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**REPORT OF THE MEETING**

WORKING GROUP ON SANITATION PROMOTION

WATER SUPPLY AND SANITATION COLLABORATIVE COUNCIL

1-3 MARCH  
THUN, SWITZERLAND

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World Health Organization  
Geneva

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## MEETING REPORT

### Objectives of the meeting

The objectives of the meeting were to revise and finalize a Terms of Reference for the Collaborative Council Working Group on Sanitation Promotion, to create a work plan to meet the terms of reference and to suggest how the working group might be expanded to include members who could help implement the work plan.

### Participants

Fifteen persons attended this first meeting of the Working Group. The list of participants is attached as Annex E and descriptions of their background in the field of sanitation are attached as Annex F. Three of the fifteen were from developing countries and five were women. The participants represented a mix of professions vital to this sector, including social and behavioural sciences, technology, information, and research. Nearly all had both field experience in sanitation and experience with international development policy. Participants from developing countries were underrepresented because three of the six persons invited were not able to attend.

### Meeting agenda and method of work

Eight persons met a day prior to the meeting to decide upon the agenda. The Agenda is attached as Annex D. In addition, they decided that rather than having a chairperson throughout the meeting, that a number of participants would facilitate different sessions of the meeting. In all, nine participants served as facilitators. This resulted in a very participatory process throughout the meeting.

### Outputs of the meeting

The main outputs of the meeting were the final Terms of Reference, attached as Annex A, and a brief paper on The Problem of Sanitation, attached as Annex B. Most of the group discussions are incorporated into the final outputs and are not described further here. The problem statement (Annex B) was the result of a day and half of discussions and participatory exercises. It is a major achievement of the meeting. It builds upon and goes beyond the paper prepared for Rabat by Mayling Simpson-Hebert. The group endorsed distributing this paper as the first output of the working group.

The group also found it necessary to create a new working definition of "sanitation." The definition is both narrow enough to focus upon the problem of human excreta and broad enough to encompass all those measures that would be necessary to consider to achieve "safe interaction with human excreta," including drainage, hygienic behaviours, excreta reuse, pit emptying and disposal and others.

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**TERMS OF REFERENCE**

**WORKING GROUP ON HYGIENE AND SANITATION PROMOTION**

**1. DEFINITION OF SANITATION**

The definition of sanitation used for the purpose of this working group will be "safe interaction with human excreta".

**2. THE PROBLEM OF SANITATION**

In many developing countries sanitation coverage is very poor resulting in the persistence of many fecal-related diseases and increasing degradation of our fresh water resources. The foundation of this problem seems to be the low prestige accorded the field of sanitation, and this may be related to many cultural beliefs and taboos surrounding human excreta in many cultures. It has been difficult to move forward the field of sanitation in this socio-cultural climate. With the expected rapid population growth over the next thirty years in developing countries, total sanitation coverage appears to be impossible to achieve if the sector continues working in the same ways it has worked in the past.

**3. OBJECTIVE OF THE WORKING GROUP**

To make recommendations to the next meeting of the Collaborative Council in November 1995 on how best to raise the profile of sanitation in and outside of the water supply and sanitation sector and to help initiate and boost sanitation activities globally.

**4. FOCUS**

The focus of the working group is on the promotion of human behaviours and technologies related to safe excreta disposal.

**5. PRINCIPLES**

The working group agrees to accept and work under the following principles.

- 5.1 Sanitation involves both behaviours and facilities which should be promoted together to maximize health benefits.
- 5.2 In some cases improvements in hygiene behaviours without latrines can result in reduction of disease and can serve as valid programme objectives alone.
- 5.3 Sanitation is essential to protect human health but also to improve economic well being and reduce the immense cost of suffering and loss through disease. By investing in sanitation much environmental pollution will be prevented, resulting in cost savings.
- 5.4 Improvements in hygiene behaviours (especially the disposal of the stools of babies and young children, hand washing and keeping drinking water clean) and excreta disposal practices should be approached incrementally, based on local beliefs and practices and working toward small lasting improvements that are sustainable at each step, rather than the wholesale introduction of new systems.

- 5.5 Full latrine coverage is not attainable in many countries in the foreseeable future without a tremendous effort. Therefore, hygiene and sanitation programmes should aim at full latrine coverage for high risk and under-served groups and hygiene promotion should be for all. High risk populations will have to be determined within each country but will likely include urban and peri-urban and squatter areas and selected rural communities.
- 5.6 Sanitation should be treated as a priority topic in its own right and not simply as an add-on to a more attractive water supply programme. It requires its own resources and its own time-frame to achieve results.
- 5.7 The vital role of the private sector and non-governmental organizations in sanitation promotion is recognized. Government role is to protect public health. Ideally, for the promotion of sanitation, partnerships among these should be forged.

## 6. NEEDS FOR SANITATION PROMOTION

The working group identified a number of needs for sanitation promotion.

### 6.1 Attractive sanitation products

Sanitation promotion requires products attractive to consumers, based on their perceived needs and affordable to them. Very few such products exist at the moment. It also needs service support and enthusiastic promotion of the products.

There is a need for research to develop more attractive and affordable sanitation "products" such as facilities and more effective methods for improving hygiene behaviours.

### 6.2 Information, Tools and Guidelines

Countries could improve sanitation promotion if they had fuller information, tools and guidelines. Important identified needs are:

- a. A list of key hygiene behaviours that should be promoted.
- b. An inventory of the range of facilities designs available, especially for latrines and hand washing facilities, that are attractive to consumers (appropriate technologies) and affordable.
- c. A description of better strategies and methods for hygiene education.
- d. Tools that will empower the poor, especially women, to articulate their desires and express their demand.
- e. Guidelines on social marketing for promoting sanitation as a prestigious product.
- f. Guidelines for communication strategies, including advocacy, social mobilization and programme communication, for different levels, from grassroots to national and global levels.
- g. Examples for developing partnerships with the private sector.
- h. Indicators (with measurement methods) to assess sanitation promotion performance.

## 7. WORKING GROUP OUTPUTS

The task of this working group is to try to meet the above identified needs of countries to promote sanitation. The outputs of the working group will address each of the needs in the form of recommendations, guidelines or tools.

Some recommendations, guidelines and tools already exist and these can be made immediately available to countries. Other issues require a study of information and state-of-the-art. The immediate tasks detail the work the group will undertake between the first and second meeting in order to prepare for the final outputs.

## 8. IMMEDIATE TASKS

### 8.1 Provision of existing information to countries

The working group will:

- a. Disseminate information to countries on the key water and sanitation-related hygiene behaviours.

WHO held in 1992 a consultation on key hygiene behaviours. The consultation report is available for distribution and plans are underway for publishing a fact sheet for decision-makers.

- b. Disseminate the problem statement developed at this first meeting of the working group.

### 8.2 Gathering and analysis of other information for strategy development

The working group will:

- a. Gather and analyze information on the range of available affordable and saleable sanitation technologies.
- b. Identify research needs for producing more attractive and affordable hygiene facilities and better methods for hygiene education.
- c. Gather information on existing tools that can be used to empower people to express their needs and existing tools to estimate willingness to pay. Relevant information will be obtained from the Gender Issues Working Group.
- d. Gather case studies that demonstrate how to promote sanitation as a prestigious product.
- e. Gather information on communication strategies, including advocacy, social mobilization and programme communication for different levels from grassroots to national and global levels. This includes bringing forward earlier work of the CC Working Group on IEC.
- f. Prepare a background paper on the potentials and limitations of the private sector in sanitation and how to forge partnerships with the private sector. Liaise with the working group on Institutional and Management Options.
- g. Suggest relevant indicators for the periodic assessment of sanitation promotion performance and methods for measuring them. This information will be made available to the WHO/UNICEF Joint Monitoring Programme.
- h. Identify on-going projects and programmes where the outputs from this working group can be applied and feedback can be given to the group.

- i. Exchange information with the Working Groups on Water Pollution Control and Services for the Urban Poor in order to avoid duplicating efforts.
- j. Identify what tasks must be undertaken to advocate for sanitation at the senior policy level.

9. **WORK PLAN: March to September 1994**

DATE	ACTIVITY	RESPONSIBLE
March to September 1994	Support WHO in disseminating paper WHO/CWS/93.10.	WHO
	Disseminate WG paper on problem of sanitation.	CC Secretariat
	In order to commission a state-of-the-art paper on available affordable and saleable sanitation technologies, gather all available literature on the subject and identify research needs.	IRCWD
	Prepare a digested list of research needs in hygiene education.	IRC
	Prepare appreciation paper on participatory approaches for decision-makers.	UNDP/WB RWSG-EA
	Prepare a critical paper on existing tools to determine willingness-to-pay.	UNICEF/SKAT
	Gather case studies on how to promote sanitation as a prestigious product.	SKAT/UNICEF / IRC
	Prepare a paper on the potentials and limitations of government and non-government sectors in sanitation promotion.	UNDP/WB and WASH Project
	Prepare a critical review of existing documents on hygiene/sanitation "indicators" and methods to measure them.	LSHTM/Mr. Chatterjee
	Identify projects and programmes where outputs of the WG can be tested/applied as they become available.	WHO and WG members
September 1994	Second meeting of WG.	WHO
April 1995	Third meeting of WG.	
May 1995	Final report of WG. completed and delivered to CC secretariat.	

10. **APPLICATION OF THE OUTPUTS**

The outputs from the working group will be channelled as quickly as possible to on-going sanitation promotion projects and programmes for field testing and feedback to the group. Suggested programmes to date include the WHO Africa 2000 initiative for water supply and sanitation in Africa and the sanitation promotion programme of the Mvula Trust in South Africa, and on-going sanitation promotion programmes in Bangladesh, Indonesia, Lesotho and Uganda.

## THE PROBLEM OF SANITATION

### THE BURDEN OF POOR SANITATION

Every year, 2.5 million children die from diarrhoea that could have been prevented by good sanitation; millions more suffer the nutritional, educational and economic loss through diarrhoeal disease which sanitation can prevent. Poor sanitation has led to the infestation of nearly a billion people, largely children, with a variety of worm infections, with corresponding costs in health and energy. Human excreta are also responsible for the transmission of schistosomiasis, cholera, typhoid, and many other infectious diseases affecting hundreds of millions. Heavy investments have been made in water supply since 1980, but the resulting health benefits have been severely limited by the poor progress in sanitation. Besides this toll of sickness and disease, lack of sanitation is a major environmental threat to water resource systems and a fundamental denial of human dignity.

### CHARACTERISTICS OF THE PROBLEM

Like all complex problems, poor sanitation can be analysed on many inter-related levels. At its first meeting, the Collaborative Council Working Group on Sanitation Promotion started a process of identifying problems, barriers, and themes that appeared to operate on three levels.

#### **Level 1, The basic problem: sanitation isn't happening.**

Despite years of rhetoric, good intentions, and hard work, we are in fact making little or no progress; at current rates of "sanitation provision", the number of people without sanitation will not change in the next forty years: a staggering 2 billion people. This is astonishing, given the human capacity to solve problems, the fundamental nature of this basic need, and the enormous suffering caused by our failure to meet it. Yet those of us working in sanitation are agreed that, with some notable exceptions, we are either losing ground or barely holding the line.

#### **Level 2, barriers to progress: Why sanitation doesn't happen.**

Given the magnitude and importance of the problem, why is there so little progress? The barriers to progress found by the working group were varied and complex, but could generally be grouped into nine linked and overlapping categories.

Lack of political will There is little political incentive for government to deal with a difficult subject; politicians rarely lose their jobs because of poor sanitation, particularly as the people most in need have the least power. Political commitment is needed to create an environment in which demand for sanitation can grow, which in turn can strengthen political will. The issue of political will is thus both a cause and effect of other problems, and a key to successful sanitation promotion.

Low prestige and recognition Low cost sanitation facilities, and hygiene promotion campaigns have never been prestigious; politicians and movie stars don't demonstrate latrines. Among the professionals, the best and the brightest avoid low-cost sanitation as a low-status low-pay career, particularly as it is more difficult and demanding than high-status high-tech engineering or medical approaches. Among consumers, low-cost sanitation has no prestige in comparison with "conventional" water borne sanitation, as used by the industrialized world and by the economic elite of developing countries.

Poor policy at all levels Agencies responsible for creating a supportive environment for sanitation generally have ineffective and counterproductive policies at all levels. These include too much attention to water supply at the expense of sanitation, a focus on short-run outputs (hardware) rather than long term behaviour change, and subsidies that favour middle and high income communities. More fundamentally, there is often no philosophical approach to the problem upon which sound policy can be based.

Poor institutional framework Many players are affected by sanitation, and many more could be involved in

its promotion. The institutional frameworks in place fragment responsibilities between government departments, neglect the needs of the most vulnerable, and ignore the powerful role that NGOs and the private sector can play. It is clear that governments by themselves have failed to promote sanitation, and that existing institutional frameworks need to change.

Inadequate and poorly used resources Sanitation does not attract a fraction of the resources needed to do the job. It is at least as important for health as water supply, and is a far more demanding problem yet sanitation receives far fewer resources. Increasing resources are required just to maintain the *status quo*, as urbanization and population growth make the hazards of poor sanitation more acute. Where resources are available, far too much goes into hardware, and not enough into mobilisation and hygiene promotion.

Inappropriate approaches Even where sanitation promotion is attempted, the approach taken is often wrong. Attempts are made to find simple universal solutions which fail by ignoring the diversity of needs and contexts. Urban needs often differ from rural needs, the technological options offered are limited and inappropriate, and critical issues of behaviour are ignored or handled badly. The short-term is generally favoured over the long-term, and we fail to learn from collective experience.

Sanitation also fails by being defined and applied too broadly or too narrowly within a specific environment. In some cases, for example, the scope of environmental protection and pollution control becomes so broad that the focus on basic household excreta management is lost. In other cases, a narrow focus on pit latrine installation which ignores local drainage needs could exacerbate disease transmission during floods. Short term disaster relief fails to develop long term sustainable sanitation because the approach doesn't include the transition as a goal. Current approaches also stifle innovation and undermine confidence; we're so afraid of even more failure in this difficult field that we don't take the risks required for success.

Neglect of consumer preferences Too often, we try to sell what people don't want and/or can't afford. Low-cost technologies are often seen by consumers as low-status technologies, while many "appropriate" technologies are far beyond the economic reach of those most in need. Promoters try to sell sanitation facilities on health benefits, where people really want the privacy, comfort, and status which sanitation can offer. Much hygiene promotion is based on messages which ignore existing knowledge, belief, and experience. Very simply, most of us promoting sanitation simply don't listen to what people want or believe.

Ineffective promotion and low public awareness People don't want to talk or think about faeces, so selling the idea of sanitation is difficult. Yet the engineers and doctors frequently responsible for selling sanitation are often unaware of effective promotional techniques, and continue with top-down approaches that alienate "target populations" by denying their voice, desires, and involvement in the process. Those in charge are not trained for this job of promotion. Adoption of social marketing and participatory approaches to sanitation is promising, but this is still in its infancy; we have much to learn.

Women and children last Women are potential agents of change in hygiene education, and children are the most vulnerable victims, but men usually make the decisions about whether to tackle the problem, and how. Many sanitation programmes ignore the disposal of children's faeces, even though these are a major reservoir of disease pathogens. Women often need privacy and security in sanitation more than men, yet are unable to express these needs effectively in many societies. Those with the most at stake thus have the weakest voice.

### **Level 3, Cross-cutting themes: demand and taboo.**

Little effective demand If enough people wanted the available sanitation improvements badly enough, many of the above problems would resolve themselves. These problems are frequently expressed as constraints upon supply; we also need to think about factors which limit economic or political demand. Some people may want sanitation very badly, but are powerless to express that want in financial or political terms; some may want sanitation facilities, but not at the available price; and others may not want the available "improvements" at any price. Where sanitation is poor we need to understand why the effective demand is low, to determine whether it is most amenable to political, financial, technical or informational change.



Cultural taboos and beliefs In most cultures, excreta are taboo, and viewed as a disgusting and/or dangerous nuisance not to be discussed openly or seriously. Nobody wants to be associated with excreta; even those who actually reduce its offensive characteristics for others are stigmatized by association. Problems can't be solved if people don't want to talk about them, and don't want to be associated with their solution. In many contexts, ancient or more modern technical taboos can block the safe reuse of human waste as a resource. The excreta taboo lies behind many of the barriers to progress.

### CONCLUSIONS

The above is not a complete description of the Working Group's initial analysis of the problem of sanitation, but reflects most of the issues raised and indicates their complexity. Although the problems above are grouped into differing categories and levels, they obviously interact to varying degrees in different contexts.

What is to be done? In some cases **solutions exist but are not widely enough known**; in others **further work is required to develop fresh approaches**; in still others **further work is required just to define the problem** more clearly. The Working Group is not in a position to address all such barriers in a comprehensive fashion, but it can and must **identify principles, set priorities, develop strategies, and work toward solutions** of the sanitation problem. The Working Group's Terms of Reference set out the approach to these tasks.

## ANNEX C

### MEETING AGENDA

<u>1 March</u>	<u>Facilitator</u>
9:00 Welcome	M. Simpson
9:05 Background and purpose of Working Group Objectives of the meeting	B. Locke
9:20 Introductions	P. Kolsky
10:20 Meeting logistics Review of agenda	M. Simpson
10:40 Coffee/tea break	
11:00 Brainstorming on sanitation promotion - barriers, limiting factors, opportunities (Rabat paper & more)	M. Ramonaheng & A. Chatterjee
12:30 Lunch	
2:00 Creation of analytical framework on barriers/ opportunities Review preliminary TOR "principles"	M. Ramonaheng & A. Chatterjee
8:00 Sharing of experiences/resources on sanitation - Derrick Ikin on Bangladesh	S. Mtero

<u>2 March</u>	<u>Facilitator</u>
9:00 Continuation of brainstorming session on sanitation	M. Ramonaheng A. Chatterjee
10:30 Coffee/tea break	
11:00 Determine specific WG output to CC in November 95 "What we think we can achieve."	U. Winblad V. Tobin
12:30 Lunch	
2:00 Review part 2 of preliminary TOR	U. Winblad V. Tobin
Suggested TOR for Working Group	
Review Working Group composition	
8:00 Sharing of experiences/resources	S. Mtero
- Bjorn Brandberg on Malawi	
 <u>3 March</u>	
9:00 Sharing of preliminary report on "The Problem of Sanitation" as result of brainstorming session	P. Kolsky
10:00 Sharing of results of group work on revising "principles" and TOR.	M. Simpson
10:40 Coffee/tea break	
11:00 Further discussion on TOR	M. Simpson
12:30 Lunch	
2:00 Workplan March 1994 to May 1995 Budget implications and priority activities Planning/preparation for next meetings	D. Ikin & R. Schertenleib
3:00 Closing - thanks and acknowledgements	B. Locke

**"Waste is a resource in the wrong place."**

- Old Chinese saying

ANNEX D

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## PARTICIPANTS' PROFILES

### **Bjorn Brandberg**

Bjorn Brandberg began his career as a builders foreman before training as a building engineer and as an architect. During the last 15 years he has specialized in low-cost sanitation for rural and low-income urban communities, developing implementation systems incorporating both hardware and software components. He is the designer of the "San Plat System", a low cost sanitation system for developing countries, which he believes to have had a catalyzing effect in many developing countries, especially in Eastern and Southern Africa.

Since 1990 Mr Brandberg has been an independent consultant working principally through major international external support agencies, including the World Bank, UNICEF, HABITAT, SIDA and NORAD. His work has focused on trouble-shooting in low-cost sanitation programmes.

### **Ashoke Chatterjee**

Ashoke Chatterjee is a communication specialist whose professional experience includes over ten years in industry, six years with the International Monetary Fund (Washington DC), five years in Government-sponsored tourist promotion and ten years as Executive Director of the National Institute of Design (NID), Ahmedabad, India. For the past nine years he has worked with the NID as a teacher and practitioner.

Mr Chatterjee has been a consultant to India's National Drinking Water Mission, to IRC (the Hague), to UNICEF (New York) and to the IUCN (Pakistan and Geneva). His recent IEC experience also includes assisting IEC efforts in several Indian states, particularly to the state of Rajasthan in setting up an IEC bureau in the Department of Health and to strengthening communication/health education strategies of the government of Himachal-Pradesh. He is also working with an Ahmedabad based NGO on AIDS awareness and control in Gujarat state, and as an adviser to the government of India on AIDS communication issues. These and other projects in the communications sector are linked to NID's education programme in communication design, linking classroom instruction to actual hands-on field experience.

### **Lucy Clarke**

After studies, in France and Scotland, in languages, then communication, Lucy Clarke came to WHO/Geneva in 1992. After an internship followed by employment with the Health Learning Materials Programme, she joined the Community Water Supply and Sanitation Unit one year ago and is now a Technical Officer. She continues to study Community Health part-time at the University of Geneva.

Within WHO, Ms Clarke's principal role is to provide support to the hygiene education sub-programme. Amongst other activities, this includes advising the unit on document presentation and general communications strategies; and coordination of a workshop on School Water, Sanitation and Hygiene Education in West Africa, to be held in Ouagadougou, Burkina Faso in April 1994, and of the national post-workshop activities of the eight participating countries.

### **Derrick O. Ikin**

Derrick Ikin is a sociologist working as a project coordinator at SKAT in St. Gall, Switzerland on issues of user participation and technology, small entrepreneurs, and marketing in water, sanitation, energy and building materials projects. He also consults on monitoring, evaluation and project management. He was born and educated in South Africa and worked for a time with Rank Xerox as a systems analyst and financial planner. Since 1983 he has concentrated on agricultural cooperatives and more recently, water and sanitation. His overseas experience includes Indonesia and Bangladesh.

### **Dan C.O. Kaseje**

Dan Kaseje is Technical Advisor in Community Health and Acting Head of the Health Department at the International Federation of Red Cross/Red Crescent Societies in Geneva. A medical doctor with post-graduate public health training, his professional experiences in Kenya include roles as a team leader of a district health management team, as a lecturer in Community Health, Communicable Disease Control and Environmental Health and as initiator and manager of district community-based health programmes with major hygiene and sanitation components.

At an international level, Dr Kaseje has been director of the Christian Medical Commission of the World Council of Churches, Geneva. This role involved providing technical support and capacity building for churches' health activities, of which water and sanitation were key elements. Dr Kaseje's current position with the Federation of Red Cross/Red Crescent Societies involves working with the national societies on health development and management of the health aspects of disaster and emergency situations. At its last Assembly, the Federation committed itself to the strengthening of its members' involvement in hygiene and sanitation. An Action Plan for implementation of this decision is currently being developed.

### **Pete Kolsky**

Pete Kolsky is a public health engineer by training and had worked on different aspects of water and sanitation for fifteen years before coming to the London School of Hygiene & Tropical Medicine in 1991. His work experience includes over seven years in developing countries. He is the acting head of the research programme at the School on Environmental Health in Developing Countries, funded by the British government.

His introduction to sanitation came fifteen years ago in Alexandria Egypt whilst exploring low cost drainage as a means to alleviate appalling conditions introduced to slums provided with plenty of water supply...but no drainage. He learned that water supply without sanitation was a mess, a lesson that he feels still needs to be learned by many in powerful positions!

Besides his own technical interests in sanitation and surface water drainage, Mr Kolski has learned much from his colleagues at the London School of Hygiene & Tropical Medicine about behavioural aspects of sanitation, in particular anthropological and participatory techniques to assess the success or failure of water, sanitation and hygiene promotion efforts through evaluation of hygiene behaviour and the health risks of agricultural reuse of both untreated and partially treated sewage.

### **Brian Locke**

Brian Locke was born and educated in England but has spent most of his working life abroad. Since 1966 he has been with UNDP in various country offices in Africa, Asia, Latin America and the Caribbean, with a seven year spell in its New York headquarters. He has been involved in administering the development programme of technical cooperation in member states in all sectors. His interest in sanitation began in 1968, however, when he introduced the so-called "Vietnam Slab" water siphon sealed latrine to the Yangambi tribe and arranged for its local manufacture. Later involvement in the sector included a project to install water and sanitation "comfort stations" in Ibadan, Nigeria. A period of several months without water supply in Mogadishu, reinforced his commitment to the sector.

For the last five years Mr Locke has worked for the Collaborative Council, firstly as deputy to the Chairman, and since the Oslo meeting of 1991, as deputy to the Executive Secretary.

### **Shungu Mtero**

A biologist by training, since 1991 Shungu Mtero has been Principal Medical Research Officer on Water and Sanitation at the Blair Research Institute, Harare, Zimbabwe. The Blair is a research department within the Ministry of Health and Child Welfare, charged with initiating and promoting research and development within the fields of water and sanitation, malaria, schistosomiasis, AIDS and health systems. Ms Mtero's principal role involves studying health issues in relation to the appropriate technologies developed by Blair and used in the country's rural water supply and sanitation programme. This involves not only looking at microbiological aspects of health and disease but also the sociological aspects of disease transmission which cover health behaviours. Results generated can be used for promotion of water and sanitation programmes in the country, through service and training functions also provided by the Department.

Together with the Institute of Water and Sanitation Development (Zimbabwe) and the Swiss Tropical Institute, Ms Mtero is currently conducting a study on the measurement of health impact of improved water

supply and sanitation. Within this study, the need to use hygiene behaviour change as an indicator of health impact is recognized, and participatory research tools for gathering data are being tested.

#### **Mamonaheng Ramonaheng**

Mrs. Ramonaheng is coordinator of the Urban Sanitation Improvement Team (USIT) within the Department of Housing in the Ministry of Home Affairs, Lesotho. She has been with the team since 1981. USIT is the first national sanitation project in Lesotho and is responsible for developing and upgrading on-site sanitation facilities in the urban and peri-urban areas of the country. The programme, in its current form, was launched in 1982 and received funding from United Kingdom ODA and German KFW in 1987.

USIT promotes construction and use of VIP latrines through a Sanitation Fund. The main objectives of the programme are to increase the prevalence of adequate sanitation; to increase the level of knowledge about sanitation and hygiene and to improve targeting of these to the lowest-income groups of the community. To achieve this many activities are undertaken: loans are offered to all in urban areas irrespective of income; safe disposal and treatment of pit sludge are provided; demonstration units are built; educational materials are created. The team encourage the use of low-cost technologies, made with locally produced materials, and community execution and management of projects.

#### **Roland Schertenleib**

A civil and environmental engineer by training, Dr Schertenleib has worked in the field of sanitation since 1970, initially dealing principally with sanitation problems in industrialized countries and since 1980 working mainly on water and sanitation issues in economically less-developed countries.

From 1970-1974 he worked with a private consulting firm in Switzerland in the design and construction of sewerage systems and municipal wastewater treatment plants. Since 1976 he has worked for the Swiss Federal Institute for Environmental Science and Technology (EAWAG), originally conducting applied research in wastewater engineering and water pollution control in highly industrialized countries and, since 1980, as Director of the International Reference Centre for Water Disposal (IRCWD). In 1993 IRCWD became a department of EAWAG working on sanitation and water treatment in developing countries. IRCWD seeks to evaluate and support replicable and affordable technical solutions appropriate to local physical and socio-economic conditions.

#### **Gunner Schultzberg**

Gunner Schultzberg has is an engineer by training, with post-graduate training in public health, and is Manager of the UNDP/World Bank Regional Water and Sanitation Group, East Africa (RWSG-EA). He has been with the RWSG-EA for almost six years and previously spent 17 years working in the field of environmental health with WHO.

The RWSG-EA is implementing a pilot sanitation project in Kampala, Uganda and prepared a number of case studies on urban sanitation. Together with WHO, RWSG-EA has conducted a workshop on "Environmental Sanitation Implementation in Informal Settlements in Nairobi". Currently the Group is implementing a project together with WHO on "Participatory Tools for Hygiene Education", involving six countries in the region. The other Regional Water and Sanitation Groups of the Program have considerable experience in sanitation projects, RWSG-West Africa in particular.

#### **Mayling Simpson-Hebert**

Mayling Simpson-Hebert is a medical anthropologist specializing in water and sanitation hygiene behaviours, hygiene education, the role of women and community participation. In the past she has worked on behavioural aspects of infant feeding, family planning and childhood immunization. She has carried out anthropological field work in Iran and Philippines and has worked on water and sanitation problems in nearly twenty developing countries.

Dr Simpson-Hebert began work on water and sanitation in 1979 with the UNDP/World Bank Technology Advisory Group for Water and Sanitation, where she served as an advisor on socio-cultural factors in water and sanitation. She produced TAG Note 1 on *Methods for Gathering Socio-Cultural Information for Water Supply and Sanitation Projects*. She worked at the Johns Hopkins University, School of Hygiene and Public Health from 1979 to 1985, spending part of that time in the Philippines directing an infant feeding study. In 1985 she became involved in the PROWESS Project and that interest has resulted in an effort currently underway to produce a tool kit for participatory hygiene education together with the UNDP/World Bank Water and Sanitation Program.



In 1991 Dr Simpson-Hebert joined the Division of Environmental Health of the World Health Organization, where she working to develop better methods for hygiene education and the promotion of sanitation. She is the current coordinator for the Working Group on Promotion of Sanitation.

#### **Vanessa Tobin**

Vanessa Tobin is presently working for UNICEF, New York as Senior Project Officer, Water Supply, and Environmental Sanitation. She previously worked for UNICEF in Pakistan from 1988 to 1990 and in Nepal from 1981 to 1984. Her academic background is in engineering and community health. Other professional experience includes periods in the south of Sudan with an NGO (Euro Action Accord) and in Lesotho for the UK Overseas Development Administration (1986 to 1988).

#### **Hans van Damme**

A geologist by education, Hans van Damme spent part of his career as project manager of hydro-geological surveys in the Netherlands. He helped to initiate the International Water and Sanitation Centre in the Hague, and in 1981 became its Director. The Centre now employs 40 multi-disciplinary staff, addressing social issues in rural and low-income urban water supply and sanitation programmes, in particular their development through partnership and the integration of sanitation and water supply.

During studies and professional life Mr van Damme has lived in Curaçao and Italy. He has travelled to over 70 countries in all regions of the world, and conducted missions in Africa and Asia. In recent years Mr van Damme has chaired Working Groups of the Collaborative Council on Public Information/Promotion and on Information, Education and Communication (IEC). He is currently engaged in promoting these issues at national and global levels.

#### **Dennis B. Warner**

A civil engineer by training, Dennis Warner is the chief of Rural Environmental Health at WHO/Geneva and senior technical officer for Water Supply and Sanitation for WHO. Over a thirty year professional career, he has worked in the field of water supply and sanitation for the US Peace Corps, the Government of Tanzania, several universities and consulting firms, and the World Bank. He was director of the USAID WASH Project from 1981 to 1984, and has been with WHO Headquarters since 1989.

Dr Warner's concern for sanitation arose from work on the development of planning and evaluation methodologies for water and sanitation projects. Since the measurement of health impacts was not feasible in most cases, Dr Warner's interest shifted to the role of behavioural change as an intermediate indicator of health changes. His current interests and activities in sanitation at WHO are directed towards developing problematic approaches for encouraging sustainable, household and community involvement in sanitation improvement efforts.

#### **Uno Winblad**

Uno Winblad is an architect/planner with thirty years experience of development assistance as a project manager, researcher, teacher and consultant. Over the past twenty years his main field of activity has been environmental sanitation and education in Africa, the Middle East, Asia and Latin America. He is the author of a manual entitled *Sanitation Without Water* (Macmillan, 1985) and since 1985 has served as SIDA's in-house consultant on environmental sanitation. His current assignments include the role of principal investigator for the SIDA-funded action research project "No-cost/low-cost sanitation".