

**REAL – Systems research on small groundwater retaining structures under local management in arid and semi-arid areas of East Africa**

**FP5 - ICA4-CT-2002-10005**

**<http://www.ira.udsm.ac.tz/research.html>**

**Communication**

To my mind, the important message from our project is that water quality in rural areas is a major challenge and that governments and agencies responsible for water supply must recognise the need to deliver clean water to the end consumer rather than to a supply point. The difficult issues associated with this are probably socio-economic rather than engineering: household water treatment of collected water is feasible, but the costs of such equipment remains high and probably exceeds the willingness-to-pay of poor rural households (our study showed a median of approx USD 10). We got this message to one government by inviting South African special adviser Professor Goldberg to visit our study site and discussed the issue with him. We have had less success in Zimbabwe and Kenya with government contact. Another route of dissemination was the attendance (by invitation) at a World Economic Forum meeting in London in early 2005, where delegates were discussing the role of PPPs in delivering W&S. There seemed to be an almost total lack of understanding of the needs of rural households and delegates from water companies and finance houses seemed to have a template of transferring northern water company models to DCs, without proper consideration of producing an integrated solution.

I believe that our findings will influence future government policy in South Africa, but less so in Zimbabwe and Kenya. This may change as a result of our end of project feedback meetings with communities and water ministry officials, to take place in late September.

**Role of local and traditional knowledge with science**

It is clear that natural springs often take on special meaning in rural communities – for example 'sacred springs' in Zimbabwe. This traditional understanding of the need for clean drinking water and hence the hygienic management of sources is now being somewhat lost by the installation of improved facilities such as boreholes and wells. Without either this embedded traditional hygiene approach or an understanding of the germ theory of disease, rural people do not easily comprehend the need for hygienic household water storage, let alone treatment. One other issue of great concern is the taste of water. Rural people seem to have a clear preference for natural waters either rivers/streams or springs. There was much criticism of borehole water being variously described as 'salty', 'bitter' etc. Anecdotally, some households seemed to be continuing to use unsafe traditional sources (where the water was 'sweet') rather than an improved, safe, source because the adults preferred the taste. As far as we can tell, there has been little research into this issue, but it is a potential barrier to widespread adoption of improved sources. Chlorination was also strongly disliked on taste grounds.

**Take up by managers, policy makers, educators**

Although we are making strenuous efforts to inform policymakers in partner countries, it is difficult to get access to them or persuade them to visit study sites. Local officials have been much better, but they rarely change policy. On an international level, we have become members of the WHO International Network to Promote Household Water Treatment and Safe Storage and this seems to be starting to influence policy in donor governments.

**Contribution to capacity building legacy**

Within the organisations in the partner countries where the research was conducted there is a much greater understanding of the links between water and health for rural areas.

**Longer-term institutional cooperation**

It may well do - we are planning more research projects together, including participation in the WHO Network's initiative to implement some large scale household water treatment projects as a demonstration of the benefits of such technologies. But no – not yet

**Enduring legacy of the project (political, social, economic, scientific, and connections to traditional knowledge)**

We need to do more analysis, but our findings seem to suggest that groundwater sources in rural areas of DCs are not as safe as is believed. We think that there may be links between the widespread adoption of pit latrines and the levels of bloody diarrhoea in under five age children, but this needs very careful investigation.

**Local, 'grass-root' experience that would be valuable as case material for the WWF4 discussions?**

No, really only anecdotal stuff as mentioned above.

**Recommendations arising from the experience of having (or not) impact on discourse and action outside science to be taken into account for future research (e.g. FP7)**

Some way needs to be found to improve the links between the research findings and the take up of these by the EC's development directorate. The latter seemed unconvinced by small scale research studies, but are unwilling to fund larger scale demonstration projects that would be needed to influence policy change. FP7 should look at how this gap can be addressed.