



## WELCOME TO THE ACTION DECADE

World Water Day, 22 March 2005, heralded the start of the International Decade for Action proclaimed by the United Nations General Assembly. **Water for Life** calls for a coordinated response from the whole United Nations system. The timing is significant: the end of the action decade in 2015 is the target date for achievement of many of the Millennium Development Goals (MDGs). Those goals were amplified by the 2002 World Summit on Sustainable Development in the Johannesburg Plan of Implementation, which set the following target.

### HALVE, BY 2015, THE PROPORTION OF PEOPLE WITHOUT SUSTAINABLE ACCESS TO SAFE DRINKING WATER AND BASIC SANITATION.

It is not hard to see why providing access to safe drinking water and basic sanitation for the world's most deprived populations is moving up the political agenda. With 2.6 billion people recorded as lacking any improved sanitation facilities in 2002 and 1.1 billion of them without access to an improved drinking water source, the resulting squalor, poverty and disease hold back so many development efforts. Focusing efforts on achievement of the MDG drinking water and sanitation target will speed progress towards all eight goals.

The increasing reliability of coverage data has enabled the WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (JMP) and others to link access to improved drinking water sources and improved sanitation with health, economic and human development statistics. A growing portfolio of case studies from around the world helps to demonstrate the beneficial effects

of improved drinking water and sanitation. Relating coverage and diarrhoeal disease prevalence shows that meeting the MDG target would avert 470 thousand deaths and result in an extra 320 million productive working days every year. Economic analyses are showing that the benefits on investment to achieve the target would be considerable. Depending on the region of the world, economic benefits can be valued to range from US\$ 3 to US\$ 34 for each dollar invested.

In the International Decade for Action, we need to find ways of replicating successful actions and instigating many more that will bring improved water and sanitation services to all those in need.

The first part of this report charts the effect that lack of drinking water and sanitation has on people's lives at different stages (childhood, adolescence, adulthood and old age), highlighting the gender divide and threat posed by HIV/AIDS. The second part looks at a range of interventions that are being advocated and analyses their potential impact on progress towards the MDG drinking water and sanitation target.

To help you to find out more about the action decade, the report lists web pages that provide background reference materials. There is also a list of the main agencies that provide advocacy and technical support in the water, sanitation and hygiene sector.

The report concludes with statistical tables showing the increase needed to achieve the MDG drinking water and sanitation target (Annex 1) and drinking water and sanitation coverage estimates at regional and global level (Annex 2).

#### INVESTING IN DRINKING WATER AND SANITATION

The estimated economic benefit comes in several forms:

- ▶ Health care savings of **US\$ 7 billion** a year for health agencies and **US\$ 340 million** for individuals.
- ▶ 320 million productive days gained each year in the 15–59 year age group, an extra 272 million school attendance days a year, and an added 1.5 billion healthy days for children under 5 years of age, together representing productivity gains of **US\$ 9.9 billion** a year.
- ▶ Time savings resulting from more convenient drinking water and sanitation services totalling 20 billion working days a year, giving a productivity payback of some **US\$ 63 billion** a year.
- ▶ Value of deaths averted, based on discounted future earnings, amounting to **US\$ 3.6 billion** a year.

The WHO study from which these figures are taken shows a total payback of **US\$ 84 billion** a year from the **US\$11.3 billion** a year investment needed to meet the MDG drinking water and sanitation target. It shows too some remarkable additional returns if simple household water treatment accompanies the drinking water and sanitation improvements.

Source: *Evaluation of the costs and benefits of water and sanitation improvements at the global level*. Geneva, World Health Organization, 2004.

#### THE EIGHT MILLENNIUM DEVELOPMENT GOALS

- ▶ Eradicate extreme hunger and poverty
- ▶ Achieve universal primary education
- ▶ Promote gender equality and empower women
- ▶ Reduce child mortality
- ▶ Improve maternal health
- ▶ Combat HIV/AIDS, malaria and other diseases
- ▶ Ensure environmental sustainability
- ▶ Develop a global partnership for development

## DRINKING WATER AND SANITATION: A FORMIDABLE CHALLENGE

The charts of drinking water and sanitation coverage in Figures 1 and 2 remind us of the huge progress made from 1990 to 2002. They show also that too many people in the world still live in squalid, demeaning conditions that rob them of dignity and the means to escape from poverty.

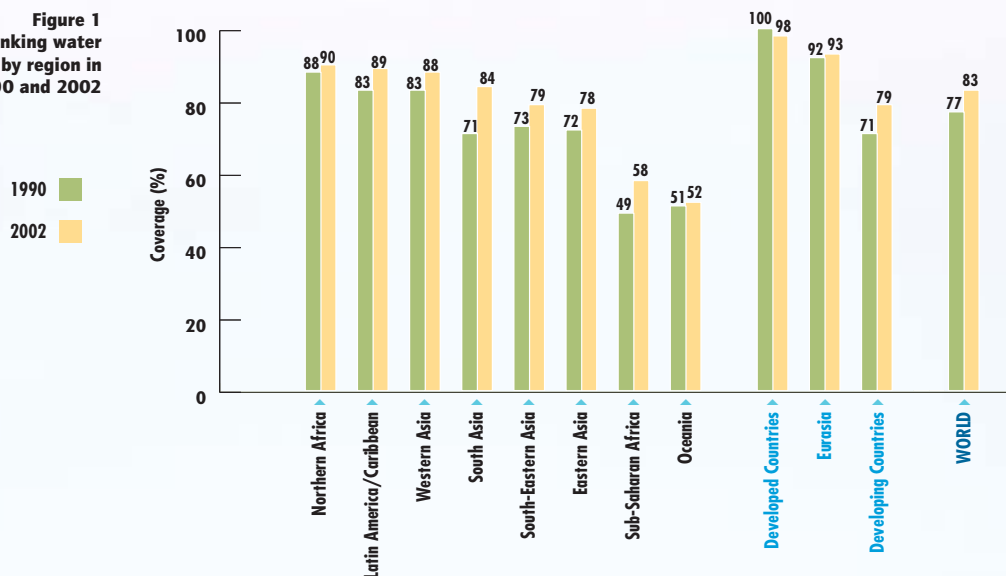
In 2002, there were 2.6 billion people without even the most basic sanitation facilities. Providing improved sanitation for an additional 1.8 billion from 2002 to 2015 will achieve the MDG target to halve the proportion unserved by 2015. But, because of rising population, there will still be 1.8 billion people having to cope with unhygienic sanitation facilities at that time.

The population benefiting from improved sanitation went up by 87 million a year from 1990 to 2002.

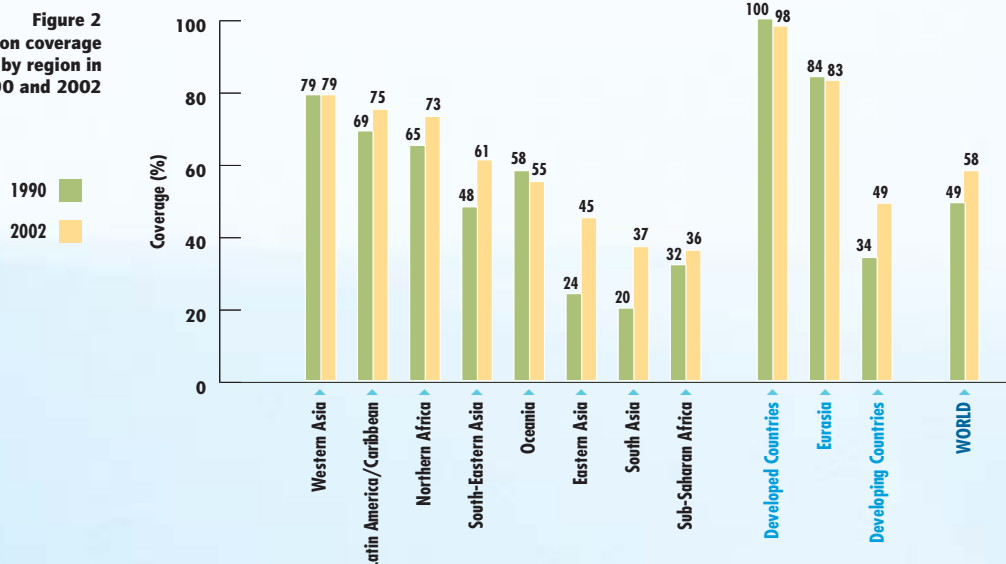
An increase to 138 million a year from 2003 to 2015 is needed if the MDG sanitation target is to be met – a 58% acceleration. Sub-Saharan Africa will need almost to double the annual numbers of additional people served with drinking water and quadruplicate the additional numbers served with basic sanitation if the MDG target is to be reached. So, reaching the target means going faster and investing considerably more. That is being recognized by the world community in political proclamations and in increased commitments to the sector in some of the poorest countries. There is a strong case to do even more.

Lack of drinking water and sanitation kills about 4500 children a day and sentences their siblings, parents and neighbours to sickness, squalor and enduring poverty. Improvements bring immediate and lasting benefits in health, dignity, education, productivity and income generation.

**Figure 1**  
Drinking water coverage by region in 1990 and 2002



**Figure 2**  
Sanitation coverage by region in 1990 and 2002





## MONITORING WATER SUPPLY AND SANITATION

In its 2004 report, *Meeting the MDG drinking water and sanitation target: a mid-term assessment of progress*, the WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (JMP) presented 2002 coverage data for most countries of the world. The figures revealed the glaring contrasts between rich and poor nations, and between rural and urban populations.

In this report, the JMP focuses on the changes that simple improvements in water and sanitation services can make to people's lifestyles, health and economic prospects – and the relatively small investments needed to make those improvements. In doing so, it exposes the cost of inaction.

Target 10 of the Millennium Development Goals (MDGs) is to halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation.

The baseline for the target is estimated water and sanitation "coverage" in 1990. So, for example, Kenya, where 55% of the 24 million 1990 population were deemed to have no access to drinking water, will need to reduce that level to 27.5% of the much higher 2015 population, if it is to reach the MDG target.

The figures used to set the baseline and to monitor progress towards the MDGs are produced by the JMP.

The JMP has been assembling statistics on drinking water and sanitation coverage since 1990. Since 2000, the JMP has based its reporting on household surveys and on the classification of water sources and sanitation facilities as "improved" or "unimproved".

Household surveys used by the JMP include: USAID-supported Demographic and Health Surveys (DHS); UNICEF-supported Multiple Indicator Cluster Surveys (MICS); national census reports; WHO-supported World Health Surveys; and other reliable national surveys that allow data to be compared.

Earlier coverage data came from the water utilities and ministries in charge of drinking water and sanitation services. Definitions of "safe water" and "basic sanitation" differed widely from region to region and country to country. Commonly, too, a village water point was deemed to provide "coverage" for the whole village population, although in many cases quite a number of villagers did not use it for one reason or another.

From 2000, coverage assessments of the JMP, using population-based data gathered through household surveys and national censuses, give a much clearer comparison between countries, as they record the percentage of people using the improved facilities, as determined by face-to-face interviews and censuses. The 1990 coverage statistics have been recalculated according to the new criteria, so that the monitoring of progress truly compares like with like.

The JMP's web site ([www.wssinfo.org](http://www.wssinfo.org)) has an updated database of coverage statistics for most countries. The data are periodically analysed and presented in a global report. The 2004 report contained global data from surveys up to the end of 2002; those same figures are used to draw the conclusions presented in this report. A 2006 report will present revised coverage estimates to provide a baseline for the International Decade for Action [Water for Life](#).

Alongside its compilation and analysis of coverage data, the JMP is trying to improve the definitions of "improved" and "unimproved" water and sanitation technologies. WHO and UNICEF are also working on nationally representative water-quality surveys

### IMPROVED TECHNOLOGIES

#### **Improved sources of drinking water**

Piped water into dwelling, yard or plot  
Public tap/standpipe  
Tubewell/borehole  
Protected dug well  
Protected spring  
Rainwater collection  
Bottled water\*

#### **Improved sanitation facilities**

Flush/pour-flush to:  
piped sewer system  
septic tank  
pit (latrine)  
Ventilated improved pit latrine  
Pit latrine with slab  
Composting toilet

### UNIMPROVED TECHNOLOGIES

#### **Unimproved sources of drinking water**

Unprotected dug well  
Unprotected spring  
Vendor-provided water  
Tanker truck water  
Surface water (river, stream, dam, lake, pond, canal, irrigation channel)

#### **Unimproved sanitation**

Public or shared latrine  
Pit latrine without slab or open pit  
Hanging toilet or hanging latrine  
Bucket latrine  
No facilities (so people use any area, for example a field)

\* Bottled water is considered an "improved" source of drinking water only where there is a secondary source that is "improved".

that will help to identify more specifically the technologies likely to deliver safe water. The JMP has produced a new guide covering standard questions on water and sanitation to be included in current and future household surveys and national census questionnaires. The two main international household survey instruments (DHS and MICS) have already started using these standard questions and the suggested response categories.

Future challenges include developing appropriate indicators and mechanisms to collect information about disparities in access to services, the affordability of services, per capita water quantity use, and the sustainability and reliability of services. Efforts are currently under way to test field-based techniques to determine water safety that could be used cost-effectively alongside a household survey, as a cross-check on the safety of improved drinking water sources and on safety at point of use.

Progress in access to and use of drinking water and sanitation services, and the development of new technologies mean that JMP indicators will need to evolve. For example, vendor-supplied water is currently excluded from the category of improved sources, as the regulatory framework to ensure water safety from vendors is absent in most countries and no other guarantees can be given that the water purchased is from a safe source. In addition,

#### MONITORING SANITATION AND POLICY DEVELOPMENT

A recent evaluation of definitions of "access to improved sanitation" in sub-Saharan Africa found that there were inconsistencies between definitions used in different surveys and different countries.

The anomalies came to light when data from subsequent surveys found discrepancies in access. In particular, traditional latrines were sometimes called open pits and other times latrines. While an open pit is clearly not improved, the JMP previously considered a latrine or traditional latrine as improved, without having sufficient evidence on how hygienic such a facility really was. As a result, the *Global water supply and sanitation assessment 2000 report* estimated that in 2000, about 2.4 billion people globally did not have access to improved sanitation, which was rather optimistic. The 2004 JMP report *Meeting the MDG drinking water and sanitation target – a mid-term assessment of progress* adjusted the estimate of the population without access to sanitation to 2.6 billion in 2002.

Monitoring policy development is a very difficult task. Plenty of high-level commitments and pledges have been made over the past years, but whether these will be attained remains to be seen. Surprisingly, the MDG water and sanitation target is not always reflected in Poverty Reduction Strategy Papers (PRSPs).

the minimum quantities of water required for drinking and basic hygiene are often not affordable where vendors are the suppliers of water. If better regulation and the development of new partnerships bring the assurance of adequate quality, and sufficient quantity, this criterion will need to be modified.

#### THE RANGE OF WORK OF THE JMP

A major thrust of the JMP at present is to continue monitoring progress towards the MDG drinking water and sanitation target, providing governments, policy-makers and donor agencies with regular updates on the numbers of people benefiting from improved drinking water supply and sanitation facilities, and change over time. In addition to the coverage updates, the JMP will produce a series of reports addressing region-specific issues pertaining to progress in drinking water supply and sanitation. A report on monitoring access in urban slums will be prepared jointly with the United Nations Human Settlements Programme (UN-HABITAT), and another addressing the scale and impacts of poor wastewater treatment and disposal will be prepared jointly with the United Nations Environment Programme (UNEP).

While maintaining its global monitoring functions, the JMP will also work towards strengthening national-level monitoring. The JMP aims to support the establishment of a local knowledge base to help in monitoring and evaluating the effectiveness of national and local policies and sector strategies. This will help to identify sub-national disparities in access which do not currently emerge from the national-level household surveys on which the JMP relies for its global monitoring work.

#### UN-WATER

Among United Nations entities, 24 have significant activities involving water (and often, but not always, sanitation and hygiene). Each agency has traditionally planned and implemented its own activities concerning water, with insufficient coordination with the other agencies. This has often resulted in the duplication of water-related activities and, in some cases, the development of contradictory information. UN-Water was created as a forum for sharing information and ensuring coherence and coordination between the different agencies to more effectively implement water-related programmes.

UN-Water has given the JMP the responsibility for monitoring progress towards MDGs related to drinking water and sanitation.



#### MONITORING FOR ACTION AND EFFECTIVENESS

Programme managers and administrative authorities should ensure data are regularly collected and analysed concerning the status of water supply systems, number of actual users versus planned figures, amount of water provided on a per capita basis, and the quality of the water, both chemical and microbial. Information on breakdowns and facilities in disrepair is vital, and should be acted upon by local authorities.

It is estimated that in Africa 30% of systems do not function properly; the estimate for Asia is around 20%. In some countries, the estimates of systems needing repair or replacement are as high as 50%. More effective monitoring at country level would help to identify systems that need to be repaired, rehabilitated or completely replaced.

Another issue that monitoring has brought to light is that the costs of installing water supply systems in sub-Saharan Africa are still far higher than is necessary. The lessons learned from other regions have not been adequately shared. The use of effective technologies and methods of work is essential if sustainable progress is to be made in the region that is furthest behind in providing safe water and basic sanitation to its people.

#### RAPID ASSESSMENT OF DRINKING WATER QUALITY

Deteriorating water quality threatens the gains that have been made in improving access to drinking water throughout the world. Although the greatest problem continues to be the microbial contamination of drinking water supplies (especially faecal contamination), chemical contaminants – notably fluoride and arsenic – are of increasing concern. Programme planners can no longer make assumptions about the initial safety of groundwater or any other water source without testing, and all sources must be adequately protected from subsequent contamination.

With the rapid increase in water quality problems, it is essential that all countries put in place simple and reliable water quality monitoring systems.

WHO and UNICEF are working together to develop a protocol for rapid assessment of water quality using field based sampling and analysis techniques. The protocol is designed to be used alongside a household survey. Countries can then examine areas and regions in more depth, and link water quality to different facility types, subsequently taking the necessary remedial actions to address the problem.

#### THE JOINT MONITORING PROGRAMME FOR WATER SUPPLY AND SANITATION

Established: 1990, at the end of the International Drinking Water Supply and Sanitation Decade.

Executing agencies: WHO and UNICEF.

Technical Advisory Group: individual experts from academic institutions and civil society, plus representatives of organizations involved in both water and sanitation and data collection, including UN-Habitat, ORC Macro International, United Nations Environment Programme, United States Agency for International Development, the World Bank, the Water Supply and Sanitation Collaborative Council, and the Millennium Project.

Funding support: United Kingdom's Department for International Development, Swiss Agency for Development and Cooperation, WHO and UNICEF.

