

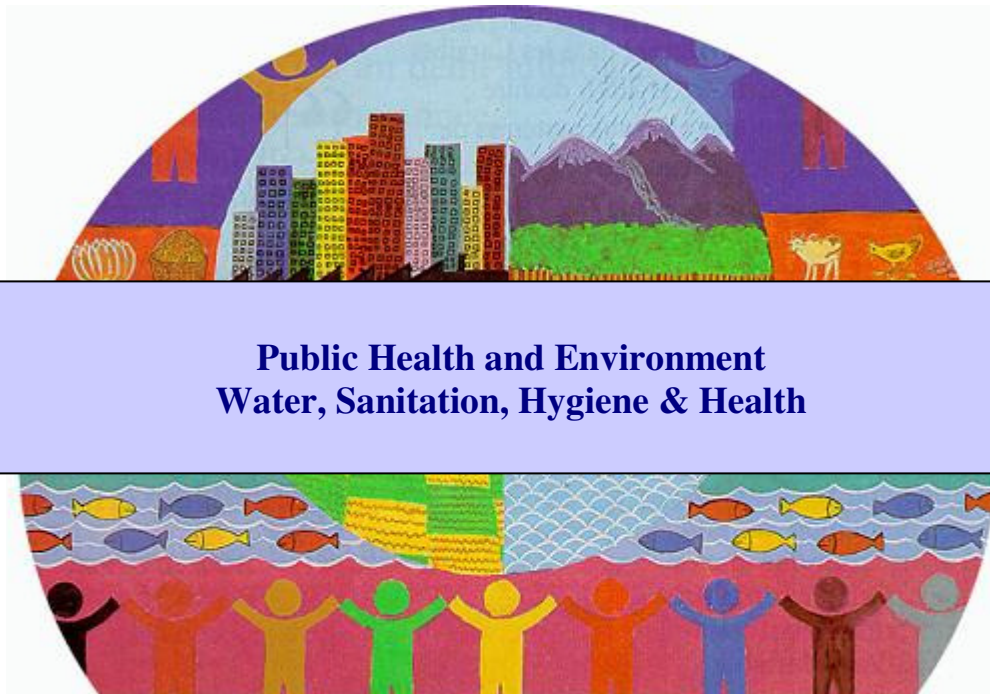


**World Health  
Organization**

**Report of the  
International Small Community Water Supply  
Management Network**

**Strategic Planning Meeting**

**Geneva, Switzerland  
11-13 January 2010**



**Public Health and Environment  
Water, Sanitation, Hygiene & Health**





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## **Introduction**

A strategic planning meeting on Small Community Water Supply Management was held at the headquarters of the World Health Organization (WHO) in Geneva, Switzerland, on 11, 12, and 13 of January 2010. This meeting was organized under the aegis of the International Network on Small Community Water Supply Management (SCWSM).

This was not a regular meeting of Network members, where progress in the agreed programme of work and planning of new activities is normally addressed in detail. Rather, this meeting aimed to consider the management of small community water supplies in a strategic framework, responding to the question where we (i.e. the community of professionals with an interest in small community water supplies) want to be in this area of work five years from now, and how we can optionally achieve the goals we set ourselves.

The meeting was attended by 14 participants who were selected from the SCWSM Network on the basis of agreed criteria which included expertise, experience and geographical distribution. In addition four Secretariat members were in attendance. The meeting was chaired by David Cunliffe, Australia. Jennifer Mercer and Sinead Tuite, WHO-HC Agreement, served as rapporteurs. The final report write-up was completed by Jennifer Mercer.

## 1. Background

In 2005, members of the WHO Drinking-water Quality Committee and other drinking-water experts raised concerns about the need to improve the management of small community water supplies. Their concerns were in keeping with the data presented by the WHO/UNICEF Joint Monitoring Programme (JMP) on Water Supply and Sanitation. At that time, the JMP reported that globally, almost 3.3 billion people lived in rural locations. These people are typically, served by small community water supplies<sup>1</sup>. These supplies are considered a “weak link” in making progress towards the Millennium Development Goal (MDG) drinking-water target and they require further attention.

The MDG drinking-water and sanitation target (7c) is formulated as: halving, by 2015, the proportion of people without sustainable access to safe drinking-water and basic sanitation. There was consensus among these experts that the establishment of a network of management specialists working on small community water supplies worldwide would be an effective response to this need. This Network would serve as a forum for the sharing and exchange of information, knowledge and country experiences. Subsequently the International Small Community Water Supply Management Network was established, hosted by the WHO, Water, Sanitation, Hygiene and Health Unit. The Network provides a platform for:

- the identification of common management and technical issues and problems in relation to small community water supplies, and
- the development of workable solutions in a geographical, socio-economic and cultural context.

Membership is open to governments, non-government organizations, academic institutions and members of civil society at large on the condition that they subscribe to the Network's purpose and objectives. Members should be willing to commit themselves to working towards achieving the objectives of the Network, and these include:

- developing internationally-recognized evidence-based guidance;
- developing and facilitating access to tools to implement this guidance; and
- building the evidence base to facilitate advocacy for political support.

Since its inception in 2005, the SCWSM Network has grown to include more than 150 members from approximately 40 countries. Five Network meetings have been held in Iceland, Australia, Canada, Scotland and Uganda, giving participants the opportunity to share information on national, regional and international approaches, good practices and challenges. The next Network meeting is planned to be held in Malaysia in November 2010.

The Network workplan has advanced on a number of key activities, including:

- the launch of a virtual forum to post and share information and documents;
- targeted dissemination of Network information and outputs, raising the profile of the challenges facing small community water supplies, at water sector events;

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<sup>1</sup> Urban and rural water supply coverage, 2006

- the collation of training and guidance materials in key areas of interest to Network members;
- the development of guidance on social cost-benefit analysis for small community water supply improvements;
- the development of a detailed outline and associated content for a Manual on Water Safety Plans for small supplies;
- the development of guidance on communicating with respect to safe drinking-water;
- the promotion and sharing of research findings with respect to sustainable improvements to drinking-water supply management and technology use;
- the development of a promotional fact sheet to be used by members to increase awareness of the challenges facing small community water supplies;
- the development of a small community water supply component in the standardized terms/definitions contained in the WHO's Health and Environment Lexicon.

### **Objectives of the meeting**

- i. Review the progress on SCWSN activities as a follow up to the November 2008 meeting in Uganda.
- ii. Determine next steps and priorities for Network activities.
- iii. Discuss and determine strategic directions and operations for the SCWSN to ensure effective implementation.

The agreed agenda for the meeting is presented in appendix 1.

## **2. Proceedings**

### **2.1 Introduction to and its operations**

Objective: *Ensure meeting participants have a common understanding of the context of the drinking-water small supplies worldwide, as well as the history and activities to date of the Network in addressing the challenges.*

Robert Bos, Coordinator, Water, Sanitation, Hygiene and Health, WHO, welcomed the meeting participants and spoke about the importance of improving the management of small community water supplies. He touched on the associated challenges such as limited funding and higher per capita costs, difficulties with recruiting and training operators, and frequent lack of clarity in roles and responsibilities. Small community water supply management continued to be of strategic importance in WHO's larger work plan in the area of water, sanitation and hygiene. In fact, the subject of small community water supplies was addressed traditionally in a separate volume of the WHO Drinking-water Quality Guidelines. It was noted, however, that the fact that this particular volume had not been updated for an extended period of time reflects the subject had lacked adequate focus in the recent past.

Robert suggested that potential synergies with other Networks supported by WHO should be explored, such as the Household Water Treatment and Safe Storage (HWTS) Network and the International Network of Drinking-water Regulators (RegNet). The goal of the HWTS network

is to contribute to a significant reduction in waterborne disease, especially among vulnerable populations, by promoting household water treatment and safe storage as a key component of water, sanitation and hygiene programmes. Given that household water treatment and safe storage is frequently used in small community water supplies, there are opportunities for sharing of lessons learned between the two networks and for the identification of ways in which the SCWSM can support and build upon the work of the HWTS network, and vice versa. RegNet aims to promote best practices in the legislation and regulation of a variety of water quality and water management issues. Interactions between these two Networks could focus on developing guidance on how best to regulate small community water supplies, addressing with a regulatory context challenges such as limited-resources, both financial and human resource capacity.

He asked participants to keep in mind WHO's strategic advantages:

- Convening power supported by a global reputation;
- Constitution-based links with ministries of health; and
- Presence in country through 130 country offices.

From these comparative advantages WHO was able to take a leadership role in advocating for change and facilitating information exchange.

On the issue of water quality as one of the two flagship areas of activity – the other one being the area of monitoring – he indicated that the adoption of the so-called Stockholm framework for drinking-water quality management, for the safe use of waste water, excreta and greywater in agriculture and agriculture, and for the management for safe recreational waters provided the basis for a further harmonization and consolidation. The WHO-hosted Networks would continue to support such a consolidated water quality programme.

Sinead Tuite, Technical Officer and Manager of the Network, reviewed the functions and objectives of the Network and, under each of those objectives, activities under way and completed. She highlighted WHO's multi-faceted role in the Network, as both the Secretariat and as a participant and/or lead in activities undertaken by the Network. In terms of Network composition, currently at 150 Network members, it was clear that there some 30-40 members were actively involved at a higher than average level. She suggested that the remaining members might represent an untapped potential in the Network's efforts to meet its objectives, and that this was an issue worth pursuing further.

In the ensuing discussion, John Cooper raised the need to discuss and reach agreement on the Network's role vis-à-vis field work. Robert Bos emphasized that WHO could not in and of itself, fulfill all Network members' expectations and that Network members needed to assume an active role in achieving the Network's objectives.

## **2.2 Development of internationally recognized guidance**

*Objective: Determine how the Network will be involved in the revisions of the Guidelines for Drinking-water Quality*

Bruce Gordon, Technical Officer, WHO, provided background information on the WHO Guidelines for Drinking-water Quality and the rolling revision mechanism designed to ensure that the Guidelines remain up to date, reflect the latest advances in science and promote our understanding of the protection of public health as it relates to drinking water. Volume 1 describes a Framework for Drinking-water Safety and discusses the roles and responsibilities of different stakeholders, including the complementary roles of national regulators, suppliers, communities and independent “surveillance” agencies. The Drinking-water Quality Committee is currently revising Volume 1 of the Guidelines, updating some technical aspects and focusing on improving readability and uptake. This will be the 4<sup>th</sup> Edition of the Guidelines, Volume 1, and it is expected to be released later this year. Content will include household treatment and safe storage.

Volume 3, Surveillance and control of community supplies, describes the methods used in the surveillance of drinking-water quality in the light of the special problems of drinking-water supplies to small communities. This document was last revised in 1997 and, while still in use, needed to be updated. It was originally written for all audiences and therefore contains a mix of both policy and field level content. Bruce Gordon reported that Jan-Willem Rosenboom, a member of the WHO Drinking-water Quality Committee with expertise in small community water supply management had taken the lead in reviewing and updating Volume 3. Jan-Willem had already completed a high order review of the current contents, which could be used to shape the division between guidance for managers and planners (policy) and guidance for those who work directly with communities (field).

In the ensuing discussion, a water supply surveillance field guide had already been developed. Jan-Willem Rosenboom was rewriting it to focus the content to the field level. Text best suited for use by managers and planners would be identified and set aside.

David Cunliffe described his dual role as a member of the WHO Drinking-water Quality Committee and the International Small Community Water Supply Management Network. In this regard, together with WHO staff re-ensured that the Network’s perspectives are reflected in discussions. The same was done for the WHO Drinking-water Quality Committee at Network meetings. The Drinking-water Quality Committee, supported by Network members, had agreed that there was a need to mainstream guidance on small community water supplies in a format which:

- still makes it possible to identify it as a separate issue, but
- at the same time, ensures a better integration into all other guidance, e.g. Volume 1 of the Guidelines

The integration of high level policy guidance into the 4<sup>th</sup> Edition of Volume 1 of the Guidelines will emphasize the importance of small community water supplies, mitigating their marginalization in the current format of the third edition of the Guidelines.

The proposed nature and outcomes of the revised version of the current volume 3 was presented.

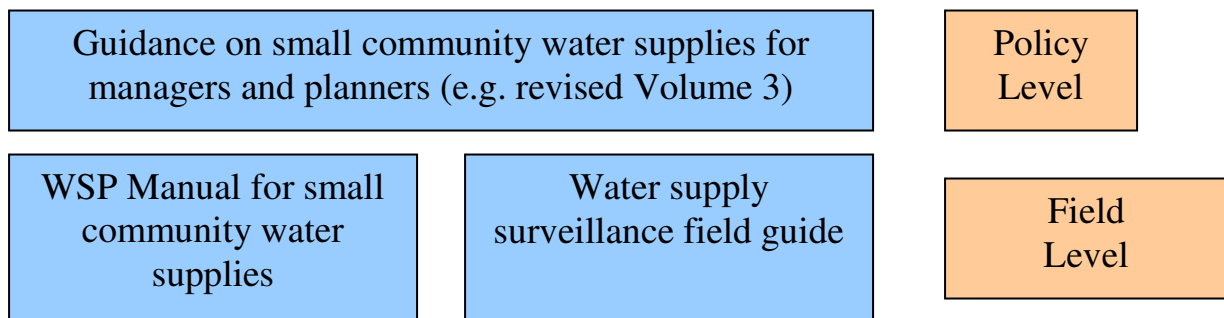
This would be a guidance document rather than a more narrowly defined guidelines document of a more prescriptive nature. It would have a clearly defined target audience consisting of

midlevel planners and managers in national government agencies and in agencies at lower levels of government (e.g. provinces and districts) with responsibility for supporting small communities in the management of their water supplies. Such support includes transfer of technical knowledge and provision of relevant expertise.

The guidance document will provide information on the creation of a policy framework, the establishment of institutional arrangements and the promotion of approaches such as water safety planning. It will be updated in terms of information and technology references. The detailed technical advice and guidance for the implementation of actions at the community level contained in the current volume 3, such as the sanitary survey examples, will be deleted from the new version, and moved to supporting documents.

Among the supporting documents will be a field guide on surveillance and a manual for Water Safety Plans for small community water supplies.

Together with guidance and supporting documents, it will be presented as a complementary package or “toolkit” of information on small supplies management, as graphically represented below:



In the ensuing discussions, participants recommended that each of the guidance and supporting tools be kept short and focused. They emphasized the need to ensure guidance can be achieved with the limited resources available to small community water supplies and that they be practical. Guidance should also be given to issues of cost-effectiveness for cases where various options present themselves. Robert Bos cautioned participants to ensure that guidance is supported by solid evidence and that it is validated.

Writing any guidance document by committee members is an unwieldy and therefore undesirable process. It was agreed that engaging paid expert(s) to do the ‘heavy lifting’ is the best way forward was to contract the preparation of draft documents out to experts, with clear terms of Reference, including a timelines. This will require significant funding and sources of funding would need to be identified.

**Summary of Recommendations:**

The meeting recommended that the Network would support:

- 1) the integration of high level policy guidance on small community water supplies into 4<sup>th</sup> Edition of Volume 1 of the Guidelines; and
- 2) the development of a package of documents on small community water supplies, targeted at planners and managers at different levels of government as a substitute for the current Volume 3.

In order to implement these recommendations, it was agreed to establish a working group for the integration of high level policy guidance into 4<sup>th</sup> Edition of Volume 1, led by David Cunliffe, and composed of Oliver Schmoll, Han Heijnen, Jan-Willem Rosenboom, Jennifer Mercer and Bruce Gordon

Similarly, it was agreed to establish a working group for the development of a package of guidance documents on small community water supplies, led by Jan-Willem Rosenboom and composed of Oliver Schmoll, Jennifer Mercer, Jamie Bartram, and Rick Gelting

Based on these recommendations and using the agreed working group mechanisms, the next steps formed were:

Integration of high level policy guidance into 4<sup>th</sup> Edition of Volume 1 (David Cunliffe)

- Proposed text to be reviewed in light of recent discussion, and revised accordingly

Guidance documents on small community water supplies (Jan-Williem Rosenboom)

- Review of 'road map' document that illustrates how the above mentioned guidance documents fit together in a package for a given audience, as outlined in the above
- Identify content for guidance on small community water supplies, e.g.:
  - Importance of small community water supplies;
  - Framework for safe drinking-water - in other words, key areas that need to be included in regulations, policies and programmes;
  - Socioeconomic considerations and how they impact the policies, programmes and regulation associated with small community water supplies;
  - How to best design and implement regulations to meet the needs of small community water supplies;
  - How to apply the WSP approach, including incremental improvement as a management principle, with special attention to risk assessments, how to set health-based targets, operational and verification monitoring, surveillance, training, education, institutional and organizational structure that provide support, and other capacity building mechanisms, and use of communication to address risks to public health.
- Based on Jan-Willem Rosenboom's review of Volume 3, identify content from the current Volume 3 and from the water supply surveillance field guide to be incorporated into the updated policy-level guidance on small community water supplies and in the 4<sup>th</sup> edition of Volume 1 and also to identify gaps that need to be filled

- Formulate a proposal for the structure and content of the package of guidance documents on small community water supplies for the SCWSM Network to review, provide input and identify contributors
- Formulate a work plan for content development, including how to incorporate content from Volume 3, the water supply surveillance field guide, and content/text already developed by the Network.
- Contract the preparation and coordination of inputs and directions on content provided by the Network and the WHO Drinking-Water Quality Committee.

## 2.3 Evidence Base

Objective: *Determine priority activities for the Network in the area of strengthening the evidence base for the coming five years*

John Cooper, Health Canada, made a presentation on knowledge development and transfer in relation to the management of small community water supplies. Priority areas that had been previously identified by the Network included socioeconomics and capacity, source water protection, infrastructure and treatment, and health risks (chemical and microbial). Research activities had been undertaken, focussing socioeconomic aspects (i.e. documenting successes and challenges of small community water supplies in differing economic situations) and approaches and technologies for remote-monitoring. A gap area that remained and should be addressed in the coming period was the strengthening of research on and documenting and promoting the Water Safety Plan approach in small communities.

The Canadian Network for Public Health Intelligence (CNPHI), also presented by John Cooper, was a system that featured public health alerts to facilitate information dissemination and to track outbreaks/illnesses/clusters. It also included a water advisory section, wherein advisories are recorded. The data collected to date indicated that most boil water advisories in Canada had been in relation to small water systems. The system could be made available to interested authorities in other countries, as it functioned as a web-based tool, captured real-time drinking-water surveillance data and facilitated outbreak management.

CNPHI was identified as a possible opportunity for the improvement of the collection and analysis of data sets, not only at a national but also at a global level. For example, there might be potential benefits associated with the use of CNPHI for the WHO/UNICEF Joint Monitoring Programme (JMP) that tracks progress against the drinking-water and sanitation target of Millennium Development Goal 7, and the Global Annual Assessment of Sanitation and Drinking-Water (GLAAS) that puts the JMP data in a socioeconomic context. It was suggested that an article on CNPHI for submission to, for example, the WHO Bulletin would be a substantial contribution to the global promotion of this system and tool.

Corinne Wallace, United Nations University, International Network on Water, Environment and Health (UNU-INWEH), presented the Water-Health Nexus. This initiative, for which UNU-INWEH was seeking support, aimed at the development of a Safe Water Provision Knowledgebase. It was designed to help communities identify appropriate processes and adapt technologies to ensure the safety of their drinking-water. It incorporated technology and process

compendia into an on-line database, including pros and cons and suggested context for each. Other work of interest to the Network undertaken by UNU-INWEH is research for the informed development of educational materials for communities through the use of focus groups, community mapping and interviews. Vulnerability mapping was under way, designed to examine the impacts of environmental change on water-related infectious diseases. Focus of this work was on the development of tools. Objectives included describing and mapping the current global burden of selected water-related infectious diseases. Tool development included a globally applicable and accessible suite of interactive mapping tools for water-related infectious diseases in the context of environmental change

### **Summary of Recommendations:**

There was a clear understanding that the Network itself should not undertake research but that it should focus on identifying research needs, setting and updating the research agenda, and on promoting the need for strengthened health-based evidence that can support Network activities, including advocacy and the development of guidance materials. Yet it was also recognized that individual Network members were actively involved in research and that these experiences and the results of their efforts were potentially important inputs into the Network's programme.

It was recommended that research fostered by the Network to date be used as content for the guidance on small community water supplies, e.g. the development of remote monitoring system led by Health Canada and the studies on limitations and opportunities associated with technologies led by Dalhousie University.

Other related activities, such as gathering and sharing success stories and case studies on WSP implementation in the context of small community water supplies (e.g. lessons learned and benefits), are discussed under section 3.5 of this report.

Based on the information provided by John Cooper and Corinne Wallace and in line with the recommendation of the meeting, the following next steps were agreed, with responsible person in brackets:

- Facilitate liaison between CNPHI, JMP and GLAAS (Jennifer Mercer)
- UNU-INWEH to identify ways in which the Network can technically support its current activities and to keep the Network informed of progress (Corinne Wallace)
- Ensure outcomes of research supported to date are reflected in guidance on small community water supplies (Jennifer Mercer)

### **2.4 Risk Assessment Tool**

*Objective:* To gain Network input and endorsement of the proposal for the development of a risk assessment tool, obtain feedback on elements to be included in the tool, and identify volunteer experts to serve as members of the project committee

David Cunliffe, South Australian Department of Health Services, and John Cooper, Health Canada, presented a proposal to develop a generic risk assessment tool for small supplies. Building on the risk assessment tool developed by the Australian Government, the purpose of the

proposal presented in this meeting was to develop a generic risk assessment tool specific to small community water supplies which would support the implementation of the Water Safety Plan (WSP) approach in Canada and internationally. The risk assessment tool would be intended to help identify hazards, assess and prioritize risks and provide management advice (preventative, operational, or responsive) for use within a WSP. The tool formats under consideration were paper based, CD and internet. Ideally, the tool would be modular (targeted questions), adaptable (for jurisdiction-specific guidance) and easily updated. The Australian authorities had given permission for the tool to be developed based on the existing two Australian Community Water Planner tools.

Phase 1 of the proposed project would consist of developing a risk database: identifying the common characteristics, hazards, associated risks and risk management strategies specific to small community water systems in generic international contexts. Phase 2 would consist of developing the generic risk assessment tool, including field guides and training materials. Phase 3 would consist of piloting the tool and providing revisions for the final version of the tool.

In the ensuing discussion, meeting participants responded positively to the proposed development of a generic risk assessment tool. With respect to format, recommendations from participants included ensuring that the tool be flexible in structure and composition so that it may be used directly and adapted to specific local contexts. Suggestions to maximize flexibility and, as a result, ensure broad applicability of the tool included:

- A modular approach;
- Modifiable scoring system;
- Adaptability to national guidelines;
- Open-source electronic tool.

It was suggested that the best way to proceed would be using a simple structure, ensuring maximum ease to use. It was also recommended that, wherever possible, a paper-based version of the tools be developed.

With respect to audience, participants identified as main users of the tool third-party organizations with technical expertise and with responsibilities to assist communities in managing their drinking-water (e.g. local government, sub-national organizations). The tool should be designed, therefore with this audience in mind. Only a few cases, those responsible at the community level for the supply of drinking water would use the tool (i.e. where there is sufficient expertise at a community-level). Although the tool would be designed for a technical audience, it was strongly recommended that a simple companion document on the material be developed for a community-level audience. Literacy could be an issue and should be taken into consideration in its development. An example of these suggested companion material for a non-technical audience was a poster depicting a scenario where there is no filtration or chlorination, identifying graphically, the greatest risk(s) and presenting simple strategies to address those risks.

With respect to content, ranking of risks was identified as an issue that would be a challenge for the developers to address. It was suggested that the risk prioritization tool in the WHO/IWA

WSP Manual for organized water supplies be used as the basis for a procedure to assist in risk prioritization, and it was suggested that the content of the tool be reviewed against the WSP approach. Sanitary inspection tools, such as those presented in the appendix of Volume 3 of the Guidelines were identified as a possible source of risk assessment content, but this information might need updating. It was agreed that Network members would identify gaps in the existing tool, paying special attention to the needs, capacities and capabilities in developing countries. Specific content suggested included:

- Rainwater harvesting and above ground storage
- Tsunamis as a hazardous event
- Risks associated with cold weather/ice
- Desalination

It was also strongly suggested that the tool be applicable and appropriate to multiple types of water supplies, including trucked water and cisterns household wells and standpipes. Terminology should be used with care, e.g. “catchments” vs. watersheds and “bores” vs. “wells”. Suggestions to address concerns regarding terminology include using generic terms or allowing for adaptation for local use. The possible role of the web-based WHO Lexicon on water sanitation and health to ensure consistency was emphasized, as was the importance of developing accompanying training materials.

#### **Summary of Recommendations:**

The group concluded that the proposal to develop a generic risk assessment tool for small community water supplies was valid, timely and in line with the Network’s objectives. It was recommended that the Network support the development of this generic risk assessment tool in the following ways:

- 1) Development of a risk database: identifying the common characteristics, hazards, associated risks and risk management strategies specific to small community water systems in generic international contexts;
- 2) Development of a generic risk assessment tool, including field guides and training materials;
- 3) Piloting of the tool and its modification based on the outcome of the pilots prior to finalization.

Phase 1 is to be completed by the end of June 2010. Therefore, Network members are urged to become involved with great immediacy.

It was agreed to establish the following working groups:

Phase 1 (content) – Led by John Cooper, Health Canada, and composed of Christopher Cox, David Cunliffe, Rick Gelting, Laila Laraki, Collette Robertson-Keelie, Aaron Kabirizi, Marc Overmars, Oliver Schmoll, and Corinne Wallace.

Phases 2 & 3 (logic structure & piloting) - Led by Bruce Gordon, WHO, pending approval of funding and composed of John Cooper and David Cunliffe. Other working group participants are to be identified at a later date.

Based on these discussion, conclusions and recommendations, it was agreed that the working groups would be responsible for the following next steps:

#### Phase 1 (John Cooper)

- Network members to share tools they use and/or have developed that might address some gaps
- Working Group to provide, over the next two months (March, April 2010), information on their contexts (e.g. types of systems), hazards, risks, gaps in the Australian tool for global context, scoring systems and management advice from their country perspectives
- Consultant will review inputs provided and further identify gaps based on international needs
- Consultant will develop risk database based on the above, specifically hazards, hazardous events, risks and risk management measures
- Select Network members to review content
- Consultant will revise content based on the above review

#### Phase 2 and 3 (Bruce Gordon)

- WHO to work with Network members in order to identify funding to support Phases 2 and 3
- Network members to review and develop a logical framework and to pilot

It was pointed out that involvement of Network Members in the development of the risk assessment did not imply they would be the same people to pilot the tool and in fact the opposite was desirable.

## **2.5 Water Safety Plans**

*Objective: Provide feedback and approval for current and proposed activities under way with respect to WSP promotion, implementation and tools with a view to supporting implementation in the context of small community water supplies*

Jennifer de France, Technical Officer, WHO, provided an update on WSP activities currently supported by WHO. Information on and resources to assist in the implementation of the WSP approach was collected by WHO and IWA for inclusion in an on-line library, the WSPortal. Only those registered to the site will have access to it and Network members would be asked to contribute to WSPortal.

A WSP case study template had been developed and was currently applied by members of the International Network for Drinking-water Regulation. The purpose of the case studies was to identify the challenges, lessons learned and benefits associated with applying the WSP approach.

A WSP quality assurance tool was currently developed for large, organized water utilities. This tool was unlikely to be a good fit for small community water supplies and therefore the Network might want to consider supporting the development of a complimentary tool for small community water supplies at a later date.

WHO released the outcome of a study on the resilience of drinking-water and sanitation systems and services in the face of climate change, using climate change scenarios for 2020 and 2030 (Vision 2030). The conclusions and recommendations emerging from this study focus on how resilience may be optimized. One conclusion of the study was that the WSP approach can assist in optimizing resilience. Jennifer referred participants to an on-line version of this document and hard copies were made available to participants. WHO plans on releasing an accompanying CD ROM on these documents early in 2010<sup>2</sup>. Dr Jamie Bartram added that further research is under way on this topic, supported by the University of North Carolina and UNICEF.

The World Water Day 2010 theme had been selected as communication on water quality challenges and opportunities. The fact sheet that was developed by the Network, with special thanks to Robyn Grey-Gardner, is part of the information kit that WHO and partners will be distributing for use at national celebrations on 22 March 2010.

A number of forth coming WSP related events in 2010 were mentioned:

- The 5<sup>th</sup> Caribbean Environmental Forum, Montego Bay, Jamaica, June 21-25, hosted by the Caribbean Environmental Health Institute (CEHI) will feature technical sessions on WSP development in the Caribbean. The United States Centers for Disease Control and Prevention (CDC) will be the principal sponsor and collaborator for these sessions;
- Singapore International Water Week, June 28-July 2, where the cost-benefit guidance documents developed through the Network will be launched;
- Stockholm World Water Week, September 5-9, where a seminar has been proposed to discuss how WSPs can be integrated into overall management. A one-day a workshop on Water Quality and Health Care also focus on WSP-work;
- IWA World Water Congress, Montreal, September 19-24. Of note, Health Canada has offered to host a meeting of the International Network of Drinking-water Regulators back-to-back with this congress;
- WHO/IWA Water Safety Conference, Malaysia, November 4-6, where the WSP Manual for Small Community Water Supplies is planned to be launched.

The activities under way in each of WHO Regional Offices with respect to the WSP approach were described in some detail. Jennifer de France concluded her presentation by identifying what would be needed to advocate for the adoption of the WSP approach, specifically, documenting and communication benefits and collaborating with a range of stakeholders (beyond the usual suspects, in other words – words preaching to the converted).

In the ensuing discussion, it was recommended that the Network co-locate its next meeting with the WHO/IWA Water Safety Conference in Malaysia. Jennifer Mercer was asked to develop a

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<sup>2</sup> The CD ROM has meanwhile been released and can be obtained from Chee Keong Chew, Technical Officer, WHO/WSH, [chewc@who.int](mailto:chewc@who.int)

concept note in this regard for review and approval by WHO's Regional Office for the Western Pacific. If this was to materialize then the Network meeting could be held immediately after the Global WSP meeting rather than before given that several Network members may attend the University of North Carolina's Water and Public Health Conference at the end of October.

Sinead Tuite, Technical Officer and Network manager, provided an update on the WSP Manual for Small Community Water Supplies and guided participants through a review of the document. As detailed above, the plan was to release the Manual in Malaysia at the WHO/IWA Water Safety Conference. Han Heijnen had been engaged to edit the Manual and he would do so with the guidance and direction provided by Network members.

The draft Manual was discussed in detail. Overall, it was agreed that it needed to be made more accessible to its intended audience, technical experts working in and providing assistance to small communities.

In its current draft version, the Manual contained a mix of policy and field language. Text should be re-written for its intended audience. Plain language needed to be used throughout the document, both in presentation and in content, and jargon should be avoided. For example, the section on health-based targets should be either removed or revised. The sections at the beginning (e.g. detailed information on what is a Water Safety Plan, challenges associated with small community water supplies) should be reduced to a one page introduction. The suggested content for this introduction included a map or flowchart of the water safety plan process to be followed and the purpose and target audience of the Manual. In this regard, the charts on pages 15 and 16 were identified as a useful summary of process.

Participants found some sections to be very complicated. For example, it was suggested that the description and content on page 47 be simplified, limited to two main activities – to prevent or to treat.

It was noted that with 88 pages the Manual was far too long, and it was recommended that this be reduced. Examples of items that can be removed included advocacy text at the beginning of the Manual. There were suggestions to move advocacy text to separate documents. Participants found the appendices difficult to use and had to keep flipping from the front to the back of the Manual. It was recommended that the contents of the appendices be integrated into the main body of the text. Along the same vein, participants indicated that there were too many pages on hazards, i.e. pp.29-53. It should be recognized that the Manual cannot comprehensively capture all hazards and risks and should only present examples to assist the user in enhancing her/his understanding as a basis for optimally informed discussion making. Specific hazards and risks should be captured elsewhere.

It was noted, however, that care should be taken to not lose content. A suggested path forward was to handle the Manual as a package, with additional resources available for support. This way, no one piece would be overwhelming or intimidating in length or format. Suggested additional resources included documents and materials to leave behind with the community.

The total number of tasks the user was to undertake is ten and this may appear daunting. It was suggested that this be reduced to five high level tasks, with combined and simplified activities underneath. High level tasks that were suggested included:

1. Engage the community and assemble the team
2. Describe the community water supply
3. Identify hazards and assess risk and opportunities
4. Develop and implement step-wise improvement plan (including supporting programmes and SOPs) for risk management and for effective monitoring
5. Verify, review and update WSP, as necessary

Rick Gelting mentioned that he is developing a facilitator's guide for a similar piece, which he will share with the Network.

Ms María Estela Calderon, Péru, presented the proposed content and methods for training community members on how to best manage small community water supplies, building on a variety of methods that are already used around the world. She emphasized the need to provide appropriate training to strengthen operators' and managers' ability to best manage small community water supplies. The content was built around the WSP approach with the aim of strengthening the community's capacity to acquire community commitment to participate in a WSP approach and design and implement a WSP.

The process should start by addressing the need for a multi-disciplinary team of WSP trainers. In addition to the technical expertise that was normally engaged, someone who has expertise in training methods for small communities should also be included. These individuals could be found within government, non-governmental organizations, universities and other institutions.

In its reaction to this presentation, the meeting noted that the outcomes of the work of María Estela Calderon and Marco Campos should be included in the Guidance on Small Community Water Supply Management.

Jamie Bartram, University of North Carolina, presented a distance-learning platform on WSPs. The intended target audience consisted of those working or wishing to work on WSPs. After successful completion of the course, a certificate would be given. There would be no academic credits associated with completing the course as its aim is to be part of continuing professional education. Students needed to complete short on-line tests and participate in course work and team work in order to pass. Students would have to work through a linear series of modules and they would only be able to continue to the next module once they had successfully completed the previous module.

Students would have access to learning materials, either on-line or through CD-ROMs and an interactive platform. As distance-learning can be difficult if students only have access to slide presentations, this distance-learning programme would have voiced-over slide presentations. The core resource material on which the course would be based was the WHO/IWA Manual for WSP training.

It was recognized that diversity in students would enrich the course, particularly in the team-work and on-line discussions. It was also recognized, however, that different backgrounds may result in potential conflicts (e.g. some cultures are more forthright, whereas others are not as they do not want to offend).

Work was under way to develop the content for the course, 12 modules to be delivered over 12 to 14 weeks. The pilot would begin in April, followed by feedback two months later. The official launch of the learning platform was targeted to be November 2010 at the WHO/IWA Water Safety Conference in Malaysia. A discussion space would also be made available for those who wish to stay in contact with peers after taking the course, enabling them to share lessons learned and discuss challenges and successes.

Additional courses would be developed thereafter, e.g. how to develop guidelines and standards for water safety. The intent was to make the courses available in other languages.

In the discussion following this presentation on distance-learning, interest was expressed by participants in the course and, in particular, the options to include issues related to small community water supplies in the content or, alternatively, the possible development of a separate course on small community water supplies.

Maria Gunnarsdóttir presented the implementation of case studies in small community water supplies using the WSP Manual. The purpose of the case studies was to share with others the lessons learned and best practices associated with applying the WSP approach in small community supplies. In this regard, case studies would be evaluated, the results compiled and published. The approach presented by María was to prepare and identify potential sites for case studies, implement the WSP approach and then undertake an evaluation of both the process and the outcomes.

The following criteria were proposed to guide selection of case study communities:

- Geographical distribution: at least two case studies in each of the six WHO regions;
- Functional, real-life situations: case study communities should have a working water supply, irrespective of quantity or quality; and
- Agreed support: the case study should be supported by either a sponsoring organization or a government.

The timeline proposed was 2010 to 2012, with implementation of the WSP approach occurring in 2011. The suggested approach was to ensure that all case studies consist of a baseline assessment, awareness and training, and development and implementation of a WSP using the Manual. María recommended that case study evaluations include verification and audit of the processes followed and the resultant WSP, as well as an evaluation of lessons learned and challenges.

With respect to sharing information with the Network, María recommended that progress in the case studies be presented to the Network in 2011 and final evaluation results in 2012.

The issue of WSP case studies focusing on small community water supplies led to suggestion that WSP case studies be developed in areas where there had already been some momentum, as it would be easier to identify and promote the WSP process in settings where the work did not have to start from scratch. Case studies should not exclude non-governmental organizations. It was pointed out that the timeline for undertaking the case studies was overly ambitious and consideration should be given to allocating two years or more for implementation. There should also be recognition that not all case studies will start and finish at same time and may have different needs, so they may not operate in parallel.

Before proceeding with case studies, a structure and framework is needed to be provided, in the form of terms of reference for implementing and evaluating case studies. Providing selection criteria, a framework of minimum requirements for implementation, questions to guide the implementation and a definition of deliverables for the evaluation would allow for comparisons over time and in different geographical contexts. Care would need to be taken to ensure the terms of reference are appropriate for both resourced and non-resourced case studies.

There might be some funds allocated (\$1,000 per case study) to support organizations in ensuring evaluations are done correctly, accurately, and thoroughly.

There was some debate about whether or not to allow groups to self-identify and self-fund case studies. It was recommended that groups should not be excluded, as the WSP Manual is designed to be all-inclusive. However, with respect to compiling and publishing case study evaluations, it was recognized that applying the above criteria and procedures rigorously put a limit to the number of case studies that the Network and WHO could handle.

The main purpose of the case studies was to identify lessons learned, recognize challenges and promote best practice. Feedback on the WSP Manual was a secondary by-product. If the case studies suggested that the WSP Manual would need to be revised, then this would occur if/when it was decided the second edition would be prepared.

### **Summary of Recommendations:**

In light of the discussions, it was recommended that the Network would support the:

- 1) Identification of materials for inclusion in the WSPortal;
- 2) Revision and publication of the WSP Manual for Small Community Water Supplies;
- 3) Development of content and methods to support training;
- 4) Inclusion of small community water supply specific information and content in distance learning platforms under development; and,
- 5) Implementation and evaluation of WSP Case studies, once the WSP Manual is final.

Based on this review and the emerging recommendations, agreement was reached on the following next steps, with responsible person(s) in brackets:

#### WSPortal

- Network members will be asked to contribute to WSPortal and will be invited to register to have access to the site once it is public (Jennifer de France)
- Network members will be kept informed of WSP activities supported by WHO (Jennifer Mercer and Jennifer de France)

#### WSP Manual for Small Community Water Supplies

- Provide feedback for Han Heijnen for incorporation into next revision (Jennifer Mercer)
- Next version of Manual and possible companion pieces will be shared with Network members for comment (Jennifer Mercer)
- Subject to reviews and appropriate clearances, Manual to be published and formally released. Target date for completion is November 2010 (Jennifer Mercer).

#### WSP Training Content and Methods

- Provide comments on draft proposal to María Estela Calderon and Marco Campos, and experiences/products developed for WSP training in small supplies from international/national context (All Network members)
- Following feedback and finalization, the work will be validated in Péru and case studies undertaken (María Estela Calderon and Marco Campos)

#### WSP Distance-Learning

- Follow up with Jamie Bartram on possible partnering for pilots (interested organizations and Network members)

#### WSP Case Studies

- Revise work plan and approach, based on feedback received (Jennifer Mercer).

### **3. Strategic priorities and operations**

*Objective: Discuss and refine a vision for the small community water supply sector, including Network contributions and priority activities to achieve this vision, and determine accompanying implementation strategies.*

Since 1998, the programme of the WHO Water, Sanitation, Hygiene and Health (WSH) were involved from its narrow post-decade sanitary engineering focus on community water supply to a leader perspective taking into consideration a range of water issues (drinking-water, sanitation, norms, irrigation schemes, wastewater use and natural and man-made wetlands), addressing the nature and magnitude of the lines between water and health.

For this evolutionary process the long-standing programme components of WSH were maintained and, where needed, strengthened. Thus, work on the WHO Guidelines for Drinking-water Quality continued and took on a more flexible, contextualized approach which is made operational through Water Safety Plans (WSPs). The same Stockholm framework that forms the basis for the drinking-water guidelines and WSPs, with its integrated risk assessment and

incremental risk management approach, is also applied to the safe use of wastewater, excreta and grey water in agriculture and aquaculture and in the management of safe recreational waters.

Water quality and health has remained a flagship activity of the WSH unit (the other is monitoring, including the WHO/UNICEF Joint Monitoring Programme (JMP) and the Global Annual Assessment on Sanitation and Drinking-water (GLAAS) implemented on behalf of UN-WATER). The programme is heavily influenced by the Millennium Development Goal (MDG) targets, in particular of course by target 7c on access to safe drinking water and basic sanitation, but also by other MDGs and their targets: maternal and child health, major infectious diseases including malaria and the ones on education.

In this connection 2010 is a crucial year, a milestone signalling the start of the final five years toward the MDG end point 2015. It is therefore important to review activity areas under WSH's remit for progress and trends, and to formulate a vision and a strategy within a five-year time horizon that will ensure the optimal use of limited resources to achieve important objectives in the MDG context.

There are three important Networks under the WSH water quality and health programme component:

- The International Network on Small Community Water Supply Management
- The Household water Treatment and Safe Storage Network
- The International Network of Drinking-Water Quality Regulators

In addition, the WHO and the International Water Association are involved in the Operations and Maintenance Network which is located at the National Institute for Public Health in Tokyo, Japan.

These Networks are composed of stakeholders with a range of relevant disciplinary backgrounds, focus on subject areas that receive too little attention in other, mainstream fora, and serve as fertile environments for the identification and development of new talents and experts.

Within the scope and objectives of each of these Networks, WHO contends to develop a strategic plan for 2010-2015.

Network members spent an entire day discussing and refining a 2015 vision for small community water supply management. The objective of the discussion was to develop a strategy for 2010 to 2015, agreeing on priority objectives and activities within the limits of resources available. This included:

- Re-confirming the goal and objectives of the SCWSM Network;
- Determining future Network operations and membership focus and;
- Identifying priorities and specific activities for moving forward.

The discussion was facilitated by Robert Bos and Sinead Tuite.

A draft strategy document for the Network was used to guide the discussion. The outcomes of this discussion are reflected in the revised strategy document for the Network (Appendix 2).

The following is a summary of the discussions:

### **Definition of small community water supply**

Administration was discussed at length, specifically as it related to the need for many small community water supplies to 'fend for themselves'. Small community water supplies did not get the same attention as larger urban supplies and often were administered separately. Other areas proposed for inclusion in the definition were:

- The modalities by which small community water supplies should be regulated differently from other water supplies.
- The lack of awareness that potential risks to supplies could not be resolved until communities have access to the appropriate expertise.
- The concept of social and physical isolation.
- The use of undertrained operators.

### **Network Impetus**

It was recommended that the text in the draft strategy document under impetus should be modified to better capture why the Network had been established.

### **Network Context**

During the discussion on Network context, a key point raised was the need to identify the number of people, worldwide, that rely on small community water supplies. Knowing these numbers and associated trends will make it easier to advocate for improved management of these supplies and implement interventions. This gap in the evidence base was also discussed during the formulation of a draft action plan later on in the day.

Another key point raised was how the Network can best communicate its messages in order to improve the management of small community water supplies. It was recommended that communication strategies be considered at all stages in the implementation of the Network's work plan. In order for small community water supply management to be recognized as crucially important in the overall context of drinking-water quality and to be mainstreamed, a convincing case needed to be made before the core decision makers of governing bodies. When identifying governing bodies to target, consideration should be given to the fact that, depending on the country, there may be a number of them and, as a consequence, multiple stakeholders and multiple entry points: ministries of health, water, and agriculture, non-governmental organizations and professional associations. Consideration should also be given to targeting regulators in communication strategies. The message being communicated should always be evidence-based and authoritative in order to convince decision makers to re-focus policies, programmes and regulations for the benefit of small community water supplies.

In this regard, the Network should also pursue synergies with the International Network of Drinking-water Regulators (RegNet), which is hosted by WHO as well. RegNet is currently developing an issue sheet on the management of small community water supplies and Network members will be included in its development.

Household water treatment and safe storage was discussed with respect to its overlap with small community water supplies. Given that WHO also hosts the Household Water Treatment and Safe Storage Network, it was agreed that the possible synergies between the two should be explored. Care needed to be taken to not ‘re-invent the wheel’ but to build on work that had already been undertaken. There was support for the co-location of the next meeting of the two Networks.

To summarize, the need to improve communication was re-emphasized as a high priority for the Network. Participants noted the need to select target audiences for their ability improve the management of small community water supplies at all levels, going beyond ministries of health to include, for examples, donor agencies and local-level decision makers. Accordingly, target-audience-specific messages and content should be developed and mechanisms for reaching these audiences should be adapted accordingly.

Advocacy and impact were important issues that cross-cut all of the discussions. The documentation of success stories, lessons learned and best practices were highlighted as important as they have not yet been well-documented and can be used in advocacy and related communication strategies.

Related, the need to strengthen evidence base for decision making and to inform the development of content was reiterated during most discussions.

The strategic areas suggested by participants were reviewed and discussed in plenary in order to prioritize them. As a result of the discussion, three key priority strategy areas emerged, as reflected in the revised strategy document (Appendix 2), and these are:

1. Build evidence base to support decision making and the development of guidance tools;
2. Advocate and collaborate with stakeholders to mainstream small community water supplies into policy environment and obtain commitments from senior decision makers to improve the management of small community water supplies; and
3. Develop and facilitate access to guidance and tools to assist stakeholders at all levels in improving the management of small community water supplies for which they are responsible.

### **Strategy Rationale**

In answering the question, ‘where do we want to be in five years’, participants initially identified five key areas:

- Strengthened evidence base;
- Increased political awareness;
- Increased access to and dissemination of guidance and resources;
- Increased stakeholder collaboration; and
- Integration of the Water Safety Plan approach

For each key area, participants then identified activities that the Network could support. The five key areas initially identified and all activities suggested by participants are included in appendix 3 of this report.

### **Network Operations, including Secretariat and Member Responsibilities**

The Network consisted of members who subscribed to the Network's principles and were committed to apply these principles in their own activities, whenever this was relevant. By providing Secretariat services to the Network, the World Health Organization contributed from the perspective of its comparative advantages, i.e. its convening power and its coordinating capacity. Network members should be aware that the Secretariat was to coordinate but not to lead the work. The Secretariat should be enabled to optionally perform its coordinating role by effective and timely communications from the members. Through its convening power, WHO could ensure that progress toward achieving the strategic goals of the Network was monitored regularly, that the strategy of the Network was periodically reviewed and updated and that the need to continue the Network was regularly assessed.

Yet, WHO had a dual role – in addition to the independent role of coordinator and convenor, it could also take the lead in one or more activities (like any of the other members) or it could be a partner or facilitator for activities initiation by one or more other members.

Membership of the Network should remain open to all that agree with the Network's purpose, goals and objectives, who agree to the Network's pursuit of these goals, and who are willing to commit to working towards achieving the objectives of the Network, preferably in the context of their regular institutions and programmes. The Network members' role is to promote and support the implementation of the strategy, including the identification of leads, other partners, and associated funding for specific activities.

It was recognized that within the Network membership there was a core group of active and committed members who are in a position to support Network objectives and activities in a substantial way. It was suggested that a Strategic Committee be established consisting of these members. The Strategic Committee would meet regularly to review and discuss progress in implementing the Network's strategy and to identify ways to assist the Network members in achieving the objectives. Membership of this committee could include donors and activity leaders. As a result, it was expected that the composition of this group would not be stagnant and would change over time. Criteria would have to be applied in the selection of members of the Strategic Committee to ensure proper geographical and disciplinary representation, a gender balance and developing/developed country balance that would be accepted and act at a high level of performance.

It was suggested that the remaining Network members represent untapped resources in the Network's efforts to meet its objectives. One way of achieving a higher level of management might be to determine the characteristics and rationale of the passive members, evaluating their expectations and experiences through a questionnaire and identifying actions that appeal to them. Another suggestion was to have time-limited, moderated electronic discussion groups on various topics, with clear tasks and questions.

In terms of expanding Network membership to better meet Network objectives, it was suggested that champions should be identified, within countries, regions and internationally, and invited to participate in the Network.

### **Network Financing**

The discussion on financing was limited. Participants agreed that funding should be re-addressed after the strategy paper is revised, sent out for comment and finalized. Suggestions were made to target those agencies involved in investment in water and sanitation infrastructure especially the regional development banks.

## Appendix 1

# Agenda for the Strategic Planning Meeting for the International Network for Small Community Water Supply Management

- Geneva, Switzerland -

### Day 1: Monday, 11 January 2010

#### **Introduction and Operations**

*Objective: Ensure that all participants have a common understanding of the context of the small supply water sector worldwide, as well as the history and activities to date of the Network in addressing these challenges*

9.00 – 9.15 Welcome and objectives of meeting, Mr Robert Bos – Coordinator, WSH

9.15 – 9.30 Introduction of Participants, Mr Robert Bos

9.30 – 10.00 Review of SCWSN objectives and work to date, Ms Sinead Tuite

10.00 – 10.30 Health Break

#### **Guidelines for Drinking-Water Quality, Volume III**

*Objective: Determine how the SCWSN overall will be involved in the revisions of the GDWQ, Volume III and assign roles and responsibilities to specific individuals*

10.30 – 11.00 Overview of process and objectives, Mr Bruce Gordon

11.00 - 11.45 Review of current Volume III Guidelines

11.45 - 12.15 Discussion of next steps and roles and responsibilities

12.15 - 1.15 Lunch

**Evidence Base:**

*Objective: To determine priority activities for the Network in this area for the coming five years*

1.15 – 2.15 Knowledge Development and Transfer, Dr John Cooper

2.15 – 2.45 Health Break

**Risk Assessment Tool:**

*Objective: To gain Network input and endorsement of the proposal, feedback on areas for inclusion in the tool, and identify specific volunteers / experts to sit on the project committee*

2.45 – 5.00 Proposal to develop risk assessment tool for small supplies, Dr David Cunliffe and Dr John Cooper

**Day 2: Tuesday 12 January, 2010****Discussion on strategic priorities and operations**

*Objective: To discuss and refine a vision for the small community water supply sector, including Network contributions and priority activities to achieve this vision, and determine accompanying implementation strategies*

9.00 - 9.30 Presentation on draft strategy document, Ms Sinead Tuite

9.30 – 10.30 Facilitated discussion on Network objectives and priorities

10.30 – 11.00 Health Break

11.00-12.00 Facilitated discussion on Network objectives and priorities

12.00 – 1.00 Lunch

1.30 – 2.30 Facilitated discussion on Network objectives and priorities

2.30 – 3.00 Health Break

3.00 – 4.00 Discussion of proposed next steps and priorities

4.00 – 5.00 Facilitated discussion on Network structure and operations

**Day 3: Wednesday 13, January, 2010**

**Water Safety Plans**

*Objective: To provide feedback and approval for current and proposed activities underway with respect to WSP promotion, implementation and tools to support implementation in small community water supplies*

- 9.00 – 10.00 Overview of WSP implementation and scale-up, Ms Jennifer De France
- 10.00 – 11.00 Review of WSP Manual for Small Community Water Supplies, Ms Sinead Tuite
- 11.00 – 11.15 Health Break
- 11.15 – 12.15 Review of WSP Manual for Small Community Water Supplies, Ms Sinead Tuite
- 12.15 – 1.30 Lunch
- 1.30 – 3.00 Training for WSPs in small supplies, Ms María Estela Calderon
- 3.00 – 3.15 Health Break
- 3.15 – 4.00 WSP distance learning development, Dr Jamie Bartram
- 4.00 – 4.45 Discussion of WSP roll-out in small community water supplies, Ms Maria Gunnarsdóttir
- 4.45 – 5.00 Summary and next steps, Ms Jennifer Mercer
- 5.00 – 5.15 Conclusion and wrap-up, Mr Robert Bos

**Appendix 2**  
**Strategic Direction of the International Network for Small Community Water**  
**Supply Management**  
**- 2010 to 2015 -**

**Impetus for Network Formation:**

Prior to 2005, a number of developed and developing countries identified small community water supplies as an issue critical to public health that needed to be addressed. Technical personnel involved with water supply issues had been aware for many years of the need to focus on addressing the challenges associated with supplying water to small or remote communities in order to protect public health. However, this need had only relatively recently risen further up the agenda of developed and developing countries.

For several developed countries, small communities were brought to the forefront because of high-profile waterborne illness outbreaks. Even in developed countries, small community supplies are those most liable to contamination and breakdown, and hence pose a consistent risk to public health. Globally, almost 3.3 billion people live in rural locations and are, typically, served by small community water supplies<sup>3</sup>. Small community water supplies are considered the “weak link” in moving towards the Millennium Development Goal (MDG) drinking water target and further attention on them is needed.

In response, the World Health Organization’s (WHO) initiated the formation of a global network of technical and management experts working on small community water supplies. A network was selected as the most appropriate platform as it enables the sharing and exchange of information, know-how, and country experiences and provides a forum in which experts can discuss common management and technical issues and problems and find workable solutions.

The strong global normative role and convening power of WHO, combined with the extensive expertise of network members, puts the network in a unique position to provide authoritative expert advice. Other strategic advantages are WHO’s position as an internationally-recognized authority on public health, its links with Ministries of Health, and its country offices on the ground, thereby enabling the network to take a leadership role in advocating for change and facilitating information exchange.

**Definition of Small Community Water Supplies:**

The precise definition of a small community water supply will vary. A definition based on population size or the type of supply may be appropriate under many conditions. However, what often sets community supplies apart is how they are managed, operated and administered.

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<sup>3</sup> Urban and rural water supply coverage, 2006

Small communities are typically limited in resources and capacity and are often remote and physically and socially isolated. As a result, the management and operation of these water supplies in small communities is characterized by the increased involvement of ordinary, often undertrained and sometimes unpaid, community members. As a result, these communities do not necessarily understand and are therefore not able to mitigate the risks associated with their water supplies.

Whether in policy or in practice, small community water supplies are often administered differently at a national and sub-national level. For example, regulations are typically designed to improve the management of large organized supplies and are not suited to address the challenges associated with small community water supplies. Limited resources and capacity often make it difficult for these communities to meet regulations, even if they are designed appropriately.

This characterization provides a ready distinction between small community water supplies and the supply systems of major towns and cities. However, water supplies in peri-urban areas – the communities surrounding major towns and cities – are often organized and managed in a similar manner. Consequently, they may also be classified as ‘small community water supplies’.

### **Achievements to Date:**

In the years since its conception, the network has gained strength in gathering good practices, identifying and advancing priority works areas, and in attracting a range of global participants. Work has advanced in a number of areas including:

- Launch of a virtual forum to post and share information and documents;
- Targeted dissemination of network information and outputs, raising the profile of the challenges facing small community water supplies, at water sector events;
- Collation of training and guidance materials in key areas of interest to members;
- Development of guidance on cost-benefit analysis for water supply improvements;
- Development of a WSP manual for small supplies, currently being finalized;
- Development of guidance on how to use communication to protect public health as it relates to drinking-water;
- Promotion and sharing of research findings with respect to sustainable improvements to drinking-water supply management and technology use;
- Development and release of a promotional fact sheet designed to increase awareness of the challenges facing small community water supplies;
- Development of standardized terms/definitions through WHO’s Health and Environment Lexicon.

### **Rationale for the 2010-2015 Strategy:**

With the MDG target date of 2015 on the horizon, it is now time to take stock and articulate a vision of where we want to be with small community water supplies by 2015. Building on achievements to date, the network is well positioned to re-define its goals, objectives and

concrete activities and deliverables in order to help advance progress towards the MDG drinking-water target.

### **Network's Goal and Mission:**

**Vision:** To have, by 2015, accelerated progress towards universal, sustainable, access to safe water, through an increased focus on and improved management of small community water supplies, including achievement of the MDG drinking-water target as a key milestone.

**Mission:** To support increased attention to and improved management of small community water supplies in collaboration with stakeholders at all levels to achieve universal, sustainable access to safe drinking water.

### **Objectives:**

4. Build evidence base to support decision making and the development of guidance tools;
5. Advocate and collaborate with stakeholders to mainstream small community water supplies into policy environment and obtain commitments from senior decision makers to improve the management of small community water supplies; and
6. Develop and facilitate access to guidance and tools to assist stakeholders at all levels in improving the management of small community water supplies for which they are responsible.

### **Guiding Principles:**

The network operates on the basis of the following guiding principles

- To leverage the expertise and experiences of individuals, network members and Member States and work together to the best advantage of all.
- To facilitate and encourage optimal participation from all network members.
- To find workable solutions in geographic and cultural context.

- To ensure activities supported by and outputs of the network are based on evidence, which includes scientific findings and real world experiences.

### **Membership:**

Membership in the Network is open to all that agree with the Network's purpose and objective and who are willing to commit themselves to working towards achieving the goal and mission of the Network.

Members' role is to promote and support the network in achieving its objectives and action plan. This includes helping to identify leads, other partners and funding for specific activities and reviewing and providing feedback on network products.

Members will be given access to the network's virtual forum where information and documents can be posted and shared by network members. The virtual forum is also used by the Secretariat can send out announcements to members and to facilitate the engagement of members in network activities. The virtual forum can also be used by members to discuss topics of interest.

Members will be invited to attend regular meetings of the network to review and provide feedback on network activities underway and being finalized and to assist members in identifying activities in which they want to become more actively involved. Typically, meetings will be co-located with other meetings and conferences. Care will be taken to ensure meetings are held in varying geographical locations worldwide. Members who are interested in hosting meetings are to contact the Secretariat.

### **Activity Management:**

As the Secretariat for the Network, WHO coordinates and facilitates all network operations, ensuring its goal, mission and objectives are met. This includes managing the network's virtual forum.

Leads and co-leads of working groups oversee and ensure effective implementation of each activity. In some circumstances, the Secretariat may take the lead for a specific activity.

Working groups, established by activity, provide advice, guidance and support. The Secretariat, typically, is a member of all working groups.

Members are encouraged to self-identify as leads and participants on working groups, subject to final approval by the Secretariat.

## **Oversight and Direction:**

The Steering Committee will meet regularly to determine and track progress on the strategic priorities and activities of the network, providing recommendations on how and when to modify the direction of the network.

The Steering Committee, established by the Secretariat, consists of donors, activity leads and other key members. As a result, it is expected that this group will change over time.

The Steering Committee is to have diverse representation, e.g. developed and developing countries, men and women, in order to best assist the network in meeting its goal and mission.

In 2015, the WHO will undertake a third-party evaluation of the work and functions of the Network and make the decision as to whether the Network should continue, be re-tooled or be sunset.

## **Action Plan:**

The following is a summary of the network's action plan.

### **1. Build evidence base**

- Collect evidence on health challenges associated with small supplies, globally and at country-level on, for example
  - Additional statistics on the extent to which small community water supplies are used; and
  - Additional evidence that a focus on these supplies is fundamental to reducing the numbers of people dying or sick because of water-related disease
- Undertake cost/benefit analysis of improving the management of small community water supplies
  - Publish global assessment in WHO Bulletin
  - Publish *Guidance* and short `how to` manual that has already been developed in this regard
  - Identify and provide support to those able to undertake cost/benefit analysis
- Collect evidence to support the identification of interventions that improve the management of small community water supplies, including:
  - WSP case studies highlighting lessons learned and best practices (as detailed further below);
  - Virtual forum's library of, for example, risk assessment tools and communication materials; and
  - Informal information sharing via the network's forum

## 2. Advocate and collaborate

- Develop strategies, including objectives and mechanisms, to advocate for change and to collaborate with:
  - Funders and donors;
  - Organizations and governments that support a focus on small suppliers, (e.g. Samoa's Independent Water Schemes Associations and Germany's water supply operators and associations)
  - Governments, including ministerial fora;
  - Non-government organizations;
  - WASH Coalitions;
  - Other networks; and
  - Those that are not the "usual suspects", e.g. Ministries of Agriculture as they can have responsibilities for drinking-water.

In collaboration with the network, WHO's strategy in this regard is to include messages on the importance of small community water supplies, in broader water, sanitation and hygiene advocacy and communication efforts, e.g.

- Meet with funding agencies and country-level ministries on the importance of drinking-water, WHO will present water, sanitation and hygiene as a full package: Water Safety Plans, small community water supplies, household water treatment and storage, etc.
- WHO's World Water Day 2010 Package to include a fact sheet on small community water supplies, the overall theme for which is "Communicating **Water Quality** Challenges and Opportunities". The advocacy package will be available at importance conference and events and on WHO's website for all to download.
- Poster series to be released with the 4<sup>th</sup> Edition of the Guidelines for Drinking-water Quality will include at least one poster on the importance of small community water supplies.
- International Network on Small Community Water Supply Management to be better integrated with other networks, such as the Household Water Treatment and Safe Storage Network and the International Network on Drinking-Water Regulation.

Other possible strategies to be undertaken by the network include:

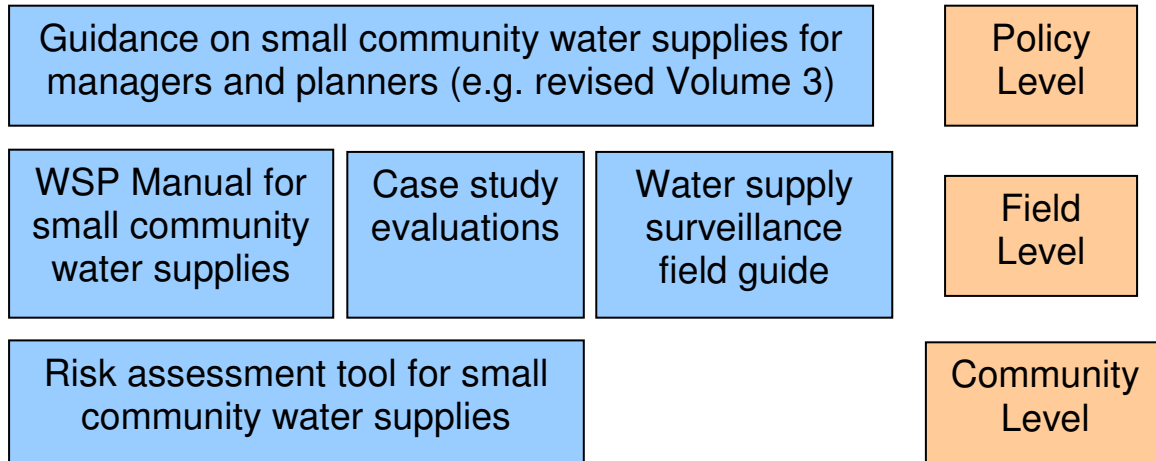
- Country by country mapping to be undertaken to identify which organizations/ Ministries maybe best suited to take the lead at a country-level;
- Provision of support to regional agencies and WHO regional offices in advocating to ministerial fora and groupings of water sector interests; and
- Support twinning between countries.

This work recognizes that, while it may be a role filled by individual network members, WHO and the Network will not work directly with small community water supplies.

### 3. Develop and/or facilitate access to guidance and tools

- Develop and implement communication and promotion strategies for guidance and tools, including existing tools (e.g. single window, user-friendly website of resources)
- Develop *Guidance on management of small supplies*, targeted to managers and planners (i.e. revised Volume III), including:
  - Framework for safe drinking-water - key areas that need to be included in regulations, policies and programs;
  - How to set health-based targets that are applicable and appropriate;
  - Socioeconomic considerations and how they impact the policies, programs and regulation, building on research supported by the Network
  - Importance of and how to best build capacity, building on training and education work supported by the Network; and
  - Public health surveillance and operational and verification monitoring, building on work undertaken by Drinking-water Committee and network members, including policy level text currently in the Water supply surveillance guide.
- Develop guidance on how to apply WSPs, including
  - Finalize and publish *WSP Manual for small community water supplies*, including a training materials focussing on communities;
  - Undertake case studies within all six WHO regions; and
  - Publish *case study evaluations*, specifically lessons learned and best practices
- Finalize and publish *Water supply surveillance field guide*
- Develop generic risk assessment tool for small water supplies, in order to be undertaken:
  - Develop globally applicable risk database for small community water supplies;
  - Develop tool, including field guides and training materials; and
  - Pilot, revise and finalize tool
- Consider development of manual on practical interventions (e.g. identification of technologies applicable and appropriate for small community water supplies in varying contexts)

Together, the guidance and supporting documents mentioned above are a complementary package or “toolkit” of information on small supplies management, as graphically represented below:



The following parts of the Network’s action plan have cross-over to other priority areas and will be of interest to those working outside of small community water supplies.

- Finalize and publish *Guidance on how to use communication to best protect public health as it relates drinking-water and hygiene*, including associated evidence base
- Formally launch and continue to population the on-line Health and Environment Lexicon
- Identify data and information requirements for protecting public health, as it relates to drinking-water, from a national to a community-level
  - Finalize plain-text editing; and
  - Review within the broader water, sanitation and hygiene context to develop a communication and promotion strategy that best leverages increased public health protection

## **Appendix 3**

### **Key areas and all Activities Proposed by Participants**

The following are the five key areas initially identified by participants as the areas in which the Network should focus its activities

- Strengthened evidence base;
- Political advocacy;
- Access and dissemination of guidance and resources;
- Increased stakeholder collaboration; and
- Integration of the Water Safety Plan (WSP) approach

The following are all the proposed activities suggested by participants for each of the key areas initially identified.

#### **Strengthened Evidence Base**

##### Research

- Initiate systematized literature review collection
- Research sustainability of interventions, over five to 10 years
- Support good quality studies of the various impacts of WSPs (operational impacts, health impacts, etc.)
- Interact with research funding bodies to bring small community water supplies onto their agenda

##### Data

- Develop baseline, undertake case studies, and evaluate WSPs project with qualitative and quantitative health evidence
- Undertake research/data collection activities at country-level
- Document health data and health effects
- Identify challenges and enable trend analysis in the future
- Improve use and application of JMP methods and analysis on access to water as they relate to small community water supplies
- Use JMP data to better define access in rural areas
- Evidence of WSP adoption (by region, by country)
- Evidence that shows a focus on these supplies is fundamental
- Evidence of current access to safe supplies and of improvements
- Statistics on the extent to which small community water supplies are used, e.g. the number of individuals served by these supplies.
- Evidence that a focus on these supplies is fundamental to reducing the numbers of people dying or sick because of water-related disease
- Evidence that, economically, there is an overall benefit to improving the management of small community water supplies

- Evidence to support the identification of interventions that improve the management of small community water supplies, thereby reducing the number of people who die or become sick because of water-related disease.

#### Case studies

- Compile success stories of community level adoption of the WSP approach
- Collect stories from members of the Network
- Document and disseminate WSP implementation experiences in small supplies. Post on the web, present at global WSP meetings, etc.
- Collate and share positive and negative examples for promotion, learning and sharing
- Promote and encourage groups to document current situations in areas, as well as documenting successes/lessons learned, health data, health impacts

#### Tools

- Develop simple assessment tool on two levels
  - Uptake of best WSP practice
  - Change in health-based water quality indicators
- Identify and develop practical monitoring tools, e.g. liaise with GLASS & JMP to collect data
- Develop drinking water safety planning indicator framework

### **Increased Political Awareness**

#### Messages

- Small systems needs to be mainstreamed into policy environment and decision making
- Ensure Network is on agenda in water-related disease discussions, at global and national level
- Develop evidence base on WSP methods, centered around improving efficiency and collaboration
- All aspects of Water Safety Plan Framework need to be promoted, not just WSP (e.g. Surveillance)

#### Target audiences

- Promotion of importance of the WSPs approach to governments
- Influence governments to have include the WSP approach in their regulations
- Advocate to ministerial fora and groupings of water sector interests
- Take information to regulators
- Attract interest of donors and financing agencies, encouraging them to use the WSP approach as a basis for infrastructure interventions

## Advocacy mechanisms

- Develop curricula for stakeholders we want to engage
- Develop simple 1-2 pager with simple text on the WSPs approach and importance of small community water supplies, target audience being policy makers and civil society
- Provide support to regional agencies, e.g. CEHI, to advocate to ministerial fora; groupings of water sector interests
- Worth exploring linkages between climate change and adaptation with respect to water supply and WSPs. Climate change is attracting national level attention
- Develop advocacy package on WSH's key areas (e.g. Household water and small community water supplies). Content need support and buy-in of WHO regional offices and country offices
- Ensure advocacy packages are available and WHO views are clear at strategic international conferences and meetings
- Identify how we can get other agencies/stakeholders to take up initiatives
- Meet with country-level decision makers and funder on importance of drinking water from public health perspective, including household water and small community water supplies
- Identify possible sources of funding

## **Increased access to guidance and dissemination of resources**

### Target audience

- Develop guidance and resources that target managers and regional-decisional makers
- Guidance of management of small community water supplies developed, targeting managers and regional decision makers.

### Communication mechanisms

- More effective communication of guidance need, e.g. link to collaboration with stakeholders
- Notify partners, groups, donors of availability of guidance
- Announce guidance documents on WHO website
- Designate national focal points for WSP development where possible, to be national resource to access guidance and resources

### Format

- Collate `tool boxes` for key subjects, (i.e. guidance and tools), showing how they fit together
- Develop consumer-friendly tool
- Ensure guidance is pithy and written to a specific audience
- Ensure WHO website is clear and easy to navigate for all skill levels
- Have all guidance available in an easy, accessible location and a user-friendly-format for groups to use (printed materials, posters) in many languages.
- Guidance available in an easy to use format, in many languages

## Content

- Need to identify key content/chapters for guidance on small community water supply management
- Provide guidance on how to set health-based targets
- Evidence needs to be strong but not in print, only available on-line
- Limit develop of tools to those that are the most important (WSP Manual and risk assessment tool )
- Translate guidelines for small community water supplies and adapt to local circumstances

## **Increased stakeholder collaboration**

### Mechanisms

- Compile collection of best case examples of approaches on how to successfully engage stakeholders inputs. Publish it.
- Promote recognition of Network as global resource for guidance and exchange of information on small systems
- Initiate and facilitate twinning partnerships between suppliers (small and small or small and big)
- Support twinning between countries
- Organize back to back meetings/workshops focussing on small supply issues (maybe instead of Network activities?)
- Work with stakeholders to facilitate a meeting as a first step
- More meetings involving government authorities, NGOs (working in the field) funders and ask them what they would need to adopt WSPs
- Hold round tables with initiating bodies that work in small communities, e.g. Donors, NGOs
- Collaborate and integrate with other Networks
- Hold joint meetings with other initiatives, rather than stand alone
- Map, influence and engage stakeholders on a country by country basis
- Identify all donors, collaborators, stakeholders, at national level

### Stakeholders

- Improve cooperation with the health sector
- Align and build synergies with NGOs/funding agencies active in water
- Include more NGOs in the Network
- Improved communication with actors, e.g. NGOs
- Network with other NGOs, e.g. WSH coalitions, UNICEF, to mainstream WSP approaches
- Involve other Networks that work on the same topic
- Actively link to other Networks, e.g. Global Water Operator`s Partnership
- Identify and target unusual suspects with role in water sector, ex. Guyana who liaised with agriculture
- Identification of and include involvement of small community water supply support organizations (e.g. SOPAC and Germany)

## **Integration of the Water Safety Plan approach**

### Advocacy

- Commitment to formalize WSP into various mechanisms, e.g. Policies, regulations, case studies
- Draw road map on critical steps in piloting WSPs and how to scale up
- Increase formal commitment to WSPs
- Adoption of WSPs into regulations
- Produce simple two page brochures on WSP approach, what it is and why it is important, targeting policy managers

### Evidence

- Adopt WSP in case studies
- Share case studies and lessons learned
- Share case studies and lessons learned (develop, document, share)
- Show evidence to governing bodies that they work, once evidence is developed, to lead to acceptance of WSPs on a regional/national level
- Use evidence to date and present it at national fora

### Guidance

- WSP Manual on small supplies
- Actively disseminate WSP Manual
- Publish WSP Manual for small supplies

### Tools

- Post existing tool kits, on-line and publicize through appropriate
- Risk assessment tool to support WSP
- Development of a training handbook, maybe combing and using existing tools

### Target audiences

- Used by funding agencies
- Twinning between communities facilitated by donor partners
- Empower training providers, bringing WSPs into their agenda