

<p>Case title: Wastewater Treatment in Eastern Africa using constructed wetlands</p>
<p>Subtitle:</p> <p>Use of vetiver grass in constructed wetlands for wastewater treatment and erosion protection to mitigate marine pollution through business development in the Msimbazi river catchment in the suburban areas of Dar es Salaam, Tanzania.</p>
<p>Description</p> <p>Three Tanzanian consortium partners, the National Environment Management Council (NEMC), (lead agency), the Tanzanian Vetiver Grass Network (TAVEN), a Tanzanian NGO, (executing partner) and the University of Dar es Salaam, Department of Chemical & Process Engineering (UDSM-CPE) (executing partner) proposed a pilot project within the UNEP-GPA framework on the application of vetiver grass for constructed wetlands in the catchment area of the Msimbazi river. Vetiver grass is an ecotechnology that could easily be adopted by the local communities in their struggle for wastewater treatment, land erosion and economic use.</p> <p>In the area all well known landbased activities like housing (with discharge of grey and black water), leaches from landfill and dumping sites, industrial activities and agriculture are encountered. Due to heavy rainfall during the rainy season the area is regularly flooded. Sediment, solid waste and contaminants are discharged with the stormwater by the river and its branches and flows in the Indian Ocean.</p> <p>The pilot was selected for funding through UNEP/GPA and will be executed in 2004. Main targets of the pilot are a significant contribution to the reduction of water pollution and soil erosion, sustainable business development and the potential for upscaling of this pilot-scale project to other areas.</p>
<p>Lessons learned</p> <ul style="list-style-type: none"> ▪ Gain experience and thus capacity building on vetiver grass application in constructed wetlands for wastewater treatment and riverbank erosion protection ▪ Involvement and commitment of the local community is a critical success factor for the pilot and for future application on a larger scale. ▪ Opportunities for business development with private partner(s) are another essential factor for the application of the vetiver grass technology. ▪ Using the vetiver grass technique can contribute to the effectiveness of a public awareness program on environment issues and self-reliance.
<p>Importance of case for IWRM</p> <p>The use of ecotechnologies instead of traditional methods can be promising for IWRM because of its low cost and easy to operate opportunities for contaminant removal and its economic re-use possibilities.</p> <p>This pilot shows how private business development in combination with community awareness and participation can have an added value to solve wastewater treatment problems in IWRM, which is in line with the 10 Keys advocated in the UNEP/WHO/HABITAT/WSSCC Guidelines on Municipal Wastewater Management.</p>
<p>Main Tools Used:</p> <ul style="list-style-type: none"> ▪ B1.8 Role of the private sector ▪ B1.9 Civil society institutions and community based organisations ▪ B1.11 Building Partnerships ▪ B2.1 Participatory capacity and empowerment in civil society ▪ UNEP/WHO/HABITAT/WSSCC Guidelines on Municipal Wastewater Management
<p>Keywords: Treatment municipal wastewater, ecotechnology, constructed wetlands, erosion, public awareness, local involvement, private business development</p>
<p>Contact:</p> <p>Name and Title: Cees van de Guchte, Senior Program Officer Organization: United Nations Environment Programme (UNEP) Address: PO Box 16277, 2500 BE The Hague, The Netherlands Telephone/Fax/E-mail: 31.70.311.4464/31.70.345.6648/c.vandeguchte@unep.nl</p>