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### MAXIMIZING THE BENEFITS FROM WATER AND ENVIRONMENTAL SANITATION

## Rural water supply network making a difference

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*Intensified experience and knowledge sharing is needed to strengthen sustainability, efficiency and effectiveness in rural water supply. RWSN's objective to create a vibrant knowledge sharing network uses an integrated approach: locating and capturing experiences and best practices, validating knowledge and extracting lessons learnt, storing knowledge and making it accessible, enabling the creation of new knowledge, disseminating and facilitating sharing of knowledge, and supporting application of knowledge by capacity building and training. Thematic programmes keep networks active and innovative. Originally conceived as the Handpump Technology Network (HTN), RWSN recently decided to focus its work in three specific areas: Cost-effective boreholes, Sustainable Handpumps, and Self-supply, incremental improvements by households. RWSN also maintains its interest in developing and promoting sustainable solutions based handpumps and low-cost technologies. Efficient and effective knowledge sharing needs a well-organised backbone. Step-by-step, RWSN has grown to a leading global knowledge network with about 900 individual and institutional members.*

### Introduction

The Rural Water Supply Network (RWSN) is a global knowledge network for promoting affordable and appropriate technologies and sound practices in rural water supply. Originally conceived as the Handpump Technology Network (HTN), RWSN grew out of the need to focus greater attention on challenges in the three specific flagship areas. It has the potential to provide the critical links between the countless people dedicated to making a difference. The exchange of ideas and information gives catalyzing and energizing effects, which are vital for reaching the ambitious Millennium Development Goals.

### Focus on Africa

RWSN is a global network that pays special attention to Africa. Progress has been slow in *rural Africa*. RWSN aims to strengthen the region's capacity to facilitate knowledge exchange, and to enable identification of sound practices in its flagship areas. The three recently defined flagship activities are:

- **Technologies and management systems used to drill boreholes.** What can be done to ensure that borehole drilling in Africa becomes more cost-effective, so that more people can be served with more water of better quality in less time?
- **The supply-chains and management systems being used to keep handpumps in operation.** What can be done to help those responsible to ensure that their handpumps work 95% of the time, and not 50% of the time?
- **270 million rural Africans without access to government supported water systems provide water for**

**themselves.** How can one build on traditional methods and household initiatives to develop sustainable water supply improvements?

RWSN continues to be a reference centre for the development and dissemination of specifications and manuals for public domain handpumps and for the technical support to assist local production.

RWSN shares lessons learned, best practices, and latest development in technologies by producing books, working papers, studies, and newsletters, most of them available on the interactive website.

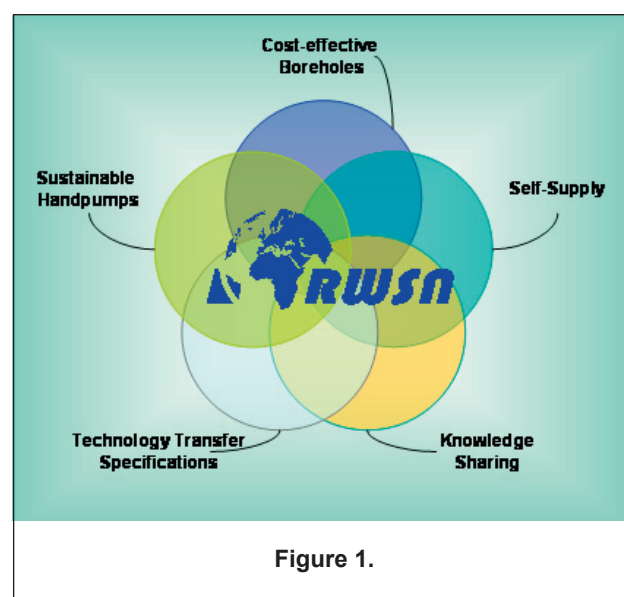


Figure 1.

### Strategy for the next three years

Every international network needs an *operational plan* that breaks down the vision or mission into concrete strategies, objectives, and actions. At a planning meeting held in Kampala in February 2005 the RWSN discussed strategic action plans in its three flagship activities.

The RWSN steering committee selected a leader for each of the three focus areas. These team leaders were each required to develop a strategy and action plan for further work in their respective areas. The purpose of the two-day workshop held in Kampala in February 2005 was to give the team leaders the opportunity to present and discuss their strategies and action plans with a small group of invited specialists.

### Cost effective boreholes

Until the Kampala meeting, this theme had been known as “low cost drilling”. However, it was agreed that the description “low cost” does not convey the point that quality cannot be compromised. The agreed revised name “Cost effective boreholes” includes non-conventional construction techniques, such as augering or jetting.

#### Objectives

To enable information exchange and dialogue between active stakeholders with the aim to develop mechanisms and tools for the provision of cost-effective boreholes in Africa.

#### Key learning areas

- Sector dynamics and players
- Sector standards and quality assurance
- Sector practices
- Borehole markets
- Borehole technologies
- Siting and risk

### Sustainable handpumps

In the past, efforts to improve handpump reliability tended to focus on the technology in isolation of its institutional and environmental context. Then it became clear that maintenance systems were critical. In trying to understand why

**Table 1. Summarised three-year plan: Cost Effective Boreholes**

Actions and Outputs	Schedule
Establish Flagship Working Group	Feb - April 2005
Undertake scoping survey of approx. 20 countries	Feb - June 2005
Carry out detailed country case studies: Tanzania, Uganda, Madagascar, Niger, Burkina Faso	Feb 2005 - June 2006
Comparative and Thematic Research, e.g.: - Borehole specifications - Hand drilling technologies - Procurement systems - Market development - Utilization of small rigs	July 2005 - June 2007
Develop processes, advocacy methods and promotional materials	July 2006 - June 2007

**Table 2. Summarised three-year plan: Sustainable Handpumps**

Actions and Outputs	Schedule
Establish Flagship Working Group	Feb, March 2005
Scoping Study of Handpump Functionality: to be done in three parts: West Africa, East Africa and Southern Africa	April – July 2005
Preliminary identification of interested country partners: (Angola, Nigeria, Mali, Uganda, and Malawi)	June – Aug 2005
Carry out detailed country case studies (approx. 4), with synthesis of lessons learned	July 2005 - Mar 2006
Development of policy and implementation tools	Jan – June 2006
Advocacy and information dissemination	July 2005 - June 2007

handpumps did not work better in Africa, the question was not so much “Why do handpumps fail?”, but “Why don’t people fix them?”

#### Objectives

To increase the percentage of functioning handpumps through the application of improved policies and practices.

#### Key learning areas

- What handpump monitoring programmes are in place?
- What are the primary reasons for non-functioning handpumps?
- What management and finance systems work well, where and why?
- How much can users reasonably be expected to pay for handpumps?
- How can RWSN make the greatest difference to handpump sustainability?

There are overlaps between this theme and the others. For example, handpump functionality will be affected if the borehole construction is inappropriate. Lessons learned from cross-cutting issues will be shared between the themes.

#### Self-supply

Self-supply entails incremental upgrading steps, which improve access to water as well as water quality. Source up-grading usually leads to water quality comparable to the protected shallow wells.

#### Objectives

To establish self supply alongside communal supply as an acceptable option

To make available technical and software information for practitioners and communities

#### Key learning areas

- Where in Africa are effective self-supply systems most viable?
- What are government and donor attitudes to self-supply? How can they be changed?

**Table 3. Summarised three-year plan: Self-Supply**

Actions and Outputs	Schedule
Establish Flagship working group	Feb - April 2005
Reconnaissance visits - four countries (Uganda, Tanzania, Mali, Sierra Leone)	Feb - April 2005
Scoping Study on Self-Supply in Africa	May - Sept 2005
Detailed case studies in five or six countries (Uganda, Tanzania, Mali, Sierra Leone, Zimbabwe, Zambia)	June 2005 - June 2006
Launch pilot self supply initiatives in at least three countries	Jan 2006 - Dec 2006
Advocacy and information dissemination	July 2006 - June 2007

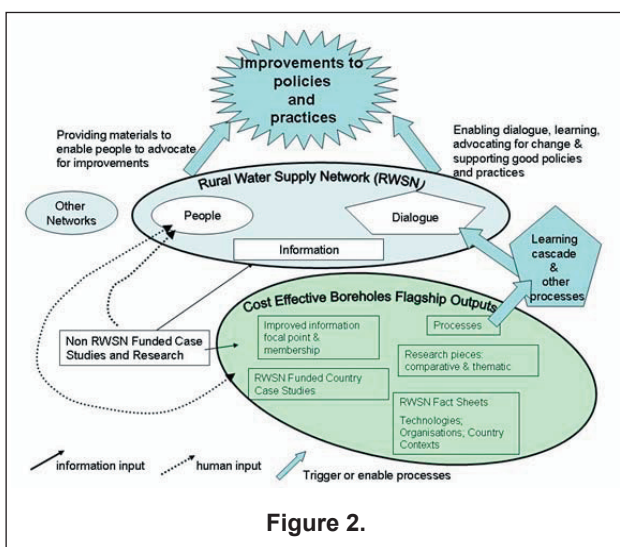
- How can self-supply be promoted, replicated, and supported without discouraging local initiative?
- Can systems be found for communal and private water supply policies and subsidies to co-exist?
- How can self-supply be linked to the productive use of water?

Again, overlaps exist between this theme and the other two. For example, self-help may go as far as handpumps as communities or families move up the technology ladder, very low cost manually drilled wells may form part of self-supply.

## Communications

### Communication is the Life-blood of Networks

To ensure that communication and advocacy is effective, RWSN not only needs to carry out well targeted, strategic research, but it also needs to make its work known to as many people as possible through local and international contacts, and through actively bringing key people together. RWSN has the potential to act as a catalyst in an ongoing process of communication and dialogue across the continent. Ideally, all members contribute to and gain from the network. The figure below is an illustration of the dynamics of this process.

**Figure 2.**

For every network and its members communication is THE means of exchanging knowledge, learning from each other and developing new ideas. In fact, communication is the life-blood of networks. A balanced *intensity of communication is necessary* to keep a knowledge network alive. If it gets too low the partners will move away, and if it is too high, they will get short of breath and stop sharing knowledge.

Network members may communicate with each other directly. However, it is also of great importance that networks have a *facilitator* – the secretariat moderates and facilitates the open communication in email discussion groups or in discussion forums.

## Ways and means for knowledge sharing

### Website

RWSN runs a website that serves as a portal for information and knowledge sharing in the network. The website is maintained by the secretariat ([www.rwsn.ch](http://www.rwsn.ch)). The site provides up to date research and advocacy materials and publishes “grey literature”. It informs visitors about the network’s mission and vision, history, membership composition, governance and executive mechanisms, strategy for realising the vision, ongoing activities, and its products. Many of the publications produced by the network are available for download on this site.

At the end of 2004 RWSN has made a major step and completely revised its website. The new website [www.rwsn.ch](http://www.rwsn.ch) is programmed with Plone software that allows fully-fledged content management. The further development, marketing, and maintenance of the site will be a long-term priority for the RWSN secretariat.

In order to draw maximum benefit from the services that RWSN offers the network members have now the possibility to register online and free. Once this is done, they can set their preferences how their personal data is handled. There is a possibility to download documents and other information, members can control how much (or how little) email notification they receive of recent changes on the site, and they can participate in discussion forums or meet in the virtual “chat room”.

### Newsletter

Every 3 months the secretariat produces an electronic newsletter. Each newsletter is dedicated to a specific theme and list upcoming events and other information on network activities. It is sent to all members who are registered in the database.

### Discussion forum

RWSN has maintained for many years a moderated discussion forum on [www.jiscmail.ac.uk](http://www.jiscmail.ac.uk) with about 150 subscribed members. Practitioners in the field of rural water supply have exchanged their experiences and have supported each other in their work. The new website programmed with Plone integrates the jiscmail discussion forum in the new web

environment. In this way, it will be possible to search the whole website and discussion forum at the same time.

### Question and answer service

The secretariat acts as a router or as a technical support desk in response to questions reaching the network – originating from the membership and beyond. The secretariat processes roughly 400 such queries annually.

This service is mainly managed by email, fax, and telephone. The question and answer service will now also be integrated in the new web environment. Nevertheless, it will remain possible to submit questions by traditional means.

### ICT cannot replace face-to-face contacts

Information and communication technologies (ICTs) are particularly promising tools for improving the quantity and the quality of communication. These tools offer many opportunities to communicate independently of time and geographic location and to present information in attractive, convenient formats. Useful as they are, ICTs *cannot replace face-to-face* contacts or conventional means of communication. Whilst ICTs continue to offer an ever-widening range of options, regular meetings, workshops or conferences are still necessary. Face-to-face meetings are important to generate trust and to keep the community in a network alive, and they are vital conduits for sharing tacit knowledge.

Other traditional ways of knowledge sharing still remain important, including all *paper-based documents* – from regular field notes and newsletters to books and other commissioned publications. In many places in the world, only small minorities have access to the Internet and feedback continues to show that the demand for paper-based documentation remains strong.

### Members and partners

RWSN counts approximately 900 individual and institutional *members*; including governmental agencies, multilateral organisations, bilateral donors, NGOs, the private sector, research and development groups, inspection agencies and individuals.

As a global network of partners, RWSN is open to all organisations, agencies, and individuals working for better rural water supplies in the South.

The RWSN steering committee is responsible for the overall strategic guidance and direction for all activities. The steering committee comprises representatives from the most important donors and partners of the network. The members of the steering committee meet formally once each year.

In order to facilitate work planning, co-ordination, implementation, and monitoring, a working group has been constituted. It acts as an interface between the Chairperson, implementing agencies, the flagship coordinators, and the secretariat.

The RWSN secretariat is hosted by the Skat Foundation in Switzerland. It is the nerve centre for all activities and undertakes overall co-ordination to ensure that the activities are in line with the objectives of RWSN and that they

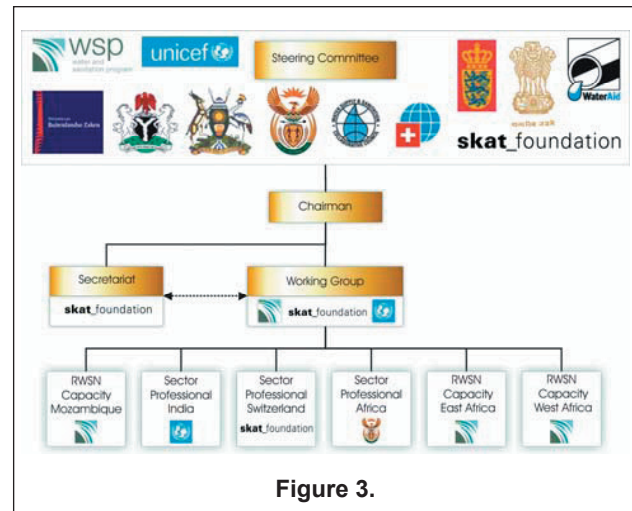


Figure 3.

follow the guidelines provided by the Steering Committee. Funding for the secretariat comes mainly from Switzerland and the Netherlands.

A strong regional and local representation of RWSN in Africa is needed. Local chapters of RWSN have an important role in the regional coordination of RWSN flagship activities. Currently one *national network chapter* exists in *South Africa*. It is financially independent with firm institutional support from the South African Department of Water Affairs and Forestry.

In addition, it is planned to set up a network of *national focal persons* for RWSN. Their commitment, however, depends very much on the availability of resources for networking from projects and programmes where they are involved. Unfortunately, these resources were reduced in the last years and the commitment of the national focal persons is therefore on a weak basis.

### Conclusion

International knowledge networks can make a considerable contribution to knowledge sharing and learning as the example of RWSN shows. They need, however, a strong organisational backbone that supports the activities of the network in a structured and targeted way and a committed core group that pushes the network forward.

The example of RWSN shows also that a network may consist of many different members with varying interests and commitments. However, the common goal, to facilitate the provision of safe water to the poor and deprived through the promotion of sustainable technologies that are affordable and responsive to the needs of the users, helps to strive continuously for increased efficiency and effectiveness.

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