

Transforming lives and land in drylands with sand dams and clean water

UK charity, Sand Dams Worldwide are supporting people living in rural drylands to build sand dams and develop climate-smart agriculture, which will provide them with lifelong access to clean water and food. A sand dam is a reinforced concrete wall built across a seasonal sandy river that can capture up to 40 million litres of water during the rainy season; water that is stored safely within sand and protected from evaporation, contamination and disease.



“Now that I have clean water close to my home, I can plant my farm produce, water and harvest my vegetables. I also now have time to tend to my home and family which I was not able to do before.”

Esther Mwende,
Kenyan farmer.

Visit sanddamsworldwide.org.uk for more information.

What is a sand dam?

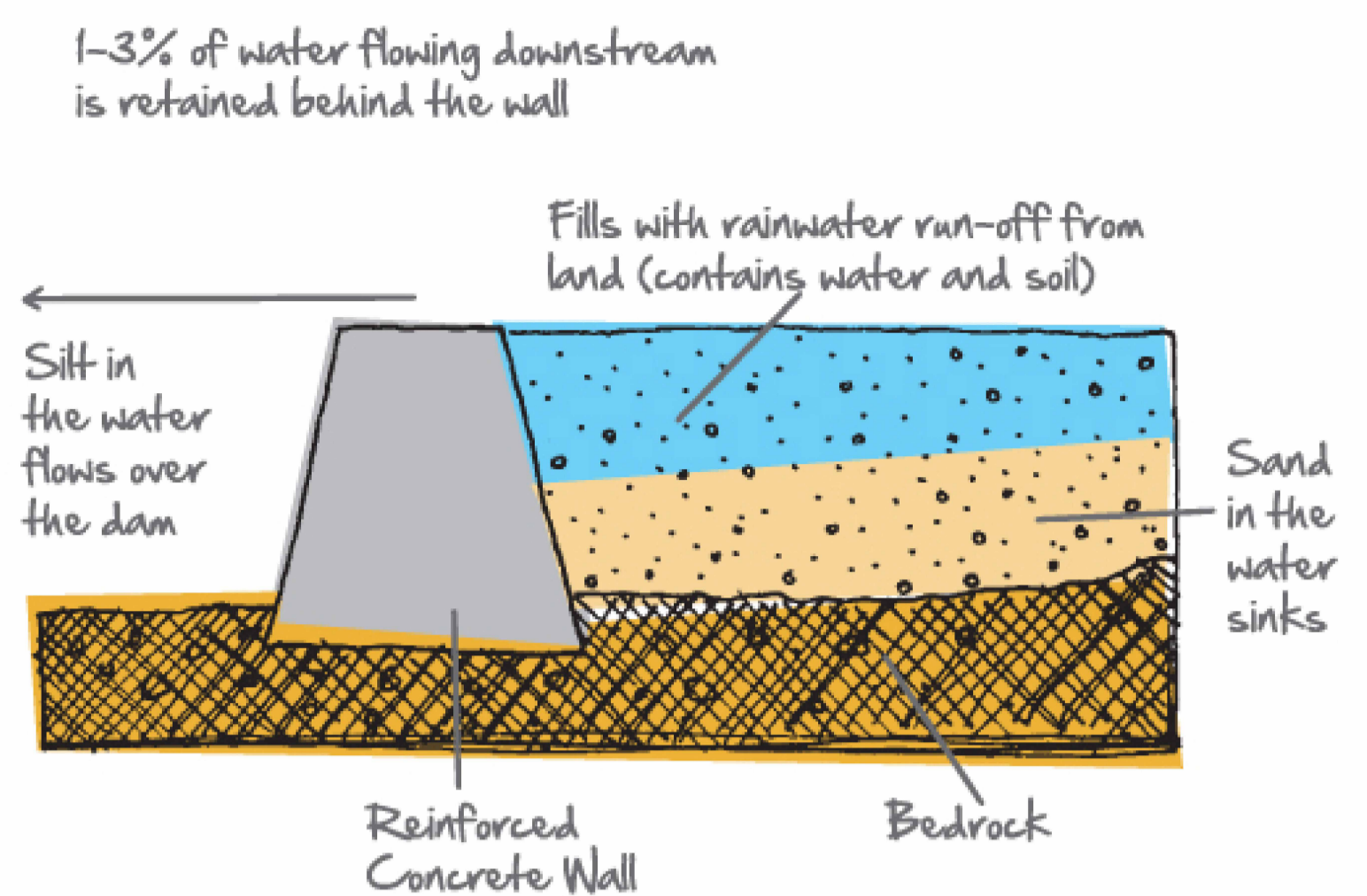
A sand dam is a reinforced stone masonry wall built across a seasonal sandy river. They have almost no maintenance costs, can last for well over 30 years and there is one still in use that is more than 100 years old.

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 sand 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.



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.

Sand Dams Worldwide have extensive experience having supported the build of over 1,000 sand dams, which have provided over 1 million people with access to clean water for life.



Children standing on a sand dam in Makueni County, southeast Kenya.