

Project Splash

Examining water management in peri-urban communities of South Africa and Kenya



Project Splash commenced in 2008 and is a joint collaboration between the RSC and Unilever plc. The main topic addressed is water management in peri-urban communities. The countries being studied at present are South Africa and Kenya and therefore the project falls within the remit of the PACN.

The broad objectives of RSC and Unilever within Project Splash are unique but complementary. For Unilever the key aim is to understand how increasing pressures on the supply of fresh water in Africa



Project Splash logo

will affect the nature and form of home care products and consequent consumer demand.

Meanwhile the RSC's key objective (in line with its mission to advance the chemical sciences) is to demonstrate how the chemical sciences can and will provide innovative, cost-effective, sustainable solutions to problems exacerbated by the growing fresh water supply shortages in Africa.

The peri-urban communities being studied are townships within South Africa (near Cape Town and Durban) and several communities in or very close to Nairobi in Kenya. The primary academic links are with the Sustainability Institute at Stellenbosch University and the University of KwaZulu-Natal in Durban.

Current Splash projects

There are three current projects going forward, two of which involve at least one

student who is studying of his/her Masters Degree. These are:

1. Domestic Grey Water – the overall objective is to understand better, and exploit, the opportunities to use domestic grey water” (water used to wash clothes, dishes and people) to grow salt-tolerant crops (e.g. spinach and green peppers) in the peri-urban township communities. Field tests have been conducted at Unilever South Africa Head Offices in Durban.



Grey Water project launch at Unilever South Africa Durban, July 1st 2009. L to R: Gail Klintworth (Chairman of Unilever Board South Africa), Rodney Townsend (RSC), Louise Duys (Unilever South Africa), Chris Loxley (Unilever UK), Nicola Rodda (University of KwaZulu-Natal), Teddy Gounden (Durban government municipality), Urisha Singh (Unilever South Africa) and Presanthe Naicker (University of KwaZulu-Natal)

Preliminary studies have already shown that spinach and green pepper plants irrigated with greywater had significantly higher growth rates compared to plants irrigated with tap water.

In addition, the long term effects of grey

Grey water to 'grow your own'



Nutrient solution



Greywater



Tap water



Peppers

Spinach

Grey water trial results (courtesy Nicola Rodda)

water irrigation on soil composition, texture and microbial properties will also be examined. A Masters student, Preshanthie Naicker, is currently working on this project and is supervised by Nicole Rodda and Ademole Olaniren from the University of KwaZulu-Natal in Durban.

2. More Value from Water – the overall objective here is to see how we can use chemical and associated technologies - together with detailed, related consumer studies in various seriously water stressed localities within Nairobi - to produce more efficient and cost effective personal wash products that appeal to consumers within peri-urban township communities. The project is in collaboration with Jason Musyoka at the University of Nairobi, Kenya as well as with Dr Zoë Wilson from the University of KwaZulu-Natal in Durban.

3. Solar Water Heating – various schemes are underway to provide inhabitants within peri-urban townships of South Africa with ample supplies of hot water through solar heating technologies that do not utilise photoelectric cells. The overall objective of this project is to raise the quality of life of township dwellers by reducing further the cost of providing this hot water.



Jaco duToit installing a prototype low cost solar water heating unit

Two Masters students, Jaco duToit and Thumakele Gosa from the Sustainability Institute at Stellenbosch University, are involved in this project. They are supervised by John van Breda and Saliem Fakir, respectively. This project has been active in the Kuyasa district of Khayelitsha township.



Durk Krol (left) and Rodney Townsend (right) sign the agreement between the FP7 Water and Sustainable Chemistry Technology Platforms on July 8th 2009.

Splash's bright future

On July 13th 2009 the project team met in London to plan the next stages of Splash. Although project Splash is an initial two-year venture between the RSC and Unilever, there is anticipation of continuing some projects in the future.

A recent cooperation agreement between the EU FP7 Technology Platforms on Sustainable Chemistry (SusChem) and Water (WssTP) to encourage and co-develop major research and innovation programmes on sustainable management was recently signed. The European Commission is encouraging Technology Platforms to work more closely together, and it is encouraging that recently there has been a call for proposals on water management in Africa.

On the heels of these new funding opportunities, the Project Splash team intends to seek funding from a variety of sources that will allow Splash to significantly expand its activities to other areas in Africa and beyond.

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