



Rainwater Harvesting
Implementation Network

RAIN - Adapting to climate change

Climate change is leading to more erratic and extreme rainfall and drought patterns in many countries around the world. Water buffering can mitigate the effects of variable water supply. Decentralised rainwater harvesting techniques are available to provide safe water throughout the seasons, making a crucial difference for vulnerable rural and peri-urban populations. The RAIN Foundation facilitates the implementation and mainstreaming of rainwater harvesting infrastructure through the establishment of local expert centres.

Climate change asks for adaptive measures

The world is facing climate change. Countries in tropical and sub-tropical regions are among the most affected. They are facing serious changes in precipitation patterns and, as a consequence, more frequent extreme weather events such as droughts, storms and floods. As a result, both agricultural production and the availability of drinking water in tropical and subtropical regions are under increasing stress.

Agriculture is undoubtedly the most important economic sector for many countries in the dry regions of Sub-Saharan Africa and South Asia. In Africa, for example, 70% of the continent's population depends on agriculture for their livelihood. As most of the agricultural activities in the dry countries hinge on rain, any adverse changes in the climate would likely have a negative effect on the livelihood of the majority of the population. The current farming technologies are basic and incomes low, suggesting that farmers will have few options to adapt.

Rainwater harvesting as adaptation to climate change

Many activities to fight climate change have been focussed on a reduction in outputs of greenhouse gases. This is important, but even if successful, the changes to the global climate will not be stopped immediately. The predicted impacts will increase, probably for many decades. Therefore, to overcome the effects of climate change, adaptations are needed to agricultural practices and the management of natural resources, including water. Where climate change results in a drier environment and the water balance topples towards a shortage, buffering water with a small rainwater harvesting facility could make a significant difference.

Increasing water storage capacity is a very efficient, simple and therefore promising adaptation strategy to climate change. Harvesting rainwater during scarce and unreliable rain showers and increasing the storage of this water can be achieved by harvesting rainwater in constructed tanks, by enhancing groundwater storage and by erecting small-scale dams in the beds of seasonal rivers and streams. In the dry tropics, access to water for domestic uses, such as drinking, sanitation, cooking and small-scale food production, will increase if rainwater is collected, stored and used where it falls.

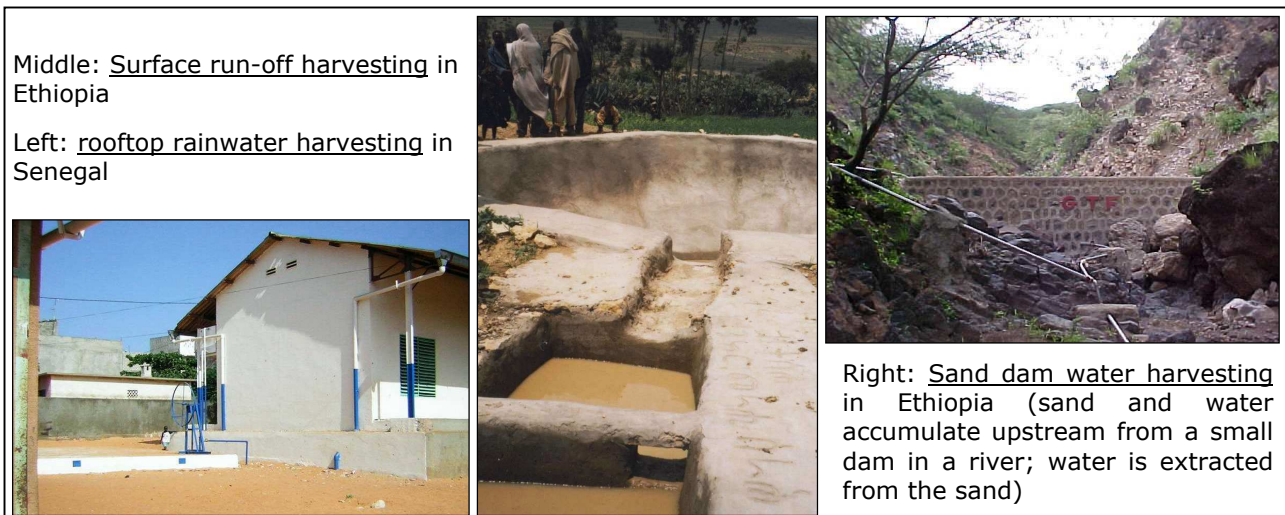
This approach is in line with the Johannesburg Plan of Implementation: *'(...) support efforts for developing non-conventional water resources, including the energy-efficient, cost-effective and sustainable (...) rainwater harvesting (...)'*.

Focus on field action!

The Rainwater Harvesting Implementation Network (RAIN) is an international organisation that focuses on implementation of rainwater harvesting structures in the field. RAIN explores, enhances and exchanges local rainwater harvesting techniques, and establishes local expert capacity to mainstream rainwater harvesting. RAIN aims to increase access to water for vulnerable sections of society in developing countries, women and children in particular. RAIN projects use low-cost and simple (appropriate) technologies that are adapted to local conditions. On average, the cost of rainwater harvesting ranges from 4 to 12 Euro cents per litre of storage capacity, depending on local conditions and the techniques used.

RAIN is presently active in Nepal, Senegal and Ethiopia and is planning to expand further in Sub-Saharan Africa and South Asia in the near future. In addition, RAIN facilitates a global exchange of knowledge on rainwater harvesting between its partners and other interested organisations. PLAN Netherlands currently covers most of RAIN's costs for technical assistance. Local costs for implementing rainwater harvesting pilots and programmes are covered by interested donors and development programmes.

RAIN's initial projects have utilised rooftop and surface run-off harvesting, combined with tanks and sometimes lavatories. Other options, such as sand dams and groundwater recharge, are being considered for future projects.



If your organisation is interested to implement or fund rainwater harvesting as an adaptive measure to climate change, RAIN can provide technical and management support to local specialised rainwater harvesting institutions. In case such institutions are not yet present in the country, RAIN uses pilot projects as a vehicle to build capacity with selected organisations. RAIN ideally selects and empowers one local organisation to become the national expert centre on rainwater harvesting. This expert centre facilitates the implementation of rainwater harvesting projects throughout the country. Integration in existing programmes is possible. Rainwater harvesting projects are best embedded in an integrated approach to managing water resources and sanitation.

Contact us for more information

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