

Looking back: Looking ahead



“Safe water supply and adequate sanitation to protect health are among the basic human rights. Ensuring their availability would contribute immeasurably to health and productivity for development.”

© World Health Organization 2003

All rights reserved. Publications of the World Health Organization can be obtained from Marketing and Dissemination, World Health Organization, 20 Avenue Appia, 1211 Geneva 27, Switzerland (tel: +41 22 791 2476; fax: +41 22 791 4857; e-mail: bookorders@who.int). Requests for permission to reproduce or translate WHO publications – whether for sale or for noncommercial distribution – should be addressed to Publications, at the above address (fax: +41 22 791 4806; e-mail: permissions@who.int).

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

The World Health Organization does not warrant that the information contained in this publication is complete and correct and shall not be liable for any damages incurred as a result of its use.

Printed in India, June 2003.

The World Health Organization

Established in 1948, with its headquarters at Geneva, the World Health Organization (WHO) is a specialized agency of the United Nations. It is governed by the World Health Assembly, consisting of representatives from 192 Member States, which meets at least once a year. The Organization is headed by the Director-General, who is appointed by the Health Assembly on the nomination of the Executive Board.

Six regional offices for Africa, the Eastern Mediterranean, South-East Asia, Europe, Western Pacific and the Americas have been established to further the purpose of WHO which is “the attainment by all peoples of the highest possible level of health”. Their work is supported by technical committees which have enabled WHO to make notable strides in the eradication of diseases such as smallpox, polio, leprosy and guineaworm and the control of cholera, malaria and tuberculosis. WHO also deals with other global problems that directly impact on health; it has drafted and built consensus around important conventions concerning sanitary requirements and other measures for preventing the international spread of disease and has sponsored research on the problems of environmental pollution.

WHO has always maintained that sanitation is literally the foundation on which a sound public health structure must be built. Over the last 50 years WHO has generated, evaluated and shared new knowledge on safe disposal of excreta, sewage and community waste and been at the forefront of exploring the linkages between environmental pollution and change, and people’s health and livelihoods. There is no doubt that people, especially poor people living in countries where basic infrastructure is lacking, are seriously affected by environmental degradation. In addition, the ongoing and deteriorating situation of sewerage causing environmental pollution needs urgent and serious attention.

This publication documents the history and experiences of WHO’s involvement in environmental sanitation.

TABLE OF CONTENTS

Chapter 1

Page 2 The Global Picture:
Why action is needed to
improve environmental
sanitation

Chapter 2

Page 5 WHO and
Environmental
Sanitation: A priority
from the beginning

Chapter 3

Page 8 Historical
Developments: Planning
and implementing
sanitation systems
around the globe

Chapter 4

Page 13 Improved
Sanitation = Better Health:
Spreading the message
through advocacy,
supporting research,
information dissemination

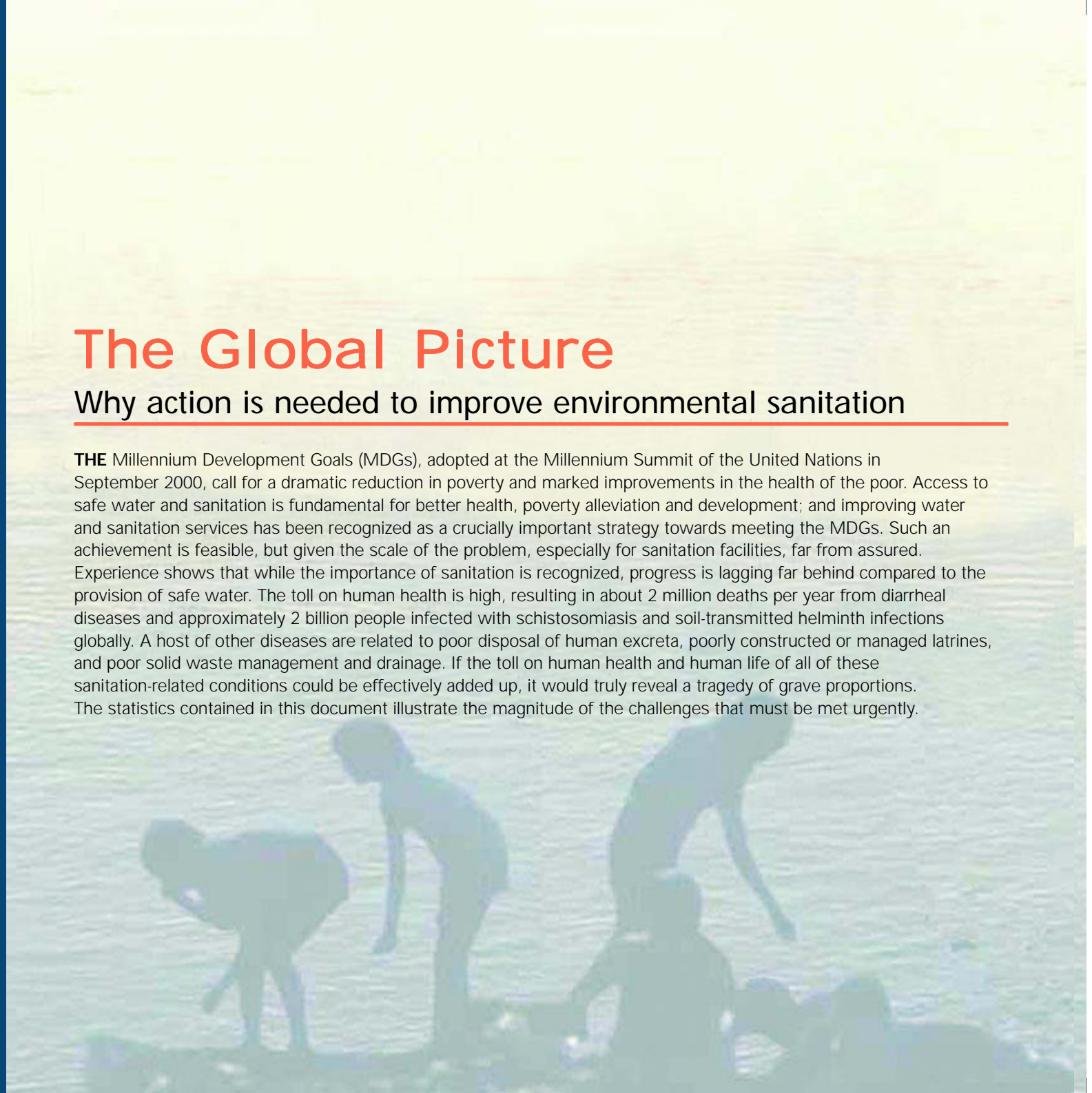
Chapter 5

Page 18 Future Challenges

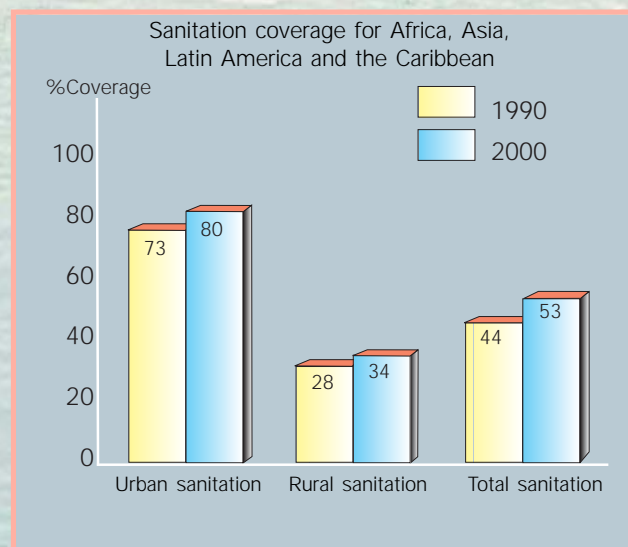
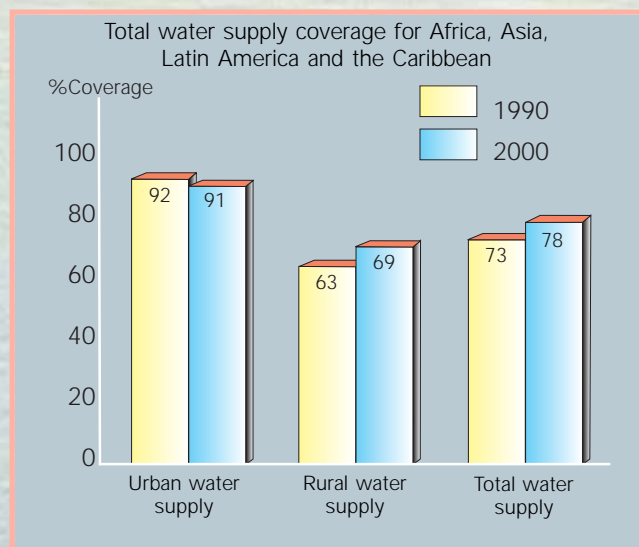
The Global Picture

Why action is needed to improve environmental sanitation

THE Millennium Development Goals (MDGs), adopted at the Millennium Summit of the United Nations in September 2000, call for a dramatic reduction in poverty and marked improvements in the health of the poor. Access to safe water and sanitation is fundamental for better health, poverty alleviation and development; and improving water and sanitation services has been recognized as a crucially important strategy towards meeting the MDGs. Such an achievement is feasible, but given the scale of the problem, especially for sanitation facilities, far from assured. Experience shows that while the importance of sanitation is recognized, progress is lagging far behind compared to the provision of safe water. The toll on human health is high, resulting in about 2 million deaths per year from diarrheal diseases and approximately 2 billion people infected with schistosomiasis and soil-transmitted helminth infections globally. A host of other diseases are related to poor disposal of human excreta, poorly constructed or managed latrines, and poor solid waste management and drainage. If the toll on human health and human life of all of these sanitation-related conditions could be effectively added up, it would truly reveal a tragedy of grave proportions. The statistics contained in this document illustrate the magnitude of the challenges that must be met urgently.



Water supply and sanitation should go hand-in-hand in community improvements, but unfortunately this is often not the case. Little has changed since the 1996 WHO/UNICEF Joint Monitoring Report concluded that: "Analysis of the global sanitation figures leaves the unavoidable impression that sanitation has been almost totally neglected in the four years from 1990 to 1994. The comparison with water supply progress makes it all too clear that investment in sanitation improvements remains a low priority for many governments and communities." Recent statistics indicate that sanitation coverage can barely keep up with increasing populations. The decade from 1990-2000 saw a worldwide population increase of 15%, up from 5.27 to 6.06 billion people. During this same period, an enormous number, about 747 million people, have gained access to improved sanitation. However, the huge population increase means that, despite growth in absolute terms, the improvement in percentage coverage of sanitation facilities is less impressive: up from 55% (2.9 billion) in 1990 to 60% (3.6 billion) in 2000. This still leaves a total of 2.4 billion people without sanitation. The vast majority of these unserved people (93%) live in Asia and Africa. The greatest need for improvement is in rural areas and peri-urban areas.



Source: GWSSA 2000

Some facts and figures showing links between poor sanitation and health

- 2.4 billion people lack access to basic sanitation.
- 2 million people die every year from diarrheal diseases (including cholera) associated with inadequate water supply, sanitation and hygiene. The majority are children in developing countries.
- Water, hygiene and sanitation interventions reduce diarrhea incidence by 26% and mortality by 65%.
- 200 million people, in 74 countries, are infected with schistosomiasis and soil-transmitted helminths and 20 million suffer severe consequences.
- Basic sanitation reduces schistosomiasis by up to 77%.
- 500 million people are at risk from trachoma and 146 million are threatened by blindness.
- Trachoma can be prevented by improving sanitary conditions and hygiene practices.

The following examples illustrate why it is important that water and sanitation improvements should go hand-in-hand; they clearly highlight the health risks of using raw or independently treated wastewater in irrigation; a practice associated with a prevalence of intestinal helminth infection. They also point to practical ways of dealing with the situation to improve the health of affected individuals.

In **Mexico**, a study published in 2000 showed that partially treated wastewater was directly responsible for 80% of all *Ascaris* infections and 30% of diarrheal disease in farm workers and their families. By the simple expedient of holding wastewater longer in a series of retention ponds the risk of either *Ascaris* infection or diarrheal disease was reduced to a minimum.

In **Jerusalem**, a cholera epidemic in 1970 was traced to the consumption of salad vegetables irrigated with raw wastewater. Health authorities isolated the same cholera strain from infected individuals, sewage, irrigated soil, and the irrigated produce. The epidemic quickly subsided when the vegetables grown with the untreated wastewater were confiscated.

It should be pointed out that such risks are no longer confined and of just local importance. As food products travel greater distances to their place of consumption, the impact of poor sanitation will be increasingly felt in countries where people are confident that they are not exposed to sanitation-associated health risks.

WHO and Environmental Sanitation

A priority from the beginning

IF health is seen not just as the absence of disease but also as a central goal of human development, then the protection of the environment and the protection and improvement of health are mutually supportive.

The sanitary revolution of the 19th century started in London in 1852, when the Metropolitan Water Act required the water supply to be filtered; soon after, John Snow demonstrated that, by turning off the pump at Broad Street (pumping water from the river Thames), the London cholera epidemics of 1855 would subside. The 1892 Hamburg cholera epidemic confirmed the association of polluted water and the disease. The routine bacteriological examination of London's water supply was introduced in 1885, and in 1908 the chlorination of water supplies started, becoming perhaps the most efficient and effective health technology at that time. In the Americas, the Pan American Sanitary Bureau (PASB), founded in 1902, advocated improvements in sanitation, sanitary sewage disposal, and soil drainage right from the outset. In 1936 the Health Organization of the League of Nations published reports on water supply, sewage treatment and the collection and treatment of domestic refuse. It was against this background of increasing international focus on environmental sanitation, that the Committee on Environmental Sanitation was established by the first World Health Assembly in 1948.



Water supply and sanitation: Milestones in the UN

- 1948** WHO assumes a constitutional function to promote the improvement of environmental hygiene.
- 1950** The Executive Board gives priority to rural environmental sanitation. WHO and UNICEF collaborate closely.
- 1957** First drinking water standards published by the WHO Regional Office for Europe.
- 1959** World Health Assembly decides a global “spearhead” program for community water supply.
- 1961** Charter of Punta del Este sets targets for water supply and sanitation.
- 1977** UN Water Conference in Mar del Plata.
- 1978** Launch of the International Drinking Water Supply and Sanitation Decade.
- 1980s** WHO links the IDWSSD with primary health care.
- 2000** UN announces Millennium Development Goals (MDGs).
- 2002** Target adopted at the World Summit for Sustainable Development to reduce by half the number of people who do not have access to safe sanitation facilities by 2015.

The Committee’s first, groundbreaking report, published in 1949, concluded that physical development, health and well-being, depended on the management of environmental factors which included excreta and community waste disposal; drinking water; food safety; healthy personal habits; understanding the causes of diseases; and, the control of disease vectors. It was decided to focus action on the reduction of those infectious diseases by monitoring how they related to environmental management, and that the lessons learned in public health engineering from the sanitary revolution in Europe and the Americas would be of particular value. Changes from old patterns of life were an essential condition for the achievement of better environmental health.

To spearhead these changes WHO was asked to develop/refine international sanitary standards and guidelines for national health services to involve them in priority environmental health programs, and to educate the public. WHO undertook to:

- Link environmental sanitation with other health-related activities.
- Cooperate with other UN bodies.
- Undertake demonstration projects, especially for rural sanitation.
- Promote research and disseminate information.
- Cooperate with governments in strengthening national health services in environmental matters, and develop human resources.

Since its inception in 1948, WHO had defined how it would pursue the achievement of “The improvement of sanitation, and other aspects of environmental hygiene” as called for in Article 2(l) of the Constitution. **The First World Health Assembly gave environmental sanitation the same priority as malaria, maternal and child health, tuberculosis, venereal diseases and nutrition and these priorities became known as ‘the big six’.**