Rural Water Supply Network

29th November - 1st December, 2011

Speke Resort Conference Centre

Kampala, Uganda

6th International Rural Water Supply Network Forum 2011 Uganda

hosted by

Rural Water Supply in the 21st Century: Myths of the Past, Visions for the Future

EVENT REPORT

table of contents

HOSTED BY

Ministry of Water & Environment
Government of Uganda

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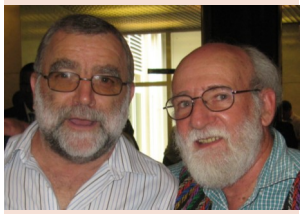
Awards

Award for Services to Rural Water Supply:

- **Dr Sally Sutton**



- **Mr Erich Baumann** (left)
- **Dr Peter Morgan** (right)

Best Papers

- **Ms Cate Z Nimanya** *"Strengthening the Capacity of Civil Society Organisations, Local Private Enterprises and Community Members in Domestic Roof Water Harvesting and management in Uganda"* [Paper 188];
- **Mr Edgar Phiri** *"Donor District Coordination: The Key to Sustainable Rural Water Supply"* [Paper 137];
- **Mr Jonathan Annis & Gerald Razafinjato** *"Public-Private Partnerships in Madagascar: a promising approach to increase sustainability of piped water supply systems in rural towns"* [Paper 152]

Best Poster

- **Mr Harry Rolf** *"Artificial Recharge of Runoff Rainwater to Improve Spring Water Catchment"*

Best Exhibition Stand

- **Multiple Industries Limited (Uganda)**

Best Film

- **SDC/CARE** *"The SABA Model Peru"*

Cost Effective Boreholes Competition:

- **Government of Sri Lanka**
- **Government of Burkina Faso**
- **the Nigerian Drillers**

welcome

The 2011 6th Rural Water Supply Network Forum in Kampala set out a vision for the future. It provided the opportunity for 480 participants from 54 countries to share their experiences and chart key next steps along the path for rural water supplies. This includes actions determined at the Forum and the Kampala Rural Water Supply Commitments (page 4) with ten statements. These summarise a commitment to accelerating progress in inclusive and sustainable rural water supplies wherever those services are absent or under-performing.

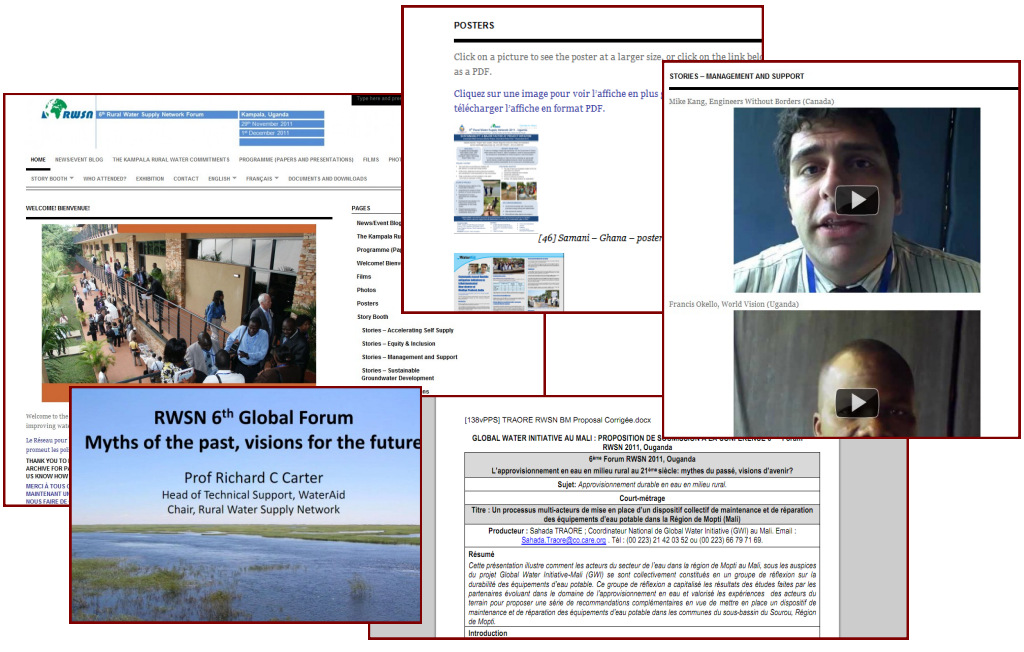
As well as being opened and closed by Hon. Maria Mutagamba, Minister of Water and Environment, we were kindly joined by a sizeable delegation from the Government of South Sudan and the Hon. Ato Kebede Gerba, Minister for Water and Energy for Ethiopia.

The big discussion point of the week was 'sustainability' – how can rural water services be implemented that last for many years, not just one or two. All aspects were scrutinised and case studies discussed, looking at aspects of governance, technology, financial management, empowerment and capacity building.

Self supply, equity and inclusion and groundwater were also popular topics and have given momentum to the new and existing RWSN themes.

It was a week packed with fascinating content, useful discussion, excellent presentations, posters, exhibition stands and entertainment. Did everything go without a hitch? Of course not – we had a last minute rush of registrations, the rain early in the week was a challenge and the field trips at the end of the week were more adventurous than expected, but overall it went smoothly and was a fantastic experience enjoyed by all.

This report is written to reflect the spirit of sharing knowledge and experience. In particular, thanks to IRC for their 'Story Booth' which captured many ideas and reflections from delegates. The forum website (rwsnform.wordpress.com) remains available as an archive of the papers, Powerpoint presentations, posters, films and video interviews:



Kampala Rural Water Commitments

background

The 6th International Forum of the Rural Water Supply Network was held in Kampala, 29th November – 2nd December 2011. The Forum was officially opened by Hon Maria Mutagamba, Minister of Water and Environment, Republic of Uganda.

Addresses were also delivered by His Excellency the State Minister for Water Resources and Energy, Democratic Republic of Ethiopia and the Under Secretary, Ministry of Water Resources and Irrigation, Government of South Sudan.

The participants in the forum numbered 480 from 54 countries, and were drawn from national and local governments, academia, NGOs and CBOs, the private sector and development partners.

This statement of commitments should be read in conjunction with RWSN's Strategy, Vision Paper, and the specific actions which have been articulated in the 30 sessions of the 6th International Forum.

the commitments

The following ten statements summarise our commitment to accelerating progress in inclusive and sustainable rural water supplies wherever those services are absent or under-performing.

1. We recognise the rights and the natural justice of all citizens to enjoy secure water services, regardless of location, lifestyle, gender, age, disability, ethnicity or income.
2. We will do everything possible to ensure that the services we deliver are equitable and sustainable, providing lasting service with no time limits.
3. We will take full account of all water users' needs for close and unrestricted access, adequate quantity and acceptable quality of water, high levels of reliability, affordability, and a realistic burden of management responsibility.
4. We recognise the multiple uses of water, and the multiple sources from which users take their water for domestic and livelihood purposes.

Focusing on ourselves as rural water professionals:

5. We are committed to high quality of design, implementation (of both software activities and construction) and post-construction activities.
6. We will continue to develop, promote, and adhere to specific standards and codes of good practice in rural water supply, and build close links to other development sectors which affect, or are affected by, this sub-sector.
7. We will continue to enhance our own individual and organisational learning and professional development, with a special emphasis on south-south learning.

We will advocate for:

8. Increased and better-balanced finance for capital investments and for post-construction financing through local governments to address the sustainability of rural water services.
9. Greater transparency and accountability in regard to progress in rural water provision and service performance.
10. Special efforts to raise the profile of rural water, including development of post -2015 targets and the possibility of an International Year of Rural Water.

Endorsed and approved by the delegates at the 6th International Forum of the Rural Water Supply Network, 1st December 2011.

"The review process of our paper for the 6th RWSN forum was very good. It not only improved the quality of my paper but also provided the opportunity to learn from practitioners and gain confidence to write the paper."

Madan Raj Bhatta, Helvetas Nepal

"I should say the whole process of submitting the first draft of the paper, the technical guidance from the review team in Kampala and the review team at the RWSN secretariat was very helpful and enriching."

Godfrey Mulinda, JESE, Uganda

Publications

RWSN Field Notes provide a succinct overview of experiences of implementing specific rural water supply approaches or introducing technologies and taking them to scale.

From 2012, the RWSN Secretariat and working groups will provide technical support to RWSN members to produce high quality field notes.

About ten submissions for the RWSN Forum were considered to have potential as RWSN field notes in the future.

A short list of high quality papers will also be submitted to the journal **Waterlines** for their special Rural Water Supply edition in July 2012.

waterlines
an international journal of water, sanitation and waste

forum philosophy

The philosophy of the RWSN Forum can be summarised through six core aspects:

- Inclusive of different perspectives;
- Raising the quality of the submissions and thus improving communication skills within the rural water sector;
- Sharing of knowledge and experience among equals;
- Bringing field realities to the attention of decision-makers and funding agencies;
- Catalysing vibrant south-south exchange and networking;
- Accessible to all French and English speakers.

The RWSN Secretariat, Executive Steering Committee members and Ministry of Water and Environment wanted to bring together a wide variety of informative presentations, from a diverse range of practitioners and professionals. This included local and national government, the private sector and NGOs as well as academic institutions, ranging from the smallest to the largest. This was the basis for the **open call** for papers, films and posters that was sent out widely in April 2011. The response was much higher than anticipated. From 189 expressions of interest, 143 submissions were made.

With each paper benefitting from two **reviews**, it was a tremendous task to provide feedback and select papers, films and posters for the event itself. In order to have an inclusive event, the organisers were determined to ensure that practitioners as well as individuals with more experience of writing would have the chance to present. Where the reviewers found that the submission had potential, but writing skills were weak, considerable support was provided to ensure that the work was able to reach the required standard.

preparing for the forum

The Forum was **financed** from a mix of donations and the participants fees (see table on right). Skat Foundation, as the RWSN Secretariat provided the financial guarantee for the event. This was a risky undertaking but necessary to ensure that the Forum took place. It was not clear whether the funding would cover the cost of the event right up to the first day of the Forum itself. Although the registration process commenced in April, about half of the participants did not register until November. At the start of November it was estimated that 300 people would take part. In the end there were about 480 participants.

The Forum **National Organising Committee** (NOC), chaired by the Eng. Sottie Bomukama, the Director of the Directorate of Water and Environment was instrumental in preparing for the event, including arranging the field trips. The RWSN Forum benefitted from the inputs of the members, old and new, representing government agencies, NGOs and academic institutions.

Funders

We express a huge thanks to the organisations and individuals that funded the Forum. Without their contributions, the event would not have taken place:

Funder	Amount (US$)
Participants and Exhibitors Fees	159,600
UNICEF	70,000
WaterAid	49,900
IRC	50,000
WSP	50,000
Danida	50,000
Conrad N. Hilton	35,000
SDC	29,000
WWF6 - Marseille	13,300
Helvetas	10,700
IEA-PVPS	10,400
Skat Foundation	5,700

Reviewers

We wish to express our thanks to the efforts of the following people who reviewed Forum submissions, many of whom contributed their time as individuals or thanks to their organisations:

- André Olschewski, Kerstin Danert, Sean Furey [Skat Foundation]
- Dotun Adekile, [Independent]
- Isaac Mutenyo [ATC Uganda]
- Peter Harvey [UNICEF]
- Richard Carter, Vincent Casey, Sue Cavill, Shamila Jansz [WaterAid]
- Rupert Talbot, [Independent]
- Sally Sutton [SWL Consultants]
- Stef Smits [IRC]

forum programme

Tue 29th November	Wed 30th November	Thu 1st December
Registration	12 Rural Water Supply Perspectives	24 Vision for rural water supplies
1 Opening Plenary and Welcome 	Break	Break
	13 Innovative Technologies	25 Water for All: Solutions at Scale
	14 Decentralised Service Provision 1	26 Scaling up innovation in community-based management for rural water
	15 Equity and Inclusion	27 How to Accelerate Self Supply
	16 Multiple dimensions of costing and financing Rural Water Supply	28 Groundwater Resources and Catchment Management
	17 Innovative Implementation and Management of Rural Water Supplies	29 Multiple Use and Drinking Water Supply in Arid Environments
Lunch	Lunch	Lunch
2 Managing Handpump Water Supplies	18 Introducing Technologies	30 Closing Plenary 
3 Post construction support and partnership for sustainable rural water services	19 Decentralised Service Provision 2	
4 Exploring Self Supply Potential	20 Sector Performance Measurement and Mapping	
5 Sustainable Groundwater Development 1	21 Getting guidance and tools taken up by institutions	
6 Delivering Water Supply and Sanitation in Post Conflict Countries	22 Village and Small Town Piped Water Supplies	
Tea and Coffee	Tea and Coffee	Tea and Coffee
7 Private Sector Participation	23 Visit to exhibition, poster sessions and side events/sessions 	
8 Rural Water Supply Cinema		
9 Experiences in Accelerated Self Supply		
10 Sustainable Groundwater Development 2		
11 WASH in Schools – Emerging innovations and challenges in the provision of rural water supply		

Session topics

Most of the Forum sessions were aligned to the four RWSN themes:

- Accelerating Self Supply;
- Sustainable Groundwater Development of Rural Water Supplies;
- Management and Support of Rural Water Supplies;
- Equity and Inclusion in Rural Water Supplies.

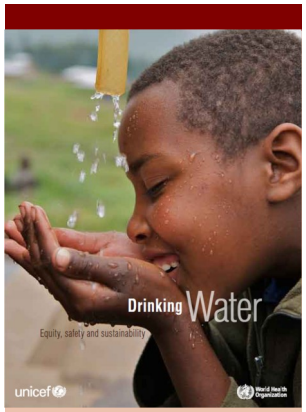
In response to a sizeable number of submissions on other key topics, other sessions included: Delivering Water in Post-Conflict Countries, WASH in Schools, Costing and Financing Rural Water Supply, Multiple Use and Drinking Water in Arid Environments, and Solutions at Scale.

Session managers, chairs & rapporteurs

Each session was managed, chaired and reported on by a rural water supply stakeholder with expertise in the topic. We extend a big thanks to all of the session managers, chairs and rapporteurs:

André Olschewski, Kerstin Danert, Sean Furey (Skat); Dominick de Waal, Sam Mutono, Seydou Traore, Kwabwena Manu (WSP); Harold Lockwood (Aguaconsult); Sottie Bomukama, Ian Arebahona, Aaron Kabirizi, Gilbert Kimanzi, Joseph Eyatu, Callist Tindimugaya, Disan Ssozi, Dominic Kavutse, Justine Zziwa (MWE); Grace Katurama (Danida); Joe Narkevic (Independent); Joseph Pearce, Louisa Gosling, Shamila Jansz, Richard Carter, Vincent Casey (WaterAid); Léo Giordano (6th World Water Forum); Leslie Moreland (WaterCan); Mike Kang, Alyssa Lindsay (EWB Canada); Peter Harvey (UNICEF); Sarah Mackenzie (Eau Vive); Martin Mulenga (IIED), Rick Johnston (Eawag); Corrine Wallace (UN); Valarie Bey, John Butterworth (IRC), Isaac Mutenyo (ATC), Mike MacCarthy (UoSF); Gaze Emmanuel (CWSA); George Mumbo (Water For People); Albert Rugumayo (Ndejje University); Wana Etyem (NCA); S.S. Meenakshisundaram (India Wash Forum); Tom Roberts (AfDB)

welcome and opening



Did you know?

An estimated 22% of the world's rural population (over 700 million people) does not access a safe drinking water supply. In fact, 7 out of 9 people without access to a safe drinking water supply reside in rural areas.

Although the world is on track to meet the Millennium Development Goal (MDG) Target to "*halve, by 2015 the proportion of the population without sustainable access to safe drinking water*", this is very unlikely to be met in many rural areas.

Urbanisation is taking place, with 79% of the world's population expected to live in urban areas by 2050 compared to 50% today.

However, the number of rural dwellers will still be about 2.8 billion by 2050, with many female-headed households.

The terms rural and urban suggest a simple divide, but there is actually a range of settlement patterns from scattered homesteads, hamlets, more nuclear villages up to small towns.

In his welcoming address the RWSN Chair, Professor **Richard Carter**, challenged the participants to re-think the myths of the past:

"How many of you have flown in an aeroplane? How many of you have used a mobile telephone today, or are using one right now? These are two myths of the past, that human beings cannot fly, and that human beings cannot communicate by voice further than they can shout...Now … we live in a world where safe convenient air travel is accessible to many, and where mobile phones are used by almost all. "

In 2009 RWSN published the Myths of the Rural Water Supply Sector. It stimulated thinking and discussion by highlighting seven myths or assumptions which should be questioned. The 6th RWSN Forum moves on from these myths, to a vision for the future. To quote the RWSN Chair:

"So why can we not envision a world in which all rural people enjoy safe and sufficient reliable water supply at an affordable price, round the clock, near to or at their homes? It may take time to get there, but if the early aviators and telecommunication engineers had given up, the world would be a very different place."

Hon. **Maria Mutagamba** Minister for Water and Environment, Uganda, opened the Forum, which:

"sets out to marry pragmatic solutions with actions and commitments to transform the lives of rural people from all over the world. So that women can draw water from close to their homesteads and children can enjoy their education without the burden of fetching water from distant sources... the Forum will help all of us take stock of what we have so far achieved and come up with solutions to the existing gaps".

Hon. Minister **Kebede Gerba** from the Ministry of Water and Energy, Ethiopia commented in his opening remarks:

"We are in this Forum to share our experience … but we are also here in this Forum to learn from you so that we have more knowledge and more practical tools to return back to Ethiopia and transfer our new knowledge into action."

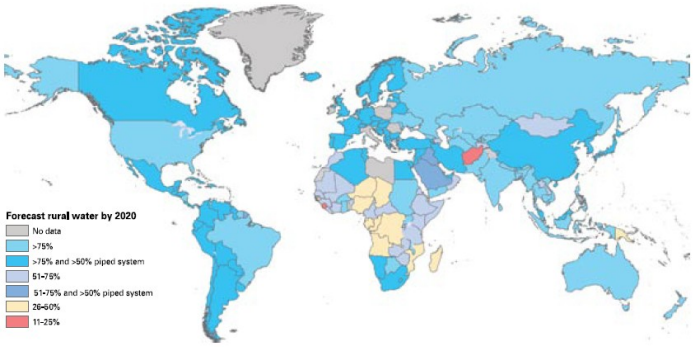


Figure: Predicted access to improved drinking water sources in rural areas, by 2020 (WHO, 2009)

7 out of 9 people without an improved drinking-water source live in rural areas
(JMP 2011)

A Vision for the Future

Finding the way forward - what needs to change?

The challenges facing rural water are multiple and significant.

Change can be brought about, but it will not happen overnight.

The failure to achieve over-ambitious targets in the past should remind us of that.

The new way of working must lead us on a progressive and deliberate shift away from the shortcomings of the past.

In this vision we have advocated three main principles that can guide this change process:

- The delivery of permanent services which meet the needs of all;
- Strong national capacity and leadership;
- Coordinated and balanced financial flows.

RWSN's vision is of **a world in which all rural people have access to a sustainable and reliable water supply which can be effectively managed to provide sufficient, affordable and safe water within a reasonable distance of the home.**

purpose of the forum

The purpose of the Forum was to enable participants to:

- learn about the key achievements and challenges of improving rural water supplies in different contexts from local, national and international organisations;
- learn about specific initiatives to pilot and scale-up service delivery models and innovations;
- examine new ways of doing business at scale in rural water supplies (e.g. using micro-finance, harnessing the local private sector, through decentralised structures, using household-level technologies, with local associations, with effective regulation and catchment protection);
- build-up and strengthen formal as well as informal networks and elaborate ways to enhance the dissemination of information to implementers.

after the forum: taking action

With the launch of the new RWSN strategy (2012 to 2014), the Forum provided an ideal opportunity for the RWSN thematic coordinators to better understand participant's expertise and experience in each theme. Within each of the 30 sessions, the participants were requested to come up with specific actions for the RWSN work plans and beyond. This, together with the formation of dedicated working groups is intended to build a stronger network and enable many more RWSN members to engage in specific actions.

The short session overviews in this report summarise the discussions and the proposed actions. Note that the four RWSN themes are all at different stages of their development. Thus the type of actions recommended are quite different between the themes.

RWSN is coordinating the Target and Solutions Group for rural water supplies (Target 1.1.2) at the 6th World Water Forum in Marseille in March 2012. The RWSN Forum provided a timely opportunity to determine key messages, actions and commitments to take to Marseille. The Forum closed with the endorsement of the Kampala Rural Water Supply Commitments (page 4).

Participants Expectations

"I'm expecting to see a lot of cheap technologies, like for drilling boreholes, so that people spend little money on getting clean water"

Willy Walusimbi, Rural Health Care Foundation (Uganda)

"I'm here to talk about my experiences in the Dominican Republic and network with individuals from other countries and share experiences with them."

Ryan Schweitzer, University of South Florida (USA)

"My expectation is to be able find information on the best type of handpumps that we can use in Liberia. Also to share experiences about maintenance and sustainability."

Phillip Cooper, Welthungerhilfe (Liberia)

"The onus for rehabilitation, capital maintenance and replacement costs has always been on governments to provide. Often times they have not found the resources to do this and systems fall into disrepair. These are issues that we should look at here and find solutions to them."

Gaze Emmanuel, CWSA (Ghana)

Mission Statement

RWSN is a **global network of professionals and practitioners working to raise standards of knowledge and evidence, technical and professional competence, practice and policy in rural water supply and so fulfil the vision of sustainable rural water services for all.**

Sessions

5. Sustainable Groundwater Development 1

[167] *Sustainable Groundwater Development: use, protect and enhance* – S. G. Furey

[161] *Mapping of suitable zones for manual drilling ... to increase access to drinking water in Africa* - F. Fussi

[27] *Manual Well Drilling, Senegal* (Film) – A. Boubacar

[-] *Groundwater resilience to climate change in Africa* – Dr A. MacDonald

10. Sustainable Groundwater Development 2

[169] *Accelerated Groundwater Development for Rural Water Supplies in Sri Lanka* – N. Ferdinando

[179] *Cost-Effective Boreholes in Nigeria* - A. Adekile

[233] *Evolution of Groundwater Development in Burkina Faso* - G. Hado Alphose

13. Innovative Technologies

[86] *Baptist Drilling (Film)* - Rik Haanen

[160] *Is Fluoride Removal Affordable in Rural Ethiopia?* – L. Osterwalder

[127] *A Community Choices Tool for Decision Making on Sustainable WASH Intervention* – Dr J. Akudago

18. Introducing Technologies

[159] *The SHIPO Smart centre: An example of dissemination of new low cost WASH technologies in Tanzania* – H. Holtslag

[177] *The Canzee Pump in Madagascar(Film)* – S. Ranaivojaon

[188] *Strengthening the Capacity ... in Domestic Roof Water Harvesting and management in Uganda* – C. Z. Nimanya

[168] *Introducing Technologies* – A. Olschewski

28. Groundwater Resources and Catchment Management

[79] *Walking on Water (*Film) – S. Madrell

[96] *Towards drinking water security through participatory water resource management approach in ...*, India, – Dr A. Umar

[173] *Experiences of Water Use Master Plan in Nepal* – M. Bhatta

[130] *Hydrogeological Characteristic of Aquifers And Borehole Performance Assessment for Rural Water Supply in ... NW Nigeria* – Dr M. Eduvie

[211] *Sustaining rural water supplies in Uganda through improved water catchment protection* – Dr C. Tindimugaya

(Note: only presenters are named. See papers on Forum website for full author list.)

sustainable groundwater development for rural water supply

Groundwater is an essential component of rural water supply and five sessions considered these questions: How can groundwater be used effectively and sustainably? What progress has been made with using the 'Code of Practice for Cost Effective Boreholes'? What role does new technology play and how can new ideas get from pilot project to widespread use? How do we balance water supply with other water demands?

Key Points

Groundwater Resources

- Community water supplies in rural areas often depend on groundwater;
- The main challenges for users are managing seasonal fluctuations and dealing with poor water quality.

Skills, know-how and understanding

- Investing in a better understanding of groundwater and hydrology is never money wasted;
- Sustainable groundwater development is complex. Good information and interpretation skills are needed;
- Technology and professionalisation takes time;
- It is important to demonstrate the income earning potential from improved technologies, better water supplies and more professional groundwater development.

Implementation

- Roles must be clear and collaboration needs facilitation;
- The practices of international agencies can be a problem, for example, non-payment for dry holes rarely provides fair payment terms for drillers;
- Key success factors for the uptake of new technology are satisfaction of user needs, low costs, reliability and involvement of local private sector;
- Partnerships between local NGOs and local private sector are important for introduction and wider uptake of technologies including manual drilling.

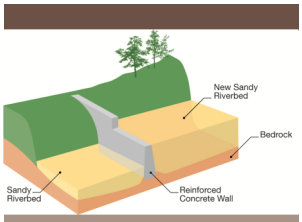
Outcomes and Actions

- ➔ Improve both technical expertise and public understanding of groundwater and technology - facilitate training;
- ➔ Improve sharing of practical hydrogeological and technological information, costs and tools;
- ➔ Develop mechanisms to improve supply chains;
- ➔ Donors need to support technology promotion to overcome the difficult transition from piloting to widespread uptake, known as the 'passing through the valley of death', and the sharing of experiences on this;
- ➔ Stronger links between rural water supply and water resource planning and management are required.

Stephen Wandera, UNICEF (Uganda)

"In the highlands areas where we were working it was not possible to get drilling rigs in, so we used hand-augering to drill wells.

"I've had a chance to go back to these highlands and people area using this water and I feel a sense of satisfaction for having been involved in such a programme."



Sand Dams in Kenya

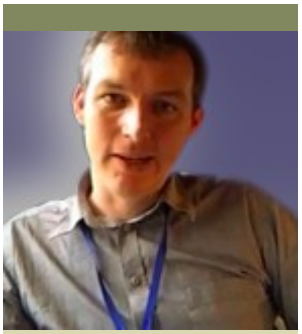
Simon Maddrell [79]

The sand dam is a technology that can increase groundwater availability, reduce seasonal water fluctuations and other benefits in arid and semi-arid catchments. The challenge is scaling up this technology to other appropriate locations.

The objective of the Sustainable Groundwater Development theme is:

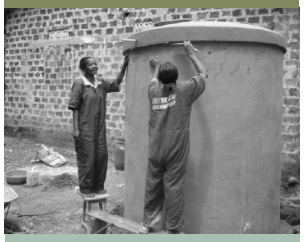
Groundwater resources are properly considered and sustainably used for developing drinking water supply sources.

accelerating self supply (ACCESS)



John Butterworth, IRC (Netherlands)

"One thing that we have noticed is high failure rates associated with community water supply systems and also that it's a huge challenge to extend community water supply systems to everybody within a reasonable number of years. So one alterative and complementary approach that is emerging - and has just been recognised in Ethiopian policy - is self supply."



Women Rainwater Tank Masons, Uganda
Margaret Nakato [124]
Training and support is provided to women to allow them to become rainwater tank masons. As well as improving their own water supply, they can earn money by building systems for others.

Accelerating Self Supply refers to increasing the rate of incremental improvement of household and community supply through user investment in water treatment, supply construction and upgrading, including small rainwater harvesting and groundwater systems. The three sessions considered these questions: How do low cost and convention supplies really perform? Why people are driven to change or augment their supply? and what technologies are available to help them to do so ?

Key Points

Self Supply has advantages:

- Self Supply promotion has led to switching of water sources, driven by water quality and ownership concerns;
- Self Supply can be more sustainable than communal systems;
- Self Supply often reduces dependence on one water source, and so reduces vulnerability.

Ways of Implementing

- Different agencies are developing innovative approaches to promote self supply, for instance by integrating it with the implementation of Community Led Total Sanitation (CLTS), Household Water Treatment and Storage or Multiple Use (MUS);
- Working through women's groups can be an effective way to scale up self supply;
- Self supply is happening in peri-urban settings but there are challenges , including risk of faecal contamination.

Challenges

- Self Supply is not perceived to be a scalable strategy by many donors and government;
- Enabling policies under which self supply can operate are lacking;
- Inventories of all water sources are not kept, government don't tend to count sources that have been improved by Self Supply approaches in national statistics.

The objective of this theme is:

Self Supply becomes a mainstream and accepted service delivery model within the Government, donor and implementing agency community as well as among water users in rural areas.

Outcomes and Actions

- ➔ Implementers should partner with the private sector to develop, discover and test products;
- ➔ The costs of promotion need to be better understood and documented, building on lessons from other approaches;
- ➔ Self Supply Activities should be evaluated and the effect of Self Supply on health, environment and GDP documented;
- ➔ If Self Supply approaches are approved nationally and facilities can meet JMP criteria, more donors may support it;
- ➔ NGOs have a role to play in developing the capacity of women as well as the small scale private sector;
- ➔ Publications and exchange visits can be used to promote self supply to other areas where it is not practiced.

Sessions

4 Exploring Self Supply Potential

[131] *New insights on the oldest approach family wells in Ethiopia* - E. Mamo

[153] *Self supply dynamic mapping* - K. Kumaru

[163] *Groundwater self supply in peri-urban settlements in Zambia* - Dr M. Mulenga

[23] *Household water supply technologies for increasing access to domestic water supplies in rural Bolivia* - M. MacCarthy

9 Experiences in Accelerated Self Supply

[26] *A Market Based Approach to Facilitate Self Supply for Rainwater Harvesting in Uganda* - T. Opio-Oming

[121] *Promoting self-supply of improved traditional wells in Mali: a comparison of two approaches* - S. Jones

[85] Low cost Water solutions - R. Haanen

[126] *Putting women at the forefront in accelerating self supply through domestic rainwater harvesting* - D. Baziwe

[124] *The Tank Revolving Scheme: Accelerating self supply in Katosi, Uganda* - M. Nakato

27 How to Accelerate Self Supply

[162] *Parallels between self supply and CLTS: lessons from Zambia* - Dr P. Harvey

[220] *Accelerated access to safe and reliable water through self supply in Uganda* - J. Kiwanuka

(Note: only presenters are named. See papers on Forum website for full author list.)

Sessions

15 Equity and Inclusion

[-] *Introduction to Equity & Inclusion* - L. Gosling

[93] *Diagnostic de l'accessibilite* (Film) - H. Rabarivelo

[107] *Developing user friendly facilitative WASH solutions for rural people with disabilities - WV WAWI Mali Study* - C. Chikusa

[164] *Promotion of appropriate technologies in water and sanitation using the Village Model Concept The Case of Kikandwa village, Mukono district, Uganda* - Dr I. Mutenyo

[196] *Rural Drinking Water Service Levels: A study of Andhra Pradesh, South India* - Dr M. Snehalatha

20 Sector Performance Measurement and Mapping and Data + drop-in session

[208] *Service delivery indicators and monitoring to improve sustainability of rural water supplies in Ghana* - P. Dzansi

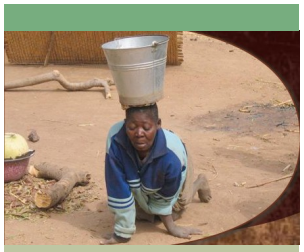
[101] *Experience using FLOW for data collection in Liberia.* (Film) - A. Koroma

[-] *Sector Performance Measurement Process in Uganda* - I. Arebahona

[-] *Improving equity of service delivery through water kiosk mapping in Lilongwe* - M. Meke

[-] *Rural Water Point Mapping in Chikhwawa District, Malawi* - E.O.S. Mchirikizo

(Note: only presenters are named. See papers on Forum website for full author list.)



Access for all in Mali, Niger and Ghana

Chimwemwe Chikusa [107]

Many difficulties are faced by the elderly, very young and those with physical disabilities who try to use water facilities, such as handpumps. World Vision, and partners, tried and tested a variety of design solutions for communal water points. The challenge now is to develop and scale up those ideas so that even those most vulnerable in rural societies can benefit from improved water sources.

equity and inclusion in rural water supplies

Equity and inclusion refers to the fair allocation of budgets, equitable distribution of infrastructure across geographical areas and access to (as well as use of) infrastructure.

These two sessions showcased examples of what has and can be done to increase access to WASH facilities across and between communities through the promotion of inclusive facilities and mapping.

Key Points

Policies and standards

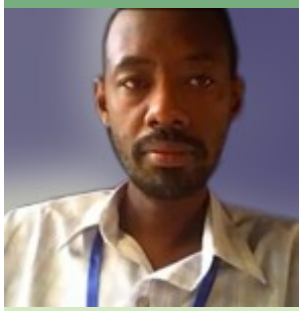
- Most countries have policies for inclusive facilities, there is a need to ensure these policies are implemented and then monitored.
- Mapping and monitoring water points needs to consider:
  - Indicators - only a small number of indicators so make then as meaningful as possible.
  - Information updating procedures - what can be realistically done at a district level?
  - Where possible, use existing data collection networks, such as health extension staff.
  - Use analysis tools that make data accessible to the people who need it.
  - Ensure that any mechanism is institutionalised within government structures.

Examples and Implementation

- Greater emphasis on evidence based decision making requires more robust data, particularly on the cost effectiveness of inclusive designs;
- Implementers are using a variety of different methods and technologies to reach excluded groups. Whilst it is important to harmonise standards for service delivery, service providers must respect different country contexts.

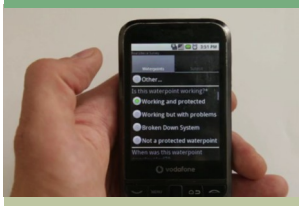
Challenges

- The 'marginalised' - are very diverse group of people - how can facilities be designed for all?
- How can Equity and Inclusion principles be mainstreamed so that they work at scale?
- Users must be involved, consulted and participate in all stages of project design and implementation and putting the phrase - "nothing *about us, without us*" into practice. NGOs must empower the marginalised to hold implementers accountable for services.



Nshuti Rugeni Nyange, WaterAid (Rwanda)

"Rwanda is one of the countries that is doing well in terms of water supply but there is still big issues of equity and inclusion, reaching out to people with vulnerabilities and poor communities ... while the coverage is good, infrastructure is not inclusive enough ... the availability of services does not equate to equitable access"



Water-point mapping in Liberia

Max Hirn [101]

Mobile phone technology can improve mapping of community water sources. In post-conflict countries, like Liberia, it is essential to have rapid, cost effective mapping so that water services can include everyone.

Outcomes and Actions

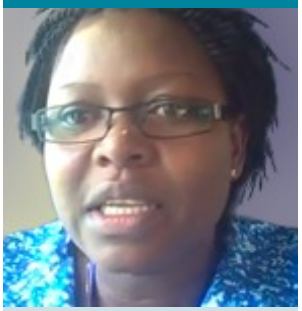
Equity and Inclusion is a new theme for RWSN. More work is planned to improve understanding further:

- ➔ Conduct research to understand who is excluded and why, as well as how the hardest to reach groups can be included;
- ➔ Determine which organisations are planning and implementing work on Equity and Inclusion and bring them together;
- ➔ Build on the range of experiences of stakeholders to develop analytical tools and frameworks;
- ➔ Share strategies, examples, evidence and tools with RWSN members to increase their effectiveness in influencing.

The objective of this theme is:

Targeting of service provision at all scales is inclusive of the needs and rights of those who are frequently excluded from access to services.

management and support for rural water supply



Destina Samani, Water and Sanitation for Africa (Ghana)

"Our ministers became concerned when they started hearing information that the majority of facilities in developing countries, especially in sub Saharan Africa, - 30-40% of them - are not functioning."

District level co-ordination of development partners

Edgar Phiri [137]

Donors and NGOs must be willing to fit their projects into district systems and coordinate with district offices throughout the project lifecycles. This requires local government officers to create an environment conducive for partnership.

The objective of this theme is:

that appropriate models for management and support of rural water supply services are piloted and taken to scale.

Over the past twenty years community management has become the most common approach for rural water supply in developing countries. In these seven sessions, participants explored a number of key questions including: how to strengthen implementation and management of handpumps, piped systems and other forms of rural water supplies? How to ensure that innovation is institutionalised? Can communities manage water supplies on there own, and if not, what technical, financial and institutional support is needed?

The overall message is that there is an urgent need to move away from project-based infrastructure installation and towards a systematic approach of incremental improvements, and maintenance, of rural water supply service level provision.

Key Points

Policies and standards

- There are good examples of countries with enabling legislation for community based management of water supplies;
- Rural water supplies have reportedly improved with the introduction of private sector participation (PPPs) and decentralisation (Rwanda).
- Public policy implications include the importance of packaging contracting appropriately (larger lots) to ensure lower costs and further developing drilling markets;
- Large differences in costs result from the method of tendering international vs. national competitive bidding with the costs of the former being significantly higher than the latter.
- The public sector has an important role in making Private Public Partnerships (PPPs) sustainable. There is potential for leveraging public funds to help address the investment gap and to use private funds to drive performance.
- There is no compelling evidence that regional schemes provide a more reliable service. Think before deciding.

What works well

- Different approaches to private sector participation (PPP) have been tested from policy driven, planned approaches to more bottom up and experimental ones;
- Techniques from the private sector have been adopted within community-based management to improve effectiveness, e.g. performance awards for Community Based Organisations (CBO) in Pakistan and 'league performance tables' in Ghana.
- Water metering has been a successful way to improve financial sustainability (Latin America);
- District-based Area Mechanic Associations and the professionalisation of community based management is key.
- Post construction management of piped systems captures detailed cost data that could be compared with other cost data;
- The Output Based Aid (OBA) mechanism ensures sustainability of systems as the microfinance banks carefully watch cash flows in the projects in order to ensure their loans are repaid;

Sessions

2 Managing Handpump Water Supplies

[156] *District-based Hand Pump Mechanics Associations in Uganda for Improved Operation and Maintenance* - J. Nekessa
[140] *Opportunities for Support of Area Mechanics by District Government in Malawi* - A. Lindsay
[157] *Repairing Water Wells in Logone Oriental region, Southern Chad* - P. Lacour-Gayet

3 Post construction support and partnership for sustainable rural water services

[30] *Community Managed Rural Water Systems: What makes them Sustainable?* - R. Schweitzer
[138] *Participatory process & strategy for maintenance & repair of water equipment in Mali* - S. Traore
[137] *Donor District Coordination: The Key to Sustainable Rural Water Supply* - E. Phiri
[98] *Rural Water Supply Experience in Khokhar Mera Village, Pakistan* - S. Gulzar
[193] *Post-construction support for sustainable rural water supply services: Expenditure on direct and indirect support* - J. Verhoeven

7 Private Sector Participation

[119] *Keep the water Flowing* (Film) H. Kashilliah
[51/142] *Factors improving the lifetime of rural water supply equipment* - T. Barbotte
[-] *Professionalised Rural Service Areas (PRSA)* - J. Narkevic

14 Decentralised Service Provision 1

[223] *Implementing a delivery-driven approach to rural water services provision in South Africa: some lessons from Chris Hani District Municipality* - M. Dungu
[154] *Service cooperatives – Solution for Rural Water Supply in Ukraine* - V. Sorokovskyi
[50] *Professionalising O&M – The Way Forward to Sustainable Rural Water Services in Kenya* - C. Tiwari
[24] *Sharing recurrent costs to ensure sustainability of water services ... in Mali* - M. Sidibé
[144] *NGO Coordination with District-Level Government and its Effect on Sustainable Community Water Supply: Cases studies from ... Malawi* - C. Songola

(Note: only presenters are named. See papers on Forum website for full author list.)

Sessions

(Continued from page 12)

16 multiple dimensions of costing and financing rural water supply

[100] *Maji ni Maisha: Innovative Finance for Community Water Schemes in Kenya* - R. Advani
[91] *Factors affecting costs of groundwater development in Sub-Saharan Africa* – Dr S. Xenarios
[194] *Drivers of capital expenditure of rural piped water systems in Ghana: The Volta, Ashanti and Northern Regions* – B. Dwumfour Asare

17 Innovative Implementation and Management of Rural Water Supplies

[150] *Malawi's Mpira-Balaka gravity fed rural piped water supply scheme: what can be learnt?* A. Mapsere
[121] *Quissanga – Water for 5000 People in 8 Days (Film)* - L. Koestler
[61] *Establishing the building blocks for sustainable water service delivery in Ghana* - V. Duti,

19 Decentralised Service Provision 2

[151] *Examining and strengthening the involvement of local governments and district-level non-government WASH actors in the provision of rural water services in Uganda* (film) - L. Mirembe
[225] *Supporting local authorities .... in Burkina Faso* - S. Mackenzie
[226] *Decentralised Responsibility for Water in Niger – Providing Technical Support to Local Authorities* - S. Mackenzie & Y. Boué

22 Village and Small Town Piped Water Supplies

[229] Regional umbrella organizations for sustainable management of rural piped water supply systems: Uganda's experience and expectations - F. Twinomucunguzi
[222] *Is it Worth Building Regional Schemes – Reflections from the Eastern Cape, South Africa* - J. Gibson
[230] *Promoting Public-Private Partnerships (PPPs) in Rwanda's Rural Water Supply: Lessons Learned* - E. Lazarte

(Note: only presenters are named. See papers on Forum website for full author list.)

- Drilling costs are coming down across Africa with the development of local markets in drilling.
- Regional umbrella organisations can support small-scale water supply systems to address operations and maintenance challenges through economies of scale.
- Local private sector participation can improve the performance of piped rural water supply systems. Private sector management can increase access but it is not the only solution.
- Being able to borrow from financial institutions presents a significant opportunity for improving and expanding service delivery.

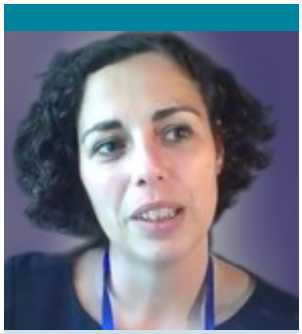
Challenges

- Community management has limitations due to lack of skills, transparency, and capacity;
- Political willingness to allow private sector participation is essential for any such approach to be successful;
- Regular backstopping visits are required to ensure the functionality of systems and access to water services;
- Planning for sustainable management of community water supplies takes time and resources;
- The process of learning and taking innovation to scale is as important.
- To change from numerous remote schemes to regional/ centralised schemes results in the exchange of the logistical challenge of many schemes for a technical challenge associated with 'connected infrastructure'.

Outcomes and Actions

More research, documentation and case studies are required on:

- ➔ Policy frameworks that encourage coverage and coordination between stakeholders;
- ➔ Examples of well drafted 'model' partnership agreements are required, that clearly define key elements as well as the roles and responsibilities for all stakeholders;
- ➔ How and why different actors and regions invest in post-construction support;
- ➔ The direct and indirect costs of providing on-going support to communities;
- ➔ Experience in using PPPs for post-construction support;
- ➔ The use of metering in rural water systems;
- ➔ The effectiveness of performance awards for water committees;
- ➔ How to take innovation to scale and examples of where this has been done.
- ➔ Existing cost data would be useful to ministries responsible for water supply if it was compiled into matrices for them to assess costs as a priority. It could then be used for budgeting and in designing fiscal transfer systems between national and local governments;
- ➔ Given the low functionality rates in the sector, the monitoring of lifecycle costs is essential. It should compare the costs of different types of rural water schemes (e.g. diesel vs. solar);
- ➔ There is need to have clear institutional arrangements and legal mandates to back it up including monitoring, evaluation and regulation;
- ➔ Financing: Work needed on how to manage the huge gap in investments in small piped systems as well as ensuring financial sustainability.



Catarina Fonseca, IRC (Netherlands)

"There is a paradox - on the one hand CBOs are being trained to do minor maintenance of handpump but when it gets more complicated and complex they call the Area Mechanic, yet communities can't afford to pay them. Area Mechanics then become de-motivated because they don't have a business. And in the end the organisations that support the area mechanics end up paying for that service .. The full cost of maintaining a handpump is highly undervalued."

New models for water services in Ukraine

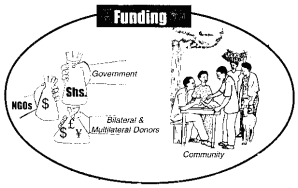
Viacheslav Sorokovskyi [154]

After the breakdown of the Soviet Union, the centralized water supply systems in rural areas no longer had enough money. A new community-based model for water supply management has been implemented in 33 communities and shows potential for scaling up across Ukraine.

26 Scaling up innovation in community-based management for rural water

[189] *Sustainability of Rural Water Supplies: The Case of WaterCan supported project in Becho District, Ethiopia* - H. Jemal
[125] *Incentivising Sustainability Through Performance Awards* - S. Yusuf

rural water for all



"Rural water remains a major development issue which needs continued and active engagement of governments and non-government organizations"

Alexander Bakalian, World Bank.

Water users, local and national governments, the private sector and donors have their own distinct and often differing perspectives on what is important and how rural water supply should be improved. Three of the Forum sessions provided a platform for different voices to be heard. All have a vision of ensuring access to sustainable rural water for all. Most of their initiatives are being carried out at regional or national scale. All have experiences to learn from.

Effective community management in Ethiopia

Y. Ghebremedhen [176]

In the Community Managed Project, in Amhara and Benishangul -Gumuz regions, Ethiopia, microfinance banks are routing money to communities to do their own contracting for water points. This has led to higher sustainability and higher utilization of funds.

G. Basterrechea Blest [234]

Scaling up in Peru

The key success factors for the SABA model in Peru are: Government authorities: political will and leadership; continuous enhancement processes; social policies & decentralization process; favorable national and international context in terms of economic growth; and operation of project directive committees composed of sector authorities from both national and regional levels.

Key Points

At community level

- Capacity building and awareness raising at community level prior to and during to programme execution is vital for community management. Paying lip service is not enough!
- Communities can contract the construction of their own water supplies, using their own, or external funding. They need motivation, knowhow and support;
- More emphasis should be given to service delivery close to the home.

At local Government level

- Local Governments have a significant role to play to stimulate, facilitate and support communities and local enterprises to improve access to water supplies.

In relation to the private sector

- Political will, size and location, latent demand and donor support are essential for successful public private partnerships;
- Slow public tendering processes and payment delays undermine private sector participation;
- Participation of the private sector should be expanded.

In relation to large scale initiatives and investments

- Joint efforts, coordinated at national level, with full consideration of technical, social, political and institutional aspects are essential to enable sustainable access to improved water supplies for all;
- Burkina Faso, India, Peru, Ethiopia, Sri Lanka and Uganda offer examples of promising programmes at national or regional scale. Ensuring that stakeholder diversity comes together, strengths are built upon, learning is mutual and everyone plays their roles is a challenging task.

With respect to finance

- Current investments are inadequate to meet the MDG targets in many countries;
- Long term financial sustainability is required to replace infrastructure at the end of its economic life.

Sessions

12 Rural Water Supply Perspectives

[205] *Rural Water Supplies - Lessons from India* - S. S. Meenakshisundaram

[-] *Rural Water Supply and Sanitation Initiative (RWSSI)* - T. Roberts

[219] *Enhancing Safe and Reliable Water Supply Through Self Supply: A case of Iganga District – Uganda* - W. Mbatya

[215] Delivering Drinking Water to a Community of Grandmothers, Agutu

[176] *Community Managed Project Approach in Ethiopia* (Film) - Y. Ghebremedhen

24 Vision for Rural Water Supplies

[148] *Rural Water Supply in Sub-Saharan Africa: A View from the World Bank* - A. Bakalian

[227] *Rural Water Supplies in Latin America: the next decade* - I. Marmanillo

[-] *Rural Water Supplies in Uganda: everybody playing their roles* - A. Kabirizi

25 Water for All Solutions at Scale

[-] *6th World Water Forum* - L. Giordano

[111] *Towards Achieving MDG in Water Supply in Sri Lanka* - G. Fernando

[152] *Public-Private Partnerships in Madagascar: a promising approach to increase sustainability of piped water supply systems in rural towns*, J. Annis, G. Razafinjato

[234] *The Integral Basic Sanitation Model (SABA) in Peru* - G. Basterrechea Blest

[213] *The National Programme for Water and Sanitation in Burkina Faso: The Rural Context and Challenges for Access to water and Sanitation for All* - J. Oubda

(Note: only presenters are named. See papers on Forum website for full author list.)

WASH in schools – emerging innovations and challenges in the provision of rural water supply

Sessions

11. WASH in Schools – Emerging innovations and challenges in the provision of rural water supply

[191] Creating favourable environments for school children through water, sanitation and hygiene promotion. Katooke Sub County, Kyenjojo District, Uganda. - Ann Kyohairwe

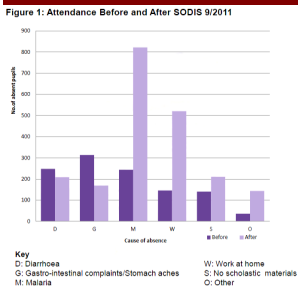
[88] Innovations in Water Technologies: the case of clean water for schools (CWFS) Project in Kabulasoke Sub County, Gomba District, Uganda. - Ronald Kato Salongo

Posters

[109] Assessment of Solar Disinfection of Drinking Water on Health of Pupils in Ndagwe Sub-county, Lwengo District, Uganda - JK Asiimwe, B. Quilty, C Muyanja, KG McGuigan

[146] Kenya Water for Health Organization (KWAHO) Siaya WASH programme interventions in schools and community in Rural Kenya - C. Mwango

(Note: only presenters are named. See papers on Forum website for full author list.)



Solar-powered health in Uganda

JK Asiimwe [109]

Use of Solar Disinfection (SODIS) is able to reduce school absenteeism caused by diarrhoea and gastro-intestinal problems.

Papers accepted but not presented

[143] *Story of a Mechanic named Afzal to sustainable rural water supplies, Bangladesh* - S. R. Rahman

[122] *Preliminary study on a small-scale parabolic trough concentrator to pasteurize drinking water in developing countries* - R. Bigoni and S. Sorlini

Key Points

Policies and Standards

- WASH in schools can be a good example of multi ministry collaboration (i.e. Health, Water and Education);
- There can be a lack of clarity on Ministry standards for water quality in schools i.e. is rain water considered safe?
- Standards should ensure that the facilities are child-friendly, meet the needs of girls and are inclusive.

What works

- Disposal of wastewater should be part of all WASH in Schools activities;
- Menstrual hygiene must be addressed (design and software/ hygiene promotion) particularly to complement education of the girl child;
- If only a school's needs are met there is still a big gap in addressing improved health status when the community/ households do not have access to the same level of WASH services, so important to tackle both.

Challenges

- There is no cookie cutter solution, we need to consider many technologies;
- A challenge with schools is vandalism due to communities needs to access the WASH services. This means being strategic and strengthening communities access to water supply and sanitation in the village that surround schools;
- In rural schools using rainwater harvesting tanks need to ensure that water supply meets demands of school (litres/person/day vs. total volume) and that water lasts through dry season;
- School health clubs are a good way to improve hygiene behaviour both at schools and in the surrounding communities however are challenging to sustain over the long term.

Outcomes and Actions

➔ Policy makers should be involved in advocating for inclusion of health clubs as part of the national level curriculum for sustainability

➔ Improve knowledge sharing – to avoid reinventing and to network within sector

➔ There is still more work to do to improve technical solutions to school-specific issues i.e. sustainability of pit latrines. How can pits be designed from the beginning to address the challenge of emptying when full, is it affordable, what are alternative options (ecosan?)

Tex Tychon, Water God's Way (Uganda)

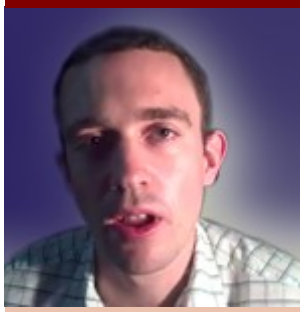
"No one really talks about the issue of dehydration but if you are sitting in schools under a tin roof and its hot, you get headaches in the afternoon - it's a sign of dehydration. By giving children clean water to drink we've seen academic performance improve, we've seen that teachers are more attentive because the kids want to learn and we've seen marks at the end of the year improve."

Schools as an entry point for improved water, sanitation and health

Ronald Kato Salongo [88]

Kyakulumbye Development Foundation (KDF) has been implementing the *Clean Water for Schools* programme in Kabulasoke sub-country in Gomba District since 2009 with the support of WaterCan. The project covers six schools with an estimated student population of 2,400 pupils. The project has constructed 6 VIP latrines, 6 ferro-cement tanks as well as distributed garbage bins to schools. These interventions have reduced water related diseases in communities and absenteeism in schools.

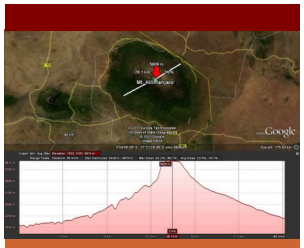
getting guidance and tools taken up by institutions



Stephen Jones, Royal Holloway, University of London (Mali)

"We have been using WaterAid's new Sustainability Framework to help analyse the situation in the different districts where WaterAid and its partners work in Mali ...

"We have identified particular issues around how costs are shared, monitoring, and the support available to pump repairers and supply chains. So we are getting ready to plan for next financial year how these aspects can be improved and the resources that need to be allocated to improve this problem, and monitoring to make sure we are succeeding."



Free online tools and information

Sander de Haas [94]

There is a wealth of information and tools now available on the internet that can help with water projects. This includes digital terrain and climate data, detailed satellite images, topographic and geological maps. While not replacing field-work, be using it for reconnaissance these tools can be used to focus field work better and validate findings.

Many excellent and useful guidance materials and tools are developed by local, national and global institutions. Unfortunately many of these remain on book-shelves, are inadequately disseminated and do not make their way into practice.

Key Points

Policies and Standards.

- Local government have a key role in providing external support to communities.

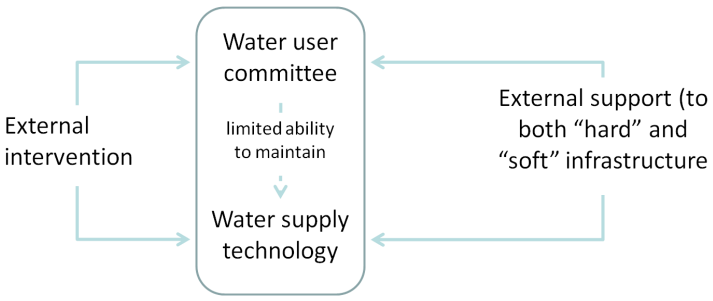
What works

- Multi-level collaboration;
- Sharing approaches with others and learning from others;
- Dedicated champions are needed to organise regular meet-ups, activities or distribute hard copies of materials through:
  - Presentation at events and conferences;
  - Online exchange, collaboration and communication;
  - Translation of materials.

Challenges

- Multiple activities require coordination;
- Organizations have a responsibility for quality assurance of publicly available data;
- There may be some value in publications that are dated, incomplete data.

Community Management PLUS (N. Bundle)



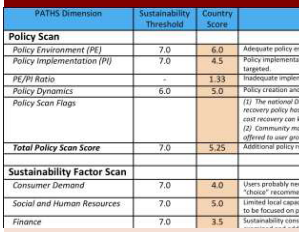
Outcomes and Actions

- ➔ Ensure that available tools, frameworks and guidance can be embedded in organizations to improve effectiveness;
- ➔ Ensure overall coordination of partners activities;
- ➔ RWSN Members may develop guiding principles and procedures for the Network;
- ➔ Dissemination of printed publications, technical specifications, and case studies with feedback mechanisms.

Sessions

21. Getting guidance and tools taken up by institutions

[-] *WaterAid Sustainability Framework* - N. Bundle
[-] *Policy Analysis Tool for Handpump Sustainability (PATHS),* - J. Narkevic
[94] *Hydrological reconnaissance for rural water projects using free online information* - S. De Haas



PATHS Dimension	Sustainability Threshold	Country Score	
Policy Scan			
Policy Environment (PE)	7.0	6.0	Adequate policy e
Policy Implementation (PI)	7.0	4.5	Policy implementa targeted.
PE/PI Ratio	-	1.33	Inadequate implen
Policy Dynamics	6.0	5.0	Policy creation and
Policy Scan Flags			*(1) The national D recovery policy has cost recovery can k (2) Community m offered to user gro*
Total Policy Scan Score	7.0	5.25	Additional policy n
Sustainability Factor Scan			
Consumer Demand	7.0	4.0	Users probably ne "choice" recomme
Social and Human Resources	7.0	5.0	Limited local capa to be focused on p
Finance	7.0	3.5	Sustainability cons

Policy Analysis Tool for Handpump Sustainability (PATHS)

PATHS is an analytical tool from WSP designed to assess country policies and practices for making hand pumps function sustainably in rural areas

PATHS comprises a methodology process and an interactive computer programme (English and French) which includes the following sections:

1. Country and Sector Information for determining utilisation groups (four groups)

2. Policy Scan (policy framework, policy implementation, policy dynamics)

3. Sustainability Factor Scan (6 dimensions)

4. Sustainability Thresholds and Scoring with automatically generated Findings and Recommendations

(Note: only presenters are named. See papers on Forum website for full author list.)

Sessions

6. Delivering water supply and sanitation in post conflict countries

[155] *Participatory Improvement of Water Supply, Sanitation and Hygiene Situation (PIWASHRA) in Ironooruvil, Resettlement Area on the East Coasts of Sri Lanka* - S. Seifert

[-] *The Liberia WASH transition* A.K oroma,

[-] *Local government and reconstruction in Sierra Leone* - L. Souma

[170] *Overcoming the Post-crisis Capacity Conundrum* - D de Waal

(Note: only presenters are named. See papers on Forum website for full author list.)

delivering water supply and sanitation in post conflict countries

Participants in this session discussed how to facilitate the transition from donor-led emergency interventions to country led sector development; and ways that emergency and development actors can work together to better accelerate this transition *Experiences were shared from Sri Lanka, Liberia, Sierra Leone and South Sudan.*

Key Points

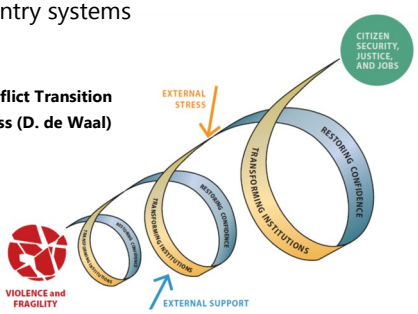
What works

- Water supply and sanitation can provide an entry point for rebuilding communities

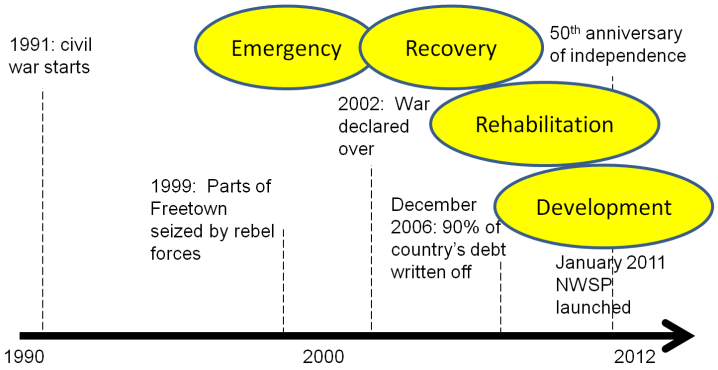
Challenges

- Loss of trust in all actors in post conflict countries requires building back of relationships at all levels.
- The transition from donor-led emergency interventions to country-led sector development requires building and linking service delivery to core country systems

Post Conflict Transition process (D. de Waal)

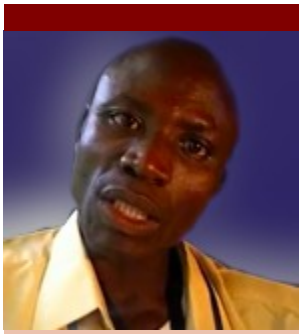


Post Conflict Transition in Sierra Leone (L. Souma)



Outcomes and Actions

- ➔ Explore options like in-country and regional training to build human resource capacity in fragile states;
- ➔ Sector coordination and linking to core country systems is key to water supply service delivery in Post Conflict Countries;
- ➔ Four opportunities for sector transition in post-crisis situations includes:
  - ➔ Build on the existing strengths of fragile states;
  - ➔ Provide examples of the transition trajectories that previous fragile states have taken;
  - ➔ Initiate an early dialogue between line ministries responsible for WSS and ministries managing core country systems (finance, planning and local government);
  - ➔ Use aid modalities to promote linkages between the WSS sector and country systems.



Charles Onji, Norwegian Church Aid (South Sudan)

"South Sudan is a new country ... the water supply system is not as developed as other countries. We are delivering rural water supply for host communities, the returnees from neighbouring countries after the long war in Sudan, and IDP (internally displaced persons) that have been displaced due to internal conflicts."

Participatory Planning in Sri Lanka

Sven Seifert (155)

Participatory planning is vital for strengthening the self-reliance and social bonds in post-conflict communities.

Cash for work (CFW) activities and the inclusion of income-generating activities improve the medium-term self-reliance of the target group and contribute to the sustainability of the project.

All project components need to be geared to the needs and potentials of the participants and involve all ethnic or religious groups and local authorities in the region, against the backdrop of civil war and the need of strengthening the civil rights of the target groups.

A peace dividend in Sierra Leone

Lamin Souma

Sierra Leone, still classified as fragile state, went through civil war until 2002 since when the country has received significant emergency assistance.

At national level Sierra Leone is now: strengthening policy, law and practice around service delivery water supply; Emphasizing water resources management, and; Linking water with environmental sanitation and hygiene promotion.

At local government level Sierra Leone is building capacity of local councils to develop and manage water supply systems, and carrying out water point mapping to support planning and investment decisions.

multiple uses of water

Raj Kumar G C, IDE (Nepal)

"IDE Nepal is using small springs for both domestic and irrigation needs. There are lots of small scale water resources scattered around the hills of Nepal but they are not well utilised. IDE is working to meet the irrigation needs of farmers with small plots of land so they can grown high value crops. Linking them to markets is hoped to increase income and improve their living standards."

Multiple Use of Water (MUS) is an approach to water programmes that considers not only drinking water, but the needs that concern all the other uses people make of water, be it for domestic purposes, growing vegetables, or watering livestock. Developing solutions that take into account and try to address the wider needs can help build more economically sustainable systems that in turn can further improve drinking water access. This session looked at some examples of successful MUS projects, particularly in the context of arid environments and to ask how to take these examples to scale and improve their sustainability.

Key Points

- It is essential to educate, document, invest in learning visits and exchanges;
- Engage local authorities in pilots and promote integration of MUS approaches into local development plans;
- Integrate MUS as a theme in RWSN and facilitate sharing of experience.

Outcomes and Actions

➔ Revive the MUS Dgroup;
➔ Share experience between RWSN members;
➔ Organise/facilitate exchange visits.

Sessions

29. Multiple Use and Drinking Water Supply in Arid Environments

[235] *Access to Water in the Sahel – multiple needs for a scarce resource* - S. Makenzie & K. Sémanou

[133] *Opportunities and obstacles for solar powered pumping technologies in rural water supply – Case study from Kunene region, Namibia* - E. H. Hjálmarsdóttir

[228] *Experiences from Multiple Use Water System in Nepal - A case study of Phulbari village of Syangja District* - Raj Kumar G C

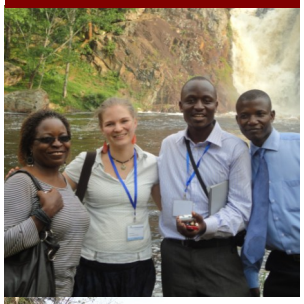
[214] *Water Security and Aridity: How a Maasai Community is Effecting Change* - S. Tema

[87] *Impact of Multiple Use of Water Services at Fessa WASH Project* - A. Asmare

(Note: only presenters are named. See papers on Forum website for full author list.)

field trips

Friday 2nd December - Mukono, Katosi, Jinja, Kayunga



Delegates had the opportunity to enjoy some of Uganda's spectacular natural heritage, such as Ssezibwa Falls.

Delegates visited the **Katosi Women's Development Trust (KWDT)**, which has enabled women to save money collectively and access loans for boosting access to improved water supplies as well as and sanitation coverage at the domestic level. Twenty women welcomed the delegates who visited a typical home affected by the interventions of KWDT and a team of women building a Ferro cement tank.

Delegates visited the **Kayunga Town Water Supply**. It has a production capacity of 3070 m^3 serves the town's population of 99,000 people. Mr. Musoke Charles manages Irumu Associates, the private operator since 2008.

There was a visit to Mr. Bitamukatono, in the town of Jinja. He is the major **supplier of handpump spare parts** including the Uganda II and UIII pumps. He started his business in 2007 and serves both the retail and wholesale market, supplying communities as well as contractors from Jinja and the neighboring districts of Kamuli, Iganga and Bugiri. To supplement his income, Bitamukatono undertakes contracts for borehole rehabilitation work for local government. One of the challenges is dealing with contractors, who sometimes take his spare-parts on credit and fail to pay.

The **Appropriate Technology Centre for Water and Sanitation (ATC)** in Mukono demonstrates rain water harvesting technologies, ecological sanitation and use of human waste for gardening, an array of irrigation technologies, point of use water treatment systems (including the biosand filter), manual water lifting devices, a hybrid solar and play pump, and a spiral shaped toilet built out of recycled plastic bottles.

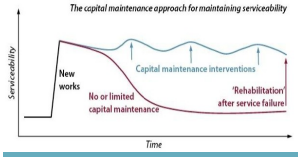
IRC WASHCOST seminar:

financing water and sanitation seminar: making services

Forty-five participants, representing African governments, multilateral organisations, civil society, and the private sector took part in a one day seminar on assessing the costs of sustainable water and sanitation services on 2nd December. The seminar was organised by IRC International Water and Sanitation Centre.

The life-cycle cost approach is a methodology for monitoring and costing sustainable water, sanitation and hygiene (WASH) services by assessing costs and comparing them against levels of service provided. At the seminar principles and components of this step-by-step methodology for costing water and sanitation services were introduced. Cases studies on collecting cost data at household, regional and national level in Burkina Faso, Ghana, India and Mozambique were presented by WASHCost country experts and discussed by participants. Besides the findings from the WASHCost project, the use of the methodology by other organisations was shared to further illustrate the possible application of the life-cycle cost approach. In various exercises participants were encouraged to explore how to start using the life-cycle cost approach in their own work.

Participation exceeded expectations and the seminar was fully booked.



Find the materials online
The materials used in the seminar are available online on the IRC International Water and Sanitation Centre website:
www.irc.nl/page/63932

More information on the life-cycle cost approach
Visit the WASHCost project website:
www.washcost.info/

or contact IRC directly at washcost@irc.nl

Catarina Fonseca, IRC, said: *"Attendance went beyond planned and exercises and examples worked well for a full day of very enthusiastic and interested audience. The feedback on the evaluation was also very good."* Overall, the evaluation revealed that participants found it an inspiring session and appreciated both the materials and ideas presented and the opportunities to interact. Graphs, maps and presentations were appreciated. "*I found the breakdown of all cost components very useful. This makes it much easier to explain and the discuss the costs of water and sanitation.*", was one of the remarks a senior sector professional on the evaluation form.

International Energy Agency seminar:

photovoltaic pumping systems in rural water supply – field experiences, new trends, and applications

The half-day seminar on the 2nd December was attended by 40 participants and ten presenters, reflecting the significant interest in Photo Voltaic (PV) water solutions by water experts. The seminar part of the seminar focused on experiences with PVP and lessons learned and the second part on examined

An important barrier for a wider application of Photo Voltaic Pumps in rural water supplies was found in the lack of knowledge among decision makers at donor agencies, national governments, and NGOs. PV technology is still surrounded by many myths. Wider application requires demystification which can only be achieved by concentrating the spread of information among these decision makers through information and training campaigns. In parallel, a technical reference document describing technical solutions and design parameters for PVP applications would very much support the development of the sector. The latter should be combined by technical training of PV technicians on the level of local PV companies.

The presentations are available for download at **http://rwsnforum.wordpress.com/programme/**

Thomas Meier of Entec Consulting and Engineering reported that the feedback received after the seminar was explicitly positive.

"We gained the impression that many experts from the rural water supply sector were highly interested in PVP as a new technical solution".

That impression was underlined in a statement by an expert working in the rural water supply sector:

"I do not understand why they are still installing handpumps. During my 30 years in this sector, I have met only three people who bought their handpumps themselves. Something has to change and PV pumping may contribute to such a change. We really need to follow up on this."

Solar pumping in Namibia

Erla Hlín Hjálmarsdóttir
[Submission 133]

On the face of it, the Kunene region of the Namib Desert is an ideal place for solar photovoltaic water pumping (PVP) because of its abundant sunshine and available groundwater resources.

However there are a number of challenges, such as theft and cost recovery that need to be thought out and implemented carefully.

There is often a bias against PVP systems because of the high initial cost and unfamiliarity among water users and professionals.

Where schemes have been implemented, the pastoral communities have benefited from easier access to water for themselves and their livestock.

exhibition, films and posters

Posters

[46] *Sustainability: A Major Factor At Project Initiation* - D. Samani
[97] *Community based fluoride mitigation initiatives in tribal dominated Dhar district of Madhya Pradesh, India* - Dr I. Bhagwat, Dr A. Umar, S. Jaiswal, G. Parihar
[104] *Developing a framework for the mitigation of geogenic contamination* - A. Bretzler, M. Amini, K. Abbaspour, R. Johnston, C.A. Johnson
[109] Assessment of Solar *Disinfection of Drinking Water on Health of Pupils in Ndagwe Sub-county, Lwengo District, Uganda* - J. K. Asiimwe, B. Quilty, C. Muyanja, K.G. McGuigan
[135] *Handpumps for schools in Miskan District, Ethiopia* - G. Semeneh, S. Alemeh
[136] *Artifical Recharge of Runoff Rainwater to Improve Spring Water Catchment* - H. Rolf, S. de Haas, H. Mwanjela
[145] *The Use of SODIS Enhancement Technologies for Treating Household Harvested Rain Drinking Water* - R. Nalwanga, B. Quilty, C. Muyanja, K.G. McGuigan
[146] *Kenya Water for Health Organization (KWAHO) Siaya WASH programme interventions in schools and community in Rural Kenya* - C. Mwango
[149] *Water is Life: Amazzi Bulamu, Uganda* - Dr. S. Linnane
[165] *Water and Sanitation are Human Rights – So What?* - R. Johnston, R. Fullan, U. Graf, F. Klingel, A. Montangero, R. Schmid, and M. Thurnhofer
[166] *Improving CSO contribution to water and sanitation through self supply options in light of the Millennium Development Goals* - J. Mugala
[183] *The Rope Pump Experience in promoting affordable groundwater development* - J. Abaliwano and S. Atuhairwe
[202] *India Mark II Deep Well Hand Pump* - L. Khanna
[207] *Financial Transparency – The Key to Successful Rural Water Management* - L. Koestler
[221] *Monitoring WASH contracts in Mozambique - Triggering transparency in the WASH sector* - F. Naene, A. Naafs & J. Zita

Sharing knowledge and experience was not just about papers and presentations. Films are an increasingly common and powerful way of showing people situations, problems and solutions. Because of the large number of submissions received, some authors were asked to submit their work as a poster, while others chose to. Reviewers helped poster authors make their submissions concise, informative and attractive and all of the authors rose to the challenge.

Perhaps the most visible area of the Forum was the exhibition area, housed within a large marquee. During session breaks, refreshments were served in the exhibition area, which drew people in and made it a hub of discussion and networking through the whole week.

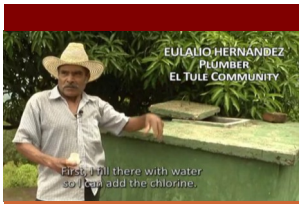
There were stands from international and Ugandan public, private and non-governmental organisations. They provided a good range of perspectives on the rural water supply sector. In addition, there were live demonstrations of manual well-drilling, rope-pump installation and water treatment. In the Story Booth delegates came and gave short video interviews.

Exhibitors

- Ajay Industrial Corporation Ltd.
- British Geological Survey
- Bushproof
- Fairwater BluePump
- Grundfos Lifelink
- IEA-PVPS, Task 9 (Photovoltaic Services for Developing Countries)
- Innovations for Poverty Action
- Integrated Engineering Associates Ltd, Cameroon
- IRC International Water and Sanitation Centre
- Jabba Engineering Ltd.
- Ministry of Water & Environment, Uganda
- Multiple Industries Ltd.
- Relief International
- RWSN/World Water Forum
- SHIPO (Tanzania)
- Techno Relief Services (U) Ltd.
- UNICEF
- Vestergaard Frandsen
- Wagtech Uganda Ltd
- Water & Sanitation Program
- Water 4 Foundation
- Water Purification Systems Ltd
- WaterAid
- WE Consult Ltd, TGS Water Ltd, Link to Progress
- World Vision

Sessions

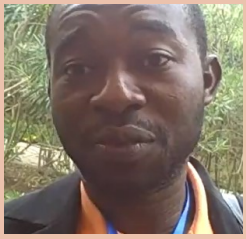
8. Rural Water Supply Cinema
[200] *Everyone, Forever*
[195] *Everyone, Forever: Chinda, Honduras* - D. Betancourt
[90] *Lifestraw in Kenya: CO_2 for H_2O* - V. Watta
[-] *Back to the River*
[74] *SODIS/WATSAN Project, Vietnam*



Voices from Honduras

D. Betancourt [195]
Films can be powerful tools for communicating stories from those whose voices would not normally be heard. In the Chinda District of Honduras, various people involved tell the story of their role in the ongoing process of delivering and using better water and sanitation.

take away messages



Bismark D-Asare,
Knust/Wash Cost,
Ghana

"I have picked research topics from the presentations that I can look at as a researcher that will inform the sector in Ghana"

Clarissa Mulders,
Link to Progress,
Uganda

"When I go back to my office I will think about how we can do operation and maintenance and rehabilitation ... I learned from this conference that there is a lot more to think about after construction."

Hon Kabede Gerba, State Minister,
Ministry of Water and Energy
Ethiopia

"From the workshop I have many lessons - low cost technologies are very important for developing counties like Ethiopia, there are many displays here we can replicate and implement in our country so that the rural community especially the poor people will have to access water and sanitation."

Martin Wasisi,
Triple-S
Uganda

"This was an opportunity to meet different partners dealing with various challenges and look at how we can partner and network. So what I am taking back from the forum is great contacts to synergise on these challenges."

Adedotun Adekile, Water Surveys and
Resource Developers,
Nigeria

"I am inspired to abolish the policy of not paying for dry holes and I am inspired to go back to Nigeria to get the authorities to take further interest in self supply to bridge the gap in rural areas."

Melaku Worku,
Ministry of Water,
Ethiopia

"From this Forum what we are really interested to scale up and use in Ethiopia is the film contributed from Senegal on Manual Well Drilling ... I understood they have a really good system and we want to use that in the rural areas of Ethiopia."

Issac Liabwel,
Ministry of Water,
South Sudan"

"I have found this forum very useful, this conference has learned me a lot and I will take home what i have learnt on empowerment of communities and local government, on using new technologies like the WaterAid technology for mapping and marking water points, and how to balance between issues equity, inclusion and sustainability in the design and implementation of projects."

Sam Mutono,
WSP
Uganda

"There is so much knowledge - policies and practice - but the way we share it out still there is a lot to do. WSP and the World Bank are involved in knowledge management - we are able to help with how it is shared so we don't have to keep reinventing the wheel."

Daniel Bando,
Ministry of Water Resource Planning
South Sudan

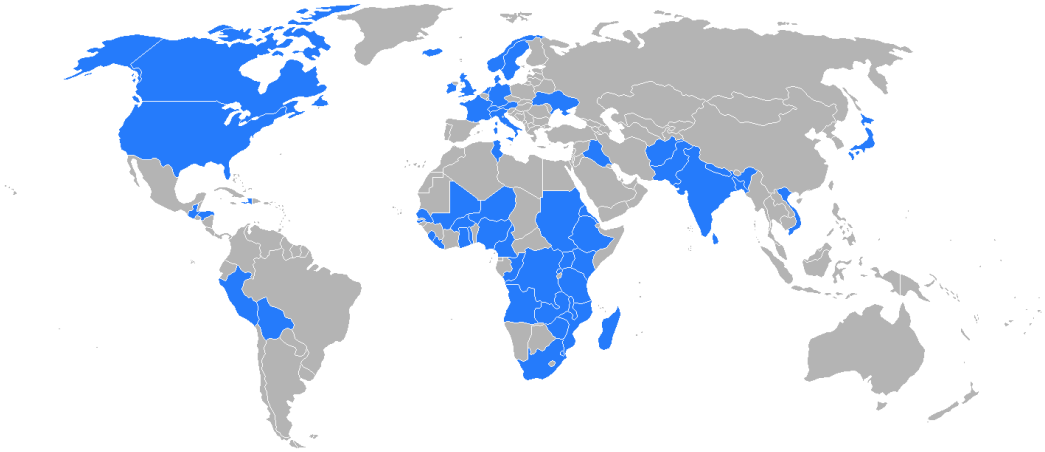
"I have learned about decentralised systems for sustaining water points, when I go back I will form a committee around water points in order to sustain them."

Kertin Danert,
RWSN Secretariat
Switzerland

"What I take away is the real need for much more exchange - be it face to face or electronically - so that different practitioners and professionals in the sector can really engage in discussion, see where they can learn from each other and take that forward."

who attended?

Providing sustainable rural water supply services is a challenge being faced by governments, community, NGOs and companies worldwide. Therefore the level of interest and participation in the Forum was gratifying and exceeded expectations. The excellent work done by the translators meant that language was no barrier between English and French speakers.



Countries represented at the Forum

reflections

What was the highlight of the Forum for you?

"Presentations and sharing lessons, strategies and experiences from different countries. Discussion that arose from presentations"

"Common experiences but a number of innovative ideas on decentralisation"

"Post Conflict session and practical demonstrations of drilling/rope pump"

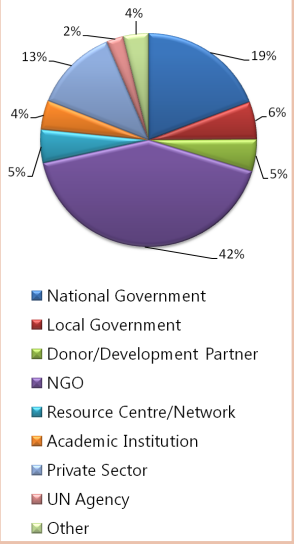
"I was able to network with various participants and was able to gain and share experiences which were beneficial"

"Exhibition - given a chance to know about products and WASH organisations"

"Sustainability mechanisms for the water source. Equity and inclusion of the vulnerable groups in the supply"

"Exchange and experiences from different countries. Self Supply with new technology"

Organisational Breakdown



Ratings from 172 completed forms

	Excellent 5	4	3	2	Poor 1
Plenary Sessions	**39%**	36%	21%	4%	1%
Parallel Sessions	30%	**47%**	19%	4%	0%
Poster Display	23%	**35%**	33%	4%	5%
Exhibition	35%	**48%**	14%	4%	0%
Venue	**62%**	30%	8%	0%	0%
Catering	**48%**	36%	13%	3%	1%
Accommodation	**42%**	38%	17%	4%	0%
Event Organisation	**43%**	40%	15%	1%	1%
Communications before event	**43%**	41%	11%	3%	2%
Delegate fee: value for money	25%	**48%**	22%	3%	2%

Forum in Numbers:

480 participants

26% women

240 organisations represented from

54 countries

Afghanistan to **Z**imbabwe





the team

Forum Director and Event Manager:
Dr Kerstin Danert (Skat)

Publicity, Exhibition, Submissions:
Sean Furey (Skat)

Registration & Payment:
Martin Läng, Laura Neuweiler (Skat)

Uganda Lead Co-ordinator:
Joseph Epitu (MWE)

Forum Facilitator:
Ian Arebahona (MWE)

Event Management:
Enid Bitalabeho (Global Events Ltd.)

Translation:
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Event Report layout & design:
Sean Furey (Skat)

Photography
Martin Läng, Sean Furey (Skat)
Global Events Ltd. (Uganda)

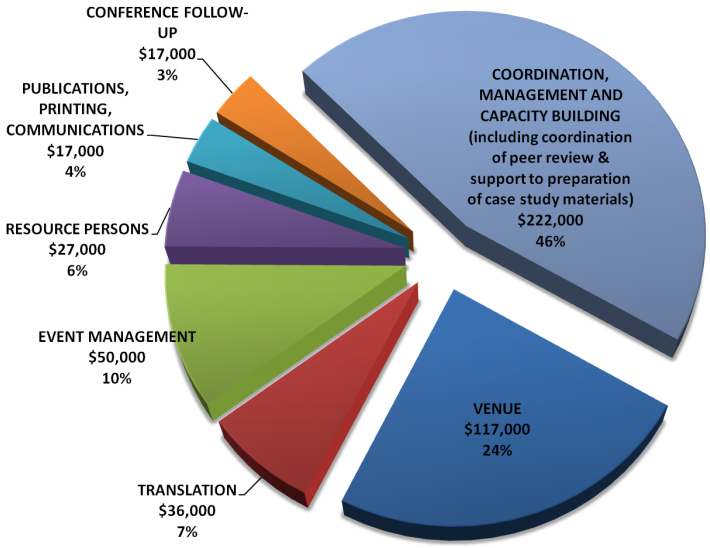
Story Booth Video Interviews
Nick Dickinson, Deirdre Casella (IRC)

Venue: Speke Resort, Munyonyo

expenditure

The cost of the RWSN Forum was US$ 486,000, or **about US$ 1,000 per participant**. In addition, the RWSN Secretariat used US$ 48,000 of donor support and participant fees to pay for the sponsorship of 24 participants. WaterAid, WaterCan, Norwegian Church Aid, UNICEF, IRC, Eau Vive, the Federal Democratic Republic of Ethiopia, the Ministry for Foreign Affairs of Finland, the Government of the Republic of South Sudan and Care each sponsored a sizeable number of delegates from other organisations.

RWSN Forum expenditure breakdown (US$)



with thanks....

National Organising Committee

Eng. Sottie Bomukama	Director (Water Development), MWE - Chairperson
Eng. Aaron Kabirizi	Comm. Rural Water Supply, MWE - Deputy Chairperson
Dr Albert Rugumayo	Senior Lecturer, Ndejje & Makerere Universities
Najjuma Christine	SAS, MWE
Spera Atuhairwe	Programme Effectiveness, WaterAid
Ms Namara Doreen	Communication Officer, MWE
Mr. Joseph Epitu	Principal Training Officer, MWE (Secretary)
Eng Ian Arebahona	PE (MWE/WSD)
Edward Bwengye	WASH Partnership Specialist, UNICEF
Florence Nalukwago	ACCURAPID Ltd
Henry Mwanga	ACCURAPID Ltd
Enid Bitalabeho	Global Events Ltd.
Judith Auma	Comm.& Doc. Officer, UWASNET - Secretary
Mr. Andrew Mbiro	African Development Bank
Mr. Chander Badloe	Head UNICEF Wash Uganda
Dr. Isaac Mutenyo	Coordinator ATC
Mr. Sam Mutono	Sen. Water & San. Specialist, WSP/WB Uganda
Mrs. Grace W. Katuramu	Programme Officer, Danish Embassy
Ms. Aciro Brenda	Senior Programme Officer, NETWAS
Lillian Nangendo	Sociologist, MWE
Chemisto Satya Ali	WASH Advisor, SNV
James Kiyimba	Communication Coordinator, WaterAid
Eng. Chris Azuba	Assistant Commissioner, MWE
Ms. Jane Nabunnya	Country Coordinator, Triple S
Lydia Mirembe	Communication &Advocacy Officer
Eng. Disan Ssozi	Assistant Commissioner, WSLD/MWE
Eng. Gilbert Kimanzi	Assistant Commissioner, WFP/MWE
Eng. Joseph Eyatu	Assistant Commissioner, RWS/MWE
Mrs. Miriam Malinga	Programme Officer, DANIDA
Dr. Callist Tindimugaya	Commissioner WRR, MWE
Mrs. Cate Z. Nimanya	Programme Manager, NETWAS
Ms Doreen Wandera	Executive Director, UWASNET
Ms. Juliet Abaliwano	Coordinator Research, WaterAid

the challenge

According to Unicef and the World Health Organisation (WHO), at least 860 million people worldwide do not have access to safe, reliable drinking water, of which 740 million live in rural areas. Building is not enough. Sustaining rural water services is even harder than installing them in the first place.

background

RWSN was founded in 1992 as the Handpump Technology Network (HTN) which developed international standards and specifications for public domain handpumps designs, such as the Afridev and India Mark II & III. This has allowed governments, NGOs and manufacturers to standardise on a few designs to make training, installation, maintenance and supplies chains easier. Millions of these pumps are now used everyday around the world.

RWSN today

In 2011, RWSN comprised over 2,500 members from all over the world. Focusing on four themes of Accelerating Self Supply, Sustainable Groundwater Development, Equity & Inclusion, and Management & Support for Rural Water Supplies. RWSN aims to enhance professional ways of working and ensure that rural water supply experiences are well documented and shared widely.

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Benefits of membership

RWSN comprises over 2,500 members from over 100 countries around the world.

RWSN produces a quarterly e-newsletter and has online discussion and knowledge-sharing tools.

We publish member experience through a series of publications and organise an International RWSN Forum every 4-5 years.

Membership is free and open to all.

Join now at

http://next.dgroups.org/rwsn

or email:

rwsn@skat.ch

RWSN publications (these and many more can be download for free from www.rwsn.ch)