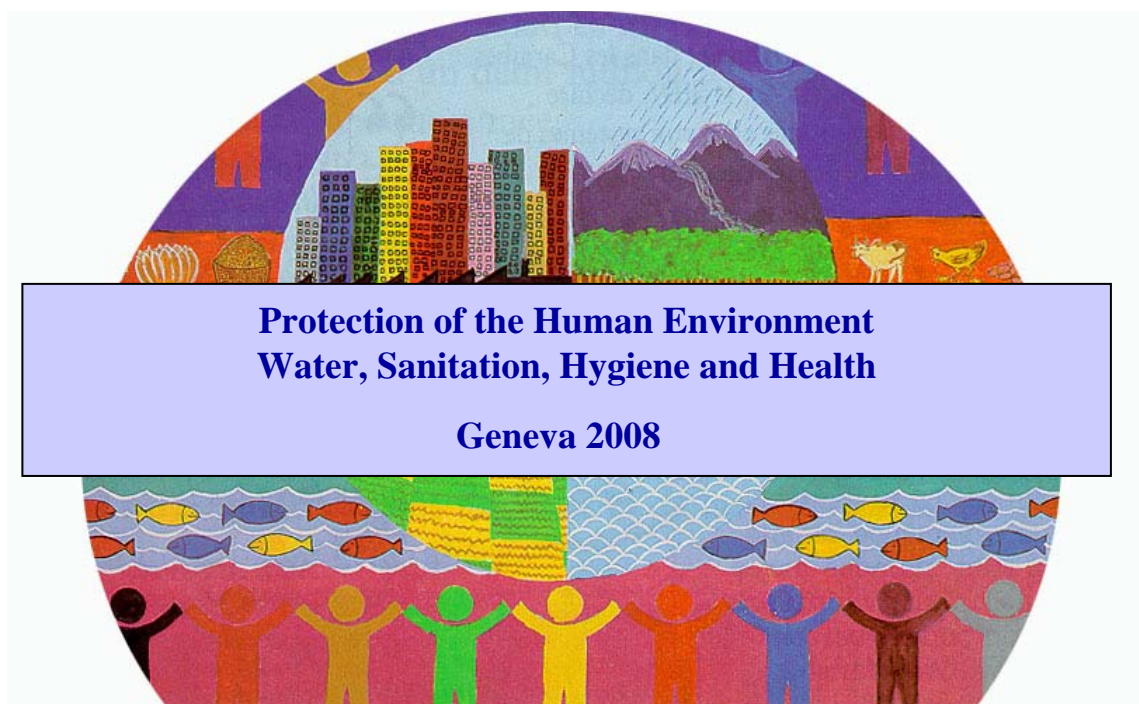




**World Health
Organization**

**Report of the Fourth Meeting of the
Small Community Water Supply
Management Network
Edinburgh 8 - 11 October 2007**





**World Health
Organization**

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**Fourth Meeting of the Small
Community Water Supply
Management Network**

**Edinburgh, United Kingdom
8 - 11 October 2007**

**Public Health and the Environment
World Health Organization
Geneva 2008**

Fourth Meeting of the Small Community Water Supply Management Network, Edinburgh, 8 - 11 October 2007

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Table of Contents

| | |
|---|----|
| BACKGROUND | 1 |
| INTRODUCTION | 1 |
| OBJECTIVES AND WORK STREAM ACTIVITIES | 2 |
| 1. Facilitate communication | 3 |
| 1.1 Fora for communication..... | 3 |
| 1.2 Share information and best practices | 5 |
| 1.3 Lexicon | 6 |
| 2. Build an evidence-base | 7 |
| 2.1 Database on policies, programs and tools..... | 7 |
| 2.2 Economic analysis, i.e. guidance document, global economic assessment and associated advocacy tool..... | 7 |
| 2.3 Research..... | 9 |
| 3. Develop a policy framework and associated tools and guidance documents | 10 |
| 3.1 Framework for the Management of Small Community Water Supplies | 10 |
| 3.2 Surveillance and verification tools..... | 11 |
| 3.3 Training tools | 12 |
| 3.4 Guidance on public reporting and risk communication..... | 12 |
| 3.5 Source water protection | 13 |
| 3.6 Data and information requirements | 14 |
| 4. Advocate for improvements to the management of small community water supplies at all levels | 14 |
| GENERAL COMMENTS | 15 |
| ANNEX 1: List of Participants | 16 |

Background

Small community water supplies are those most vulnerable to contamination and breakdown everywhere in the world. As such, even in developed countries these water supplies pose potential health risks. Sharing information, ideas and resources is extremely valuable to all countries dealing with the unique challenges posed by small community water supplies. Community water supplies in both developing and developed countries are more frequently associated with outbreaks of water-borne disease than urban supplies.

The International Network on Small Community Water Supply Management was formed to promote the achievement of substantive and sustainable improvements to the safety of small community water supplies around the world, particularly in rural areas, as a contribution to the Millennium Development Goals related to water and sanitation. As further refined in Edinburgh, the Network's objective is to:

- Develop internationally-recognized guidance;
- Develop and facilitate access to tools to implement this guidance; and
- Build evidence-base to facilitate the advocacy for political support,

Work stream activities have been developed and are being implemented by Network members accordingly.

The International Network on Small Community Water Supply Management is a platform to conduct and share innovative research, good practices and advocacy tools related to the management of small community water supplies. The Network also provides an opportunity for participants to share their experiences and the lessons they have learned with others facing similar challenges. The Network is open to all working on the topic from a policy, academic or practitioner perspective. It identifies common management and technical issues and problems in relation to community supplies, and attempts to find workable solutions in geographic and cultural context.

The Network was established at Reykjavik, Iceland, in January 2005. To further the Network's work stream activities, meetings have been held in Alice Springs, Australia in July 2005 and Kelowna, Canada in September 2006. The fourth meeting of the World Health Organisation's Small Community Water Supply Network was held in at the Scottish Government's Victoria Quay Office in Edinburgh from 8 – 11 October 2007.

Introduction

The meeting in Edinburgh was designed to further the work undertaken by the Network through a review and validation of the progress achieved on current work stream activities and the identification of additional work stream activities and next steps. The main focus was on issues in Europe but attendees from develop and developing countries from around the world.

The meeting in Edinburgh was hosted by the Scottish Drinking Water Quality Regulator with support from the Drinking Water Inspectorate for England and Wales and sponsorship from the Chartered Institute of Environmental Health, Royal Institute of Public Health, and the Royal Environmental Health Institute of Scotland. John Mason, Director of Environmental Quality for the Scottish Government welcomed delegates from Australia, Bangladesh, Canada, China, Croatia, Germany, Ghana, Iceland, Lithuania, Mexico, Morocco, New Zealand, Peru, Saint

Lucia, Uganda and the United Kingdom. WHO, EURO and PAHO were also represented. For a list of attendees, please refer to Appendix 1.

Mr Mason emphasized the importance of small community water supplies (private water supplies) in Scotland, with many people relying on them in remote communities and for tourism and manufacturing. The quality of private water supplies is highly variable but significant steps are being taken to gain improvements through a grant scheme and education package. This was a good example of the Scottish Government's aim for sustainable economic growth making the most of natural resources.

Ms Mercer (Health Canada seconded to WHO) responded on behalf of WHO by welcoming participants, thanking the hosts and by reiterating that small community water supplies are a neglected topic and WHO supports and facilitates the Network which it sees as a global resource to bring the topic into proper focus and start to get the understanding, improvements and resources needed.

Objectives and work stream activities

The purpose of the Network was reaffirmed to be the promotion of the achievement of substantive and sustainable improvements to the safety of small community water supplies around the world, particularly in rural areas, in order to meet the Millennium Development Goals related to water and sanitation. As mentioned in the background, the outcomes to which the Network is working to achieve were refined.

Consequently, the meeting agreed to reorganize work stream activities as follows:

1. Facilitate communication, to support the building of an evidence-base and the development of a policy framework and associated tools
 - Fora for communication
 - Sharing of information and tools
 - Lexicon

2. Build an evidence-base, to support the development of a policy framework and associated tools and political advocacy
 - Database on policies, programs and tools
 - Economic analysis (Guidance document, global economic assessment and associated advocacy tool)
 - Research

3. Develop a policy framework and associated tools and guidance documents, to build capacity at all levels from international to community. incorporating:
 - Framework for the Management of Small Community Water Supplies
 - Surveillance and verification tools
 - Training tools
 - Guidance on public reporting and risk communication
 - Guidance on data and information requirements
4. Advocate for improvements to the management of small community water supplies at all levels

The Network's work stream activities are expected to be completed by 2014. At this point, the Network's achievements relative to this plan of work and the need for any additional work will be reviewed. Based on this review, the Network will either cease to exist or be re-defined.

Unless otherwise noted, the Working and Advisory Groups for work stream activities have the same membership as agreed to at previous meetings.

1. Facilitate communication

Overall, the meeting recommended that future Network meetings need to focus more on work stream activities and the Network's movement towards its intended outcomes. As such, the Network will continue to reduce the number of presentations on a country, region, and/or organization's current status and recent developments. These types of presentations will be limited to those who are new to the Network. New developments and associated advice and recommendations will otherwise be incorporated directly into work stream activities and/or added to the Network's virtual forum.

1.1 Fora for communication

During side conversations during and after the Edinburgh meeting, concern was expressed about the lack of attention to Africa. As such, a concrete plan to hold a further meeting in Africa needs to be put in place and, ideally, the next meeting should be held in Africa.

The meeting agreed that the location of Network meetings would be identified three to four years in advance. Given the number of potential hosts identified in Edinburgh, this is feasible and the following opportunities will be reviewed:

The Water Research Commission (WRC) in South Africa suggested that they might be able to host and provide some funding for the next meeting, likely at a game reserve outside of Johannesburg. However, given that they have not been able to attend the last two meetings, it

might be difficult to maintain continuity. J. Mercer to further explore this opportunity with the WRC.

- Although funding has not yet been identified, it was proposed that a future meeting be held in Uganda. The advantage of holding the meeting in Uganda is that S. Tibatemwa (Uganda) has been at the last three Network meetings and is seeking support to raise the profile of Water Safety Plans in Uganda. J. Mercer to discuss with S. Tibatemwa and possible funders.
- M. Campos (Peru), proposed Cajamarca where the PROPILAS Project has a small drinking water management program and is well known for their good practices. This proposal will be reviewed by J. Mercer and R. Torres together with the appropriate national authorities.
- R. Aertgeerts (EURO) suggested that a Russian-language country in WHO's European region be considered as a future host. J. Mercer and R. Aertgeerts to discuss with the relevant national authorities, representatives of the Protocol and/or other organizations, as appropriate.
- O. Schmoll (Germany) proposed a future meeting in Germany, hosted by his organization, the Federal Environment Agency.

Lead:

J. Mercer

Next Steps:

- Identify the location of Network meetings for the next three to four years - J. Mercer
- Maintain and further facilitate the Network's current communication by:
 - Continuing transition from mass emails to the virtual forum – All Network Members
 - Regularizing teleconferences with work stream leads - J. Mercer
- Actively promote and facilitate Network growth by:
 - Developing a conference kit to facilitate presentation of the Network in other fora -By J. Mercer for use by All Network Members and to be reviewed by R. Torres (CEPIS/PAHO), D. Poulin (Canada), J. Graham (New Zealand), Oliver Schmoll (Germany) and K. Pond (U.K.).
 - Formally launching the Network on WHO's websites (i.e. HQ and regional offices), list-serves, etc. – WHO-HQ, WHO Regional Offices, and all Network members

- Presenting progress at IWA World Water Congress, Vienna, 2008, Stockholm World Water Week and other international conferences, etc - Work stream leads and WHO representatives, as appropriate

Deadlines:

Unless otherwise noted, deadline for the above is June 2008.

1.2 Share information and best practices

M. Campos and J. Graham shared some examples of training tools used by Network members. For the most part, the intended audience for these tools was at the community level, including plant operators and water quality monitors. It was agreed that there is a need to continue to share this type of information and best practices and that this can be facilitated by the Network's virtual forum.

D. Poulin shared some examples of public reporting and risk communication tools. She has added over two hundred examples of these types of tools to the Network's virtual forum. It was agreed that there is a need to continue to share this type of information and best practices and that this can be facilitated by the Network's virtual forum.

As some tools are not available electronically and/or are too large in terms of bytes of information, it was agreed that these would be scanned in and then added to the virtual forum. Alternatively, a description of the tool and contact information on how to obtain a hard copy would be added to the virtual forum.

Lead:

J. Mercer

Next Steps:

- Create a separate library folder within the virtual forum for each of the above mentioned categories - J. Mercer (done)
- Post examples of tools (i.e. public reporting, risk communication and training) into the virtual forum, as described above – All Network Members
- When a Network Member would like to add a scanned document to the virtual forum but they lack the technical capacity, they can mail the document to D. Poulin - D. Poulin
- Develop template to facilitate sharing of lessons learned with respect to training - M. Campos (done)
- Share examples of lessons learned with respect to training using above template - All Members for compilation by M. Campos and J. Graham

Deadlines:

Although sharing of information and best practices should be on-going, current members are to share examples and lessons learned before September 2008 to facilitate compilation by October 2008.

1.3 Lexicon

Overall attendees indicated that they see a lot of value in supporting the development of the Lexicon but that it has the potential to be more useful and populated faster. The following changes have subsequently been made to the Lexicon:

- Website address simplified, website profile increased, and the Lexicon is being promoted;
- Publication process of the Lexicon modified, including the publication of definitions without explanations and/or illustrations; and
- Terms are being translated into Chinese, Russian and Portuguese.

It was also recommended that the Network facilitate the technical review of translated terms. O. Schmoll is already providing assistance in the translation of English terms to German and, in Edinburgh, the following Network members offered to provide assistance in this regard:

- D. Poulin for English to French
- L. Laraki (Morocco) for French and Arabic

It was proposed that a long-term next step under this work stream activity should be the development of a graphic-based version of the Lexicon for use by the general public. This would build on, for example, risk communication tools presented. In addition, it was asked that consideration be given to the development of explanations and illustrations using a separate process, such as one facilitated by a Wikipedia-type approach but with added security and screening

Lead:

D. Drury (U.K.) and R. Torres

Next Steps:

- Identify terms that require review for small community water supplies as a priority, either by contacting D. Drury and R. Torres or by emailing lexicon@who.int - All Network Members,
- Review of terms by Network, if needed as identified by D. Drury and R. Torres – All Members; and
- Identify published definitions for inclusion in Lexicon – All Members

- Technical review of translated terms - D. Poulin, L. Laraki and O. Schmoll

Deadlines:

Deadlines are on-going but significant progress on technical review should be achieved before October 2008.

2. Build evidence-base

2.1 Database on policies, programs and tools

The working group lead has changed and it will be D. Drury. The working group has expanded to include L. Laraki, R. Torres and I. Drulyte (Lithuania).

Lead:

D. Drury

Additions to the Working Group, building from previous meetings:

L. Laraki, R. Torres and I. Drulyte

Next Steps:

- Post open invitation to fill out policy, program and tool questionnaire on WHO's HQ and regional websites. Those that complete the questionnaire, will obtain access to virtual forum - J. Mercer and Working Group
- Identify how to address the need to validate information entered into database - J. Mercer and J. Bartram (WHO) (done) for final decision by working group
- Review and validate web-enabled search engine - Working Group
- Analysis of information collected, for review and identification of next steps at the next meeting - Working Group

Deadline:

October 2008

2.2 Economic analysis, i.e. guidance document, global economic assessment and associated advocacy tool

Funding for this activity was provided by Health Canada. During the meeting, Network members indicated that the suggested method for conducting the global assessment would not be feasible. As this work is vital to the Network's ability to achieve its intended outcomes, there was strong support to find a viable solution. The Network recommended that the

Consortium re-visit their method for conducting the global assessment and consider the use of case studies, e.g. two developed and three developing countries. Attendees from the following countries indicated that they have sufficient data for use as case studies: Australia, New Zealand, Scotland, South Africa, and possibly Uganda and Peru.

Lead:

R. Bos (WHO)

The liaison between the South African Consortium and the Network will be facilitated by J. Mercer, K. Pond and R. Bos as appropriate.

Additions to the Advisory Group, building from previous meetings:

R. Aertgeerts, M. Campos, B. Conant (Canada), H. Gopaul (Caribbean), J. Graham, L. Laraki and M. Ujevic (Croatia).

Next steps - Guidance document:

- Review guidance document and terms of reference its pilot – Health Canada, Advisory Group and R. Bos
- Develop clear terms of reference to assist in piloting guidance document - Consortium
- Pilot economic analysis using guidance document with above mentioned terms of reference - J. Graham and other Network Members (TBD)
- Publication of guidance document - R. Bos

Next Steps - Global Economic Assessment:

- Continue to share information on water, sanitation and hygiene that have an economic evaluation component – All Members
- Mine data from presentations at previous meetings via the Virtual Forum - J. Mercer to facilitate access to virtual forum (done) and K. Pond to facilitate the mining of data
- Revisit method for conducting global assessment - Consortium with data provided by J. Graham, P. Heaton (Australia), R. Grey-Gartner (Australia), A. Martinez (Mexico), D. Reid (U.K.), S. Tibatemwa and M. Campos.
- Review of Consortium's method and next steps - Health Canada and Advisory Group
- Assist Consortium as deemed appropriate - All Network members and Protocol, the later facilitated by R. Aertgeerts
- Analysis of data (i.e. global assessment) - Consortium

Deadlines:

With the exception of the publication and piloting of the guidance document, all are to be done by the end of March, 2008.

In order to continue to build the evidence-base, the long-term next steps will be to encourage Network members and others to do their own economic analysis using the guidance document being developed. In this regard, it was recommended that all economic analysis published by WHO should follow a standard set of indicators/information so that a body of comparable studies can be established over several years.

Further information on this work stream activity can be found under Political Advocacy

2.3 Research

J. Cooper (Canada) reviewed the research that has already been undertaken and is currently under way in the area of small community water supply management. J. Cooper then suggested and attendees discussed areas in which the Network should advocate for research. The following research priorities were agreed, starting with the greatest priority to the Network:

- Socioeconomic (i.e. literature review and analysis of barriers to change behaviours with respect to drinking water and sanitation);
- Evidence-base with which to improve advocacy (i.e. economic analysis);
- Source protection relative to technological interventions; and
- Possibilities and limitations associated with 'leap-frog' technology.

A possible internship is currently under discussion with the University of Berkley, California. In addition, J. Colbourne (U.K.) committed to adding to socio-economic research and associated evidence-base.

Lead:

John Cooper

Additions to the Working Group, building from previous meetings:

B. Conant

Next steps:

- Facilitate formal discussion among practitioners to steer research at, for example, IWA World Congress, Vienna 2008 - WHO and J. Cooper
- Publish a call for research based on priorities identified - WHO
- Facilitate research network for small community water supplies - Working Group

- Post research into virtual forum - Working Group

Next Steps - If Intern is put in place:

- Identify acceptable literature and assemble database entries on health impacts of small community water-supply related interventions
- Review systematically acceptable studies, identify gaps in knowledge base and summarize studies undertaken to date

Deadlines:

October 2008

3. Develop policy framework and associated tools and guidance documents

3.1 Framework for the Management of Small Community Water Supplies

In advance of the meeting and during break-out sessions, direction was provided on modifications to the Framework for the Management of Small Community Water Supplies. Overall, attendees expressed support for the framework and the direction it has taken. This work stream activity was also identified by attendees as being vital to the Network's ability to achieve its intended outcomes. Modifications recommended were consistent and included the need to, for example:

- Elaborate on and provide examples for each element;
- Ensure that supporting programs are interwoven through out the entire framework, e.g. the importance of education and training programs;
- Eliminate repetition in text and provide additional clarity to diagram and text; and
- Include the fact that community-level objectives should change as a community moves through a step-wise improvement plan.

Attendees indicated that the document, as currently written, provides guidance for national and organizational level decisions makers and that a subsequent document/tool needs to be developed for use at the community-level.

J. Cooper, M. Gunnarsdóttir (Iceland) and S. Tibatemwa reiterated their support for this work stream activity.

Lead:

P. Heaton with D. Cunliffe (Australia) and S.G. Mahmud (Bangladesh)

Next steps:

- Modify framework based on comments received - Working Group
- Develop a framework for pilot - Working Group
- Begin piloting the framework at country and/or organizational level - M. Gunnarsdóttir, S. Tibatemwa and two Latin American countries, the later facilitated by R. Torres
- Modify framework based on piloting - Working Group
- Validate framework - All Network Members
- Review, finalization and publication of framework by WHO - J. Mercer

Deadline:

With the exception of the review, finalization and publication of the framework, the deadline for the above next steps is October 2008.

After which, the following next steps can then occur simultaneously:

- Modify and stream-line framework as community-level guidance, which will be a second document/tool - Working Group
- Review national level policies against the Framework - All Network Members
- Review *Guidelines for Drinking Water Quality, Volume 3* against framework and modify *Volume 3* if deemed appropriate – TBD

At next Network meeting, with those not able to attend contributing in advance of the meeting:

- Review Framework to identify areas that require additional guidance from the Network (e.g. guidance document, tools) - All Network Members

3.2 Surveillance and verification tools

The lead for this work stream activity, as it relates to the Network, has changed from B. Gordon (WHO) to J. Mercer.

Once available, attendees requested that additional information on AquaTest, including validation and timelines, be provided by F. Properzi (WHO). If specific guidance was provided, Network Members also indicated that they would be willing to consider piloting the use of AquaTest in small communities within their regional/country context.

Lead:

J. Mercer

Next Steps:

- Continue to share experiences with currently available tests and associated research – All Network Members
- Assessment of needs in sampling and testing (not limited by parameter) - Led by F. Properzi and participated in by all Network Members. J. Mercer to assist F. Properzi in liaising with the Network.
- Based on assessment of needs, identification of additional priorities for review and possible action - All Network Members

Deadline:

August 2008

3.3 Training tools

It was agreed that, while sharing information and best practices on training was useful, this work stream activity can be moved forward in order to build capacity with communities and training institutions. Although it was deemed appropriate to move forward with building capacity of training institutions, additional information was first needed with respect to training at a community-level.

Lead:

M. Campos with support from J. Graham

Next Steps:

- Assess needs of trainers - Working group with support from All Network Members
- Facilitate the networking of training institutions - WHO (TBD)

Deadline:

October 2008 for the assessment of needs of trainers.

3.4 Guidance on public reporting and risk communication

The terms of reference for the development of guidance on public reporting and risk communication had been posted in the virtual forum in advance of the meeting for review and were reviewed and discussed in Edinburgh. Attendees indicated that the guidance needs to also consider how to respond in emergency situations. It was emphasized that boil water advisories should be time-limited and only be used in extreme situations.

Lead:

Funded by Health Canada, the WHO lead for this work stream activity is B. Gordon and the Network lead is D. Poulin.

Next Steps:

- Modify terms of reference as per direction provided - B. Gordon with assistance from J. Mercer (done)
- Put in place contract to:
 - Establish context by drawing on direction provided in Kelowna, available literature and studies;
 - Develop guidance on best practice to communicate water, sanitation and health issues to individuals, community leads and community groups and service systems; and
 - Develop guidance document on how best to design and implement risk communication strategies - B. Gordon
- Review and validate above products – Working Group
- Validation of final products – All Members

Deadlines:

The contract is to be put in place by April 2008. After the contract is signed, it will take approximately 11 months to complete the work.

After the products are finalized, it was recommended that WHO then reviews the *Guidelines for Drinking-water quality* accordingly.

3.5 Source water protection

Although source water protection was not initially a discrete agenda item, it was added to the meeting's graffiti board as an important element to be taken into consideration.

Lead:

J. Mercer and O. Schmoll

Next Steps:

- Prepare and review a chapter in and provide case studies for a surface water monograph from a small community water supply perspective - J. Mercer and O. Schmoll to lead with support from S.G. Mahmud, J. Graham, and L. Laraki

- Publication of the above - WHO and IWA

Deadline:

May 2008

3.6 Data and information requirements

Although not explicitly discussed at the meeting in Edinburgh, Health Canada has funded WHO to develop internationally accepted best management practices for data and information requirements for implementing and assessing drinking water programs. Dan Deere and Annette Davidson, (Water Futures, Australia) have been engaged by WHO on the development of these best management practices.

4. Advocate for improvements to the management of small community water supplies at all levels

Network members emphasized that political advocacy is a core need and that additional work needs to be undertaken, by the Network and WHO. Core components of advocacy were moral persuasion (i.e. human right), political pressure (e.g. customer/public awareness) and economics (e.g. cost/benefit).

Lead:

R. Bos

Next steps:

- Once finalized, use the Framework for the Management of Small Community Water Supplies (item g) to advocate for improvements in country and regional level policies and programs (e.g. web-site, one to two pager, education and training) - WHO and All Members
- Develop advocacy tool based on economic analysis detailed above (item e) - Consortium
- Review and validate advocacy tool – Health Canada, All Network Members and WHO
- Publish advocacy tool - WHO
- Consider seeking formal support from Member States - Network members and WHO

Deadline:

The deadline for developing the advocacy tool is the end of March 2008.

General Comments

Feedback on the meeting was positive, with a recommendation that there be additional time for general discussion at the next meeting and less country-level/organizational level presentations. Work stream activity sessions were given high ratings.

Overall the meeting agreed that the Network needs to focus on incremental improvements and not be slowed by always aiming for perfection.

ANNEX 1: List of Participants

Fourth Meeting for the Small Community Water Supply Management Network Edinburgh, UK, 8-11 October 2007

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