

Focus on CSIR Research in Water Resources

Safe drinking water from the sun

The Water for Health group at the CSIR represents South Africa in an international project to demonstrate solar disinfection (SODIS) of drinking water. This project is set to demonstrate that SODIS is an effective, appropriate and acceptable intervention against waterborne diseases.

SODIS is a low tech, safe and affordable method to improve water quality which involves placing contaminated water into transparent bottles which are then placed in direct sunshine for six hours. The method has been approved by the World Health Organisation, and was commended for its proven efficiency in the aftermath of the tsunami disaster in Southeast Asia in 2004.

According to the World Health Organization (WHO), over 1 billion people around the world have no access to any kind of treated drinking water. Every year 1.6 million people, most of them young children, die of diarrheal diseases such as cholera which are attributable to a lack of access to safe drinking water and basic sanitation. Millions more are infected with waterborne parasites. It is envisaged that the project, under the auspices of the EU Sixth Framework Programme (FP6), will make a contribution to reducing the number of fatal casualties, especially

among sub-Saharan African children under the age of five, who fall victim to diarrhoeal diseases as a result of being exposed to contaminated water. Vulnerable communities in developing countries who normally do not have a reliable and safe drinking water supply are likely to benefit from this project, as well as those communities who might find themselves exposed to natural or man-made disasters.

The SODISWATER programme will be carried out by nine research groups in Ireland, Spain, UK, Switzerland, South Africa, Zimbabwe and Kenya. Over the next three years, the multidisciplinary team will investigate the health benefits of using solar disinfected drinking water in developing countries. In this regard, they will study the factors that influence communities to adopt or reject SODIS, whether the basic SODIS technique can be improved using simple technologies and whether there are any major waterborne diseases that are not susceptible to the method. Other institutions participating in this study include the Kenyan International Community for the Relief of Suffering and Starvation, the Institute of Water and Sanitation Development in Zimbabwe, the Royal College of Surgeons in Ireland (RCSI), the University of Ulster, the University of Leicester (both in the United Kingdom), the Swiss Federal Institute of



Aquatic Science and Technology, the University of Santiago de Compostela and the Plataforma Solar de Almeria, both in Spain.

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