

# CLIMATE LOCAL:

## Communicating locally to protect globally

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# DAMS BUILT FOR SAND, BUT ARE THEY THE ANSWER TO KENYAN WATER SHORTAGES?



Credit: [www.arche-nova.org](http://www.arche-nova.org)

## PROBLEM

- In Kitui county, southeast Kenya, increased rainfall irregularity is leading to more instances of drought, but then when the rain does come, the area floods quicker than ever before
- More droughts are leading to less trees and plants, further decreasing the water retention ability of the soil
- On a human level, the water shortages have led to increased poverty levels with community members spending 5-6 hours to collect water. This disproportionately affects women and children, with children being forced to miss school and women not being able to partake in income-generating activities

## SOLUTION

- The Kenyan NGO, Sahelian Solutions Foundation (SASOL), initiated a sand dam building programme in Kitui county
- Sand dams are an effective way of harvesting rain water, and building up stores of underground water access for local communities
- Dams are constructed across seasonal sand riverbeds whilst they are dry. Over the course of a couple of rainy seasons and storms, sand from upstream is washed down river and gets stuck behind the dam, raising the level behind it. The higher sand levels trap water by protecting it from evaporation and contamination
- The higher water table underneath the sand can then be accessed through wells built into the higher sand level. The water is stored and used, and then replenished every rainy season

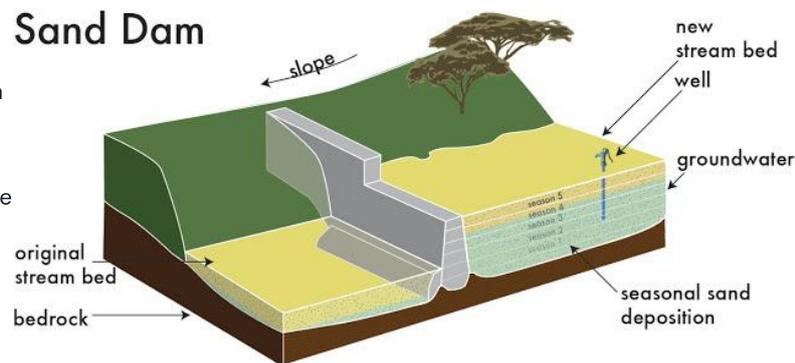
## IMPACT

- There has been a 263% increase in households planting trees in communities that have constructed sand dams
- The dams are providing a local source of clean water and the uptake in the use drought-tolerant seeds mean communities are becoming more resilient to climate change
- Water collection times have been reduced to around an hour, meaning children are now able to be in classrooms more, and women now have more time to get involved with income-generating activities and careers

## AT A GLANCE

- Rural communities in the Kitui county and other areas of southeast Kenya face severe water shortages and extreme flooding due to changing rainfall patterns
- Sand Dams have been introduced as a way of creating underground storage for local communities to access
- Education on tree planting, sustainable water use, and drought resistance seeds has been taught to coincide with the community led construction projects

## Sand Dam



## COMMUNICATIONS

- Community engagement is central to the programme from the very beginning. Costs for the construction of the dams are lowered by employing the community that is benefiting from it to construct it
- Communities are also taught about sustainability whilst completing their local project. The education around tree nurseries, seed and crop rotation, and soil health go hand in hand with the construction of the sand dam.
- If the education campaign wasn't run in conjunction with the construction, then the benefits seen from the dam wouldn't be nearly as fruitful
- The project is only set up in some areas for self-help community groups that actively request the support. Whilst this is good for ensuring commitment to the project, it does leave some communities vulnerable if they are not aware of the programme



The early stages of the community construction of a sand dam in Kenya

Credit: [www.excellentdevelopment.com](http://www.excellentdevelopment.com)