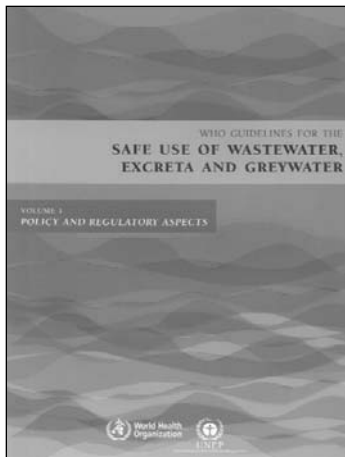


## Reviews and resources



### **Guidelines for the safe use of wastewater, excreta and grey-water**

WHO

2006, Geneva, can be downloaded free from [http://www.who.int/water\\_sanitation\\_health/wastewater/gsuwww/en/index.html](http://www.who.int/water_sanitation_health/wastewater/gsuwww/en/index.html)

These WHO Guidelines come in four volumes. Volume I presents policy aspects and regulation and includes executive summaries of Volumes II, III and IV, references, an index to Vols I–IV and a glossary of terms. Volumes II and III address the safe use of wastewater in agriculture, and the safe use of wastewater and excreta in aquaculture, respectively. Given the importance that nutrient recycling, ecosan approaches and urine separation have taken on in recent years, a special Volume IV has been devoted to excreta and greywater use in agriculture. Of particular note are the colours used for the different volumes – very evocative!

The volumes are structured similarly, with minor variations. Chapters 1 to 5 cover an introduction; an explanation of the Stockholm framework, which is a harmonized approach to risk assessment and management; an

overview of health risk assessment for the different types of use; criteria for setting health-based targets; and examples of health protection measures that can be used in the different cases. Chapters 6 to 9 address monitoring and assessment of safe use systems, and the socio-economic, environmental and financial (respectively) considerations to take into account. Chapters 10 and 11 address policy, and planning and implementation requirements. Of note also, these guidelines are now jointly produced by WHO and UNEP (United Nations Environment Programme), with FAO (Food and Agriculture Organization) associated with Volumes II and IV; so there is no longer the need to refer to independent guidelines – a step in the right direction.

With growing water scarcity, nutrient mining, increased demand for food, and more stringent environmental quality requirements, wastewater, excreta and greywater are increasingly being seen as assets contributing to all of these needs. However, their value lies in safe use, particularly from a contamination and health-risk perspective. To date, the

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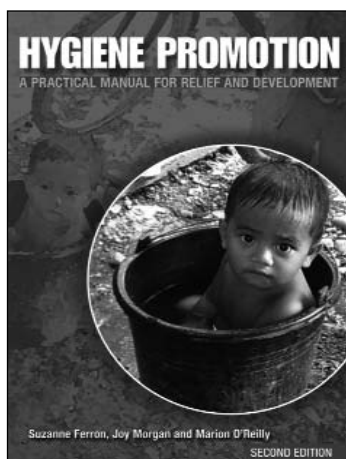
acceptable way of doing this is to treat/stabilize the waste prior to use. However, farmers in many developing countries use these resources without being able to provide appropriate treatment measures. In the 1989 guidelines for safe use, water quality guidelines (verification guidelines) for bacteriological quality and helminth eggs were the norm. Two sets of values for these parameters were available depending on the type of crops grown. Most countries were unable to meet these, and farmers remained exposed to and dependent on the use of poor quality water, with no official recourse to alternative suggestions for minimizing risk.

Since then the thinking has evolved, and the current guidelines address this dilemma faced by professionals, users, and policy and decision makers by suggesting the application of locally adapted standards. This is what the guidelines encourage one to do right in the introduction: 'the guideline is intended to be used as the basis for the development of...national approaches (including standards and regulations) to managing the health risks from hazards...as well as providing a framework for national and local decision making.'

The latter expectation is however a bit far-fetched.

Whilst these guidelines are the equivalent of scientific handbooks, moving from here to setting national guidelines is a big step. It requires more local-, country- or region-specific data for adaptation and more technical capacity at the country level. In effect, WHO, having realized this, has initiated research to translate the guidelines into practice via case studies in the cities of Africa and the Middle East with the support of IDRC (International Development and Research Center, Canada) and FAO. And for policy and decision makers to really get value for money from these guidelines, they would require policy briefs, outlining the main issues and messages with food safety recommendations applicable to the local context. Perhaps something for WHO to target next?

The scientific and research community will find these volumes extremely handy. Recently WHO has been accused of not doing its homework when preparing guidelines, but in this case, the statement is unsubstantiated. The degree of detail provided, the technical overviews, the interpretation of a vast array of epidemiological information (particularly in Volume II with special reference to developing country contexts) is nothing short of exemplary. Simply explained, the major difference between



the 1989 guidelines and these is that WHO has moved to a 'health-based target' approach in accordance with the principles of the Stockholm framework. A tolerable burden of disease, expressed as DALYs (disability-adjusted life years) is set at  $1 \times 10^{-6}$  per person per year, and this can be achieved through a single or a combination of options which include treatment and other health protection measures. Indeed the guidelines accept that countries may set a 'lower target' than 'full protection' in the short or medium term.

Readers seeking to understand how health-based targets are set should refer to Chapter 4 of Volume II which gives the clearest explanation.

The volume on excreta and greywater use is somewhat repetitive (perhaps to prove a point) and could be improved with some editing. The reader has the impression that it also promotes excreta and greywater use. Apart from this, it is very instructive on all aspects ranging from excreta-related infections to pathogen survival to the technicalities of treatment.

Not surprisingly, given the content, these guidelines are the equivalent of state-of-the-art textbooks for students of waste-water, excreta and greywater use. So believe it when I say that filling your head with

this stuff, can be a very fulfilling experience!

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**Hygiene Promotion: A Practical Manual for Relief and Development, 2nd edition**

Suzanne Ferron, Joy Morgan and Marion O'Reilly

2007, Practical Action Publishing, 256 pages, paperback, ISBN 9781853396410, £15.95

This manual puts the emphasis on relief work but contains a wealth of ideas and practical advice for a wider hygiene promotion audience. The revised edition contains useful new material, notably the up-to-date information on the Sphere standards for humanitarian interventions and the practical section on project planning which guides the reader through using a problem tree, carrying out a risk analysis and developing a logical framework.

The first chapter is a theoretical overview covering a broad range of topics relating to the book's participatory philosophy. It includes a good summary description of the emergency context and the way this changes over time and highlights some specific

issues relating to gender and to HIV/AIDS. Key scientific findings demonstrating the value of hygiene promotion are also given. The real strength of the book lies in the four subsequent chapters. These deal sequentially with four stages of the project cycle: assessment, planning, implementation, and monitoring and evaluation. Key tasks associated with each stage are outlined along with suggested tools and methods for tackling them using a participatory approach.

An extensive set of appendices accompanies these chapters providing clear, detailed guidance on how to use the main tools and methods referred to, along with a comprehensive set of pictures for use in participatory discussions, particularly with low-literacy groups. There is a useful summary of the main diseases associated with poor hygiene and sanitation and a brief, illustrated guide to sanitation options for emergency settings.

Proponents of a social marketing approach to hygiene promotion will be disappointed by the cursory attention given to this topic. The authors argue strongly from the outset for a participatory, community development focus; nevertheless some of the data collection tools presented, notably focus groups

and behaviour trials, are social marketing favourites. It would have been good to see a little more discussion about the use of these tools to understand motivations and how this understanding could be used by community groups to strengthen their hygiene communications.

The manual is aimed at fieldworkers and will be ideal for those already committed to a participatory approach, looking for practical ideas specific to hygiene promotion and guidance on how to apply current best practice in an emergency setting. A resource rather than a recipe book, it will also be of great value to trainers, not only for the specific training exercises and sample training courses outlined but because the clear and simple explanations given throughout provide ideal content for training materials. Students will find this book a useful and readable introduction to participatory hygiene promotion and to practical aspects of project planning, implementation and evaluation.

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