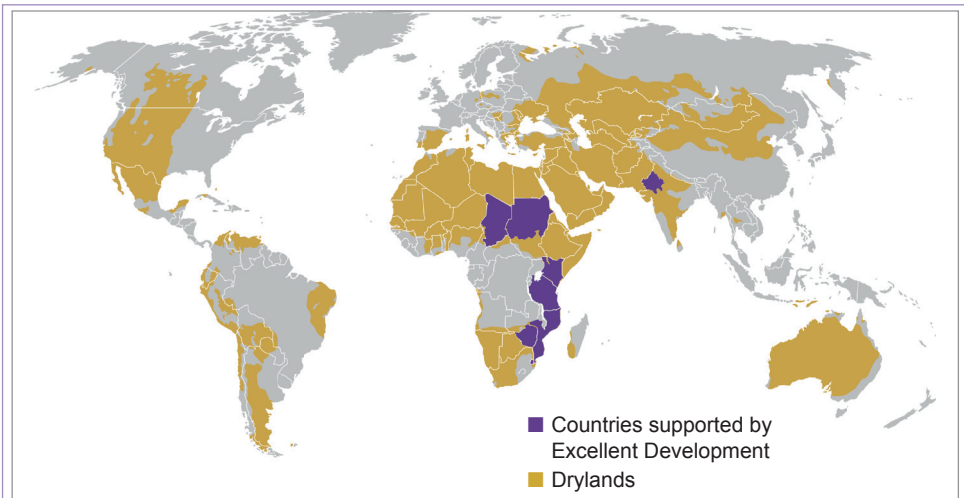
“Kew Gardens Rotary led the first of these projects inspired by the simplicity and sustainability of the technology, and its effectiveness in addressing survival in times of drought. Rotary in Great Britain and Ireland has since supported communities in Kenya, often with Nairobi North Rotary, by subcontracting the building of dams to Excellent Development and local partners, the Africa Sand Dam Foundation.”

This technology can bring safe water to 74% of the world's poor people, and it is hard to find a more cost effective way to enable such communities to have access to safe water and healthy food, improve their health and free time for children to be educated. There is always a long list of self-help groups (these are similar to Rotary Community Corps) wanting to build their own dams to transform their own lives. We just assist them.”

James Onions, Kew Gardens Rotary, Rotary in Great Britain and Ireland sand dams programme

ROTARY HAS ENABLED

In rural drylands, millions of people do not have easy access to a safe water supply and are isolated from goods and services. This Rotary programme has to date supported communities in Ukambani County, southeast Kenya to build sand dams and invest in sustainable agriculture techniques. We have also supported pastoralist communities in Lekurruki Conservancy in northern Kenya and the Maasai tribe in the southern part of the Kenyan Rift Valley to increase their access to safe water through the construction of sand dams and shallow wells. This reduces human to human and human to wildlife conflict over access to water sources.



Key lifetime figures (up to May 2019):

61

Sand dams built

\$1,149,273

Invested by Rotary

Over 200

Rotary clubs invested

105,273

People with access to safe water

Looking to the future, Rotary's worldwide network presents the opportunity over time to expand into other countries, and this programme is currently looking at involvement with Excellent Development and others in supporting dryland communities to improve their access to safe water in Rajasthan, India (for 75% of villages, the salinity of the groundwater can be as much as 10 times higher than is considered safe for human consumption) and Southern Africa (Tanzania, Mozambique, Zimbabwe and Malawi).

For updated figures, the list of Rotary clubs invested, and list of communities being support by Rotary, visit www.excellentdevelopment.com/rotary

YEAR-ROUND SAFE WATER

What is a sand dam?

A sand dam is a reinforced stone masonry wall built across a seasonal sandy river. They have almost no maintenance costs, can last for well over 30 years and there is one still in use that is more than 100 years old.

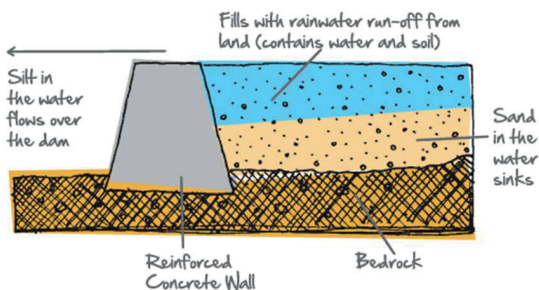
Water behind a dam raises the water table in the surrounding area which improves the soil, creating better conditions for crops and grazing. More trees can be planted which ensures that more water infiltrates the ground and less soil is washed away – creating a virtuous cycle of soil and water conservation.

During the rainy season, the dam fills with sediment-laden water. The heavy sand is deposited behind the dam, while the light silt is carried downstream. As much as 97 to 99% of the water flowing in the river continues downstream.



A sand dam chain in Kenya

1-3% of water flowing downstream is retained behind the wall



Within one to four rainy seasons, the dam fills with sand. But, up to 40 million litres of water is stored in the pores between sand particles. Here it can be extracted and is protected from evaporation, contamination and disease transmitters, such as mosquitoes and freshwater snails.

Excellent have extensive experience having completed over 1,000 sand dams.



A dam plaque featuring Rotary supporters

Excellent Development lifetime achievements

1,029,222

People with access to safe water

9

Countries

1,091

Sand dams enabled

£15,000 - £35,000

Cost of a sand dam

Latest figures: Excellent Development, May 2019.

TRANSFORMING LIVES

Our Rotary programme is creating the opportunity for some of the world's poorest people to work their way out of hunger and poverty with dignity. Rotary with Excellent Development and partners in Africa and India are making a difference and transforming lives by:

Providing clean water

Sand dams provide safe clean water for life closer to people's homes.

Supporting education

The time saved fetching water (up to 5 hours per day, up to 11 hours during droughts) frees time for children to go to school.

Growing local economies

Sand dams increase household income by reducing expenditure on water and food. They also create the opportunity to invest in new enterprises, such as exporting surplus food to local markets, or establishing small-scale fish ponds.

Saving mothers and children

Sand dam and subsequent climate-smart agriculture (such as building community seed banks with drought tolerant seeds) empower women as they become decision makers in their communities, whilst children (and parents alike) have improved nutrition at school, work and home thanks to the safe water.

Promoting peace

Sand dams reduce human to human and human to wildlife conflict in areas of Northern Kenya where there is conflict over scarce water sources.

Fighting disease

Sand dams provide a safer water supply as the water stored below the surface protects it from evaporation, contamination and waterborne diseases.



ROTARY: OUR IMPACT

“This tree nursery is of great importance to us. It enables us to plant trees at our homes.

From the mango trees we will be able to get mangoes to eat and sell so as to earn an income.

We are holding millions in our very own hands.”

Eunice Katumbi
Kakai self-help group, Kenya
**Supported by Rotary District 1145
in Southern England**



“We have really benefited from our sand dams.

We now have easy access to water, unlike in the past when we would spend almost half a day collecting water... instead we spend that time farming.

Water is no longer a problem... We are not the way we used to be.”

Peter Mwanza
Munyuni self-help group, Kenya
**Supported by Rotary District 1040
in Yorkshire and North Lincolnshire**



If you'd like to support or would like more info

KICK START NOT A HAND OUT

“My children’s lives will change a lot because their eating habits have been changed by vegetables we have grown.

In the past we would only eat carbohydrates with ugali or with baobab juice.

But now we eat ugali with sukuma and tomatoes, so my children’s health will improve and I believe they will no longer get sick.”

Joyce Kilundo
Kakai self-help group, Kenya
**Supported by Rotary District 1145
in Southern England**



“When we have the fish we will give them to our children and grandchildren so they become very brainy and very strong.

Then we will eat the fish because I don’t want to die any time soon.

After that we will sell the surplus to earn an income.”

Josephine Musyoka
Wauni self-help group, Kenya
**Supported by Rotary District 1145
in Southern England**



ENVIRONMENT AND CLIMATE CHANGE



“Conserving the environment is critical to economic development of people living in drylands. Desertification (land degradation from climate change and human activities) affects a third of the Earth’s land, resulting in poverty and hunger for millions.

Sand dams are a key tool to address environmental degradation. Talking to community members, many remember when seasonal rains supported their lives and agriculture locally – but no more as local water sources dry up. At this local level, sand dams create an oasis and have a role in mitigating the

impacts of climate change and improve the environment in the following ways:

- storing water, allowing it to be released over an extended period, including during drought, addressing the effects of fluctuating rainfall

- recharging groundwater and supporting and sustaining natural vegetation growth, capturing and storing carbon

- improved land use management, including tree planting to absorb carbon dioxide, release oxygen, reduce erosion and prevent land degradation and terracing to retain water

In addition, this works particularly well with a series of sand dams on one river, helping to sustain river flows through groundwater recharge.

We expect this will help to sustain some perennial rivers which are showing signs of becoming seasonal, through reduced rainfall, as climate change impacts increase.”

**David Jordan OBE,
Chairman, Excellent Development**

Rotary District 1145

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