

# Hand Drilling Cluster Group

Coordinating stakeholders and sharing experiences on hand drilling approaches and technologies in sub-Saharan Africa and beyond.

## Welcome

The second RWSN Hand Drilling Cluster Group newsletter features the recent experts drilling workshop held in Niger in June 2007. For more details on this, as well as other exciting developments in Niger, see the second page.



## Manual Drilling Potential

A preliminary analysis of the potential for hand drilled wells in terms of geology and hydrogeology by Kerstin Danert estimates that **90 million people** in sub-Saharan Africa could be served with hand drilled wells. This corresponds to about 12% of the total, or 18% of the rural population. Hand drilled wells have a key role to play for rural water supplies across the continent.

Provision of hand drilled wells is currently taking place in at least 12 African countries as well as in Bolivia and Nicaragua. Unfortunately, little has been documented on the experiences of local enterprises, their successes and the challenges that they face. The Cost-Effective Boreholes flagship of RWSN is trying to bring about more experience sharing in this area.

## Spotlight

The cluster group has now grown to 24 people. We would like to give special welcome to **Silvia Gaya** of UNICEF and **Joe Gomme** from the UK, new members who both have considerable experience of manual drilling, particularly in Madagascar and Chad and Senegal.

## What is Manual Drilling?

Manual, or hand drilling refers to a number of drilling techniques which rely primarily on human energy. Techniques include hand augering, hand percussion, hand sludging, rota-sludge, pounder drilling, baptist and EMAS drilling as well as wash-boring or jetting. Hand drilling can be undertaken by small, local enterprises.

More information on these techniques as well as organizations involved in development and promotion is available on <http://www.rwsn.ch> (hand drilling). A list of more than 20 hand drilling resource persons, with experiences in many different countries, and with different techniques is available and can be obtained from the editor.

## Editor

This newsletter is produced by the Rural Water Supply Network (RWSN). If you would like more information please visit the website on <http://www.rwsn.ch> or contact the editor, Kerstin Danert on [kerstin@danert.com](mailto:kerstin@danert.com) directly.

The next newsletter will be published in October 2007, and contributions are very welcome.

# Learning in Niger

**Niger** is a focus county for the Cost-effective Borehole flagship of RWSN. This is due to the promising uptake of hand drilling as a result of efforts by NGOs, in particular Enterprise Works/VITA, to introduce and commercialize the technology over many years.

## Experts workshop in Matameye, June 2007



Seven foreign and two Nigerian hand drilling experts spent ten days with four Nigerian hand drilling teams to exchange ideas and experiences and improve tools and techniques. The participants mainly spent time in the field observing drilling and also developed new tools in the local machine shop.

Despite temperatures of over 40°C, tooling was improved (e.g. riverside augers, percussion new cutting tools and bailer, under-reamer). Given the fact that people developing and promoting manual drilling tend to be rather isolated, the USAID/WAWI funded workshop gave a first-time opportunity for most of the participants to network face-to-face. Stephen Nash (Partners in Development, South Africa), who has worked on developing and introducing hand augering for the past ten years wrote *“I had an amazing two weeks. I learnt a lot and was encouraged to keep on with what I am doing, knowing that others are in similar situations facing similar challenges.”*

## Pushing the boundaries of Hand Drilling in Niger



Hand drilled wells in Niger are penetrating deeper and through harder formations than ever before. The current UNICEF-funded work by Enterprise Works/VITA (EWV) is utilizing hand percussion and rota sludge techniques to drill wells down to 20m. They are installed with the rope pump. Having also won the Development Marketplace award, EWV is planning to install another 50 demonstration wells in Niger to promote the technology.

## Opening doors on hand drilling and the rope pump in Zinder



UNICEF Niger and the regional Ministre d'Hydraulique held a two day *open door* event for local leaders to observe the rope pump and hand drilled wells. The 50 participants, including prefects, mayors and technocrats from Zinder region spent one day visiting the field to observe rope pumps and interview water users and hand drillers. The second day was spent discussing and developing an action plan. The local leaders were particularly excited about the technologies, which they see can offer low cost solutions for local people.