Press release

October 28th 2013

Wastewater as a resource: Innovative sanitation concept for Namibia

Water is a scarce commodity in Namibia. The natural resource is coming under increasing pressure due to climate change, a rapidly growing population and the exodus from rural areas. The project team of CuveWaters, led by ISOE – the Institute for Social-Ecological Research, has succeeded in turning wastewater into a resource in this most arid region of the world, so that processed wastewater from sanitary facilities can be used for agricultural purposes. The project partners TU Darmstadt (Institute IWAR), Bilfinger Water Technologies and the ISOE are presenting the sanitation concept at the 9th IWA International Water-Reuse Conference in Windhoek/Namibia.

Approximately 850,000 people live in central northern Namibia. About 40 percent of the population in urban areas don't have access to adequate sanitary facilities. In order to improve the sometimes dramatic situation for the population, the „Namibian Sanitation Strategy" recommends using efficient flushing toilets in conjunction with innovative wastewater technologies. As a result, the CuveWaters team has developed a novel sanitation concept plus vacuum system within the framework of an integrated water resources management (IWRM): The sanitary facilities are part of a complex disposal, treatment and re-use system that has been developed together with the local population and with Namibian partners from government and industry.

Energy efficient: Sanitation concept with water re-use in Outapi

The small city of Outapi (Omusati Region) was chosen as the site to implement the sanitation system with water re-use. It is home to 4,600 people, of whom 1,500 have been using the new sanitary facilities in a pilot plant since the beginning of 2013. The official handover of this plant to the municipal administration is now coming up on November 1st. The energy-efficient sanitation and wastewater concept in Outapi works this way: A vacuum system transports the wastewater from settlements in Outapi to a processing plant, where it is purified. A multi-step purification process produces hygienically impeccable irrigation water. Together with the nutrients, the purified water is then used in the fields. A farmers' cooperative works this land and sells the crops at local markets. Biogas is also won in the course of the purification process, which is used to generate power and heat. This covers a percentage of the operating energy of the vacuum canalisation and the wastewater treatment plant.

Promoting millennium goals through the transfer of technology and knowledge

The innovative concept isn't just ideal for small rural settlements, but also opens up completely new perspectives for rapidly growing urban areas in particular. Within this context it is vitally important to involve the local population, as well as training and educating them. "Together with the ‚Community Health Clubs' which have arisen locally and which help people with hygiene issues, CuveWaters also makes sure that knowledge transfer takes place, in addition to technology transfer," says project leader Thomas Kluge (ISOE). The cultivation of agricultural areas also opens up new sources of income for farmers. "Altogether, this allows us to improve the living conditions of the population over the long term and make a contribution to reaching the millennium goals, which also include safeguarding health."

CuveWaters will be presenting its project results together with the Outapi city administration at the Water Reuse Conference 2013 in Windhoek. CuveWaters is a joint project of ISOE in Frankfurt am Main/Germany and the Technische Universität Darmstadt/Germany. It is being funded by the German Federal Ministry of Education and Research (BMBF). Namibian cooperation partners include the Ministry of Agriculture, Water and Forestry (MAWF), Outapi Town Council and the Desert Research Foundation of Namibia (DRFN).

CuveWaters at the IWA Reuse Conference in Windhoek
October 28th-31th 2013, Contact: Alexia Krug von Nidda, +264 81 210 7128

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