

# Piped Solutions: A Pipe Dream?

## The Efficacy of Point of Use Water Systems

Policy dialogue hosted by the Department of Science and Technology and the European Union in collaboration with the Water Research Commission



Date: 2 October 2012  
Time : 09:00 - 16:00  
Venue: CSIR Knowledge Commons

**Keynote Speakers:** Mr Derek Hanekom, Deputy Minister,  
Department of Science and Technology  
Mr Roeland van de Geer, Head of EU Delegation



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## Policy Dialogue: DST/EU Sector Budget Support And the Water Research Commission

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### Introduction : Innovation for Poverty Alleviation Programme

The *Innovation for Poverty Alleviation* programme is funded by the EU Sector Budget Support programme and managed by the Department of Science and Technology, and has been running since 2009. This Sector Policy Programme has the overall objective of contributing to the Department of Science and Technology's policy and strategy of using science and technology to reduce poverty through job creation, SME development, economic growth and the improvement of quality of life. It is aimed at the implementation of not only the National Research and Development Strategy, but also the new 10-Year Innovation Plan, formulated to help drive South Africa's transformation towards a knowledge-based economy, in which the production and dissemination of knowledge leads to economic benefits and enriches all fields of human endeavor.

Within the overall objective, the programme focuses on the following areas identified by the Department of Science and Technology:

- Enhancing the development of sustainable livelihoods as well as sustainable economic development,
- Improving human settlements with a focus on access to basic and social services;
- Developing, establishing and improving science, technology and innovation infrastructure, including ICT services and applications

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- Developing human capital, including the promotion of youth participation in science and technology;
- Improving South Africa's response to global environmental challenges,
- Improving institutional capacity and regional collaboration.

### Sector Budget Support Dialogues

The Sector Budget Support (SBS) Dialogues are being held with the express purpose of facilitating an organized reflection on the research results from the SBS funded research to clarify and strengthen the knowledge base of policy makers and inform the policy making process. The dialogues will bring together senior policy makers and their advisors so that they can discuss, in a neutral environment covered by Chatham House Rules, the research results and the implications that the research has for policy development and implementation. In addition to policy makers and their advisors the events will also be attended by researchers and practitioners, both local and international.

The objectives of the dialogues are:

- Engage with actors across sectors
- Make recommendations for implementation
- Exchange good practice
- Analyse impact of new technologies
- Explore intersectoral strategies and opportunities
- Promote learning, dissemination and knowledge transfer
- Raise awareness of critical policy issues
- Enrich policy discussion
- Explore policy options and tools

### Point of Use water treatment systems

Many people in South Africa do not receive potable water via household connections. Some of them receive potable water via yard connections or community standpipes, while others do not receive a supply of treated water at all. While several point of use water system (or off-grid) solutions have been developed over the years, numerous implementation challenges remain. These relate largely to uncertainty about who should pay for these technologies and the nature in which these technologies are implemented or introduced to communities. To date, two main types of point of use (POU) water treatment devices exist. The first type is intended for use by those with household connections, who want such devices either because they do not trust their water supply, or they

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don't like the taste, or as a status symbol. These devices are required only to improve the aesthetics of the water. The second type is intended for use by people who do not receive a supply of treated potable water and in a perfect world would take variable quality river / spring water and provide SANS241:2011 - compliant treated water. The section of the population which doesn't already receive a supply of potable water consists of people who are the most difficult to supply due to practicality issues (topography, isolation, scattered communities, prohibitively expensive). Some of them will be connected to supplies while others may never be.

The importance of POU technologies for improving access to clean drinking water cannot be underestimated. They are usually simple, inexpensive technologies which positively affect the health of rural households by reducing the prevalence of water borne diseases. Despite this these technologies are often underutilize.

This dialogue will provide an overview of technologies which have been developed and the challenges of implementing/upscaling or replicating these technologies. It will profile work done by the Council for Scientific and Industrial Research (CSIR) and the Water Research Commission (WRC) both of which have conducted research testing these technologies. The WRC has conducted research on POU devices, specifically related to the claims made by manufacturers of POU devices, and the output water quality as measured against SANS241:2011, in order to enable informed decisions around which types of urban POU devices can be relied on. Additionally, the WRC has strived to develop a rural POU device which is acceptable to users and which provides safe (SANS241-compliant) drinking water. The CSIR's Accelerated Sustainable Water Service Delivery (ASWSD) looked at the provision of reliable safe drinking water (potable water) to unserved communities living in remote rural areas through the application of science and technology. The goal of the project in the Eastern Cape (ASWSD 1) was to provide reliable safe drinking water to unserved populations at six sites in the Amathole- and the OR Tambo District Municipalities, rather than to replace mainstream delivery. A number of technologies were explored, and Phase Two of the research will take the learning's from Phase One in an effort to find sustainable ways of providing potable water to outlying rural communities.

Several solutions will be displayed and discussed at this workshop, in an attempt to understand the best ways in which they can be used and best practice in terms of rolling out POU systems to optimize uptake.

### Goal

The dialogue will outline the current policy environment and the key gaps and challenges in providing water to outlying areas. It will then profile successful technologies and how they can be



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taken forward. The focus will be on implementation and the dialogue is expected to result in practical and concrete ways of taking these technologies forward.

The goal of this workshop is:

- To outline the research and policy landscapes affecting the implementation of POU technologies;
- Identify existing solutions and unpacking the complexity of implementation;
- Bring together key stakeholders, across sectors to Jointly articulate the way forward and the partnerships that need to be developed and strengthened between government, the research community, the private sector, and the public

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### Programme

**RAPPORTEUR: Prof John Seager**

08:30 – 09:00 Registration, tea & coffee

#### 09:00 – 10:30 Session 1: Context and background

**Morning Session Chair: Mr. Dhesigen Naidoo (CEO, WRC)**

09:00 – 09:15 Welcome (Mr Mmboneni Muofhe, DST)

09:15 – 09:35 Key Address: Mr Derek Hanekom, Deputy Minister Department of Science and Technology

09:35 – 09:55 Address: Mr Roeland van de Geer, EU Head of Delegation

09:55 – 10:05 Overview of the Research Landscape – Dr Jo Burgess (WRC)

10:05 – 10:15 The current status of water services (TBC)

10:15 – 10:30 Chair's consolidation

10:30: 11:00 TEA

#### 11:00 - 12:45 Session 2: Addressing multiple needs with POU solutions

**Mid-Morning Session Chair: Dr. Inga Jacobs (WRC)**

11:00 – 11:20 Health imperatives for using POU systems. Dr Bettina Genthe (CSIR)

11:20 – 11:40 Guaranteeing drinking water quality and its challenges from a municipal perspective. Mr. Neil McLeod (eThekweni Municipality)

11:40 – 12:00 Solutions that meet water quality challenges: Dr Jo Barnes (University Stellenbosch Water Institute)

12:00 – 12:20 Technological solutions from a research perspective. Dr. TG Barnard (UJ)

12:20 – 12:45 Questions

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12:45 – 13:45 LUNCH

### 13:45 – 15:00 Session 3: Challenges for implementation

#### Afternoon Session Chair: Mr Jay Bhagwan (WRC)

13:45 – 14:00 Solutions from government: The Blue Drop. Mrs Mariette Swart (DWA)

14:00 – 14:15 Field evidence on the acceptance and adoption of POU water systems. Ms Bongile Maposa (CSIR)

14:15 – 14:30 Accelerating Sustainable Water Service Delivery Project. Ms Esther Ngorima (CSIR)

14:30 – 14:45 Prof Maggie Momba (TUT Water Research Group)

14:45 – 15:00 Questions of clarity

### 15:00 – 16:30 Session 4: Taking the next steps

#### Facilitator: Mr Jay Bhagwan (WRC)

15:00 – 16:00 Open discussion on implementation challenges

16:00 – 16:30 Way forward (Prof John Seager)

16:30 Closure