

3R: Recharge, Retention & Reuse of Rainwater



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People living in drought-prone areas are one of the most difficult groups to reach with the millennium development goal efforts. Eighty percent of the world population live in areas where fresh water is not secure, and 3.4 billion people (52%) live in areas with severe water stress.¹ Scientific projections indicate that climate change and increased incidences of extreme weather events will have further negative impact on water security. This challenge requires innovative solutions along the development track we refer to as 3R.



3R Program

3R stands for **R**echarge, **R**etention and **R**euse: **Recharge** is a hydrologic process where rainwater moves downward from surface water to groundwater. Water **Retention** relates to storage technologies, which can differ according to local circumstances and available materials. **Reuse** involves getting the water available in periods of need and scarcity.

The 3R program aims to promote technologies to assist people in water scarce areas to maximize the use of available water. The program focuses, for example on improving rainwater storage in wider hydrological units, providing water for drinking and for economic use. These programs are linked to land use planning and managing both natural and artificial recharge.

Through the combined effort of various water management stakeholders, Aqua for All is working to convince major planning and financing agencies to invest in the application of these effective technologies. Pilot projects and experiences of third parties have proven successful, and we see great potential to replicate the benefits of these technologies across various geographies. 3R is a promising development track which merits promotion and funding, combining rainwater harvesting and climate adaptation.

Partners:

Acacia Water,
MetaMeta,
RAIN Foundation,
Co-operative Programme on
Water and Climate,
International Groundwater
Resources Assessment
Centre,
German Federal Institute for
Geosciences and Natural
Resources (BGR),

Program website

www.bebuffered.com

¹ (Nature, October 2010, Charles Vorosmarty eo).

Join us!

3R is an open source platform for interested participants. The German BGR was one of the first to join this forum. Your organization will become part of a broad network exchanging useful information and valuable knowledge on advocacy and fundraising. The consortium seeks support from “out-of- the-3R-box” agencies to increase awareness and to promote communication with the broader stakeholders in the water sector. In addition, we offer financial leverage to funding agencies.

3R and Aqua for All

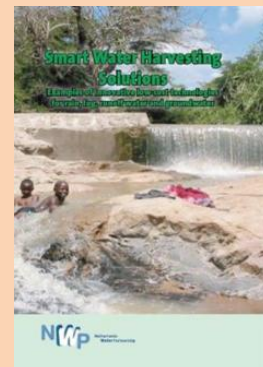
Back in 2005, Aqua for All was one of the six initiators of the 3R forum, bringing together various stakeholders to create innovating technologies in the field of rainwater harvesting. Since then, we have built up a powerful group of experts in this area, part of them participating in the working group of Rainwater Harvesting. Aqua for All manages part of the 3R secretariat, brokers partnerships and searches for funding opportunities. The organizations Acacia Water and MetaMeta provide support on knowledge sharing within the program.

3R Highlights

The 3R approach began in 2006 with the development and up scaling of **sand storage dams**. The first project was situated in Kitui District in South-East Kenya, and focused on issues such as the technical design, research on water retention volumes, socio-economic impact analysis and catchments wide modelling. Acacia Water conducted the research, and Aqua for All provided most of the funding. Because of the success of this initiative, the RAIN foundation became involved in replicating the technology in Ethiopia and Burkina Faso.

In 2009 and 2010, 3R was present at the Stockholm Water Week to promote these innovations among relevant stakeholders. The program received a great deal of attention, inspiring policy makers and representatives of funding agencies to include 3R programs among the possible intervention options.

Together with Acacia Water we are implementing a 3R promotion project for **fresh water buffering** in coastal areas with salinity risks. The solution begins with the development of a mapping tool for the definition of high priority areas, places where the water demand is high. 3R technologies offer applicable solutions where alternatives are scarce. Fresh water buffering is developed for some coastal areas in Mozambique, Kenya, Bangladesh and Tamil Nadu, India. In two priority areas pilot projects will be developed. Meanwhile, institutional and financial scans will be made for up scaling in these geographical areas. Results will be presented to a stakeholders' forum later this year. The project is subsidized by Partners for Water.



Aqua for All was the main editor of the booklet “Smart water harvesting Solutions” in the NWP smart solutions series. This booklet is written for local communities, civil engineers, non governmental organizations, research institutes, donors and governments who will use it as an effective source of inspiration for finding creative solutions in situations where “there seems to be no water”. Further information about this booklet can be found on www.kitpublishers.nl or www.akvo.org