

**General Meeting of the International Network for
Household Water Treatment and Safe Storage**

Summary Report

Date of Meeting: October 24th, 2010

Held in conjunction with
Water and Health: Where Science Meets Policy Conference
at the University of North Carolina, Chapel Hill, USA

Chapel Hill, January 2011

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1. Overview

The 2010 *Water & Health: Where Science Meets Policy* Conference (Chapel Hill, North Carolina, USA, 25 - 26 October 2010) brought together over 400 people from over 50 countries to address critical concerns facing drinking-water, sanitation, hygiene and water resources.

On Sunday 24 October the International Network for Household Water Treatment and Safe Storage (HWTS Network) held a general meeting with the purpose of presenting the HWTS Network strategy for 2011-2016 and discussing key topics of concern to the HWTS community. Highlights of the meeting are summarized in Section 2.

The meeting was jointly organized and convened by the World Health Organization (WHO), the United Nations Children's Fund (UNICEF) and the Water Institute at the University of North Carolina (UNC). Other contributing organizations included the 300-in-6 Initiative, Cambridge University, London School of Hygiene & Tropical Medicine (LSHTM), Massachusetts Institute of Technology (MIT), Medentech, PATH, and the University of Venda. The meeting materials are presented in Annexes 1 to 5.

Nearly 90 participants representing over 70 different organizations from 12 countries attended the meeting. A full list of participants is presented in Annex 5. The meeting was chaired and moderated by Mr Terrence Thompson, Regional Advisor, Environmental Health, WHO Regional Office for the Western Pacific, and Ryan Rowe (UNC), the HWTS Network Communications Officer, served as rapporteur.

2. Meeting Summary

The main objectives of the meeting were to present the strategy for the HWTS Network for the coming six-year period, to provide a snapshot of the current status of HWTS, to disseminate research and implementation efforts of various stakeholders, and to address knowledge gaps in areas such as HWTS technical guidance, community education and distribution strategies. The following organizations made presentations: the 300-in-6 Initiative, Cambridge University, the London School of Hygiene and Tropical Medicine (LSHTM), Medentech, the Massachusetts Institute of Technology (MIT), PATH, UNC, UNICEF, University of Venda and the WHO.

Presentation Highlights

Dr Robert Bos – WHO

HWTS Network Strategy: The meeting's keynote speaker was Dr Robert Bos, Coordinator, Water, Sanitation, Hygiene and Health at WHO in Geneva. Dr Bos presented an overview of the proposed Network Strategy for the second phase (2011-2016). The strategic objectives for the second phase include: (1) strengthening the evidence base of the public health relevance of HWTS; (2) achieving tangible results in the scaling-up of HWTS; (3) developing and implementing national policies and institutional frameworks to ensure the integration of different environmental health interventions with drinking-water treatment and safe storage at the household level; and (4) evaluating and disseminating best practice in HWTS programmes for advocacy and learning purposes. Furthermore, specific targets have been set: (1) by 2015, 30 countries have established policies on HWTS, (2) by 2015, strengthened evidence to guide effective and replicable HWTS programmatic approaches to achieve long-term widespread use and public health impact and (3) by 2020, 50 countries have achieved country-wide scale up of project-based HWTS. In order to effectively carry out the strategy, WHO together with UNICEF are finalizing an agreement to share Network Secretariat responsibilities. In addition, the Water Institute at UNC is responsible for official Network communication activities. Network participants will continue to be called upon to play an important role in addressing research gaps and lead targeted country-level meetings to inform HWTS policy development, guidance and implementation. In January 2011, Network participants will be given an opportunity to comment on a more detailed version of the Network strategy.

Need for HWTS: Every year an estimated 1.5 million deaths from diarrhoeal diseases occur that are related to unsafe water, poor sanitation and lack of adequate hygiene which are easily treatable and even preventable; most of these concern children under the age of five.. HWTS interventions can lead to dramatic improvements in drinking water quality and reductions in diarrhoeal disease. Recently, the executive heads of UNICEF and WHO signed on to a seven-point action plan on diarrhoea prevention and control, which includes household water treatment and safe storage among its three water and sanitation points. This action plan is contained in the report "*Diarrhoea: Why children are still dying and what can be done*" released by UNICEF and WHO in December 2009.

Tommy Ngai - Cambridge University

HTWS Coverage and Use: Outcomes of research on the status of HWTS in 45 UNICEF priority countries, carried out by MIT in collaboration with UNICEF, were presented by Tommy Ngai. The research demonstrated that there is currently limited information on HWTS coverage and consistent use at the regional and national level. It identified needs of UNICEF country offices, such as technical support (requested from 70% of the surveyed offices), documentation and information sharing to assist them in providing HWTS guidance in-country.

Professor Mark Sobsey - UNC, Dr Joe Brown - LSHTM, and Jan Willem Rosenboom - Independent Consultant

Technical Guidance: With a variety of HWTS technologies in use around the globe, the WHO is currently developing guidance on health-based targets and performance specifications for the evaluation of household water treatment options, a document which is now in the final stages of development. Professor Mark Sobsey and Dr Joe Brown, authors of the technology performance guidance document, presented a revised draft of their work during the session and meeting participants were subsequently given the opportunity to review and comment on it. The document provides a basis for evaluating the microbiological performance of household water treatment options in order to facilitate improvements in drinking-water safety and health and to inform the development of testing protocols and national regulatory frameworks. Jan Willem Rosenboom discussed his past work in Cambodia on the development of a national framework for a voluntary system of HWTS technology performance verification. Among the key success factors mentioned were capacity for regulation and oversight, performance verification and independent laboratory testing. This initiative continues to be refined and further developed by various stakeholders and will inform policy at the national level.

Michael Gately - Medentech, Glenn Austin - PATH, Dr. Natasha Potgieter - University of Venda, and Paul Osborn - 300 in 6 Initiative

Community Education and Distribution Strategies: Presenters from Medentech, PATH and University of Venda spoke about their HWTS work in the field, from broad-based strategies for emergency relief to small-scale projects targeting vulnerable populations such as people living with HIV/AIDS and in informal settlements. Medentech discussed how emergency relief was shown to be one entry point for creating awareness and providing sound guidance on use of HWTS. The company also shared its experience in training a community-based sales force in Indonesia to promote its HWTS products throughout the country. PATH, through its five-year Safe Water Project, identified gaps inhibiting scale-up across low-income populations, such as the lack of affordable and effective products, lack of appropriate distribution models and the low priority given to water treatment in comparison to other household or consumer products. In an extended user testing study in India, a specific finding was that user experience is an important factor in contributing to sustained and correct use of HWTS products, and PATH has used this insight to improve product design. PATH also discussed a micro-finance partnership pilot programme which increased market penetration of commercial HWTS products among extremely low-income consumers. Finally, PATH explored sustained uptake of free and purchased HWTS products among pregnant women in Malawi and found that social support and health care workers were key influencing factors. Dr. Natasha Potgieter from the University

of Venda shared the results of her study looking at the effects of HWTS on rural people living with HIV/AIDS in South Africa. The study consisted of a *Potters for Peace* ceramic water filtration intervention in households with known and unknown HIV status and used an innovative collection method to gather fecal samples for diarrhoea testing. There was also a presentation by the 300-in-6 Initiative on their efforts to create a private sector-led project to scale up HWTS through increased collaboration and integration. Organizations which are interested in getting involved in the 300-in-6 Initiative are invited to contact Henk Holtslag (holtslag.dapper@kpnmail.nl) or Paul Osborn (paul.osborn@300in6.org).

Cliff Ochieng - Safe Water and AIDS Project, Kenya

Social Entrepreneurship: The Safe Water and AIDS Project (SWAP) is involved in the improvement of the health of people in HIV support groups, as well as that of the general public, by promoting the use and selling safe water and health products. SWAP has organized and trained a community-based network of vendors who earn a living from the sale of such products. Mr. Ochieng was scheduled to speak about SWAP's work via video-conference from Kenya but technical difficulties prevented this from happening. The presentation slides have been circulated to Network participants.

Next steps

Participants expressed interest in Network-led workshops on topics such as hygiene and health behavior change communications and monitoring and evaluation of HWTS in the field. In the next phase of the Network these activities will be addressed along with the objectives outlined in the strategic plan presented by Dr Bos at the beginning of the meeting. Members also are encouraged to develop and host their own collaborative HWTS events in accordance with the new strategy. For further information on the HWTS Network, please visit http://www.who.int/household_water/en/.

Annex 1 – Programme overview

**THE INTERNATIONAL NETWORK TO PROMOTE
HOUSEHOLD WATER TREATMENT AND SAFE STORAGE**

GENERAL MEETING

Chapel Hill, North Carolina, USA
Sunday, October 24, 2010
13h00 – 17h30

**Sunflower Room
Friday Center**

Hosted by:

Gillings School of Public Health at the
University of North Carolina at Chapel Hill (UNC)

Convened by:

World Health Organization (WHO)
United Nations Children's Fund (UNICEF)
The Water Institute at UNC

Keynote Speaker:

Dr. Robert Bos
Coordinator of Water, Sanitation, Hygiene and Health
WHO

Chairperson:

Terrence Thompson
Regional Adviser for Environmental Health
WHO

Rapporteur:

Ryan Rowe
HWTS Network Communications Officer
The Water Institute

For questions, kindly contact Ryan Rowe by email at hwtsnetwork@unc.edu
or by telephone at +1 919 561 2469.

**THE INTERNATIONAL NETWORK TO PROMOTE
HOUSEHOLD WATER TREATMENT AND SAFE STORAGE**

GENERAL MEETING

Chapel Hill, North Carolina, USA
Sunday, October 24, 2010
13h00 – 17h30

Each presentation will conclude with a brief period for Q&A and discussion.

13h00-13h05 Welcome remarks

- *Terrence Thompson, WHO*

13h05-13h40 HWTS Network overview and strategy

- *Robert Bos, WHO*

13h40-14h00 Status of HWTS in 45 UNICEF priority countries

- *Tommy Ngai, Cambridge University
(on behalf of Susan Murcott and Mehul Jain)*

14h00-14h20 Community engagement & social entrepreneurship for HWTS enterprise

- *Cliff Ochieng, Safe Water & AIDS Project Kenya*

14h20-14h30 Massive scaling-up of safe water solutions

- *Paul Osborn, 300 in 6 Initiative*
- *Henk Holtslag, 300 in 6 Initiative*

14h30-14h50 HWTS education: a hidden success in emergency situations

- *Michael Gately, Medentech*

14h50-15h10 Effects of HWTS interventions on rural people living with HIV/AIDS

- *Natasha Potgieter, University of Venda*

Coffee & Networking Break (20 minutes)

15h30-16h20 Evaluating household water treatment options: health-based targets and performance specifications

- *Mark Sobsey, University of North Carolina at Chapel Hill*
- *Joe Brown, London School of Hygiene and Tropical Medicine*

16h20-16h40 Field assessment to performance verification: HWTS in Cambodia

- *Jan Willem Rosenboom, Independent Consultant*

16h40-17h00 User-centered design of HWTS technologies

- *Glenn Austin, PATH*

17h00-17h10 Meeting wrap-up and closing remarks

- *Peter Harvey, UNICEF*

Annex 2 – Pre-event briefing

Every year there are an estimated 1.5 million deaths from diarrhoeal disease that are related to unsafe water, sanitation, and hygiene. The vast majority of these deaths are among children under the age of 5 years old and, under normal conditions, the disease would be easily treatable and even preventable.

Household water treatment and safe storage (HWTS) interventions can lead to dramatic improvements in drinking water quality and reductions in diarrhoeal disease—making an immediate difference to the lives of the nearly 900 million people who still rely on water from polluted rivers, lakes, unprotected wells and springs and countless more using piped supplies which have been contaminated.

The International Network to Promote Household Water Treatment and Safe Storage (HWTS Network) is a World Health Organization initiative bringing together over 100 key stakeholders worldwide to promote and scale up the adoption of practices and technologies that improve the quality of household drinking water for vulnerable populations. Established in 2003, the informal network format emphasizes flexibility, participation and creativity to support coordinated action.

The general theme of this Network Meeting will focus on the critical phase of scaling up HWTS. The keynote speaker, Dr Robert Bos, Coordinator of Water, Sanitation, Hygiene and Health for the WHO, will begin with an overview of the HWTS Network strategy and the role of WHO as host and member.

We will then review the status of HWTS use in 45 UNICEF priority countries and hear a range of perspectives touching on the role of HWTS in rural communities as well as disaster situations.

There will be an overview of the WHO's new microbial reduction performance guidelines, a country-specific perspective on this topic (Cambodia), and how user-centered design philosophy guides one organization's approach to product development. Dr Peter Harvey, Senior Adviser of Water Supply & Water Quality for UNICEF, will wrap up the meeting with closing remarks.

The meeting will be chaired by Mr Terrence Thompson, Regional Adviser in Environmental Health, WHO Western Pacific Regional Office.

The key objectives for the meeting are twofold: 1) to give participants an opportunity to react and comment on the Network strategy; and 2) to share the experiences of Network Members and begin addressing knowledge gaps identified at previous events (i.e. Stockholm) in areas such as HWTS technical guidance, community education, and distribution strategies. Both prospective and existing members are welcome to attend.

The principal outcome of this meeting will be to compile a report on the proceedings and to share it through the Network's communication portals.

Annex 3 – Speaker biographies

Glenn
Austin



Glenn Austin is the director of the Safe Water Project in PATH's Technology Solutions Global Program as well as group leader of product development teams. He is responsible for determining the project's vision and strategy and for overall management of PATH activities as well as the critical relationships with water technology companies, consultants, and other collaborating organizations to ensure that project goals are met. He represents the project globally and plays a key role in engaging other agencies, including donors, in the project findings and recommendations. Glenn manages design for manufacture, pilot production, and scale-up. He is an industrial designer and has supplemental experience and education in management, mechanical engineering, and computer-aided design. He has led product design and development for over 25 years, including development of medical products and various consumer products in the private sector before joining PATH.

Dr Robert
Bos



Robert Bos is a Dutch public health biologist (University of Amsterdam) who has held different positions in the World Health Organization for over 25 years. In April 2009 he took up his current position of Coordinator of the Water, Sanitation, Hygiene and Health Unit in the WHO Department of Public Health and Environment. He started working for WHO in 1981 in Costa Rica, where he assisted the Government in the establishment of an immunology unit and the start-up of the local production of biological agents. In 1983 he transferred to the Division of Vector Biology and Control in Geneva, where he was incorporated into the Secretariat of the joint WHO/FAO/UNEP Panel of Experts on Environmental Management for Vector Control (PEEM). From 1986 to 1996 he was the Executive Secretary of PEEM, whose remit was to promote environmental management measures as an integral part of water resources development planning and management with a view to minimizing risks of vector-borne disease transmission (e.g. malaria, filariasis, schistosomiasis and other water-associated vector-borne diseases). In 1990, he moved to the Division of Environmental Health in the then Community Water Supply and Sanitation Unit. Since 1996 the scope of his responsibilities has evolved to cover a broader area of work on the human health dimensions of water resources development, management and use. His focus extended to include capacity building in health impact assessment, health dimensions of integrated water resources development, economic evaluation and burden of disease studies of water interventions for health, and the safe use of wastewater, excreta and greywater in agriculture and aquaculture. He represented WHO in negotiations that led to the 2000 Stockholm Convention on Persistent Organic Pollutants and continued to promote R&D of land and water resources management methods as alternatives to DDT and other chemicals used in vector control.

Dr Joe
Brown



Joe Brown has had 9 years experience working on water and sanitation, primarily in Latin America and in Southeast Asia, focusing on environmental microbiology and health impacts of watsan interventions. He has been a consultant with UNICEF, the World Health Organization, the World Bank, and numerous national and international NGOs. He is a lecturer in water quality and health at the London School of Hygiene and Tropical Medicine, Faculty of Infectious and Tropical Diseases, Department of Disease Control. His publications include field trials of point-of-use drinking water technologies, broad-based assessments of intervention sustainability, and global environmental health. He received his PhD in environmental sciences and engineering at the Gillings School of Global Public Health in 2007.

Michael
Gately



Michael Gately has a degree in Social Science from University College Dublin and a MBA from top 100 University, Smurfit UCD. He has been an associate lecturer with both The Institute of Public Administration and The National College of Ireland. Michael has worked in international marketing for over twenty five years launching retail water and alcohol brands. He has previously held the position of Global Brand Manager for Jameson Irish Whiskey. In his role as Head of Medentech's Sales & Marketing Department Michael's work with Aquatabs sees him visiting over twenty countries each year. He has a particular interest in talking with end users about their needs and attitudes.

Dr Peter
Harvey



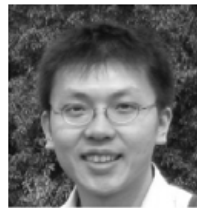
Dr. Peter Harvey is Senior Adviser for Water Supply and Water Quality at UNICEF Headquarters in New York. He has over seventeen years experience in international development and humanitarian relief, predominantly in the field of water supply and sanitation. Prior to joining UNICEF Headquarters Peter worked for three years as Chief of Water, Sanitation and Hygiene (WASH) with UNICEF in Zambia, and before that he worked as Programme Manager at the Water, Engineering and Development Centre (WEDC), Loughborough University where he undertook a wide range of research, training and consultancy in water and sanitation across sub-Saharan Africa and Asia. He has also worked as a Water and Sanitation Engineer for Oxfam and Médecins Sans Frontières in South East Asia and Eastern Europe, and started his career as a VSO Volunteer in rural Ghana. He has particular interest in water supply sustainability, water safety and multidisciplinary research, and has published three books and several academic papers.

Henk
Holtslag



With his background as marine engineer, Henk was posted in 1974 to train Tanzanian fishermen in ship maintenance by the Dutch development organisation SNV. In 1987, he moved, with SNV, to a windmill project in Nicaragua. Both postings were on 'white elephants' because the technology was too complicated, and too expensive. With this experience, he started a workshop in Nicaragua focusing on low cost technology, and simplicity. Among the results are low-cost pot filters and rope-pumps, which can be produced anywhere, using local skills and materials. Improved models of the rope-pump now serve over 4 million people in 30 countries. As a freelance advisor, Henk is active in some 15 countries, training local private sector bodies and NGOs in rope-pumps and other smart water solutions, and advocating their potential at numerous water fora. Henk joined the HWTS network in 2003. He is the man behind the booklet 'Smart Water Solutions' and is co-initiator of the 300in6 initiative. In 2008, he was made a Member of the Order of Orange-Nassau (a royal award) by Minister Bert Koenders, the Netherlands Minister for Development Cooperation.

Tommy
Ngai



Tommy Ngai is a PhD student at the Centre for Sustainable Development, Department of Engineering, University of Cambridge, England. His research focuses on understanding the complexity and challenges of disseminating household water treatment systems in developing countries, from a systems perspective. Tommy is also currently the Director of Research Learnings at CAWST, Centre for Affordable Water and Sanitation Technology, a Canadian not-for-profit engineering consulting organization providing education, training and technical consulting in water and sanitation to organizations working with the poor in developing countries. Tommy was a graduate of and former lecturer at Massachusetts Institute of Technology. He has worked with local organizations in Nepal, Bangladesh and Cambodia in the research, development and dissemination of household level arsenic mitigation techniques in the past 10 years.

Cliff
Ochieng



Cliff Ochieng is the Deputy Programmes Director for Safe Water & AIDS Project in Kisumu-Kenya. He has been engaged in working with community groups to promote access to safe water through household water treatment & proper storage. He is also a Study Coordinator with Safe Water & AIDS project's research department and has overseen program evaluation and effectiveness studies of public health interventions in collaboration with CDC- Atlanta among other partners. Currently he is conducting an evaluation of the impact of Education through Listening, a community

engagement methodology, on the adoption of safe household water treatment behaviors in communities in western Kenya, collaboration between CDC-Atlanta & George State University. Previously he has been coordinating and managing cholera response interventions in collaboration with Kenya's Ministry of Public Health and Sanitation officials and provincial administration, like minded NGO/CSOs and other governmental departmental heads in Western Kenya. Before joining SWAP he had over 5 years in consultancy with experience in conducting and facilitating trainings especially in broad areas of Behaviour Change and Managing Change, Participatory Approaches (PRA & PLA), Organisational Effectiveness, Project Management, Strategic Planning. These have been in broad-based sectors including Public Health and Water and Sanitation. These have been carried out for Community-Based Organizations (CBOs), NGOs, and Government Departments in Kenya and Uganda & Tanzania

Paul Osborn



As a communicator, Paul Osborn is set on empowering the local and the international community in their communication strategies and practice, as an essential pillar to their overall performance. The 1965 office boy of Oxfam became a VSO teacher in 1966, prior to UK NGO coordination and directing UNA's British volunteer programme. He guided the TOOL Foundation until 1981 as the Dutch hub for appropriate technology – with WASH at the fore. Then came SATIS, the technology information network which he led through the 80s, coalescing some 3,000 civil society, UN and public bodies. Business development, microfinance, mediation and agriculture were his foci during 1991-2004, with Jamaica, Pakistan and EU-ACP. A prolific period of books and films followed, with the World Bank and Indonesian and Dutch governments, on the switch to renewable energy. Since 2008, WASH issues have occupied him often, in his editor role of the Poverty Alleviation as a Business series, and advising Antenna Foundation. In October 2010, Paul joined the 300in6 upscaling initiative.

Dr Natasha Potgieter



Dr Natasha Potgieter is presently appointed as an academic professor in the department of Microbiology at the University of Venda in South Africa and also as a visiting professor at the Water and Health Research Unit at the University of Johannesburg in South Africa. She has over 20 years of experience in health related water microbiology and her research focuses on issues concerning household point-of-use water quality, hygiene and sanitation issues especially the effect there-off on vulnerable people in resource poor communities. She has several scientific papers and reports published on her research.

Jan Willem
Rosenboom



Jan Willem Rosenboom has over 15 years of experience in water supply and sanitation, working on rain water catchment and VIP latrines in Kenya, gravity-fed water supply and sanitation with WaterAid Sierra Leone, institutional development with Oxfam UK/I in Cambodia, arsenic mitigation in Bangladesh with UNICEF as well as household water treatment and sanitation marketing with the Water and Sanitation Program (WSP) in Cambodia. He recently moved to Seattle where he is preparing to take up a position as Senior Program Officer demand-led sanitation with the Bill and Melinda Gates Foundation. He is particularly interested in applied measures for improved drinking water safety, the issues around reaching scale in rural sanitation and effective approaches to capacity development.

Dr Mark
Sobsey



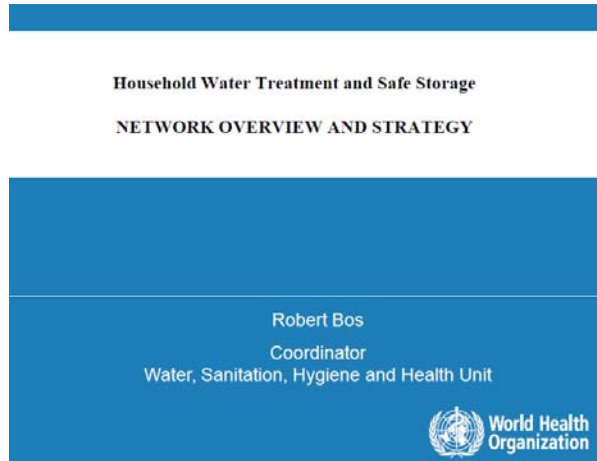
Dr Mark Sobsey is a Kenan Distinguished Professor of Environmental Sciences and Engineering, specializing in Environmental Health Microbiology and Water-Sanitation and Hygiene at the Gillings School of Global Public Health, University of North Carolina at Chapel Hill. He received a B.S. in Biology (1965) and a M.S. in Hygiene (1967) from the University of Pittsburgh, Pa. and a Ph.D. in Environmental Health Sciences from the School of Public Health, University of California at Berkeley (1971). Professor Sobsey is internationally known for research, teaching and service in environmental health microbiology and virology and in water, sanitation and hygiene, with more than 200 published papers and reports. His most recent research focuses on household water treatment for improved water quality and health, for which he is recognized as a pioneer in research, demonstration and policy. Professor Sobsey is an author, consultant and scientific advisor to the World Health Organization, UNICEF, the World Bank, US Agency for International Development, US Environmental Protection Agency, The Centers for Disease Control and Prevention, the State of North Carolina and other international, national and state entities. His honors include 2001 recipient of the American Water Works Association A.P. Black Award for research excellence, 2008 recipient of the International Water Association Project Innovations Award-Small Project category for the Asia Region and Global competitions (for work on porous ceramic water filters in Cambodia), and a 2009 Pioneer Award from the Disinfection Committee of the Water Environment Federation for outstanding contributions to the disinfection field.

Terrence
Thompson



Mr Terrence Thompson is a sanitary engineer with 30-years experience focusing on public health issues related to water, sanitation and hygiene. Early in his career Mr. Thompson was a private consultant in the USA and later became Deputy Director of Public Health Engineering for the City of New York, where he was responsible for drinking water quality surveillance in one of the world's largest water supply systems. For more than 20-years he has worked for the World Health Organization with postings in Trinidad and Tobago; Ecuador; India, and the Philippines. During this time, Mr. Thompson has carried out technical missions in more than 60 countries around the world. In his present position, Mr. Thompson supports WHO's environmental health programmes in 34 countries of the WHO Western Pacific Region. Mr. Thompson holds a bachelor's degree in civil engineering and a master's degree in environmental engineering from Manhattan College, New York. He is a licensed Professional Engineer in the States of New York and New Jersey, USA; a Board Certified Environmental Engineer in the American Academy of Environmental Engineers; a Fellow of the American Society of Civil Engineers; and a Life Fellow of the Institution of Public Health Engineers (India).

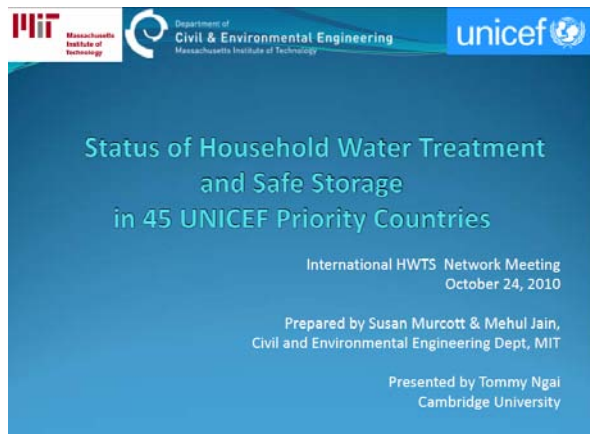
Annex 4 – Presentation materials



Presenter: Dr. Robert Bos, World Health Organization

Title: Household Water Treatment and Safe Storage: Network Overview and Strategy

Summary: Need for HWTS, HWTS Network strategy, recent policy and sector developments.



Presenter: Tommy Ngai, Cambridge University, on behalf of Susan Murcott & Mehul Jain, Massachusetts Institute of Technology

Title: Status of Household Water Treatment and Safe Storage in 45 UNICEF Priority Countries

Summary: Results of a survey of UNICEF offices on HWTS use in a range of developing countries and needs of local UNICEF personnel in relation to HWTS.



Presenter: Cliff Ochieng, Safe Water and AIDS Project

Title: Community Engagement & Social Entrepreneurship for Distribution of Household Water Treatment & Storage Products

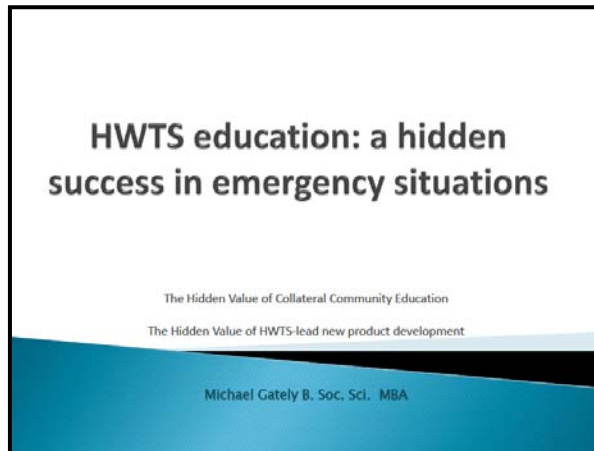
Summary: Overview of programs with community self-help groups, overview of a study to evaluate the ability of SWAP entrepreneurs to increase access to health products.



Presenter: Paul Osborn, 300-in-6 Initiative and Henk Holtslag, 300-in-6 Initiative

Title: Safe water for 300 million in 6 years with Household Water Treatment

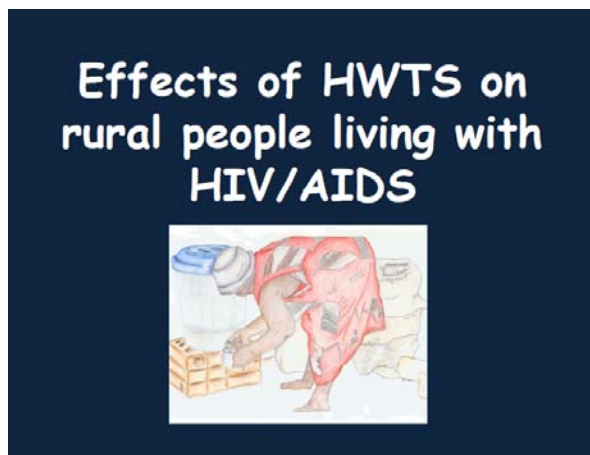
Summary: Review of need for HWTS, range of technologies, 300-in-6 strategy and vision.



Presenter: Michael Gately, Medentech

Title: HWTS education: a hidden success in emergency situations

Summary: Collateral benefits of HWTS interventions in emergency situations, commercial sales channels increase deployment, importance of community education for sustained uptake



Presenter: Dr. Natasha Potgieter, University of Venda

Title: Effects of HWTS on rural people living with HIV/AIDS

Summary: Overview of a Potters for Peace ceramic water filtration intervention in rural people living with HIV / AIDS in South Africa

Evaluating household water treatment options: health-based targets and performance specifications

Project Overview

Joe Brown (LSHTM) & Mark Sobsey (UNC)
24 October 2010, Chapel Hill

Water and Health: Where Science Meets Policy

Presenter: Professor Mark Sobsey, UNC and Dr. Joe Brown, LSHTM

Title: Evaluating household water treatment options: health-based targets and performance specifications

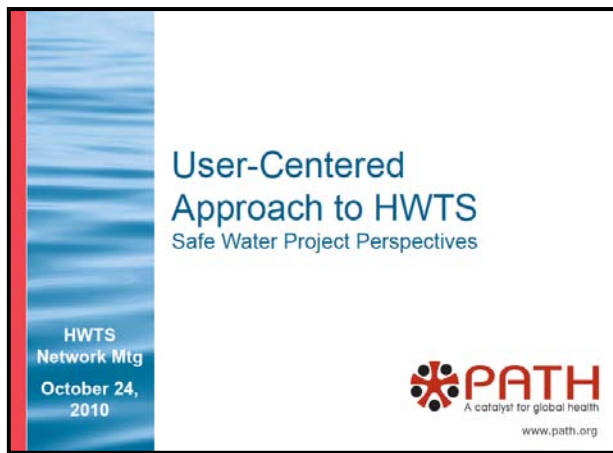
Summary: Overview of the proposed WHO technical guidance, goals, guiding principles, and recommended testing protocols



Presenter: Jan-Willem Rosenboom, Independent Consultant

Title: HWTS Technology Performance Verification, Cambodia (a.k.a. ETV)

Summary: Overview of a voluntary framework on household water treatment evaluation, issues relating to credibility and enforcement



Presenter: Glenn Austin, PATH

Title: User-Centered Approach to HWTS: Safe Water Project Perspectives

Summary: Overview of a user-centered approach to product development design using extended user testing, lessons learned from a micro-finance pilot and qualitative research on sustained uptake of free / purchased HWTS products among pregnant women in Malawi.

Annex 5 – Participant List

	Last Name	First Name	Organization
1	Allgood	Greg	Procter & Gamble
2	Andriamampianina	Nicole	PSI/M
3	Apambire	Braimah	Conrad N. Hilton Foundation
4	Appell	Andrew	Cranfield University
5	Armstrong	Andrew	University of North Carolina at Chapel Hill
6	Austin	Glenn	PATH
7	Barstow	Christina	University of Colorado
8	Berhan	Meklit	Children Without Worms
9	Boelee	Eline	IWMI
10	Borrazzo	John	USAID
11	Bradley	Ian	University of Illinois at Urbana-Champaign
12	Brown	Joe	LSHTM
13	Buszin	Justin	Population Services International
14	Calderon	Enrique	AYSA
15	Cantwell	Ray	Samaritan's Purse
16	Caouette	Paul	FilterPure
17	Carter	Emily	PSI
18	Casanova	Lisa	Georgia State University
19	Chatterley	Christie	University of Colorado
20	Clemmer	Ron	World Vision
21	Conrad	Ken	Amway
22	Cromer	La Chenna	Family Health International
23	da Silva	Allegra K	United States Agency for International Development (USAID)
24	Denham	Ron	WASRAG, Rotary
25	Doud	Chuck	HaloSource
26	Dow-Baker	Camille	CAWST
27	Elliott	Mark	UNC
28	Faircloth	Tallie	USAID
29	Flick	Kevin	PATH
30	Forsyth	Jenna	University of Washington
31	Gately	Michael	Aquatabs
32	Guo	Yayi	Johns Hopkins School of Public Health
33	Harvey	Peter	UNICEF
34	Holtslag	Henk	Connect International
35	Husman	Ana Maria de Roda	RIVM
36	Husson	Frank	Solar Solutions LLC
37	Jenkins	Mimi (Marion)	University of California Davis
38	Johnston	Rick	EAWAG / SANDEC
39	Jongsma	Karin	RIVM - the Netherlands
40	Kaufman	Amanda	UNC School of Public Health
41	Keyworth	Amy	NCDENR PWQ
42	Kirby	Miles	CDC/CSTE Fellow
43	Kohler	Kristina	International Water Association
44	Kosinski	Karen	Tufts University
45	Lantagne	Daniele	Harvard / LSHTM

International Network for Household Water Treatment and Safe Storage

	Last Name	First Name	Organization
46	Lennon	Pat	PATH
47	Liang	Kaida	WaterSHED, A Global Development Alliance, USAID
48	MacDonald	Laura	Johns Hopkins University
49	McLaughlin	Laura	Cascade Designs
50	Meierhofer	Regula	Eawag
51	Montgomery	Maggie	
52	Murphy	Jennifer	CDC
53	Nelson	Kara	UC Berkeley
54	Ngai	Tommy Ka Kit	University of Cambridge, Centre for Sustainable Development
55	Ogden	Stephanie	Water for People
56	Oldfield	John	Water Advocates
57	Opryszko	Melissa	Johns Hopkins School of Public Health
58	Osborn	Paul	300in6 Initiative
59	Parker	Alison	Cranfield University
60	Patrick	Molly	MIT
61	Pickering	Amy	Stanford University
62	Potgieter	Natasha	University of Venda
63	Rajasingham	Anu	CDC Global WASH
64	Rechenburg	Andrea	Institute for Hygiene and Public Health, University of Bonn
65	Regunathan	Regu P.	Water Quality association
66	Reimers	Diane	Waterlines
67	Reimers	Mark	Waterlines
68	Rosenboom	Jan Willem	Sayboom Consulting
69	Rowe	Ryan	Water Institute at UNC
70	Ryckman	Hayley	International Medical Corps
71	Saade	Camille	AED
72	Schubert	Jesse	PATH
73	Sears	Alissa	Safe Water International
74	Seremet	Chris	Catholic Relief Services
75	Sigmon	Cole	Mortensen Center for Engineering for Developing Communities, University of Colorado
76	Soerensen	Thomas	Vestergaard Frandsen
77	Sparkman	David	University of Colorado
78	Stenstrom	T.A.	SMI/SEI
79	Stowe	Eric	A Child's Right
80	Tamas	Andrea	Eawag: Swiss Federal Institute of Aquatic Science and Technology
81	Thompson	Terrence	World Health Organization
82	Tiberghien	Jacques-Edouard	Water Center for Latin America and the Caribbean
83	Tosh	Darren	Samaritan's Purse Canada
84	Trevett	Andrew	UNICEF
85	Veach	Charles	World Health Alliance International
86	White	Ginn	US Army Public Health Command