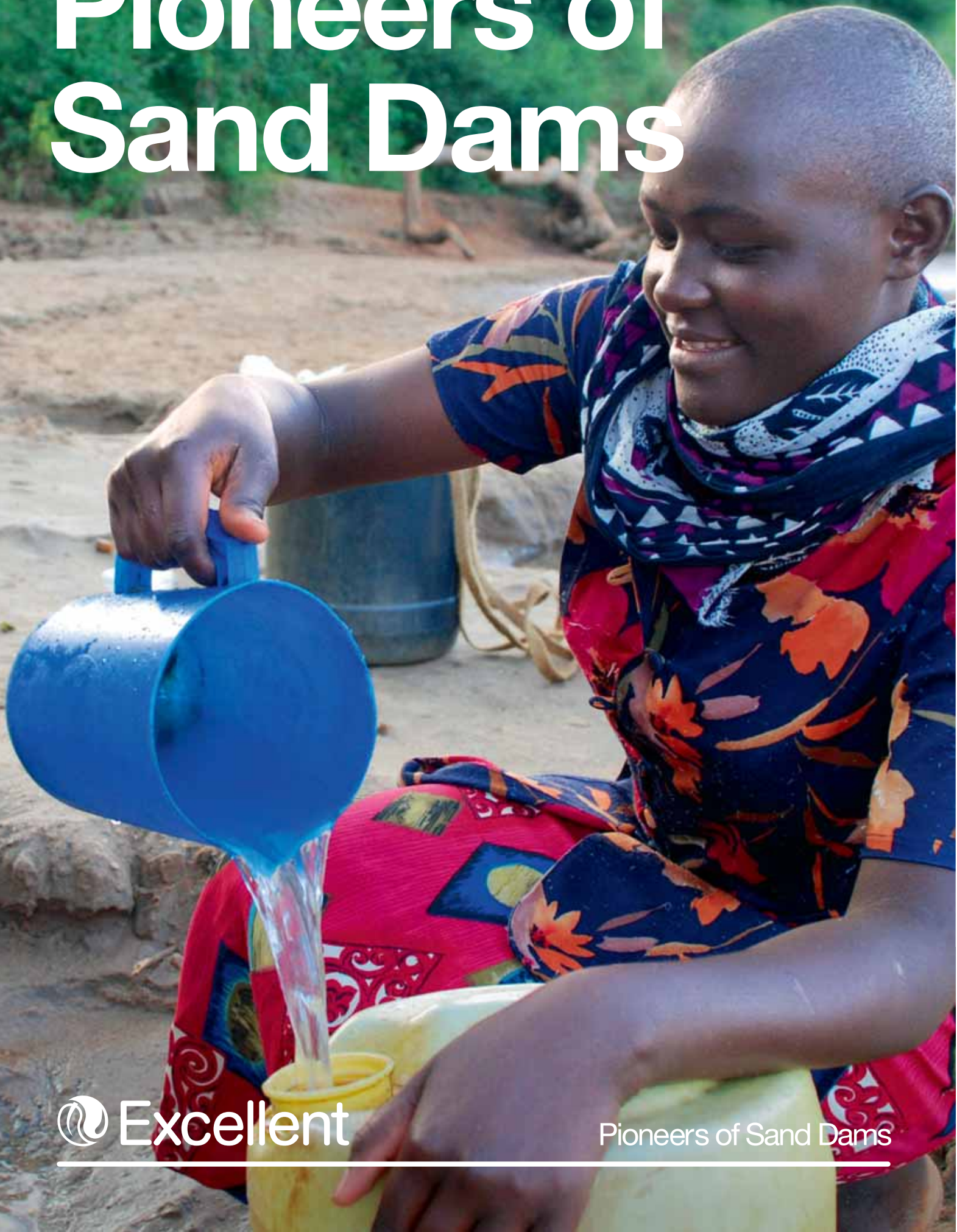

Pioneers of Sand Dams



Sand dams will transform millions of lives

Sand dams transform people's lives by providing a year round source of clean water close to their home. This saves farmers and their children hours a day, enabling them to focus on growing more food and going to school.

Who we are

01



Excellent
Studio 61
The Market Building
195 High Street
Brentford
TW8 8LB

Email:
team@excellent.org.uk

Telephone:
+44 (0)20 8232 9050

excellent.org.uk

Excellent supports subsistence farmers and their families to gain access to clean water and grow more food to eat, store and sell. We support communities to build sand dams which provide clean water and the potential to invest time in sustainable agriculture.

Our vision

Sand dams will transform millions of lives.

Our purpose

- To support farmers in developing countries to gain access to clean water and grow enough food to eat and sell;
- To promote sand dam technology and environmental conservation;
- To support organisations to implement sand dams alongside food and water programmes.

Excellent Development Limited is a registered charitable company.

Registered in England and Wales no. 4432166

Registered charity no. 1094478

Registered Office:
2 Water Court, Water Street, Birmingham, B3 1HP

Patrons
Lord Joel Joffe CBE
Sir Edward Clay

Our history



1984

Simon Maddrell, Executive Director of Excellent Development, meets Joshua Mukusya, a Kenyan farmer and development worker, to plan a venture scout expedition to Kenya.

1985

The expedition, led by Simon, visits Kenya to support Joshua building sand dams and domestic water tanks with rural communities.



1988

Simon completes a study of the first 10 years of the Utooni Development Project (UDP), started by Joshua and six families to provide solutions to their problems of food and water.

2000

A pilot project to add tree planting to the UDP terracing and sand dam model is started by Simon and Joshua.

2002

Excellent Development is formed in the UK to support Joshua to expand UDP's model throughout Eastern Kenya.

2005

Excellent Development Kenya (EDK) is formed as an NGO in Kenya.

2008

Excellent Development wins the 'Environment Charity' and 'Overall Winner' at the 2008 Charity Awards in the UK.

2009

Excellent becomes the 'Small Charity, Big Achiever' of 2009 at the Third Sector Excellence Awards.

2009

EDK becomes fully independent and renames itself 'Utooni Development Organisation' in recognition of its roots.

2010

Excellent Development expands its vision to promote sand dams throughout the world as a solution to water issues in dryland areas.

2011

Excellent Development re-launches to become 'Excellent, Pioneers of Sand Dams'.

Top:
Simon Maddrell

Bottom:
Joshua Mukusya

excellent!
DEVELOPMENT.COM

Our achievements



320

sand dams built



82

communities supported

Since 2002 Excellent has raised over £3 million to support over 220,000 people to gain access to clean water.

The 82 communities that Excellent has supported have built 320 dams. Each sand dam provides water for an average 1,000 people, plus livestock and plants. With the time saved by sand dams, farmers are able to keep more soil and water in their farms by digging terraces. They have dug an astounding 1,300km of terracing since 2002. This has enabled them to grow

"Excellent Development is a fantastic example of how innovation, passion and vision can be turned into an effective project demonstrating considerable impact. The project greatly impressed the judges with how its excellent management led to a great idea being implemented across so many communities. The initiative is both sustainable and replicable and is a perfect illustration of the inspirational work that takes place within the voluntary sector." Daniel Phelan, organiser of the Charity Awards 2008.



more food for their families, taking advantage of the potential created by sand dams.

In addition, the water supplied by sand dams in the dry season enables farmers to propagate seedlings to plant trees in their farms. Farmers have planted more than 830,000 trees since 2002.

Together, sand dams, terraces and trees create a virtuous circle of conservation helping to increase food production.

"The Third Sector team was impressed by just how far Excellent Development has come in its short life, moving from start-up charity to an organisation that has helped local communities in Kenya deliver a better future for thousands." Stephen Cook, Editor, Third Sector.

"All of us were deeply impressed by the quiet passion with which you described the work of Excellent Development. The idea of the sand dam has a magnificent simplicity and clearly a relevance that could extend way beyond Kenya." Cassandra Jardine, The Daily Telegraph, on choosing Excellent for the 2009 Charity Appeal.



ThirdSector
Excellence Awards 09
Winner

Supporting farmers

Excellent supports farmers in developing countries to gain access to clean water and grow enough food to eat and sell.

Excellent supports farming communities to achieve food and water security through soil and water conservation and sustainable agriculture.

65%

In drylands 65% of the population do not have access to an adequate water supply.

Many dryland regions receive as much rainfall as we do in the UK, but erratic rain patterns mean that water is often unavailable. Water dries up quickly after the seasonal rains, leaving few sources of clean water. The daily search for water in the dry season can take between 6 and 12 hours, leaving farmers little time to grow food for their families.

The work Excellent supports begins with community groups who come together to address their priorities of water, food and incomes. Excellent tends to support communities to build sand dams because of sand dams' cost effectiveness but sometimes other technologies are more appropriate to community needs, like rock catchments, pipelines from springs or water tanks.

Having a water source close to home saves time, allowing farmers to implement improved techniques to increase food production. This often includes:

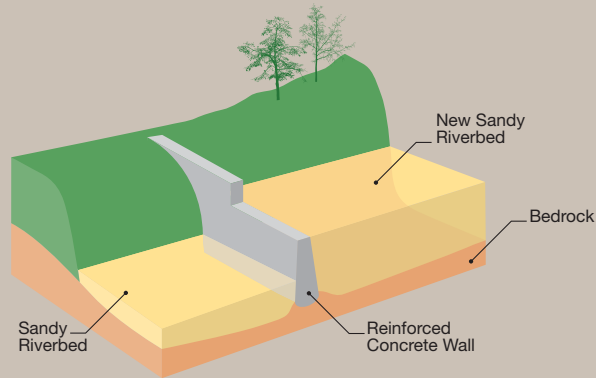
- Terracing to create flat fields on sloped land, conserving both water and soil during the rainy seasons so that farmers can increase their crop yields.
- Mixed cropping, which through planting two or more crops together effectively doubles the size of farmers' fields. Planting a mix of crops in this way improves pest and blight control as well as crop yields.
- Cover crops are often planted to keep moisture in the soil and reduce soil erosion, both of which help increase production of all the plants in the field.
- Zero grazing, which involves keeping livestock in pens enabling farmers to produce manure for their fields and protect crops, terraces and trees from roaming animals.



How sand dams work

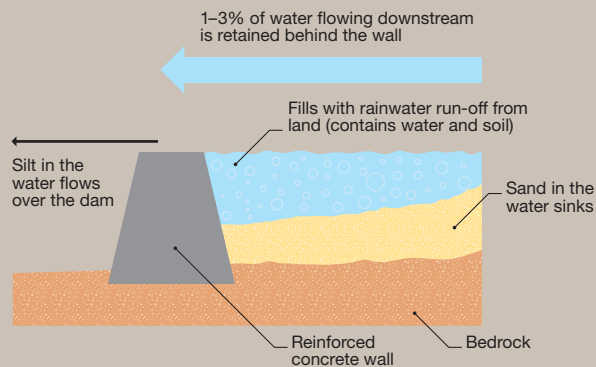
1. Siting & building the sand dam

- A sand dam is a reinforced concrete wall built in a seasonal riverbed to capture and store water beneath sand, both filtering and protecting it.
- A sand dam holds 2–10 million litres of water and is the world’s lowest-cost rainwater harvesting solution.



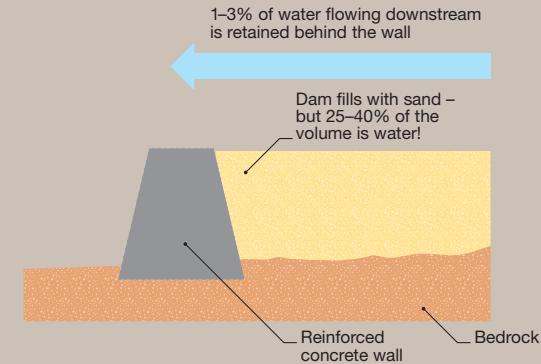
2. Harvesting rainwater behind the dam

- Seasonal rains quickly fill the dam with water and soil.
- The soil is made up of silt and sand.
- The heavier sand sinks behind the dam, whilst the lighter silt washes downstream.



3. How water is stored in the sand

- Sand accumulates until the dam is completely full of sand up to the spillway.
- Water is stored within the sand making up 25–40% of the total volume.
- This means that 2–10 million litres of water are captured – depending on the sand particle size and the size of the dam.



4. Getting to the water

- There are three main ways to abstract water from sand dams: scooping holes, pipe filtration or shallow wells with pumps. The community decides on the most appropriate option for them.
- Evaporation is reduced to a minimum with the water stored below the sand. The sand also filters the water clean and protects the water from parasite carriers such as mosquitoes and snails, reducing the incidence of the world’s two biggest killers of children under five – malaria and diarrhoea.



Promoting sand dams



Sand dams are the world's lowest cost method of capturing rainwater in dry rural areas. Excellent promotes sand dam technology and environmental conservation as a means of building resilience to climate change.

40% of the world's land surface is classed as 'drylands', which sustains 80% of the world's poorest people. The potential for sand dams to make a difference is huge.

80%

80% of the world's population living below the poverty line rely on dryland resources to survive.

Sand dams can be built anywhere there are seasonal rivers with sandy sediment – conditions that are found across the world's drylands. However there are currently less than 150 sand dams being built every year worldwide, mainly in Kenya. Excellent's mission is to change this.

Excellent won't do this alone and nor do we want to. Ultimately, we aim to work with strategic partners to develop 'Centres of Excellence' in three continents. Sand dam technology will be tested, demonstrated and proven in a variety of political, economic, social, technical, legal and environmental circumstances.

We are promoting the technology so that sand dams will become a mainstream water solution for dryland farmers.

We are currently working with two organisations in Kenya building sand dams with farmers as well as supporting pilot sand dam projects in Sudan and Mozambique. We are also engaging with more partners, including WaterAid and Oxfam, to promote sand dams.

1. Uganda

Water Aid completed a visit to Kenya in March 2010 with the intention of completing a sand dam pilot, which Excellent will support.

2. Zimbabwe

The Dabane Trust completed a learning visit to Kenya in Jan 2011. We will be supporting them in their plans to build 20 sand dams over the next 3 years.

3. Mozambique

We are supporting the creation of CCM's national water and agriculture programme. CCM completed a learning visit to Kenya in Jan 2011

4. Kenya

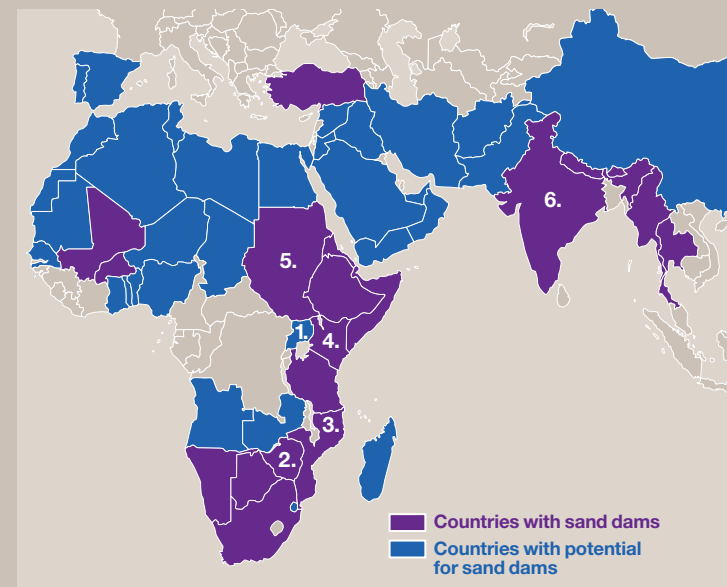
We have partnered with ASDF to promote sand dams and we are working with UCSS to pilot the use of sand dams.

5. Sudan

We are supporting SOS Sahel Sudan to integrate sand dams into their conflict reduction programme, as a way of managing the conflict created by water shortages.

6. India

India has a long history of soil and water conservation. Excellent is planning to expand into India in 2012.



Promoting sand dams

Excellent supports organisations to apply sand dam technology and our development model to their country. Our structured approach to design, learning and implementation is critical for success.

Excellent, in partnership with the Africa Sand Dam Foundation (ASDF) supports organisations to learn about the benefits of sand dams implemented as part of community-led development. Together we provide structured learning visits to Kenya so that interested organisations can understand the community development approach, sand dam technology and its integration into a water and agriculture programme.

Excellent and ASDF provide technical support on the implementation of sand dam technology, including a technical manual that demystifies the siting, design and construction of sand dams. Excellent also provides organisational development in strategy, programme planning, finances, fundraising and donor management.

Excellent's future strategy is to support six to ten organisations across three continents to enable the mass adoption of sand dam technology.



Kenya

We are working in partnership with ASDF who, by January 2011, had supported communities to build 18 sand dams in their first six months of operation.

ASDF is supporting communities in Kibwezi District to address their priorities of food and water. We are supporting ASDF to build capacity to expand their work in the wider region. This includes investment in infrastructure, strategic support and development of a fundraising and donor management function.

ASDF also host Excellent's expeditions for individual and corporate supporters. In addition we are working with the Ukambani Christian Community Services (UCCS) to pilot sand dams. We are enabling technical support in order to develop an integrated food and water programme.



Mozambique

Inspired by a visit to Kenya in 2007, the Christian Council of Mozambique (CCM) introduced sand dams to Tete and Manica Provinces. Supported by the Mennonite Central Committee (MCC), CCM have launched a national water and agriculture programme, which will expand into seven of their ten provinces. We are supporting CCM in the development of their implementation strategy; sand dam technical support and the integration of water and agriculture activities.

Excellent are also supporting CCM in developing their fundraising and financial management as well as monitoring, evaluation and reporting.

What people say



"Excellent shares in the interests of the community and they listen to the community and take direction from us. On the first day we met, Cornelius Kato came to us and explained the work you do and he listened to our problems and hopes. Other organisations do not really listen to the community and some have even begun work here without our request or consent" Mbatha Mbuli, member of Wikwatyo wa Kiambani Self-Help Group in Kenya.

Above left:
Mbatha Mbuli



"I'm more certain now that we can achieve this vision, even though I know how big the challenge is. Earlier we didn't know what to do with the idea, but now it's clear... Your interest in our movement has provided us with another way of thinking, input that is worth far more than just money." Jorge Samuel, Head of Programmes at CCM speaking about the support Excellent is providing to his team in Mozambique.

Above middle:
Jorge Samuel



"A few years back you would have to wake up at 3am to fetch water. On arrival at the water point there were fire camps by people waiting to get water. Currently you can go to get water in less than thirty minutes." Farmers in Kitandi Fruit Tree Growers Self-Help Group in Kenya.

"Income has improved because we have better harvests from terracing land, better harvests from diversifying crops, and time saved. We have more time to work on important issues, and we can sell a portion of our crops." Farmers in Kwa Mukonza Self-Help Group in Kenya.

Advocacy and research

Excellent advocates sand dam technology to international agencies in order to achieve mass adoption of sand dams in drylands worldwide.

2,000

Sand dam technology is 2,000 years old

In order to achieve our vision that 'sand dams will transform millions of lives', Excellent needs to advocate the use of sand dam technology to organisations that influence policy both at governmental and international agency level. To achieve this it is critical that we are able to demonstrate the potential and benefits of the technology. A key part of this is the facilitating research into the environmental and human impacts of sand dams. Although apparent to those communities that build them, it is necessary to establish clear scientific evidence of their efficacy. This will become increasingly important as the world seeks solutions to combating and adapting to climate change – especially in drylands.

St Andrews Prize for the Environment

Our commitment to soil and water conservation as a key weapon against climate change was recognised by the St Andrews Prize for the Environment. Our strategy for the appropriate application of sand dam technology in rural drylands areas was a runner-up for the 2009 prize.

Whilst Excellent's focus is on community-led sand dam building for the benefit of dryland farmers, there are clearly wider applications. Public works programmes could transform dry rural areas by implementing 'sand dam bridges' over seasonal rivers and streams.

The same technique could also create a sustainable environment for animals, plants and insects in game reserves throughout Africa and elsewhere. Even developed countries like Australia, or places like Jordan in the Middle East, could significantly benefit from sand dams.

2009 Earthwatch Annual Debate

At the 2009 Earthwatch Annual Debate 'From Tsunami to Drought', which was broadcast on BBC Radio 4, sand dams were voted as the best solution to the global water crisis.

"Simon won the crowd over – hands down. It was great to hear the story of Excellent Development!"
Michael Triff,
Director of Development,
Earthwatch Institute.

Development education

13

In schools and universities across the British Isles, Excellent is improving the understanding of the links between environmental conservation and rural development.

Excellent's work addresses many topics relevant, in particular, to secondary school and university courses in geography and to primary school lessons on global citizenship.

Our approach highlights the crucial role of self-help community development, environmental conservation and sustainable farming in addressing the challenges faced by people in developing countries. The case studies demonstrate solutions to the issues around water supply, food security and adaptation to climate change.

Drawing on our experience of working closely with community development projects in Africa, we have developed quality teaching resources appropriate for primary, secondary and undergraduate learning.

Teachers using our resources value the real-life case studies illustrating grass roots development work in dryland Africa.

We also provide opportunities for young people to participate in volunteer expeditions to Kenya to enhance their understanding of self-help community development and environmental conservation, in particular the remarkable impacts of sand dams.

"Excellent Development provides a valuable example of how sustainability in semi-arid Africa can be addressed in a manner that really benefits people and the environment. I'm delighted to utilise film footage and focussed curricula case studies of their excellent work"
Ian Langrish, Head of Geography, Tiffin School, Kingston-upon-Thames, UK.



Adversity and hope

Excellent's Executive Director, Simon Maddrell, recounts his visit to communities in Kenya in October 2010



Visiting the early work of our new partner Africa Sand Dam Foundation (ASDF) was a breath of fresh air. Especially going to visit the 75 members of Ndetheye Ngutethye self-help group on the border of the Tsavo East Game Reserve.

In Kikamba, 'Ndetheye Ngutethye' means 'help me, help you' reflecting perfectly the philosophy and values of both ASDF and Excellent, developed by Joshua Mukusya who first inspired our work.



The Kamba people have a long-held tradition of 'mwethya' which can be paraphrased as helping each other for the common good. This might be the extended family helping to bury a deceased relative or create a farm for a newly married son. It could also involve geographically close families joining together to fix a road washed away by the rains. What Joshua did in his early days was demonstrate how this cultural dynamic could address future development rather than just the reactive solving of specific problems.

We visited Ndetheye Ngutethye group's magnificent new dam, in its final stages, with members of the community meticulously watering the drying cement so it would cure to the required strength. Musila Silu,

Development Director of ASDF helped us understand why the group had worked so hard on this project. "Can they take you to where they currently collect water?" he asked.

We walked through the bush – cutting across to a point about 750m upstream, passing the occasional pile of elephant dung on the way. It was about 5.45pm. It'd be pitch black by 7pm.

We reached a spot in the river bed with a three foot deep hole. Barely half an inch of water covered the bottom, the water slowly refilling after each small scoop.

The woman scooping water from the hole, pictured left, had been there since 3pm and was finishing filling her third 20-litre jerry can – all she could push on her bicycle for the six kilometre journey home.

Cornelius Kato, the ASDF Field Manager, explained that this was the only water source for four local villages – a total population of 4,000 people. On Saturdays there was a 150m queue of children waiting to collect from here because the nearest other points were Mito town 18km away and Nthunguni 16km away. Challenge enough, one would have thought. But this river was the border of Tsavo East Game



"I love the ambition and vision – that's how they'll change the lives of 4,000 people..."

Reserve and elephants got water from here too. Often in the morning people had to dig another hole as elephants had taken their turn while they were away.

Another guy, pictured above, was waiting patiently with a San Diego baseball cap on – he started collecting water at 6pm. I joked that he had the answer on his hat – a big 'SD' emblazoned on the front. When I said "Sand Dams" I'm sure they laughed more out of hope than belief.

Their Chairman was unusual for a self-help group. The group had been going for 25 years, and until recently, all on their own helping to arrange and pay for funerals of deceased family members; terracing each others' farms and running 'merry go round' saving schemes where once every couple of weeks one member gets cash to buy clothes, pay school fees or simply buy seeds to grow food.

Their current chairman, Albanas Kioko Musau, is only 28 years old. A short, serious young man who obviously had a spine made from the sort of steel used to make sand dams such a success. He clearly had the

respect of the members and the local community. A village elder, old enough to be his grandfather, introduced himself with obvious respect for this amazing group and their Chair. Albanas said he wanted them to build 20 dams though he admitted they 'only' planned to build four next year.

I love the ambition and vision – that's how they'll change the lives of 4,000 people, and several handfuls of elephants.

We wandered downstream back towards the new dam and I pondered how much I knew things would change for these people in the coming years – and how much their spirit and commitment deserved it.

I always leave experiences like this with renewed vigour, energy and belief. President Obama – part Kenyan – talked about the 'audacity of hope'. If you want to know what that means, come and join one of our expeditions to help communities like this build a sand dam. You'll experience something even more meaningful, 'adversity and hope' and you will never be the same again. I promise.

Give a dam

Transform lives by supporting farmers to build sand dams. Not only do sand dams provide clean water, but they save farmers hours a day enabling them to focus on growing more food. Join us in giving a dam.

Ways to support Excellent ¹⁷

Donate

With sand dams, just £10 can provide one person with clean water for life. By donating to Excellent you can help more people to transform their lives.

I enclose a cheque / postal order made payable to 'Excellent' of

£ _____

Or please send me a form to make a regular gift.
Gift Aid makes every £1 worth £1.25

I am a UK taxpayer and I would like Excellent to treat all donations I have made as well as any future donations as Gift Aid until I notify them otherwise. Please tick:

Yes

No

giftaid it

Please remember to notify us if you no longer pay as much in income tax (or capital gains tax) as Excellent and any other charities you support reclaim on your donations in the tax year. For your donation to qualify for gift aid you must supply a home address. Excellent will never share your details with any other organisations.

Name: _____

Home address: _____

Email: _____

Phone: _____

Signature: _____

Date: _____

Become a pioneer

There are lots of other ways you can help us to pioneer sand dams, from running the marathon to joining one of our expeditions.

Contact us for more information on how you can support Excellent:

• To fundraise for us, contact gemma@excellent.org.uk

• For charitable trust donations, contact benjamin@excellent.org.uk

• For corporate donations and to join one of our expeditions, contact alexandra@excellent.org.uk

Contact Us

Excellent

Studio 61
The Market Building
195 High Street
Brentford
TW8 8LB

Email

team@excellent.org.uk

Telephone

+44 (0)20 8232 9050

excellent.org.uk

The majority of the photographs featured in this brochure were taken by Excellent staff and volunteers. A number of photos were also provided by Polly Braden. Excellent thanks all those who have contributed and allowed us to use these pictures.

We also would like to give special thanks to brand design consultancy WPA Pinfold who generously donated their time to develop the new Excellent brand, including supporting us to design and print this brochure.

This booklet is printed on paper which is made from FSC certified pulp and has been printed using vegetable inks.
