



PROGRESS ON SANITATION AND DRINKING-WATER

2010 UPDATE

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PROGRESS ON SANITATION AND DRINKING-WATER

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CONTENTS

INTRODUCTION	2
STATUS AND PROGRESS TOWARDS THE MDG TARGET	
Billions without improved sanitation.....	6
Millions without improved sources of drinking-water.....	7
Sanitation: world off track for MDG target	8
Drinking-water: world on track for MDG target	9
Sanitation ladder: global and regional trends	12
Drinking-water ladder: global and regional trends	13
URBAN-RURAL DISPARITIES	
Sanitation: urban-rural disparities	16
Drinking-water: urban-rural disparities	18
A CLOSER LOOK AT THE LADDERS	
Open defecation.....	22
Shared and unimproved sanitation facilities	23
Piped water on premises and other improved sources of drinking-water	25
ADDITIONAL PERSPECTIVES	
Time to collect drinking-water	28
Collection of drinking-water: gender disparities	29
Socioeconomic disparities: Sub-Saharan Africa.....	30
JMP METHOD	
JMP method explained	34
STATISTICAL TABLE	
Progress on sanitation and drinking-water: country, regional and global estimates for 1990, 2000 and 2008	38
ANNEXES	
Annex A Millennium Development Goals: regional groupings.....	53
Annex B Global and regional sanitation ladders: urban and rural	54
Annex C Global and regional drinking-water ladders: urban and rural	55

INTRODUCTION

This report by the WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (JMP) confirms that advances continue to be made towards greater access to safe drinking-water. Progress in relation to access to basic sanitation is however insufficient to achieve the Millennium Development Goal (MDG) target to halve, by 2015, the proportion of people without sustainable access to safe drinking-water and basic sanitation.

PURPOSE AND SCOPE OF THIS REPORT

This report describes the status and trends with respect to the use of safe drinking-water and basic sanitation, and progress made towards the MDG drinking-water and sanitation target.

As the world approaches 2015, it becomes increasingly important to identify who are being left behind and to focus on the challenges of addressing their needs. This report presents some striking disparities: the gap between progress in providing access to drinking-water versus sanitation; the divide between urban and rural populations in terms of the services provided; differences in the way different regions are performing, bearing in mind that they started from different baselines; and disparities between different socioeconomic strata in society.

Each JMP report assesses the situation and trends anew and so this JMP report supersedes previous reports. The information presented in this report includes data from household surveys and censuses completed during the period 2007-2008. It also incorporates datasets from earlier surveys and censuses that have become available to JMP since the publication of the previous JMP report in 2008. In total, data from around 300 surveys and censuses covering the period 1985 - 2008, has been added to the JMP database.

The updated estimates for 2008, 2000 and 1990 are given in the statistical table starting on page 38. This table for the first time shows the number of people who gained access to improved sanitation and drinking-water sources in the period 1990-2008.

It is important to note that the data in this report do not yet reflect the efforts of the International Year of Sanitation 2008, which mobilized renewed support around the world to stop the practice of open defecation and to promote the use of latrines and toilets.

A NEW STRATEGY FOR JMP

A new JMP strategy was formulated by WHO and UNICEF, with support from a newly created Strategic Advisory Group to better position JMP to address the monitoring challenges in the run up to the MDG target year of 2015 and beyond.

The JMP vision contained in this strategy is to accelerate progress towards universal sustainable access to safe water and basic sanitation by 2025, including the achievement of the MDG target by 2015 as a key milestone.

The four strategic priority areas of activity proposed for the 2010-2015 period are:

- maintaining the integrity of the JMP database and ensuring accurate global estimates;
- disseminating data to stakeholders;
- fulfilling JMP's normative role in developing and validating target indicators;
- enhancing interaction between countries and JMP.

With this strategy, JMP is well placed to provide a platform for developing post-2015 targets and associated meaningful and measurable indicators.

FUTURE CHALLENGES

We all recognize the vital importance of sanitation and water to human health and well-being, and their role as an engine of development. The question is how to accelerate progress towards achieving the MDG target, and how to go beyond it in order to ultimately achieve the vision of universal access.

The estimates that JMP publishes every two years help policy-makers, donors, governmental and nongovernmental agencies decide what needs to be done and where to focus their efforts. With each successive report, a clearer picture emerges of the current use of improved sanitation facilities and improved sources of drinking-water throughout the world.

Data collection and analysis are, however, not ends in themselves. The estimates and trends must be an impetus for action. With this in mind, JMP constantly seeks to provide more accurate and detailed information, to see where there is most catching-up to be done, where there are vulnerabilities, or where progress is starting to falter.

INTRODUCTION

Better decision-making to speed progress requires a greater disaggregation and a higher resolution in the datasets. JMP faces methodological challenges of analysing data from over 200 different countries and territories, of adhering to common indicators so that estimates are comparable globally, and of accommodating new or previously unavailable data.

The present report documents how much the world has changed in terms of the use of improved sanitation facilities and improved sources of drinking-water. The practice of open defecation is declining, but still too many people have no access to any kind of sanitation facilities. Piped water is reaching ever more households, but not yet all and often not reliably so. The challenge of assessing the safety of drinking-water from improved sources also needs to be addressed.







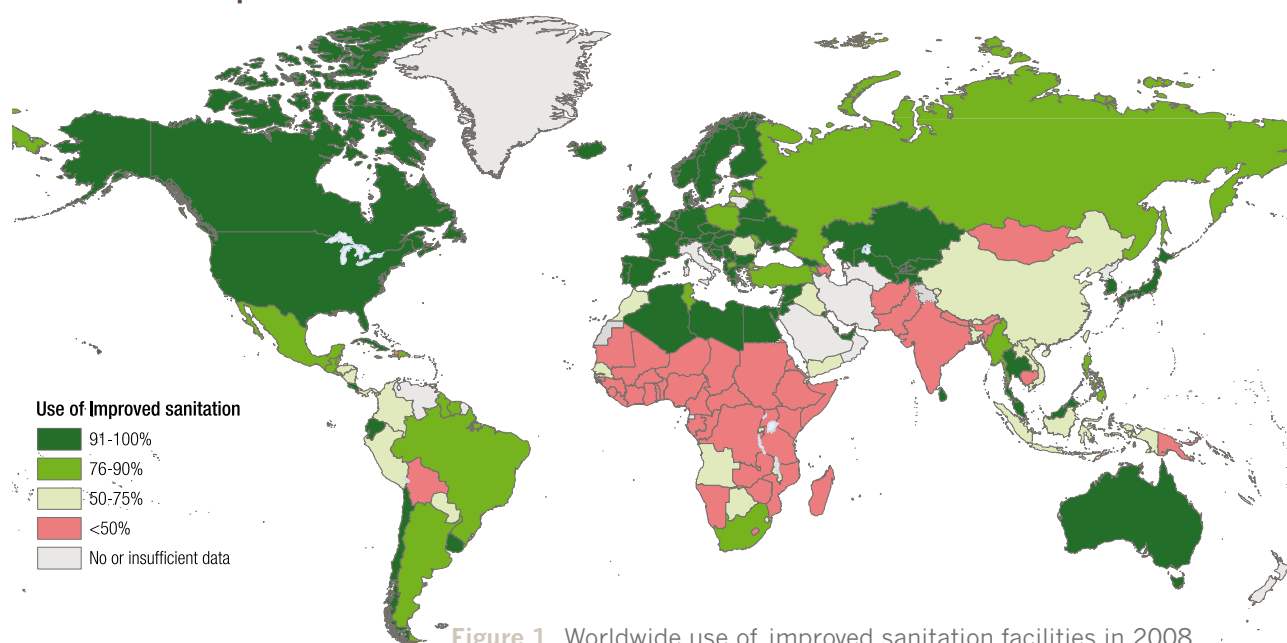
**STATUS AND PROGRESS
TOWARDS THE MDG TARGET**

BILLIONS WITHOUT IMPROVED SANITATION

2.6 BILLION PEOPLE DO NOT USE IMPROVED SANITATION

Improved sanitation facilities are used by less than two thirds of the world population. The global picture masks great disparities between regions. Virtually the entire population of the developed regions uses improved facilities, but in developing regions only around half the population uses improved sanitation. There are also disparities in progress since 1990. Notable increases in the use of improved sanitation have been made in Northern Africa, South-eastern Asia and Eastern Asia, whereas there has been no progress in the Commonwealth of Independent States and a decline in Oceania. Among the 2.6 billion people in the world who do not use improved sanitation facilities, by far the greatest number are in Southern Asia, but there are also large numbers in Eastern Asia and Sub-Saharan Africa.

Use of improved sanitation facilities is low in Sub-Saharan Africa and South Asia



61% of global population uses improved sanitation facilities

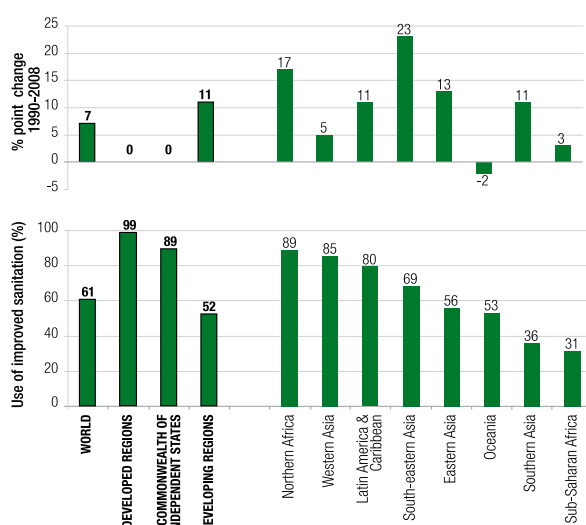


Figure 2 Regional use of improved sanitation facilities in 2008 and percentage point change 1990-2008

2.6 billion people – 72% of whom live in Asia – do not use improved sanitation facilities

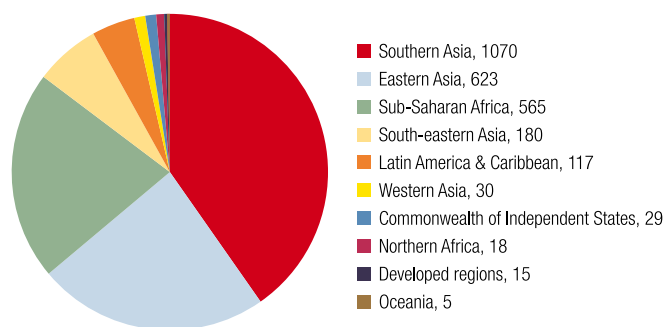


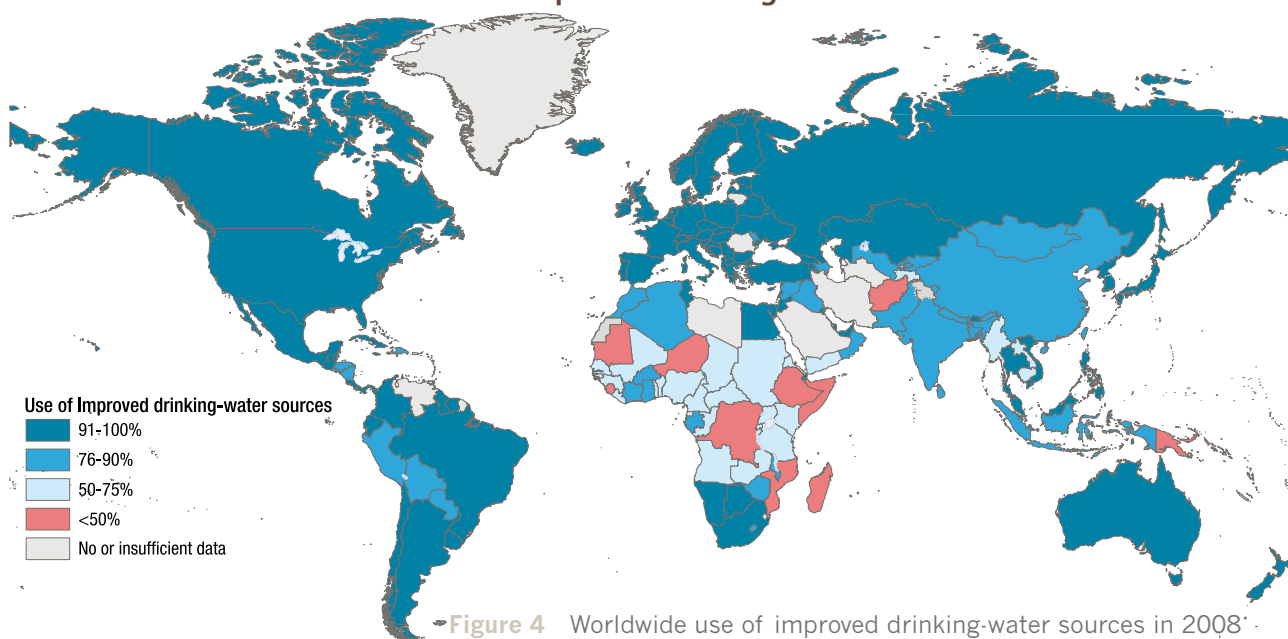
Figure 3 Regional distribution of the 2.6 billion people not using improved sanitation facilities in 2008, population (million)

MILLIONS WITHOUT IMPROVED SOURCES OF DRINKING-WATER

884 MILLION PEOPLE DO NOT USE IMPROVED SOURCES OF DRINKING-WATER

The use of improved sources of drinking-water is high globally, with 87% of the world population and 84% of the people in developing regions getting their drinking-water from such sources. Even so, 884 million people in the world still do not get their drinking-water from improved sources, almost all of them in developing regions. Sub-Saharan Africa accounts for over a third of that number, and is lagging behind in progress towards the MDG target, with only 60% of the population using improved sources of drinking-water despite an increase of 11 percentage points since 1990.

Sub-Saharan Africa faces the greatest challenge in increasing the use of improved drinking-water



87% of global population uses improved drinking-water sources, an increase of 10% point in 18 years

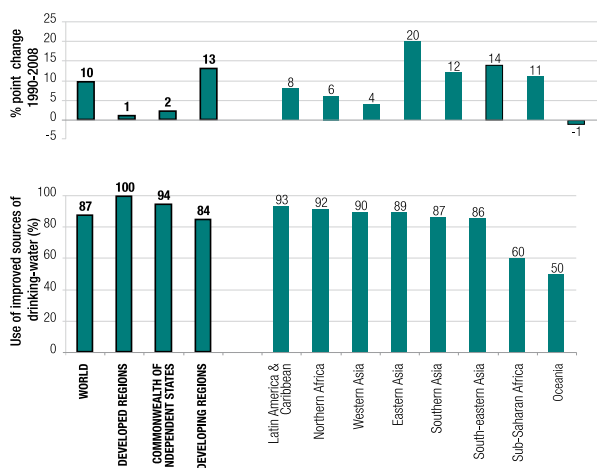


Figure 5 Regional use of improved drinking-water in 2008 and percentage point change 1990-2008

884 million people – 37% of whom live in Sub-Saharan Africa – still use unimproved sources for drinking-water

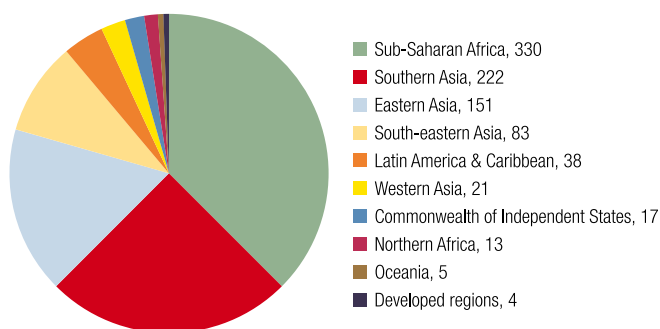


Figure 6 Regional distribution of the 884 million people not using improved drinking-water sources in 2008, population (million)

SANITATION: WORLD OFF TRACK FOR MDG TARGET

At the current rate of progress, the world will miss the MDG target by 13 percentage points. Unless huge efforts are made, the proportion of people without access to basic sanitation will not be halved by 2015. Even if we meet the MDG target, there will still be 1.7 billion people without access to basic sanitation. If the trend remains as currently projected, an additional billion people who should have benefited from MDG progress will miss out, and by 2015 there will be 2.7 billion people without access to basic sanitation.



Figure 7 Global progress towards the MDG target: trend in use of improved sanitation 1990-2008, projected to 2015

Sanitation: most countries in Sub-Saharan Africa and in Asia are not on track to meet the MDG target

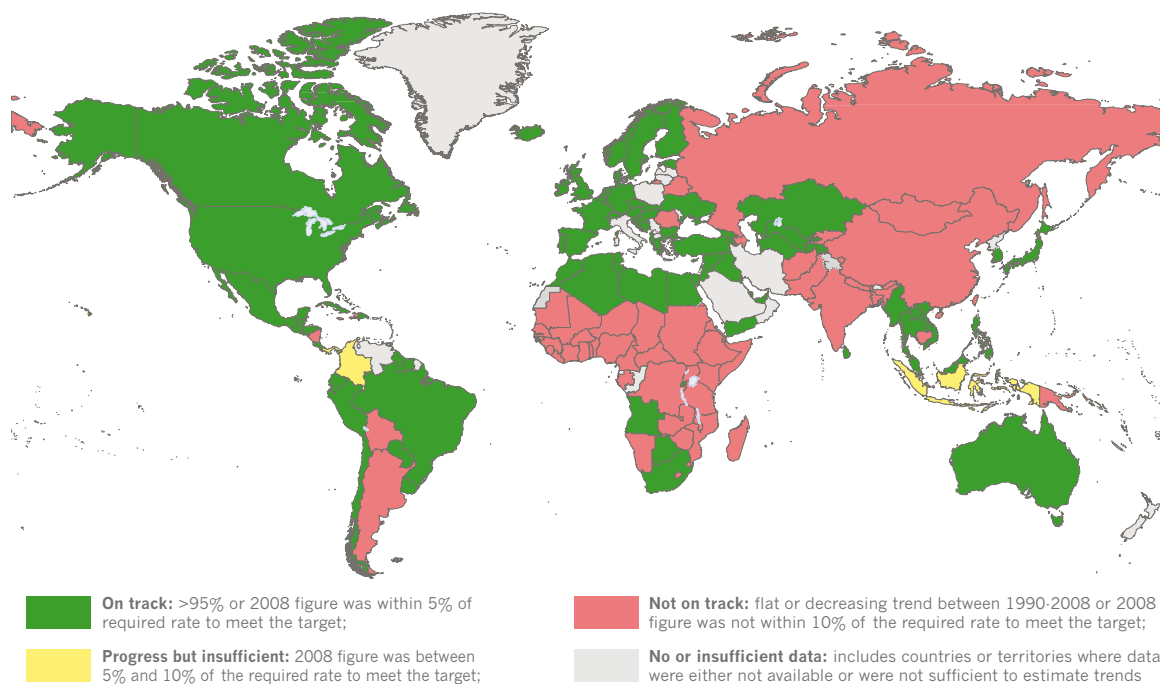


Figure 8 Sanitation: Progress towards the MDG target, 2008

DRINKING-WATER: WORLD ON TRACK FOR MDG TARGET

At the current rate of progress, the world is expected to exceed the MDG target of halving the proportion of the population without sustainable access to safe drinking-water. Even so, 672 million people will still lack access to improved drinking-water sources in 2015. For monitoring purposes, the use of improved drinking-water sources has been equated to access to safe drinking-water, but not all improved sources in actual fact provide drinking-water that is safe. The challenge of measuring water quality is addressed on page 31.

Drinking-water: world is projected to reach the MDG target

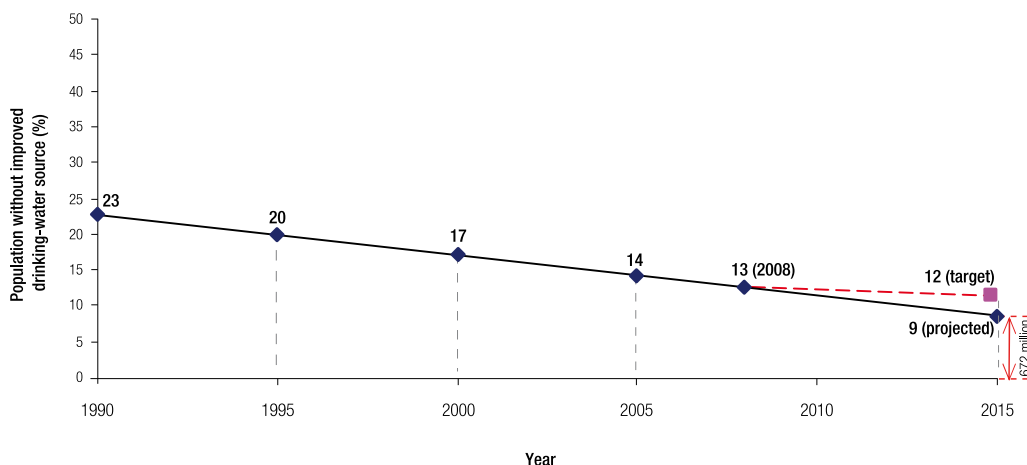


Figure 9 Global progress towards the MDG target: trend in use of improved drinking-water sources 1990-2008, projected to 2015

Drinking-water: except for Sub-Saharan Africa, most countries are on track to meet the MDG target

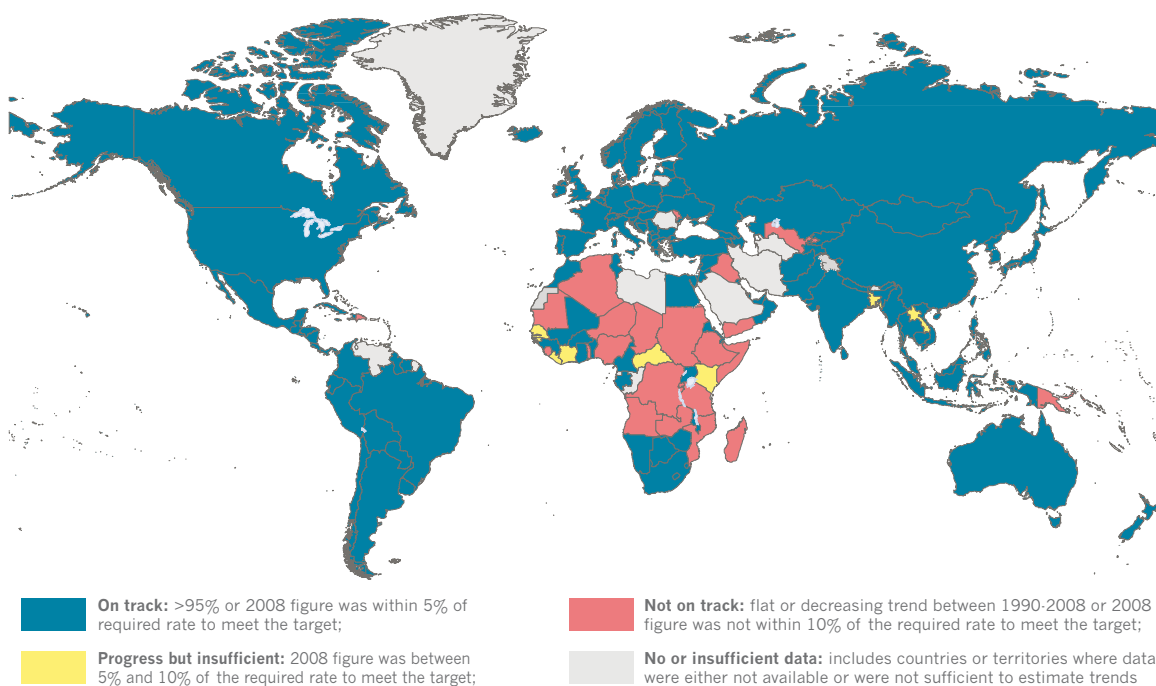


Figure 10 Drinking-water: progress towards the MDG target, 2008

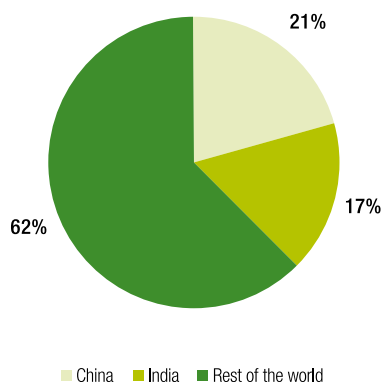
CHALLENGE: GLOBAL TREND HEAVILY INFLUENCED BY PROGRESS IN LARGE POPULOUS COUNTRIES

Global estimates of access and use hinge significantly on progress made in large, populous countries.

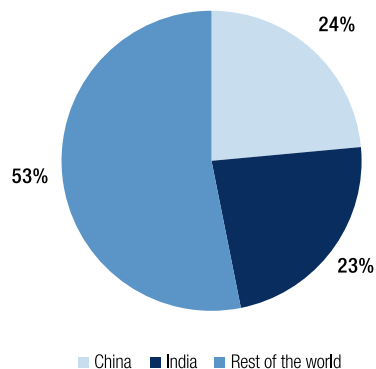
China and India are home to more than a third of the world population. Both countries have made considerable progress. In China, 89% of the population of 1.3 billion use drinking-water from improved sources, up from 67% in 1990. In India, 88% of the population of 1.2 billion use drinking-water from such sources, as compared to 72% in 1990. China and India together account for a 47% share, of the 1.8 billion people that gained access to improved drinking-water sources between 1990 and 2008. This share is almost equally distributed between the two countries. Obviously, these two countries heavily influence the global trend. Therefore, the ability to reach the MDG target is highly dependent on the performance of these two countries.

For sanitation, even with the increase between 1990 and 2008 in the proportion of the population using improved sanitation facilities in China (from 41% to 55%) and India (from 18% to 31%), the world is not on track to meet the sanitation target. This is despite the fact that 475 million people gained access to improved sanitation in these two countries alone, a 38% share of the 1.3 billion people that gained access globally.

Four out of 10 people gaining access in 1990-2008 to improved sanitation live in China and India



Nearly half of world population gaining access to improved sources of drinking-water in 1990-2008 live in China and India





SANITATION LADDER: GLOBAL AND REGIONAL TRENDS

Open defecation

Open defecation: when human faeces are disposed of in fields, forests, bushes, open bodies of water, beaches or other open spaces or disposed of with solid waste.

Unimproved facilities

Unimproved sanitation facilities: do not ensure hygienic separation of human excreta from human contact. Unimproved facilities include pit latrines without a slab or platform, hanging latrines and bucket latrines.

Shared

Shared sanitation facilities: Sanitation facilities of an otherwise acceptable type shared between two or more households. Only facilities that are not shared or not public are considered improved.

Improved

Improved sanitation facilities: ensure hygienic separation of human excreta from human contact. They are use of the following facilities:

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

SANITATION LADDER

UNIMPROVED SANITATION

IMPROVED SANITATION

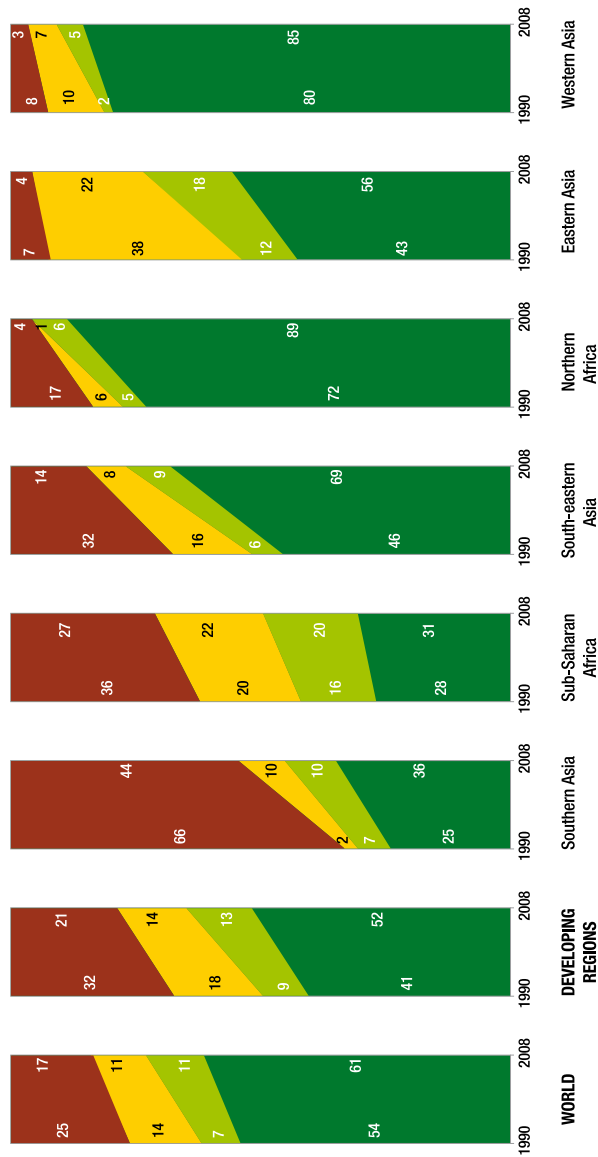


Figure 11 Proportion of the population using an improved, shared or unimproved sanitation facility or practising open defecation, by MDG region, in 1990 and 2008

Trends in sanitation practices can more easily be assessed by taking a disaggregated view of the use of the different sanitation facilities and the practice of open defecation, as categorized in the sidebar.

The proportion of the population using improved sanitation facilities is increasing in all the developing regions. Southern Asia and Sub-Saharan Africa are the only regions where less than half the population use improved sanitation facilities.

Open defecation is declining in all regions and has decreased worldwide from 25% in 1990 to 17% in 2008. Open defecation is still most widely practised in Southern Asia and Sub-Saharan Africa - by 44% and 27% of the population, respectively. In contrast, open defecation is now practised by only 4% of the population in Northern Africa and Eastern Asia and 3% in Western Asia. In five of the seven developing regions for which data are available, less than 15% of the population practises open defecation.¹

¹ No separate charts are provided for Latin America and the Caribbean, Oceania, the Commonwealth of Independent States, or for developed regions because of insufficient data.

DRINKING-WATER LADDER: GLOBAL AND REGIONAL TRENDS

Today 87% of the world's population, a total of 5.9 billion people worldwide, uses drinking-water from improved sources, an increase of 1.8 billion people since 1990. About 3.8 billion people (57% of the global population) get their drinking-water from a piped connection that provides running water into their dwelling, plot or yard.

All regions of the world have succeeded in reducing the proportion of the population using unimproved sources for drinking-water. Progress has been greatest in Eastern Asia, where the use of unimproved sources has declined by 20 percentage points.

All regions except for the Commonwealth of Independent States have seen progress in the use of piped water on premises. Moreover, the rate of increase in the use of piped water on premises has been faster than the rate of progress in the use of other improved drinking-water sources, in all regions except for Sub-Saharan Africa, Southern Asia and CIS.

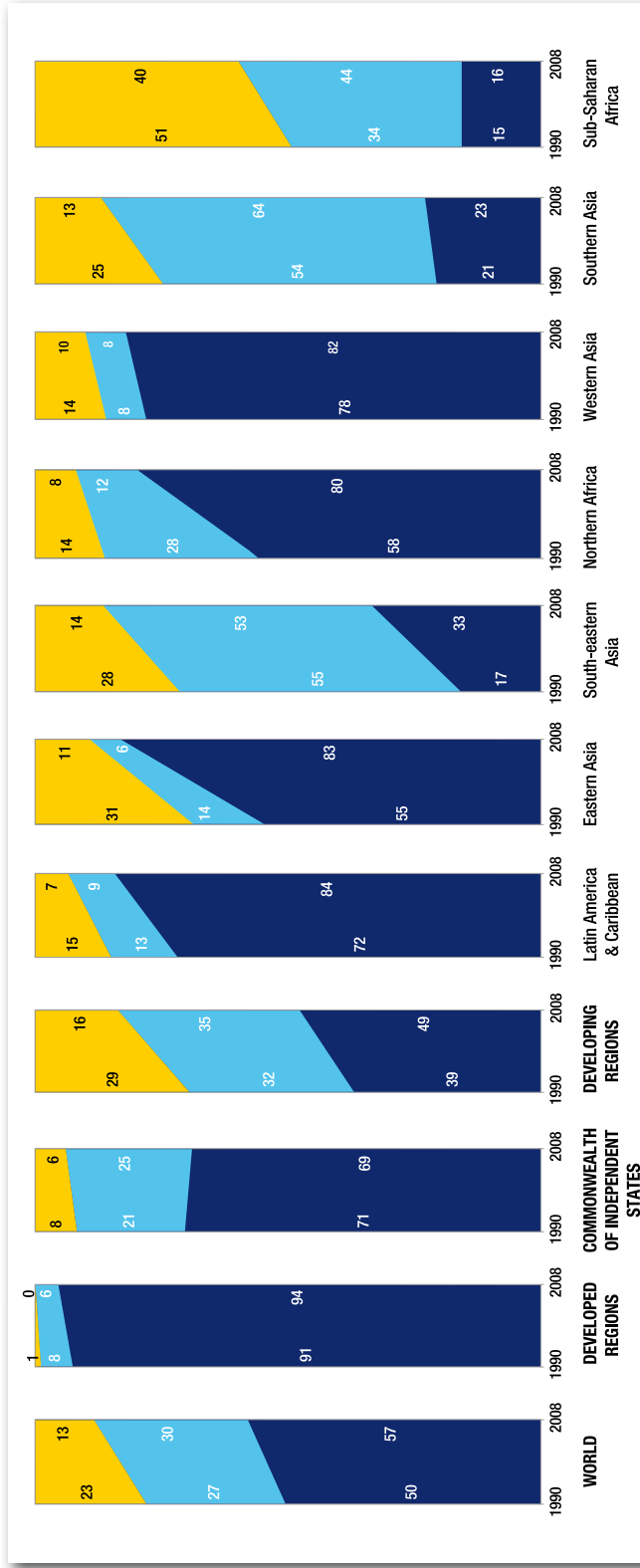


Figure 12 Proportion of the population using piped drinking-water on premises, other improved drinking-water source or an unimproved source, by MDG region, in 1990 and 2008





URBAN-RURAL DISPARITIES



SANITATION: URBAN-RURAL DISPARITIES

The use of improved sanitation facilities is particularly low in Sub-Saharan Africa at 31% overall – even so, the disparity between urban and rural areas is striking. Disparities are also particularly apparent in Latin America & Caribbean, Southern Asia and Oceania. The majority of the population in Sub-Saharan Africa, Southern Asia and Oceania live in rural areas, so these disparities are important in terms of the numbers of people concerned.

Use of improved sanitation in urban areas is higher than in rural areas

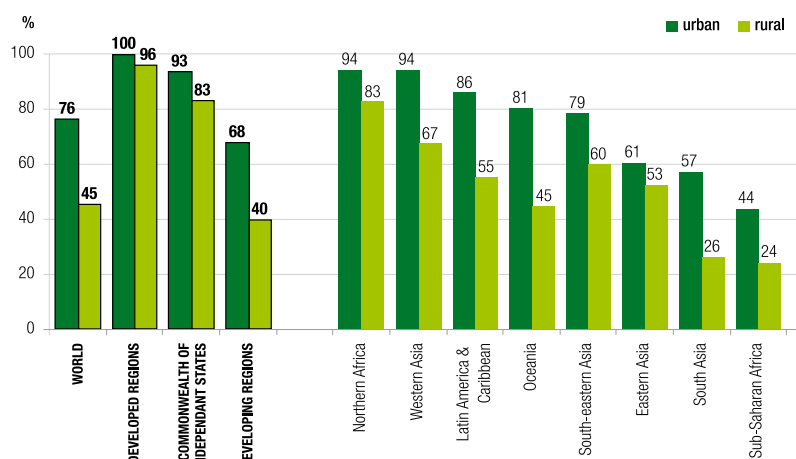


Figure 13 Urban-rural use of improved sanitation, in MDG Regions, 2008

Seven out of 10 people without improved sanitation live in rural areas

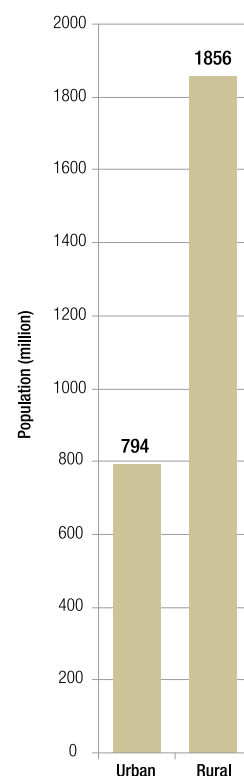


Figure 14 Urban and rural population without improved sanitation, worldwide 2008

Major progress in the use of improved sanitation is undermined by population growth

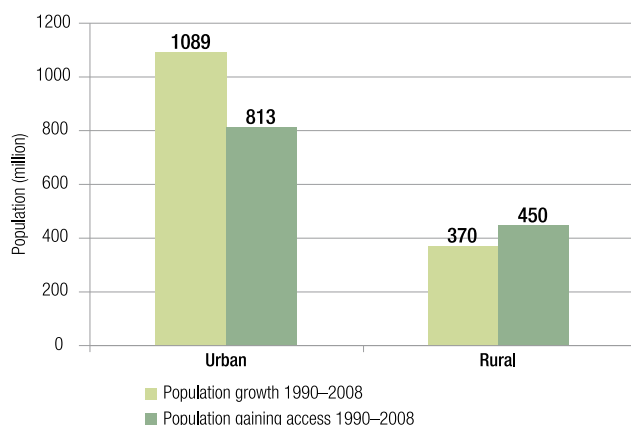


Figure 15 Population gaining access to improved sanitation compared to population growth, urban and rural, worldwide, 1990-2008

There are significant disparities between rural and urban areas in regard to sanitation. Rural areas continue to have a lower percentage of population using improved sanitation and a higher number of people without improved facilities. Of the approximately 1.3 billion people who gained access to improved sanitation during the period 1990-2008, 64% live in urban areas. However urban areas, though better served than rural areas, are struggling to keep up with the growth of the urban population.

Urban-rural disparities in the use of improved sanitation facilities are significant in most developing countries

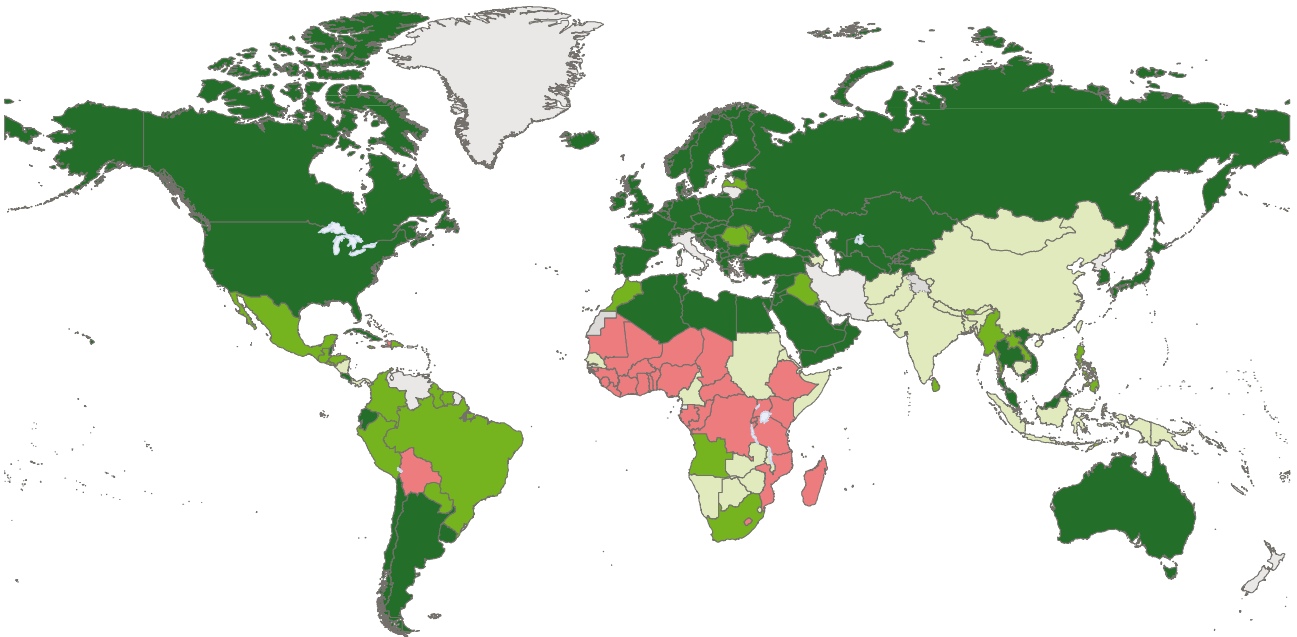


Figure 16 Use of improved sanitation in urban areas, 2008

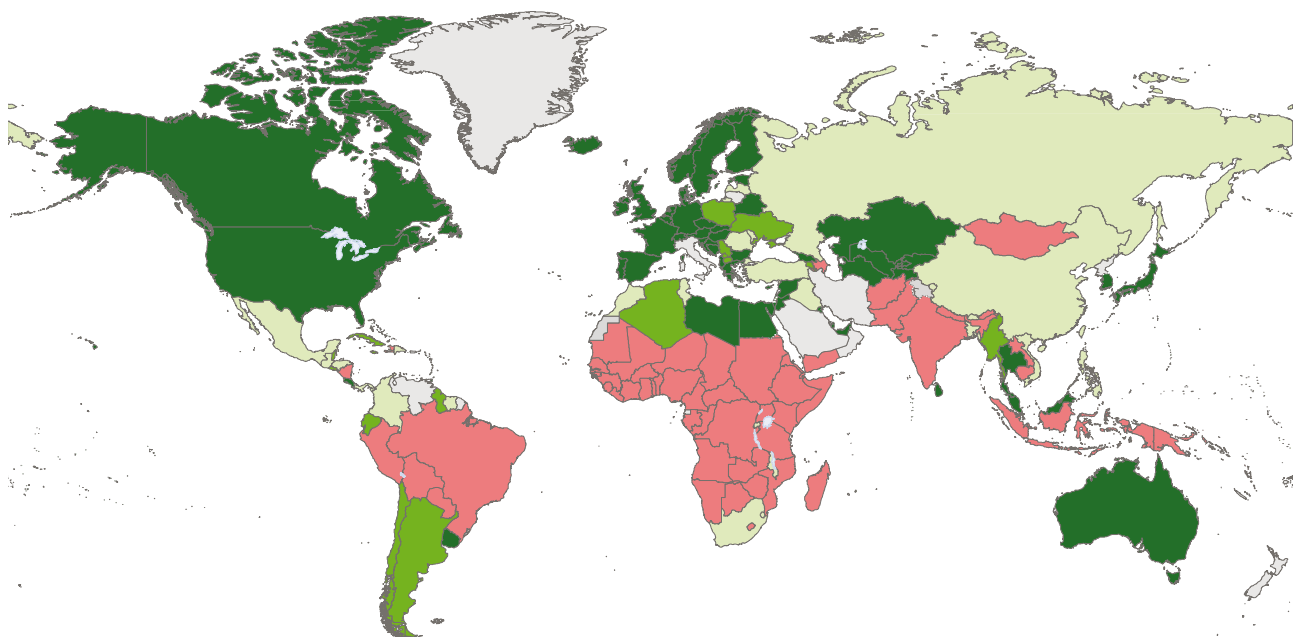


Figure 17 Use of improved sanitation in rural areas, 2008

Use of Improved sanitation ■ 91-100% ■ 76-90% ■ 50-75% ■ <50% ■ No or insufficient data

DRINKING-WATER: URBAN-RURAL DISPARITIES

Worldwide, 87% of the population gets their drinking-water from improved sources, and the corresponding figure for developing regions is also high at 84%. While 94% of the urban population of developing regions uses improved sources, it is only 76% of rural populations.

Use of improved drinking-water sources in urban areas is almost double the use in rural areas of Sub-Saharan Africa and Oceania

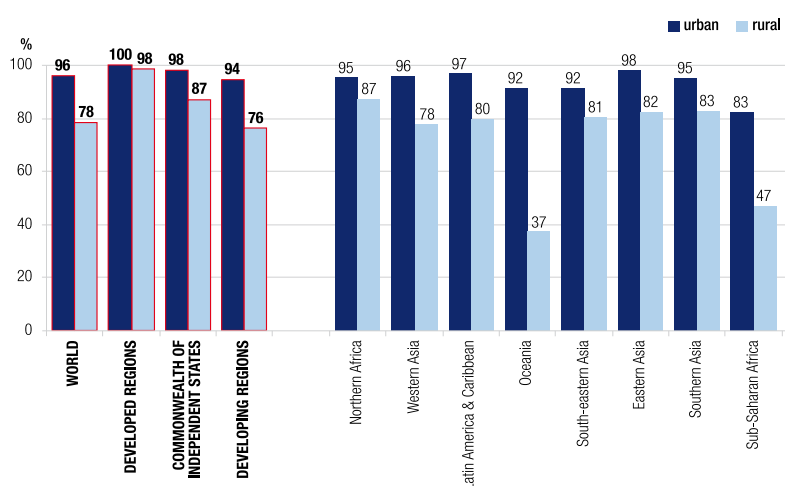


Figure 18 Urban-Rural uses of improved sources of drinking-water, in MDG regions, 2008

84% of the world population without an improved drinking-water source lives in rural areas

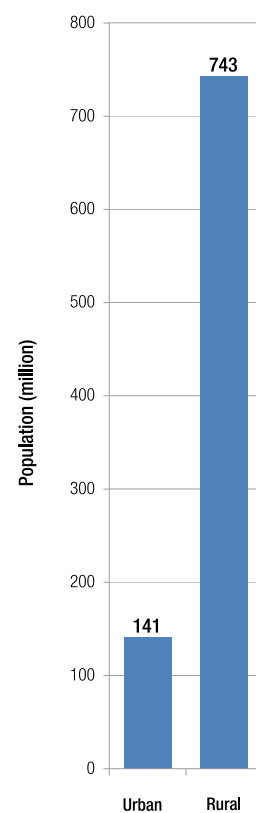


Figure 19 Urban and rural population without improved sources of drinking-water, worldwide, 2008

Increase in the use of improved drinking-water sources is barely keeping up with the urban population growth

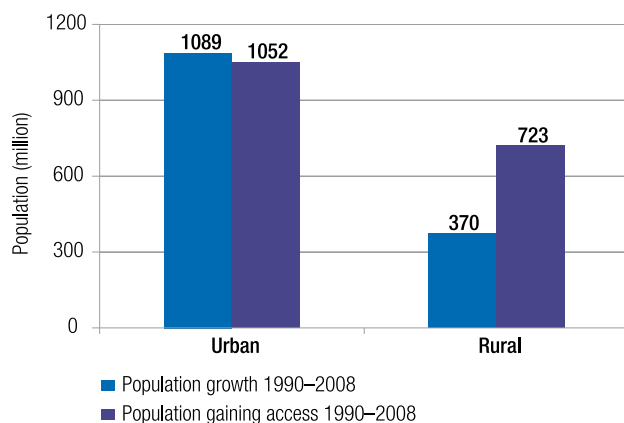


Figure 20 Population gaining access to improved drinking-water compared to population growth, urban and rural, worldwide, 1990-2008

The rural population without access to an improved drinking-water source is over five times greater than that in urban areas. Of almost 1.8 billion people gaining access to improved drinking-water in the period 1990-2008, 59% live in urban areas. The urban-rural disparities are particularly striking in Sub-Saharan Africa, but are also visible in Asia and Latin America. In urban areas, however, the increase in coverage is barely keeping pace with population growth.

Urban-rural disparities are striking in Africa

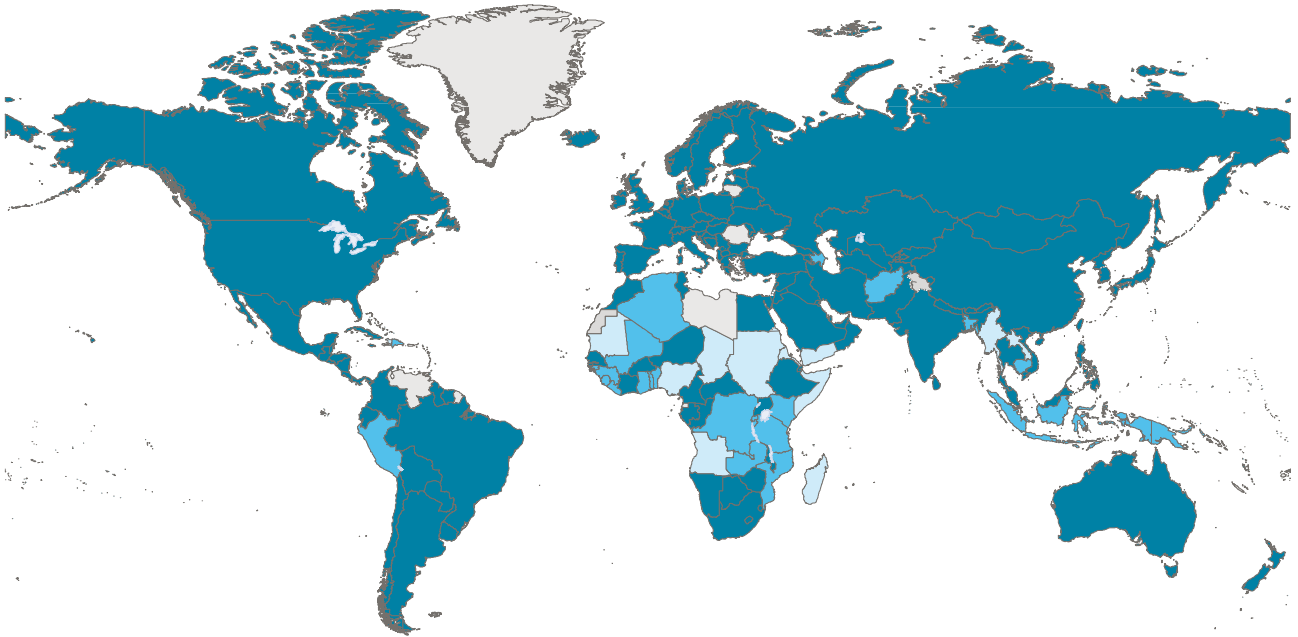


Figure 21 Use of improved sources of drinking-water in urban areas, 2008

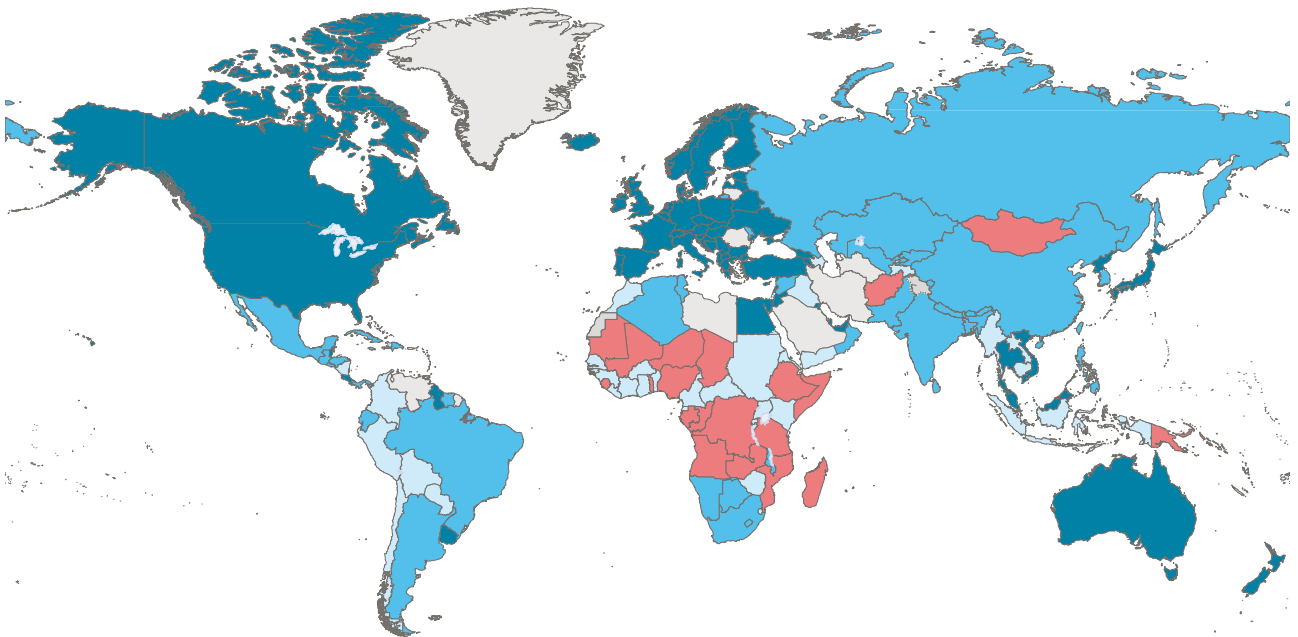


Figure 22 Use of improved sources of drinking-water in rural areas, 2008

Use of Improved drinking-water sources

 91-100%	 76-90%	 50-75%	 <50%	 No or insufficient data
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A CLOSER LOOK AT THE LADDERS



OPEN DEFECCATION

1.1 BILLION PEOPLE STILL DEFECCATE IN THE OPEN

By far the great majority of people practising open defecation live in rural areas, but this number is declining. However, partly because of rapid increases in the urban population, a growing number of people in urban areas defecate in the open.

The proportion of the world population that practises open defecation declined by almost one third from 25% in 1990 to 17% in 2008. A decline in open defecation rates was recorded in all regions. In Sub-Saharan Africa, open defecation rates fell by 25 per cent. In absolute numbers, the population practising open defecation increased, however, from 188 million in 1990 to 224 million in 2008. In Southern Asia, home to 64% of the world population that defecate in the open, the practice decreased the most – from 66% in 1990 to 44% in 2008.

81% of 1.1 billion people that defecate in the open worldwide live in 10 countries

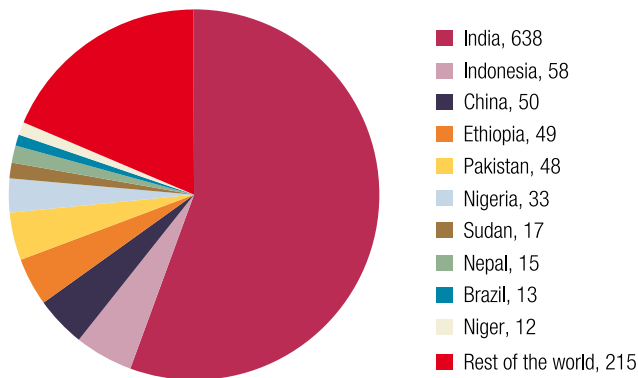


Figure 23 Distribution of 1.1 billion people who practise open defecation, 2008, population (million)

The number of people practising open defecation increased in urban areas

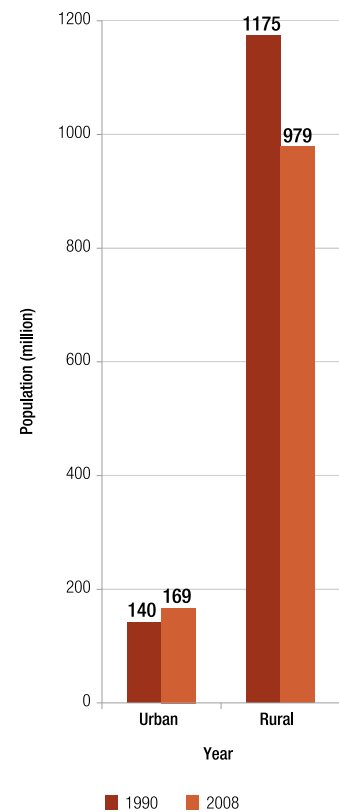


Figure 24 Number of people practising open defecation, urban and rural areas, worldwide, 1990-2008

Open defecation declined considerably in all developing regions

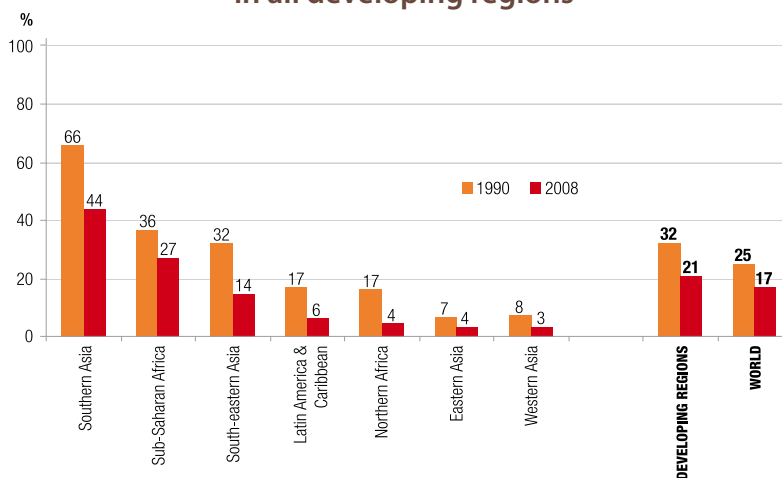


Figure 25 Regional changes in open defecation rates, 1990-2008

SHARED AND UNIMPROVED SANITATION FACILITIES

751 MILLION PEOPLE SHARE THEIR SANITATION FACILITIES

Shared sanitation facilities as defined for MDG monitoring purposes are facilities of an otherwise improved type that are either public or shared between two or more households. Sharing of improved sanitation facilities is most prevalent in urban areas. Often densely populated urban areas do not have sufficient space to construct private sanitation facilities and people rely on public or shared facilities. Among the different regions, using a shared facility is most common in urban Sub-Saharan Africa (31%), and particularly in Ghana. In 1990, 249 million people in urban areas used shared facilities as compared with 145 million in rural areas. Those numbers have now almost doubled to 497 million in urban areas and risen to 254 million in rural areas, representing a worldwide increase of 4%.

Table 1 Urban, rural and total use of shared sanitation for the countries where shared sanitation rate in urban areas in 2008 is 35% or more

COUNTRY	USE OF SHARED SANITATION, 2008 (%)		
	URBAN	RURAL	TOTAL
Ghana	70	38	54
Uganda	56	22	26
Kenya	51	18	25
Sierra Leone	47	18	29
Bolivia	44	16	34
Togo	44	6	22
Malawi	42	24	27
Guinea	42	6	18
Zimbabwe	40	15	24
Nigeria	38	14	26
Gabon	36	25	34
Lesotho	35	3	11

Shared sanitation increased almost two fold but remains considerably higher among urban users

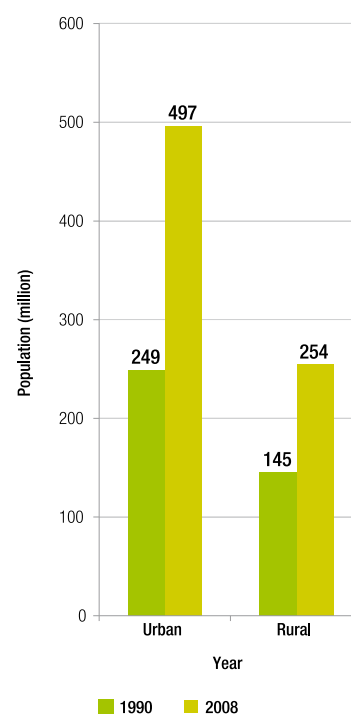


Figure 26 Number of people sharing sanitation facilities, urban and rural areas, 1990-2008

A TENTH OF THE WORLD POPULATION USES UNIMPROVED SANITATION FACILITIES

Unimproved sanitation facilities are unsatisfactory in terms of public health, although existing facilities may be upgraded in various ways to prevent human contact with excreta.

Globally the proportion of the rural population using unimproved sanitation facilities is more than fourfold that in urban areas. This is despite the decrease in the use of unimproved sanitation facilities in rural areas of the developing regions from 23% in 1990 to 20% in 2008.

Use of unimproved sanitation facilities is much higher in rural areas than in the urban areas.

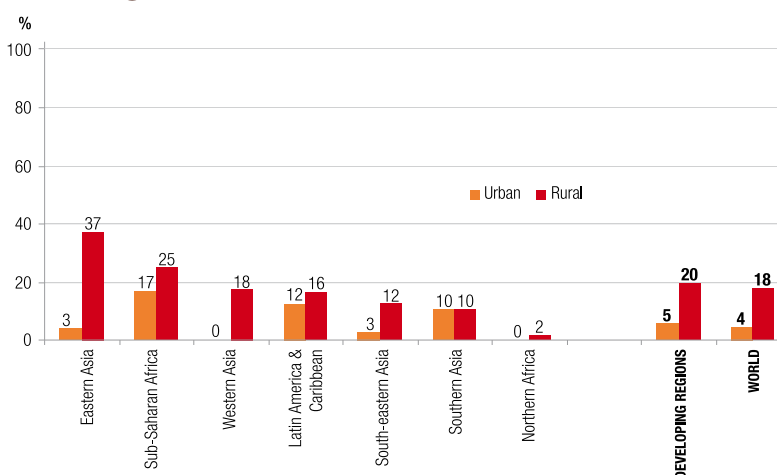


Figure 27 Urban-rural disparities in the use of unimproved sanitation facilities, MDG regions, 2008

CHALLENGE: ARE SHALLOW-PITS AND DRY-LATRINES IMPROVED OR NOT?

Classifying the different types of sanitation facilities, covered by household surveys and censuses, as “improved” or “unimproved” has been an ongoing challenge for JMP. The impact on national rates of access to improved sanitation could be substantial, especially when the facility type is used by a large proportion of the population. When this concerns a large country such as China, the impact on the global estimates could be considerable.

Chinese authorities distinguish harmless sanitary latrines and sanitary latrines and they both meet the MDG criteria for an improved sanitation facility that hygienically separates human waste from human contact. Sanitary latrines are defined by the Chinese Sanitation Authority as those structures which have walls, roofs, seepage-free and leakage free storage tanks, furnished with airtight covers, with a clean latrine room, free from flies and maggots, odourless, and in which faeces are collected in a timely manner and are treated so as to be harmless.

According to survey and census data, in rural areas of China the use of sanitary latrines has gradually increased to 25% in 2008, while the proportion of the rural population that uses another type of sanitation facility, labelled by different surveys as a dry latrine, dry toilet, shallow pit, covered pit or non-covered pit has gradually decreased from 84% in 1991 to 68% in 2008. Though these facilities do not meet the national criteria for a sanitary latrine, it is likely that some meet the MDG criteria for an improved sanitation facility. However without specific information about these facilities, it is a challenge to classify them as either improved or unimproved. The fact that a large proportion of the Chinese population uses these types of facilities has a significant impact on the number of people with or without access to an improved sanitation facility.



PIPED WATER ON PREMISES AND OTHER IMPROVED SOURCES OF DRINKING-WATER

INVESTMENTS IN PIPED CONNECTIONS ON PREMISES DRIVE PROGRESS IN MOST REGIONS

Between 1990 and 2008, more than 1.2 billion people worldwide gained access to a piped connection on premises. This is more than twice the population that gained access to other improved drinking-water sources. In Eastern Asia, Latin America & Caribbean and Northern Africa progress was exclusively the result of increases in piped connections on premises. Since 1990, 510 million in Eastern Asia, 167 million in Latin America & Caribbean and 61 million in Northern Africa gained access to a piped connection on premises. The number of people relying on other improved sources in those regions actually declined, respectively, by 73 million, 6 million and 14 million.

In Sub-Saharan Africa, growth in the population gaining access to other improved sources was 3.5 times higher than the growth in the population with piped connections on premises. In South Asia it was three times higher.

In developing regions, while 73% of the urban population uses piped water from a household connection, only 31% of rural inhabitants have access to household piped water supplies. In Sub-Saharan Africa, only 5% of the rural population gets water piped to premises. In contrast, in urban areas of Sub-Saharan Africa, 35% of urban dwellers use water piped to the household.

Growth in piped connections on premises is twice as high as the growth in other improved drinking-water sources

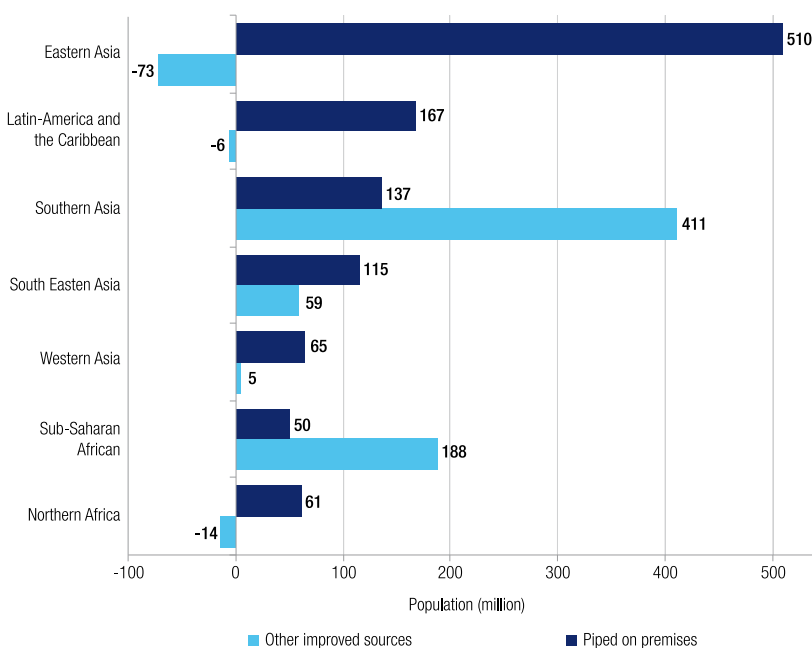


Figure 28 Change of population getting their drinking-water piped on premises or from other improved sources, by MDG region, 1990-2008

Urban use of piped water on premises is more than double rural use

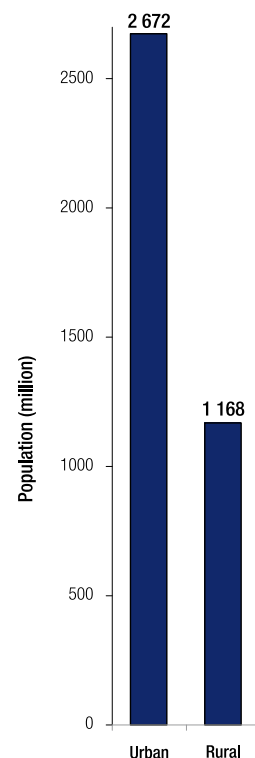


Figure 29 Urban and rural population using piped water on premises, worldwide, 2008





ADDITIONAL PERSPECTIVES



TIME TO COLLECT DRINKING-WATER

Research has shown that those spending more than half an hour per round trip progressively collect less water, and eventually fail to meet their families' minimum daily drinking-water needs.² Additionally, the economic costs of having to make multiple trips per day to collect drinking-water are enormous.³

More than a quarter of the population in several countries of Sub-Saharan Africa takes longer than 30 minutes to make one water collection round trip



Figure 30 Percentage of population that spends more than 30 minutes on a water collection round trip

An analysis of MICS and DHS surveys conducted over the past four years shows that water collection trips of over 30 minutes are most prevalent in Africa⁴ as well as in arid countries outside of Africa, such as Mongolia and Yemen.

In various countries, most notably in Eastern Africa, more than a quarter of the population spends more than half an hour per round trip to collect water.

In many African countries, one third of the improved drinking-water sources that are not piped on premises need a collection time of more than 30 minutes.

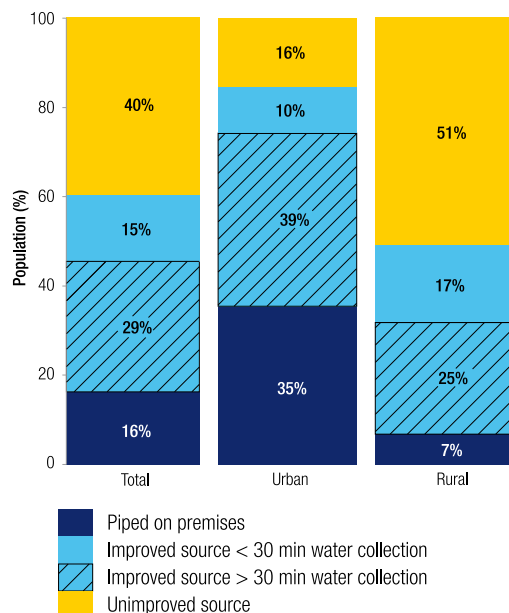


Figure 31 Proportion of the population spending half an hour or less, or more than half an hour, to collect water from an improved source, or using water from an unimproved source, Sub-Saharan Africa

² Hutton G, Haller L, *Evaluations of the costs and benefits of water and sanitation improvements at the global level*. Geneva, World Health Organization, 2004.

³ Howard G and Bartram J, *Domestic water quantity, service level and health*. Geneva, World Health Organization, 2003.

⁴ MICS and DHS surveys from 24 countries in Sub-Saharan Africa, 2005-2008.

COLLECTION OF DRINKING-WATER: GENDER DISPARITIES

For families without a drinking-water source on the premises, it is usually women who go to the source to collect drinking-water. Surveys from 45 developing countries⁵ show that this is the case in almost two thirds of households, while in almost a quarter of households it is men who usually collect the water. In 12% of households, however, children carry the main responsibility for collecting water, with girls under 15 years of age being twice as likely to carry this responsibility as boys under the age of 15 years. The real burden on children is likely to be higher because, in many households the water collection burden is shared, and children – though not the main person responsible – often make several roundtrips carrying water.

**Women shoulder the largest burden
in collecting drinking-water**

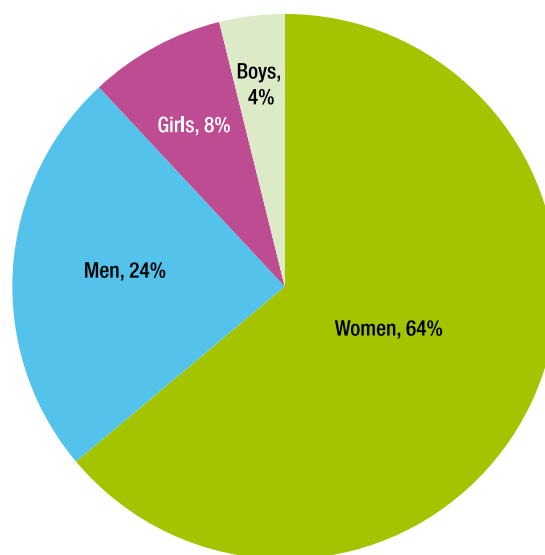


Figure 32 Distribution of those who usually collect drinking-water



5 MICS and DHS surveys from 45 developing countries, 2005-2008.

SOCIOECONOMIC DISPARITIES: SUB-SAHARAN AFRICA

The richest 20 % of the population in Sub-Saharan Africa is almost five times as likely to use an improved sanitation facility than the poorest quintile.⁶ The poorest 20% is around 16 times more likely to practise open defecation than the richest quintile. Still, even among the richest quintile, 4% practises open defecation.

The richest quintile of the population in Sub-Saharan Africa is more than twice as likely as the poorest quintile to use an improved drinking-water source. The benefits of piped water on premises are enjoyed only by the wealthiest.

The poorest quintile is 16 times more likely than the richest quintile to practise open defecation

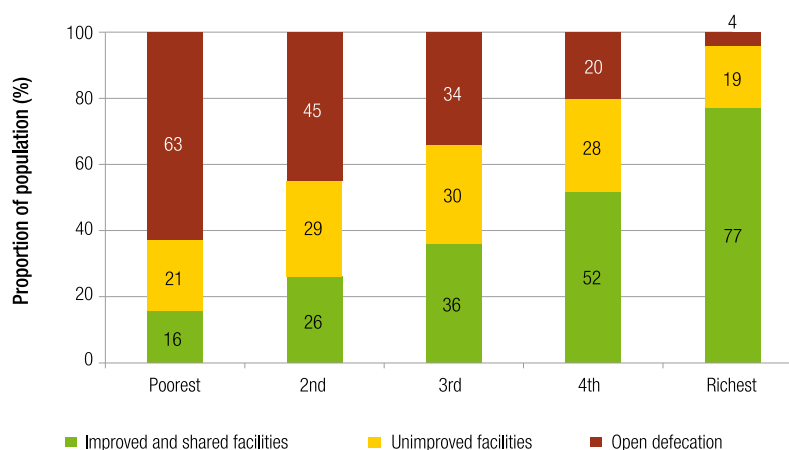


Figure 33 Proportion of the population using an improved, shared or unimproved sanitation facility or practicing open defecation, by wealth quintile, Sub-Saharan Africa



The richest quintile is more than twice as likely than the poorest quintile to use improved drinking-water

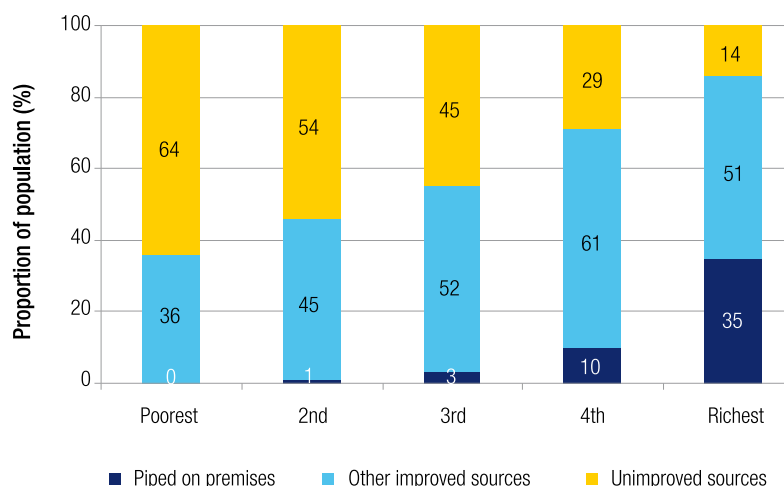


Figure 34 Proportion of the population using drinking-water piped on premises, other improved drinking-water source or an unimproved source, by wealth quintile, Sub-Saharan Africa

⁶ MICS and DHS surveys from 33 countries in Sub-Saharan Africa, 2004-2009.

CHALLENGE: MEASURING WATER QUALITY

Water quality remains an elusive indicator in the global monitoring activities of JMP. The measurement of water safety indicators at the household level has to date been beset by technical and logistical difficulties and by high cost.

How can the safety of drinking-water be monitored globally? What definitions would be meaningful and assist decision-makers in the process of improving the drinking-water situation in the world? How do new concepts in assessing and managing risks to water safety apply in the JMP context? What research and development efforts are needed to come up with a rapid, reliable and cost-effective way of measuring water quality indicators locally and reporting on them at the global level? These are some of the questions to be addressed by a JMP task force.

The MDG target refers to sustainable access to safe drinking-water and basic sanitation. But what does “safe” mean? The WHO *Drinking-water quality guidelines* provides specific values for indicators of microbial contamination and chemical hazards, but allows countries to adapt guideline values to their own socioeconomic contexts. The third edition of the guidelines shifts the emphasis away from single-

point water quality testing to a system of integrated risk assessment and incremental risk management.

In the past decade, WHO and UNICEF have tested the option of directly measuring water quality in a number of pilot countries, using a method for the rapid assessment of drinking-water quality (RADWQ).

This RADWQ project (see below) demonstrated the technical feasibility of such measurements, notwithstanding the established weaknesses of using *E.coli* or thermotolerant coliforms as indicators of microbial safety. It also showed that such a periodic water quality survey at a global level was economically not viable. Apart from affordability, there is also the question of opportunity cost: how many people could be provided with access to water and sanitation using the resources that would be needed to carry out water quality surveys?

Any new target set beyond 2015 will have to address water quality, which will have to be measured or estimated in a meaningful and cost-effective manner. Technological advances and innovative survey methods will be needed to provide the tools for rapid, reliable and cheap measurement, to be carried out on a large scale. Within countries, regulatory frameworks will need to be developed, along with the capacity to implement and independently appraise Water Safety Plans as a standard feature of ensuring sustainable access to safe drinking-water.

Pilot survey: rapid assessment of drinking-water quality (RADWQ)

Drinking-water is considered safe if it meets certain microbiological and chemical standards. To evaluate the quality of drinking-water from improved sources, WHO and UNICEF have developed a rapid assessment method, which has already been used for a pilot study in eight countries (Bangladesh, China, Ethiopia, India, Jordan, Nicaragua, Nigeria and Tajikistan).

The rapid assessment of drinking-water quality (RADWQ) survey method for the pilot study was based, for each country, on a randomly selected sample of 1600 water supplies and 160 households. Field test kits were used for microbiological and chemical testing of water quality and to assess sanitary risks in households.

Microbiological compliance with WHO guidelines varied between countries. On average, compliance was close to 90% for piped water sources, and between 40% and 70% for other improved sources.

Source: RADWQ final country reports (Geneva, World Health Organization and UNICEF, forthcoming).



A close-up photograph of a young child with dark hair and eyes, wearing a blue and yellow uniform, drinking water from a clear plastic cup. The child's face is the central focus, with their hand holding the cup to their mouth. In the background, another child is partially visible, smiling. The image is overlaid with a white horizontal band containing the text 'JMP METHOD'.

JMP METHOD

JMP METHOD EXPLAINED

DEFINING ACCESS TO SANITATION AND DRINKING-WATER

MDG Target 7c calls on countries to halve, by 2015, the proportion of people without sustainable access to safe drinking-water and basic sanitation. In order to estimate access to basic sanitation and to safe water JMP is required to use two MDG indicators:

- proportion of population using an improved sanitation facility, urban and rural;
- proportion of population using an improved drinking-water source, urban and rural.

Because definitions of improved sanitation facilities and drinking-water sources can vary widely within and among countries and regions, and because JMP is mandated to report at global level and across time, JMP has defined a set of categories for “improved” and “unimproved” sanitation facilities and drinking-water sources that are used to analyse the national data on which the MDG trends and estimates are based.

An improved sanitation facility is one that hygienically separates human excreta from human contact. An improved drinking-water source is one that by the nature of its construction adequately protects the source from outside contamination, in particular with faecal matter.



These categories and the population estimates (including the proportion of the population living in urban and rural areas) used in this report are those estimated by the United Nations Population Division, 2008 revision. The estimates used by JMP may differ from those used by national governments. Estimates in this report may therefore differ from national estimates.

DATA COLLECTION: GATHERING MOMENTUM

The first JMP report provided a global picture of access to safe drinking-water and basic sanitation. Also, as the database has grown, JMP has been able to offer more reliable estimates. Because all the estimates are revised for each report, the reports are not comparable.

Since the 2008 report, more than 300 datasets, a record number, has been added to the JMP database. To complement data directly from countries, for the first time, International Household Survey Network (IHSN), supplied JMP with data from 100 household surveys.

Currently the JMP database includes 729 nationally representative household surveys and 152 Censuses. Almost all of these come from developing regions and to a lesser extent from the Commonwealth of Independent States. Since a census in many developed countries is no longer used to collect information on water and sanitation, the JMP largely relies on administratively reported data for the developed countries. The JMP database currently includes 318 administratively reported data for developed countries.

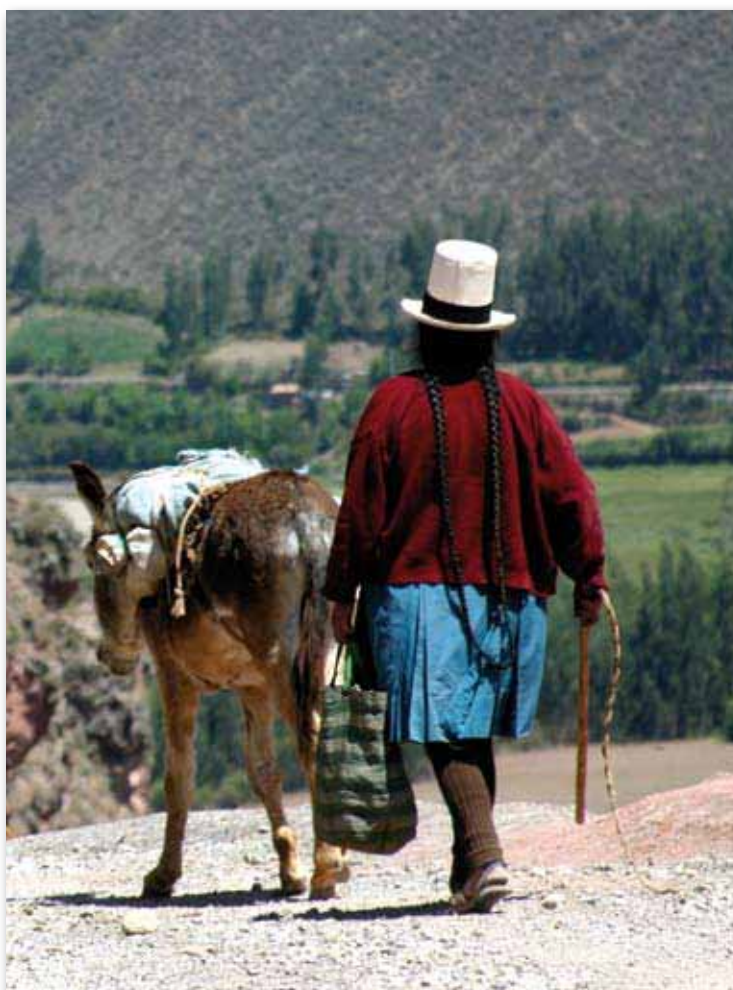
⁷ Bottled water is considered to be improved only when the household uses drinking-water from an improved source for cooking and personal hygiene; where this information is not available, bottled water is classified on a case-by-case basis.

DERIVING MDG PROGRESS ESTIMATES

For each country, survey and census data are plotted on a timescale from 1980 to the present. A linear trend line, based on the least-squares method, is drawn through these data points to provide estimates for 1990, 1995, 2000, 2005 and 2008 (wherever possible). The total estimates are population weighted average of the urban and rural numbers.

Sanitation trend analyses at country level are made for improved sanitation facilities and open defecation. The estimates for improved sanitation facilities presented in this report are discounted by the proportion of the population that shared an improved type of sanitation facility. The ratio (proportion of the population that shares an improved sanitation facility between two or more households) derived from average of all available ratios from household surveys and censuses is subsequently subtracted from the trend estimates of improved sanitation facilities, and this gives the estimates for shared sanitation facilities.

Drinking-water trend analysis at the country level is carried out for the following categories: piped water into dwelling, plot or yard; and improved sources of drinking-water.



Challenge: dealing with a moving baseline

The MDG target sets the proportion of people in 1990 without access to safe drinking-water and basic sanitation as the baseline to be halved by 2015. To capture the concept of access as a measurable indicator, JMP monitors progress to the MDG target on the basis of estimates of the proportion of the population using an improved drinking-water source and an improved sanitation facility, respectively.

The 1990 baseline was estimated for the first JMP report using the data available at that time. However, as the monitoring exercise has continued to gather momentum, an increasing number of new data sources become available each year. From a methodological standpoint, JMP takes the view that the estimates in each successive report should be as accurate as possible. This means using all the available data – not only estimating access for the most recent year, but also recalculating the estimates for earlier years if more data have come to light. Consequently, these new estimates may affect the baseline values, the trends, and the projections for 2015, the target year.

The advantage of this method is that each report presents the most accurate and detailed picture of the current situation and of progress made since 1990. The disadvantage is that reports are not comparable from one year to the next.

CHALLENGE: COMPARING AND RECONCILING DIFFERENT COUNTRY ESTIMATES

At country level, differences may be observed in the figures on the use of drinking-water sources and sanitation facilities presented by different agencies. Often there are also differences between these national estimates and those at the MDG level. At the origin of these discrepancies lies the issue of institutional fragmentation. Responsibilities for rural drinking-water and sanitation may be with different national bodies, who may each apply their own monitoring definitions, methods and procedures. The same is true, often at the municipal level, for urban drinking-water and sanitation. What is the nature of these different approaches? Can definitions be harmonized? Is it possible to align numbers so discrepancies can be reduced? Can barriers between sectoral institutions be overcome in the area of monitoring? Ultimately, can national monitoring of sanitation and drinking-water be fitted into a common framework?

This challenge has been addressed by JMP over the past two years in collaboration with a small number of countries. The first results of these data reconciliation and alignment processes are enlightening and promising.

DIFFERENT ACTORS IN CHARGE OF MONITORING

At national level, it is common for different line-ministries to monitor national access to drinking-water and sanitation. The National Statistics Office (NSO) is usually responsible overall for all national data, however individual line-ministries responsible for actual service provision often have their own monitoring mechanisms. Where NSOs largely rely on household surveys and census data, line-ministries often track progress based on recorded outputs of the sector.

MEASURING DIFFERENT ASPECTS

Line ministries responsible for water supply and sanitation often measure the provision of drinking-

water supply and sanitation facilities and/or the number of service connections. NSOs tend to use household surveys and censuses to measure the actual use of drinking-water and sanitation facilities by household members. This difference is important as a service once provided may no longer be operational, or simply may not be used for various reasons.

USING DIFFERENT DEFINITIONS OF ACCESS

NSOs and different line-ministries may use different definitions of access and these, in turn, may differ from the definitions used for the MDG coverage estimates. Understanding the differences in definitions is key to the process of comparing national and MDG coverage estimates.

HOW COVERAGE IS MEASURED FOR MDG MONITORING

Since the MDG targets are based on the use of improved sanitation and drinking-water facilities, the JMP relies on nationally representative household surveys and censuses usually conducted by NSOs. In order to be able to compare coverage rates and progress among countries, standard definitions of access are used across all countries (see definitions on page 34).

RECONCILING JMP AND COUNTRY ESTIMATES

Over the past two years, JMP has worked with a number of pilot countries to:

- develop a common understanding of monitoring methods;
- explore the possibility of harmonizing or aligning monitoring approaches;
- encourage greater collaboration among national agencies, and between national agencies and JMP.

Once definitions are clarified at national level, it is possible to make national and JMP definitions correspond better. The JMP objective is to ensure comparability between countries. Efforts by JMP to reconcile data have advanced understanding of the different approaches taken by countries. However, it is not within the JMP's mandate or capacity to carry out such a process in every country. JMP is therefore collaborating with other country-based organizations to pursue this task.



STATISTICAL TABLE



Country, area or territory	Year	Population (thousand)	Percentage urban population	USE OF SANITATION FACILITIES (PERCENTAGE OF POPULATION)														USE OF DRINKING-WATER SOURCES (PERCENTAGE OF POPULATION)				Number of people who gained access to improved sanitation 1990-2008 (thousand)	Number of people who gained access to improved sources of drinking-water 1990-2008 (thousand)						
				Urban						Rural						Total		Urban						Rural				Total	
				Improved		Unimproved		Shared		Improved		Unimproved		Shared		Improved		Unimproved		Total improved				Unimproved		Improved		Total improved	
Bangladesh	1990	115 632	20	59	27	7	34	16	10	40	39	18	10	33	88	28	60	12	76	0	76	24	78	6	72	22	37 807	22	
	2000	140 767	24	57	26	12	43	20	13	24	46	21	13	20	86	26	60	14	77	0	77	23	79	6	73	21		21	
	2008	160 000	27	56	26	15	52	24	16	8	53	25	15	7	85	24	61	15	78	0	78	22	80	6	74	20		20	
Barbados	1990	260	33	100	0	0	100	0	0	0	100	0	0	0	100	98	2	0	100	0	100	0	100	0	0	0	NA*	0	
	2000	252	36	100	0	0	100	0	0	0	100	0	0	0	100	100	0	0	100	0	100	0	100	0	0	0	NA*	0	
	2008	255	40	100	0	0	100	0	0	0	100	0	0	0	100	100	0	0	100	0	100	0	100	0	0	0	NA*	0	
Belarus	1990	10 260	66	91	8	1	96	2	2	1	93	6	1	1	100	89	11	0	99	30	69	1	100	71	28	0	NA*	0	
	2000	10 054	70	91	8	1	97	2	1	93	6	1	1	1	100	95	5	0	99	72	27	1	100	89	11	0	NA*	0	
	2008	9 679	73	91	8	1	97	2	1	93	6	1	1	1	100	95	5	0	99	72	27	1	100	89	11	0	NA*	0	
Belgium	1990	9 933	96	100	0	0	100	0	0	0	100	0	0	0	100	100	0	0	100	96	4	0	100	100	0	0	657	0	
	2000	10 193	97	100	0	0	100	0	0	0	100	0	0	0	100	100	0	0	100	99	1	0	100	100	0	0	657	0	
	2008	10 590	97	100	0	0	100	0	0	0	100	0	0	0	100	100	0	0	100	100	0	0	100	100	0	0	657	0	
Belize	1990	190	47	73	5	17	75	6	7	12	74	6	11	9	89	77	12	11	63	20	43	37	75	47	28	25	155	25	
	2000	252	48	84	6	8	81	6	6	7	82	6	7	5	95	82	13	5	83	42	41	17	89	61	28	11	155	11	
	2008	301	52	93	7	0	86	7	5	2	90	7	2	1	99	87	12	1	100	61	39	0	99	74	25	1	155	1	
Benin	1990	4 795	34	14	20	15	51	1	3	95	5	8	7	80	72	19	53	28	47	0	47	53	56	7	49	44	3 811	44	
	2000	6 659	38	19	28	13	40	3	6	4	87	9	14	8	78	23	55	22	59	2	57	41	66	10	56	34	3 811	34	
	2008	8 662	41	24	34	11	31	4	10	6	80	12	20	8	84	26	58	16	69	2	67	31	75	12	63	25	3 811	25	
Bhutan	1990	549	16	87	0	9	4	54	0	11	62	0	29	9	99	81	18	1	88	45	43	12	91	54	37	9	0	9	
	2000	561	25	87	0	9	4	54	0	35	11	65	26	9	99	81	18	1	88	45	43	12	92	57	35	8	0	8	
	2008	687	35	87	0	9	4	54	0	35	11	65	26	9	99	81	18	1	88	45	43	12	92	57	35	8	0	8	
Bolivia (Plurinational State of)	1990	6 671	56	29	38	2	31	6	10	4	80	19	26	2	92	78	14	8	42	14	28	58	70	50	20	30	3 668	30	
	2000	8 317	62	32	41	10	17	8	14	15	63	23	31	11	94	87	7	6	56	33	23	44	79	66	13	21	3 668	21	
	2008	9 694	66	34	44	16	6	9	16	25	50	25	34	20	96	93	3	4	67	47	20	33	86	77	9	14	3 668	14	
Bosnia and Herzegovina	1990	4 308	39	98	0	2	0	93	1	5	95	1	3	1	99	96	3	1	96	77	19	4	97	85	12	3	0	3	
	2000	3 694	43	99	0	1	0	92	1	7	95	1	4	0	99	94	6	0	98	71	27	2	99	82	17	1	0	1	
	2008	3 773	47	99	0	1	0	92	1	7	95	1	4	0	99	94	6	0	98	71	27	2	99	82	17	1	0	1	
Botswana	1990	1 352	42	58	5	25	12	20	6	21	53	36	6	22	100	39	61	0	88	13	75	12	93	24	69	7	568	7	
	2000	1 723	53	67	6	21	6	31	8	16	45	50	7	19	99	61	38	1	89	25	64	11	94	44	50	6	568	6	
	2008	1 921	60	74	7	18	1	39	11	12	38	60	9	15	99	80	19	1	90	35	55	10	95	62	33	5	568	5	
Brazil	1990	149 570	75	81	15	4	35	25	40	69	18	13	13	13	96	92	4	4	65	35	30	35	88	78	10	12	54 590	12	
	2000	174 174	81	84	12	4	36	30	34	75	15	10	10	10	97	95	2	3	75	50	25	25	93	87	6	7	54 590	7	
	2008	191 972	86	87	10	3	37	33	30	80	13	7	7	7	99	96	3	1	84	62	22	16	97	91	6	3	54 590	3	
British Virgin Islands	1990	17	50	100	0	0	100	0	0	0	100	0	0	0	98	97	1	2	98	97	1	2	98	97	1	2	6	2	
	2000	21	57	100	0	0	100	0	0	0	100	0	0	0	98	97	1	2	98	97	1	2	98	97	1	2	6	2	
	2008	23	61	100	0	0	100	0	0	0	100	0	0	0	98	97	1	2	98	97	1	2	98	97	1	2	6	2	
Brunei Darussalam	1990	257	66	99	0	0	100	0	0	0	100	0	0	0	100	100	0	0	100	100	0	0	100	100	0	0	0	0	0
	2000	333	71	99	0	0	100	0	0	0	100	0	0	0	100	100	0	0	100	100	0	0	100	100	0	0	0	0	0
	2008	392	75	99	0	0	100	0	0	0	100	0	0	0	100	100	0	0	100	100	0	0	100	100	0	0	0	0	0
Bulgaria	1990	8 819	66	100	0	0	100	0	0	98	99	0	1	1	100	96	4	0	99	72	27	1	100	88	12	0	NA*	0	
	2000	8 006	69	100	0	0	100	0	0	100	100	0	0	0	100	96	4	0	100	72	28	0	100	89	11	0	NA*	0	
	2008	7 593	71	100	0	0	100	0	0	100	100	0	0	0	100	96	4	0	100	72	28	0	100	89	11	0	NA*	0	
Burkina Faso	1990	8 814	14	28	17	42	13	2	2	6	90	6	4	11	73	12	61	27	36	0	36	64	41	2	39	59	7 964	59	
	2000	11 676	17	31	18	41	10	4	5	8	83	8	7	14	71	85	17	68	55	0	55	65	60	3	57	40	7 964	40	
	2008	15 234	20	33	20	39	8	6	7	10	77	11	10	15	95	21	74	5	72	0	72	28	76	4	72	24	7 964	24	

Country, area or territory	Year	Population (thousand)	USE OF SANITATION FACILITIES (PERCENTAGE OF POPULATION)																Number of people who gained access to improved sanitation 1990-2008 (thousand)		
			Urban						Rural						Total						
			Improved			Unimproved			Improved			Unimproved			Improved		Unimproved				
			Shared	Unimproved facilities	Open Defecation	Shared	Unimproved facilities	Open Defecation	Shared	Unimproved facilities	Open Defecation	Total improved	Total unimproved	Total improved	Total unimproved	Piped	Other improved				
Percentage urban population			USE OF DRINKING-WATER SOURCES (PERCENTAGE OF POPULATION)																Number of people who gained access to improved sources of drinking-water 1990-2008 (thousand)		
Improved			Unimproved			Improved			Unimproved			Improved		Unimproved							
Improved			Unimproved			Improved			Unimproved			Improved		Unimproved							
Improved			Unimproved			Improved			Unimproved			Improved		Unimproved							
Grenada	1990	96	32	96	4	97	3	97	3	97	3	97	93	75	18	7	94	81	13	6	-
	2000	101	31	96	4	97	3	97	3	97	3	97	93	75	18	7	94	81	13	6	-
	2008	104	31	96	4	97	3	97	3	97	3	97	93	75	18	7	94	81	13	6	-
Guadeloupe	1990	386	99	-	-	-	-	-	-	-	-	-	98	98	0	2	98	98	0	2	76
	2000	429	98	-	-	-	-	-	-	-	-	-	98	98	0	2	98	98	0	2	76
	2008	464	98	-	-	-	-	-	-	-	-	-	98	98	0	2	98	98	0	2	76
Guam	1990	134	91	99	1	98	2	99	1	99	1	99	100	100	0	0	100	100	0	0	42
	2000	155	93	99	1	98	2	99	1	99	1	99	100	100	0	0	100	100	0	0	42
	2008	176	93	99	1	98	2	99	1	99	1	99	100	100	0	0	100	100	0	0	42
Guatemala	1990	8 910	41	84	7	51	2	65	4	8	23	91	68	35	40	25	82	49	33	18	5 559
	2000	11 231	45	87	7	63	2	74	4	9	13	95	83	84	53	31	89	67	22	11	3 785
	2008	13 686	49	89	7	73	2	81	4	8	7	98	95	90	68	22	94	81	13	6	3 785
Guinea	1990	6 147	28	18	23	6	4	36	54	9	41	87	21	38	0	38	62	6	46	48	-
	2000	8 384	31	27	33	3	9	5	44	42	15	88	24	51	0	51	49	62	7	55	-
	2008	9 833	34	34	42	23	1	11	6	50	33	89	26	61	1	60	39	71	10	61	-
Guinea-Bissau	1990	1 022	28	-	-	-	-	-	-	-	-	-	79	37	0	37	63	2	-	-	-
	2000	1 304	30	43	7	4	4	7	0	40	53	18	2	42	2	42	38	5	50	45	-
	2008	1 575	30	49	8	4	2	9	0	48	43	21	2	46	31	46	17	9	52	39	-
Guyana	1990	749	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2000	756	29	85	10	4	1	77	8	14	1	79	9	9	11	1	87	54	33	13	-
	2008	763	28	85	10	5	0	80	8	10	2	81	9	9	1	2	93	63	30	7	-
Haiti	1990	7 108	29	44	45	1	10	19	12	7	62	26	21	6	47	38	41	2	39	59	2 881
	2000	8 648	36	34	35	21	10	15	9	20	56	22	18	20	40	40	49	3	46	51	2 881
	2008	9 876	47	24	24	43	9	10	6	35	49	17	14	39	30	29	55	4	51	45	2 881
Honduras	1990	4 901	40	68	9	12	11	28	2	12	58	44	5	12	39	9	59	42	17	41	2 765
	2000	6 230	44	75	10	9	6	47	4	11	38	59	7	10	24	7	69	59	10	31	2 765
	2008	7 319	48	80	11	7	2	62	5	11	22	71	8	9	12	5	77	72	5	23	2 765
Hungary	1990	10 365	66	100	-	0	0	100	-	0	0	100	-	0	0	0	91	72	19	9	62
	2000	10 215	65	100	-	0	0	100	-	0	0	100	-	0	0	0	98	86	12	2	62
	2008	10 012	68	100	-	0	0	100	-	0	0	100	-	0	0	0	100	93	7	0	62
Iceland	1990	255	91	100	-	0	0	100	-	0	0	100	-	0	0	0	100	100	0	0	61
	2000	281	92	100	-	0	0	100	-	0	0	100	-	0	0	0	100	100	0	0	61
	2008	315	92	100	-	0	0	100	-	0	0	100	-	0	0	0	100	100	0	0	61
India	1990	862 162	26	49	19	4	28	7	1	2	90	18	6	2	74	10	66	8	58	34	418 886
	2000	1 042 590	28	52	20	6	22	14	3	4	79	25	8	4	63	7	76	9	61	20	418 886
	2008	1 181 412	29	54	21	7	18	21	4	6	69	31	9	6	54	8	84	11	73	16	418 886
Indonesia	1990	177 385	31	58	8	16	18	22	7	23	48	33	7	21	39	4	62	2	60	38	55 933
	2000	205 280	42	63	8	12	17	30	9	19	42	44	9	16	31	10	67	5	62	33	55 933
	2008	227 345	52	67	9	8	16	36	11	17	36	52	10	12	26	11	71	8	63	29	55 933
Iran (Islamic Republic of)	1990	56 733	56	86	-	14	-	78	-	22	-	83	-	17	-	2	83	69	14	17	-
	2000	66 903	64	86	-	14	-	78	-	22	-	83	-	17	-	2	83	69	14	17	-
	2008	73 312	68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iraq	1990	18 079	70	-	5	0	-	-	-	-	-	-	-	-	-	-	44	-	-	-	-
	2000	24 652	68	76	19	5	0	54	10	21	15	69	16	10	5	49	37	12	51	80	9 132
	2008	30 096	67	76	19	5	0	66	12	17	5	73	17	8	2	55	49	6	45	20	9 132

Country, area or territory	Year	Population (thousand)	Percentage urban population	USE OF SANITATION FACILITIES (PERCENTAGE OF POPULATION)																		Number of people who gained access to improved sanitation 1990-2008 (thousand)
				Urban						Rural						Total						
				Improved			Unimproved			Improved			Unimproved			Improved			Unimproved			
				Total improved	Piped	Other improved	Shared	Unimproved facilities	Open Defecation	Total improved	Piped	Other improved	Shared	Unimproved facilities	Open Defecation	Total improved	Piped	Other improved	Unimproved	Total improved	Piped	
Micronesia (Federated States of)	1990	96	26	55	45	20	80	29	71	1	84	29	16	74	87	7	13	89	11	-	-	-
	2000	107	22	59	41	16	84	26	74	-	-	26	84	26	74	92	8	92	8	-	-	-
	2008	110	22	-	-	-	-	-	-	-	-	-	-	-	-	5	8	95	-	-	-	-
Monaco	1990	29	100	100	0	NA	NA	100	0	NA	NA	100	0	0	NA	0	NA	100	0	0	0	0
	2000	32	100	100	0	NA	NA	100	0	NA	NA	100	0	0	NA	0	NA	100	0	0	0	0
	2008	33	100	100	0	NA	NA	100	0	NA	NA	100	0	0	NA	0	NA	100	0	0	0	0
Mongolia	1990	2 216	57	66	32	2	20	49	8	16	18	36	27	8	27	19	73	58	30	28	42	42
	2000	2 389	57	64	31	2	32	50	9	13	24	26	28	9	28	12	63	66	24	42	34	34
	2008	2 641	57	64	31	2	32	50	9	13	24	26	28	9	28	3	51	76	19	57	24	24
Montenegro	1990	587	48	96	3	1	86	92	3	0	3	1	92	3	5	-	0	96	85	13	2	-
	2000	661	59	96	3	1	86	92	3	0	3	1	92	3	5	0	0	96	85	13	2	-
	2008	622	60	96	3	1	86	96	4	-	-	96	96	4	-	0	100	100	12	88	0	0
Montserrat	1990	11	13	96	4	-	96	96	4	-	4	-	96	4	-	0	0	100	100	11	89	0
	2000	5	11	96	4	-	96	96	4	-	4	-	96	4	-	0	0	100	100	15	85	0
	2008	6	15	96	4	-	96	96	4	-	4	-	96	4	-	0	0	100	100	15	85	0
Morocco	1990	24 808	48	81	14	0	5	27	3	1	69	53	8	38	8	6	55	74	38	35	26	26
	2000	28 827	53	82	14	2	43	64	10	2	50	64	10	2	24	4	58	82	50	28	22	22
	2008	31 606	56	83	14	3	52	69	10	4	38	69	10	4	17	2	60	81	58	23	19	19
Mozambique	1990	13 543	21	36	7	25	32	4	1	21	74	11	2	22	65	27	26	36	5	31	64	64
	2000	18 249	31	37	7	31	25	4	1	27	68	14	3	28	55	25	27	42	7	35	58	58
	2008	22 383	37	38	7	41	14	4	1	36	59	17	3	38	42	23	29	47	8	39	53	53
Myanmar	1990	40 844	25	-	10	8	1	-	-	-	14	65	9	-	10	13	47	57	5	52	43	43
	2000	46 610	28	81	10	4	0	59	8	19	14	65	9	16	10	20	60	66	6	60	34	34
	2008	49 563	33	86	10	4	0	79	11	9	1	81	11	7	1	25	69	71	6	65	29	29
Namibia	1990	1 417	28	66	18	5	11	9	2	6	83	25	6	6	63	1	51	64	33	31	36	36
	2000	1 824	32	63	17	5	15	13	3	7	77	29	8	6	57	1	72	81	39	42	19	19
	2008	2 130	37	60	17	5	18	17	4	6	73	33	9	5	53	1	88	92	44	48	8	8
Nauru	1990	9	100	-	-	-	-	-	-	-	NA	NA	NA	-	-	-	NA	NA	-	-	-	-
	2000	10	100	-	-	-	-	-	-	-	NA	NA	NA	-	-	-	NA	NA	-	-	-	-
	2008	10	100	50	23	26	1	50	23	26	1	50	23	26	1	10	90	90	-	-	10	-
Nepal	1990	19 105	9	41	24	5	30	8	2	5	85	11	4	5	80	4	74	76	8	68	24	24
	2000	24 432	13	47	27	4	22	19	5	5	71	23	8	5	64	6	81	83	13	70	17	17
	2008	28 810	17	51	30	4	15	27	7	6	60	31	11	6	52	7	87	88	17	71	12	12
Netherlands	1990	14 953	69	100	0	0	100	100	0	0	0	100	0	0	0	0	100	100	98	2	0	0
	2000	15 915	77	100	0	0	100	100	0	0	0	100	0	0	0	0	100	100	100	0	0	0
	2008	16 528	82	100	0	0	100	100	0	0	0	100	0	0	0	0	100	100	100	0	0	0
New Zealand	1990	3 386	85	-	-	-	-	-	-	-	12	-	-	-	-	-	0	100	100	0	0	0
	2000	3 868	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0	100	100	0	0	0
	2008	4 230	87	-	-	-	-	-	-	-	-	-	-	-	-	-	0	100	100	0	0	0
Nicaragua	1990	4 138	52	59	8	29	4	26	4	26	44	43	6	28	23	8	54	74	52	22	26	26
	2000	5 101	55	61	8	27	4	32	5	32	31	48	7	29	16	5	62	80	57	23	20	20
	2008	5 667	57	63	9	24	4	37	6	36	21	52	8	29	11	2	68	85	62	23	15	15
Niger	1990	7 904	15	19	14	41	26	2	1	2	95	5	3	8	84	43	31	35	3	32	65	65
	2000	11 031	16	27	20	31	22	3	1	3	93	7	4	7	82	22	35	42	6	36	58	58
	2008	14 704	16	34	25	21	20	4	2	3	91	9	4	6	79	4	39	48	7	41	52	52

Country, area or territory	Year	Population (thousand)	Percentage urban population	USE OF SANITATION FACILITIES (PERCENTAGE OF POPULATION)													USE OF DRINKING-WATER SOURCES (PERCENTAGE OF POPULATION)					
				Urban						Rural						Total	Urban			Rural		Total
				Improved			Unimproved			Improved			Unimproved			Improved	Unimproved	Improved		Unimproved	Improved	Unimproved
				Total improved	Unimproved facilities	Open Defecation	Shared	Total improved	Unimproved facilities	Open Defecation	Shared	Total improved	Unimproved facilities	Open Defecation	Shared	Total improved	Unimproved facilities	Open Defecation	Total improved	Piped	Other improved	Total improved
Qatar	1990	467	92	100	0	0	0	100	0	0	0	0	100	0	0	813	100	0	0	813		
	2000	617	95	100	0	0	0	100	0	0	0	0	100	0	0	813	100	0	0	813		
Republic of Korea	1990	42 983	74	100	0	0	0	100	0	0	0	0	100	0	0	5 169	97	96	1	93	7	
	2008	46 429	80	100	0	0	0	100	0	0	0	0	100	0	0	5 169	98	97	1	95	6	
Republic of Moldova	1990	48 152	81	100	0	0	0	100	0	0	0	0	100	0	0	5 169	100	99	1	98	2	
	2008	48 152	81	100	0	0	0	100	0	0	0	0	100	0	0	5 169	100	99	1	98	2	
Romania	1990	4 364	47	0	7	8	0	74	5	21	0	79	6	15	0	0	97	78	19	3	88	
	2008	4 100	45	85	7	8	0	74	5	21	0	79	6	15	0	0	96	79	17	4	85	
Russian Federation	1990	23 207	53	88	3	9	0	52	1	47	0	71	2	27	0	NA*	85	85	0	16	26	
	2008	22 138	53	88	3	9	0	54	1	45	0	72	2	26	0	NA*	91	91	0	26	26	
Rwanda	1990	148 065	73	93	7	7	0	70	0	30	0	87	13	13	0	NA*	98	87	11	45	36	
	2008	146 670	73	93	7	7	0	70	0	30	0	87	13	13	0	NA*	98	90	8	42	44	
Saint Kitts and Nevis	1990	7 150	5	35	12	50	3	22	2	69	7	23	3	67	7	3 605	96	32	64	66	0	
	2008	7 958	14	43	15	40	2	40	4	51	5	40	6	49	5	3 605	85	22	63	64	0	
Saint Lucia	1990	9 721	18	50	18	31	1	55	6	36	3	54	8	35	3	10	77	15	62	62	1	
	2008	9 721	18	50	18	31	1	55	6	36	3	54	8	35	3	10	99	99	1	99	1	
Saint Vincent and the Grenadines	1990	41	35	96	4	4	0	96	4	4	0	96	4	4	0	10	99	72	27	1	72	
	2008	46	33	96	4	4	0	96	4	4	0	96	4	4	0	10	99	99	1	99	1	
Samoa	1990	138	29	89	11	11	0	89	11	11	0	89	11	11	0	21	98	75	23	2	98	
	2008	157	28	89	11	11	0	89	11	11	0	89	11	11	0	21	98	75	23	2	98	
San Marino	1990	107	41	96	4	4	0	96	4	4	0	96	4	4	0	0	99	99	0	99	0	
	2008	108	44	96	4	4	0	96	4	4	0	96	4	4	0	0	98	75	23	2	98	
Sao Tome and Principe	1990	161	21	100	0	0	0	98	2	2	0	98	2	2	0	21	99	74	18	8	88	
	2008	177	22	100	0	0	0	100	0	0	0	100	0	0	0	21	92	74	18	8	88	
Saudi Arabia	1990	16 259	77	100	0	0	0	100	0	0	0	100	0	0	0	0	97	97	0	3	63	
	2008	20 808	80	100	0	0	0	100	0	0	0	100	0	0	0	0	97	97	0	3	63	
Senegal	1990	7 538	39	62	17	12	9	22	6	14	58	38	10	13	39	3 363	88	45	43	12	43	
	2008	9 902	41	66	18	11	5	31	8	18	43	45	12	15	28	3 363	90	61	29	10	48	
Serbia	1990	12 211	42	69	19	10	2	38	10	21	31	51	14	16	19	0	92	74	18	8	52	
	2008	10 134	51	96	3	1	0	88	3	9	0	92	3	5	0	0	99	97	2	1	98	

Country, area or territory	Year	Population (thousand)	Percentage urban population	USE OF SANITATION FACILITIES (PERCENTAGE OF POPULATION)												Number of people who gained access to improved sanitation 1990-2008 (thousand)	
				Urban				Rural				Total					
				Improved	Shared	Unimproved facilities	Open Defecation	Improved	Shared	Unimproved facilities	Open Defecation	Improved	Shared	Unimproved facilities	Open Defecation		
Seychelles	1990	72	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2000	81	51	94	-	1	-	-	-	-	-	-	-	-	-	-	-
	2008	84	56	97	-	2	-	-	-	-	-	-	-	-	-	-	-
Sierra Leone	1990	4 084	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2000	4 228	36	21	41	32	6	5	13	48	34	34	24	11	23	42	24
	2008	5 560	38	24	47	25	4	6	18	40	36	34	24	13	29	34	24
Singapore	1990	3 016	100	99	-	1	-	NA	NA	NA	NA	NA	99	-	1	-	-
	2000	4 018	100	100	-	0	0	NA	NA	NA	NA	NA	100	-	0	0	0
	2008	4 615	100	100	-	0	0	NA	NA	NA	NA	NA	100	-	0	0	0
Slovakia	1990	5 256	56	100	0	0	0	100	0	0	0	0	0	100	0	0	0
	2000	5 379	56	100	0	0	0	100	0	0	0	0	0	100	0	0	0
	2008	5 400	56	100	0	0	0	99	0	1	0	0	0	100	0	0	0
Slovenia	1990	1 927	50	100	-	0	0	100	-	0	0	0	0	100	-	0	0
	2000	1 985	51	100	-	0	0	100	-	0	0	0	0	100	-	0	0
	2008	2 015	48	100	-	0	0	100	-	0	0	0	0	100	-	0	0
Solomon Islands	1990	314	14	98	-	2	-	18	-	-	-	-	31	-	-	-	-
	2000	416	16	98	-	2	-	-	-	-	-	-	-	-	-	-	-
	2008	511	18	98	-	2	-	-	-	-	-	-	-	-	-	-	-
Somalia	1990	6 596	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2000	7 394	33	45	26	16	13	10	9	9	72	22	15	11	52	11	52
	2008	8 926	37	52	30	15	3	6	6	5	83	23	15	8	54	8	54
South Africa	1990	36 745	52	80	10	8	2	58	8	10	24	69	9	9	13	9	13
	2000	44 872	57	82	10	6	2	61	8	10	21	73	9	8	10	8	10
	2008	49 668	61	84	10	4	2	65	9	9	17	77	10	5	8	8	8
Spain	1990	38 839	75	100	-	0	0	100	-	0	0	100	-	0	0	0	0
	2000	40 264	76	100	-	0	0	100	-	0	0	100	-	0	0	0	0
	2008	44 486	77	100	-	0	0	100	-	0	0	100	-	0	0	0	0
Sri Lanka	1990	17 290	17	85	7	4	4	67	2	15	16	70	3	13	14	14	14
	2000	18 767	16	87	7	3	3	81	3	8	8	82	4	7	7	7	7
	2008	20 061	15	88	7	3	2	92	3	4	1	91	4	4	1	1	1
Sudan	1990	27 091	27	63	-	27	10	23	-	29	48	34	-	28	38	38	38
	2000	34 904	36	58	-	27	15	20	-	26	54	34	-	26	40	40	40
	2008	41 348	43	55	-	25	20	18	-	24	58	34	-	25	41	41	41
Suriname	1990	407	68	90	9	1	0	-	-	-	-	-	-	-	-	-	-
	2000	467	72	90	9	1	0	65	11	2	22	83	10	1	6	6	6
	2008	515	75	90	9	1	0	66	11	3	20	84	10	1	5	5	5
Swaziland	1990	864	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2000	1 080	23	60	31	6	3	46	18	8	28	49	21	8	22	22	22
	2008	1 168	25	61	32	5	2	53	20	6	21	55	23	6	16	16	16
Sweden	1990	8 559	83	100	-	0	0	100	-	0	0	100	-	0	0	0	0
	2000	8 860	84	100	-	0	0	100	-	0	0	100	-	0	0	0	0
	2008	9 205	85	100	-	0	0	100	-	0	0	100	-	0	0	0	0
Switzerland	1990	6 715	73	100	-	0	0	100	-	0	0	100	-	0	0	0	0
	2000	7 184	73	100	-	0	0	100	-	0	0	100	-	0	0	0	0
	2008	7 541	73	100	-	0	0	100	-	0	0	100	-	0	0	0	0

MDG regions and the World	Year	Population (thousand)	Percentage urban population	USE OF SANITATION FACILITIES (PERCENTAGE OF POPULATION)												Number of people who gained access to improved sanitation 1990-2008 (thousand)													
				Urban				Rural				Total																	
				Improved		Unimproved		Improved		Unimproved		Improved		Unimproved															
				Shared	Unimproved facilities	Open Defecation	Unimproved facilities	Shared	Unimproved facilities	Open Defecation	Unimproved facilities	Shared	Unimproved facilities	Open Defecation	Unimproved facilities														
Sub-Saharan Africa	1990	517 961	28	43	29	17	11	21	10	22	47	28	16	36	83	43	40	17	36	4	32	64	49	15	34	51	237 812		
	2000	674 693	33	43	30	17	10	23	11	23	43	29	18	21	32	82	38	44	18	42	4	38	55	15	40	45		47 100	
	2008	822 436	37	44	31	17	8	24	13	25	38	31	20	22	27	83	35	48	17	47	5	42	60	16	44	40			436 981
Northern Africa	1990	120 675	49	91	6	0	3	55	4	12	29	72	5	6	17	94	86	8	78	33	45	22	86	58	28	14	547 433		
	2000	144 621	51	93	6	0	1	72	5	6	17	83	6	2	9	94	89	5	83	51	32	17	89	70	19	11		174 442	
	2008	164 466	53	94	6	0	0	83	6	2	9	89	6	1	4	95	91	4	87	68	19	13	92	80	12	8			70 234
Eastern Asia	1990	1 213 509	38	53	25	19	3	39	6	46	9	43	12	38	7	97	87	10	56	42	14	44	69	55	14	31	1 506		
	2000	1 345 739	38	58	28	9	5	47	7	40	6	51	15	29	5	98	92	6	70	59	11	30	81	71	10	19		161 513	
	2008	1 419 532	45	61	30	3	6	53	8	37	3	56	18	22	4	98	96	2	82	73	9	18	89	83	6	11			432
Southern Asia	1990	1 200 043	26	56	18	3	23	13	3	81	2	25	7	2	66	91	55	36	9	69	9	60	31	75	21	54	1 677 021		
	2000	1 462 960	29	58	19	5	18	20	5	6	69	31	9	6	54	93	53	40	7	76	10	66	24	81	22	59		1 774 482	
	2008	1 668 746	31	57	19	10	14	26	6	10	58	36	10	10	44	95	51	44	5	83	11	72	17	87	23	64			1 506
South Eastern Asia	1990	439 591	32	69	8	10	13	36	5	18	41	46	6	16	32	92	41	51	8	63	6	57	37	72	17	55	1 506		
	2000	517 193	40	74	9	7	10	49	7	15	29	59	8	12	21	92	47	45	8	72	11	61	28	80	26	54		1 506	
	2008	575 626	47	79	10	3	8	60	8	12	20	69	9	8	14	92	52	40	8	81	16	65	19	86	33	53			1 506
Western Asia	1990	135 850	61	96	1	3	0	53	2	26	19	80	2	10	8	96	93	3	4	70	55	15	30	86	78	8	14		
	2000	174 394	65	93	6	1	0	60	4	21	15	82	5	7	6	96	93	4	4	74	54	20	26	88	79	9	12	1 506	
	2008	207 991	67	94	6	0	0	67	5	18	10	85	5	7	3	96	93	3	4	78	61	17	22	90	82	8	10		1 506
Oceania	1990	6 449	24	85	-	15	-	46	-	37	17	55	-	45	14	92	67	25	8	38	7	31	62	51	22	29	1 506		
	2000	8 121	24	85	-	15	-	43	-	40	17	53	-	47	14	92	67	25	8	38	7	31	62	51	22	29		1 506	
	2008	9 633	23	81	-	19	-	45	-	37	18	53	-	47	14	92	67	25	8	38	7	31	62	51	22	29			1 506
Latin America and the Caribbean	1990	442 310	71	81	-	13	6	39	6	12	43	69	-	14	17	95	87	8	5	63	27	37	85	72	13	15	1 506		
	2000	521 228	75	84	-	12	4	48	7	14	31	75	-	14	11	96	90	6	4	72	48	24	28	90	80	10		10	
	2008	576 102	79	86	-	12	2	55	9	16	20	80	-	14	6	97	92	5	3	80	58	22	20	93	84	9		7	1 506
Commonwealth of independent states	1990	280 899	65	94	-	6	-	79	-	21	0	89	-	11	-	98	88	10	2	82	39	43	18	92	71	21	8	1 506	
	2000	280 998	64	93	-	7	-	80	-	20	0	89	-	11	-	98	89	9	2	84	37	47	16	93	71	22	7		
	2008	276 820	64	93	-	7	-	83	-	16	1	89	-	11	-	98	90	8	2	87	33	54	13	94	69	25	6		1 506
Developed regions	1990	933 073	71	100	-	0	0	97	-	2	1	99	-	1	0	100	98	2	0	98	74	24	2	99	91	8	1	1 506	
	2000	985 273	74	100	-	0	0	96	-	4	0	99	-	1	0	100	98	2	0	98	77	21	2	100	93	7	0		
	2008	1 028 520	75	100	-	0	0	96	-	4	0	99	-	1	0	100	98	2	0	98	81	17	2	100	94	6	0		1 506
Developing regions	1990	4 076 387	35	65	16	9	10	28	5	23	44	41	9	18	32	93	71	22	7	60	21	39	40	71	39	32	29	1 506	
	2000	4 848 948	40	67	18	7	8	35	7	20	38	48	11	15	26	94	72	22	6	69	27	42	31	79	45	34	21		
	2008	5 444 533	44	68	20	5	7	40	8	20	32	52	13	14	21	94	73	21	6	76	31	45	24	84	49	35	16		1 506
1990	5 290 359	43	77	11	6	6	36	5	20	39	54	7	14	25	95	80	15	5	64	27	37	36	77	50	27	23	1 506		
2000	6 115 219	47	77	13	4	6	41	6	19	34	58	10	11	21	96	80	16	4	71	31	40	29	83	54	29	17		1 506	
2008	6 749 872	50	76	15	4	5	45	8	18	29	61	11	11	17	96	79	17	4	78	34	44	22	87	57	30	13			1 506

"NA" represents data not applicable, and "-" represents data not available at the time of publication.
* Shown as NA because of negative gain in access as a result of negative population growth.

ANNEX A MILLENNIUM DEVELOPMENT GOALS: REGIONAL GROUPINGS

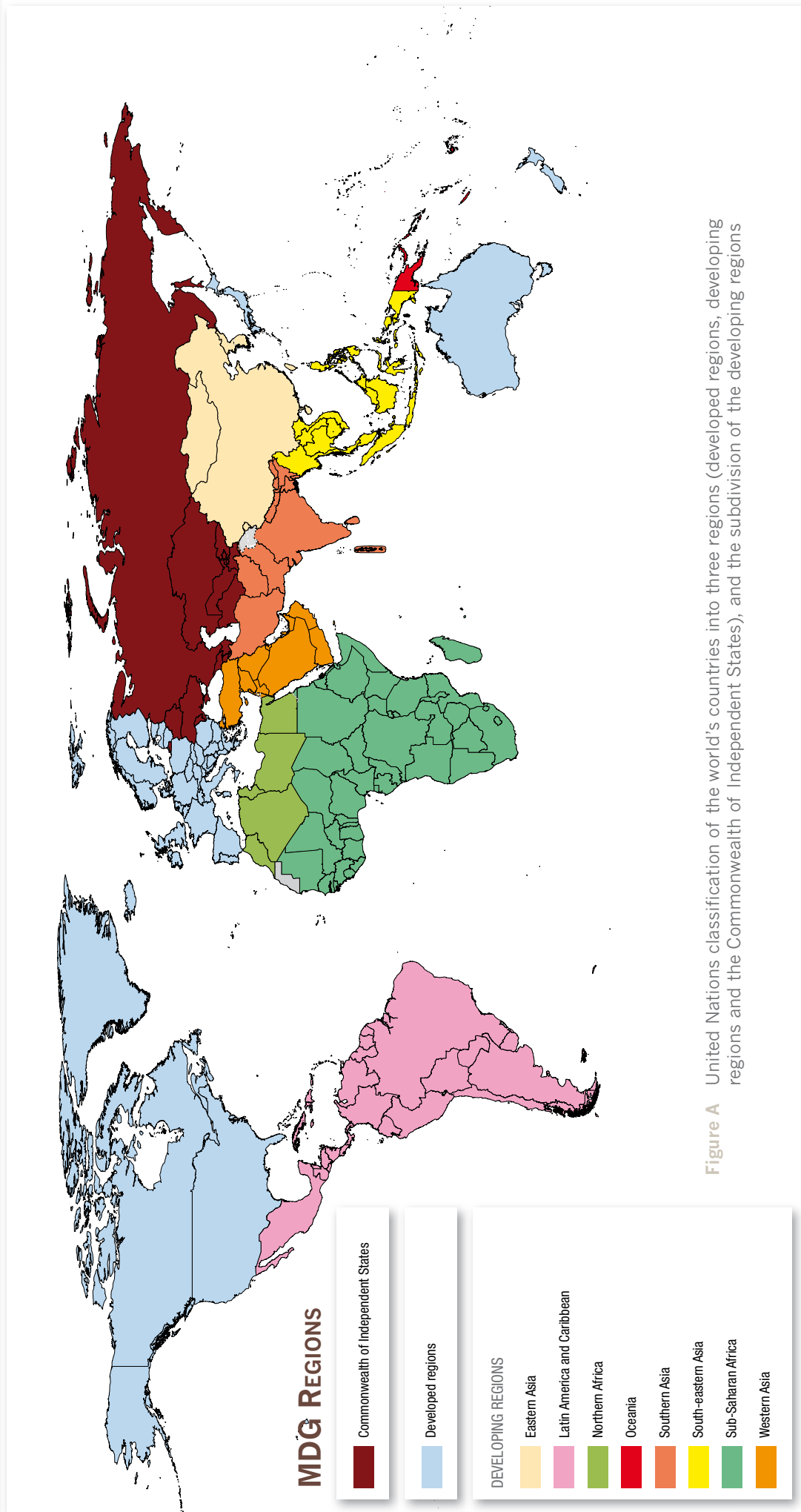


Figure A United Nations classification of the world's countries into three regions (developed regions, developing regions and the Commonwealth of Independent States), and the subdivision of the developing regions

ANNEX B

GLOBAL AND REGIONAL SANITATION LADDERS: URBAN AND RURAL

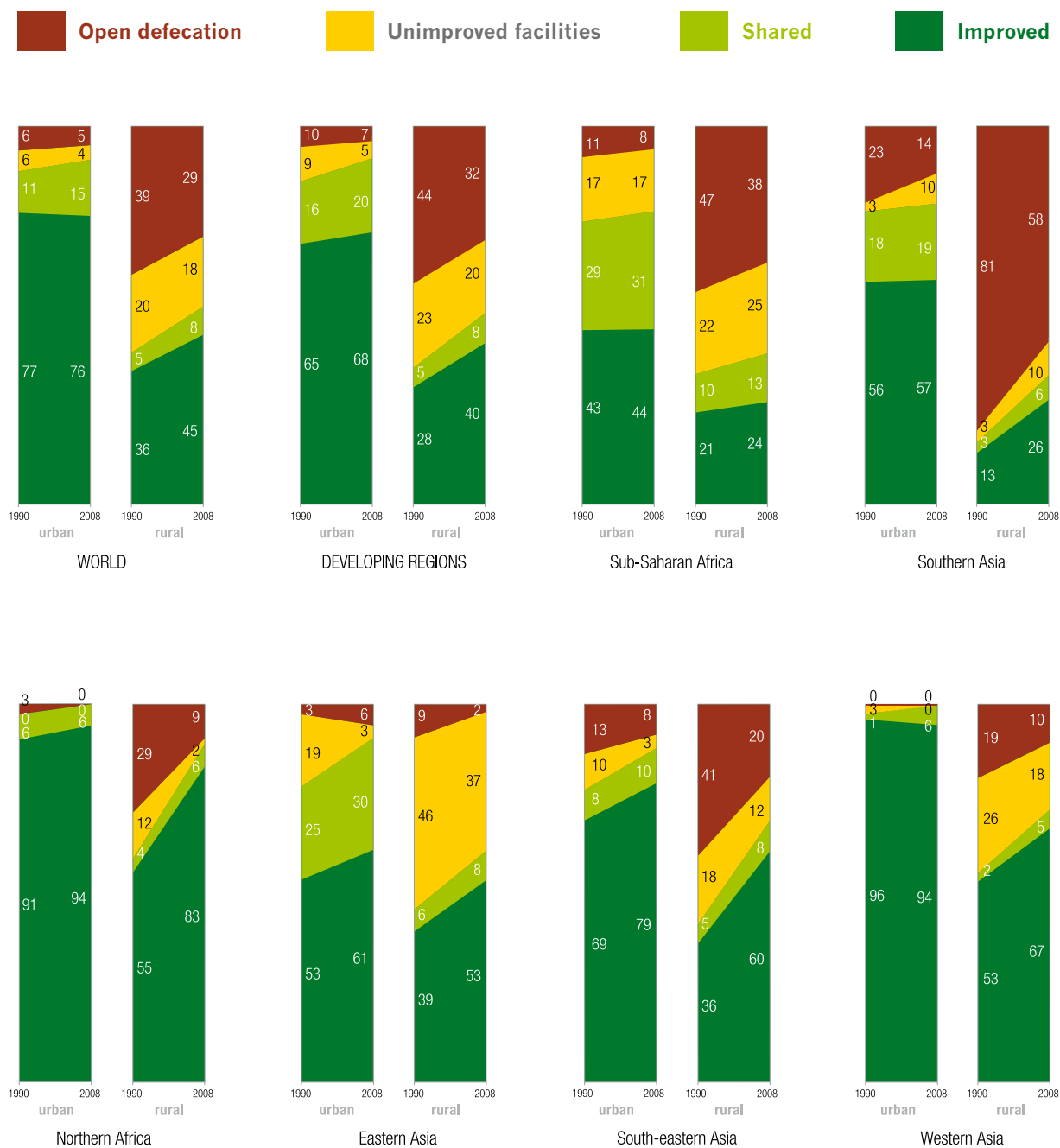


Figure B Urban and rural proportion of the population using an improved, shared or unimproved sanitation facility or practising Open defecation, by MDG region, in 1990 and 2008

ANNEX C

GLOBAL AND REGIONAL DRINKING-WATER LADDERS: URBAN AND RURAL

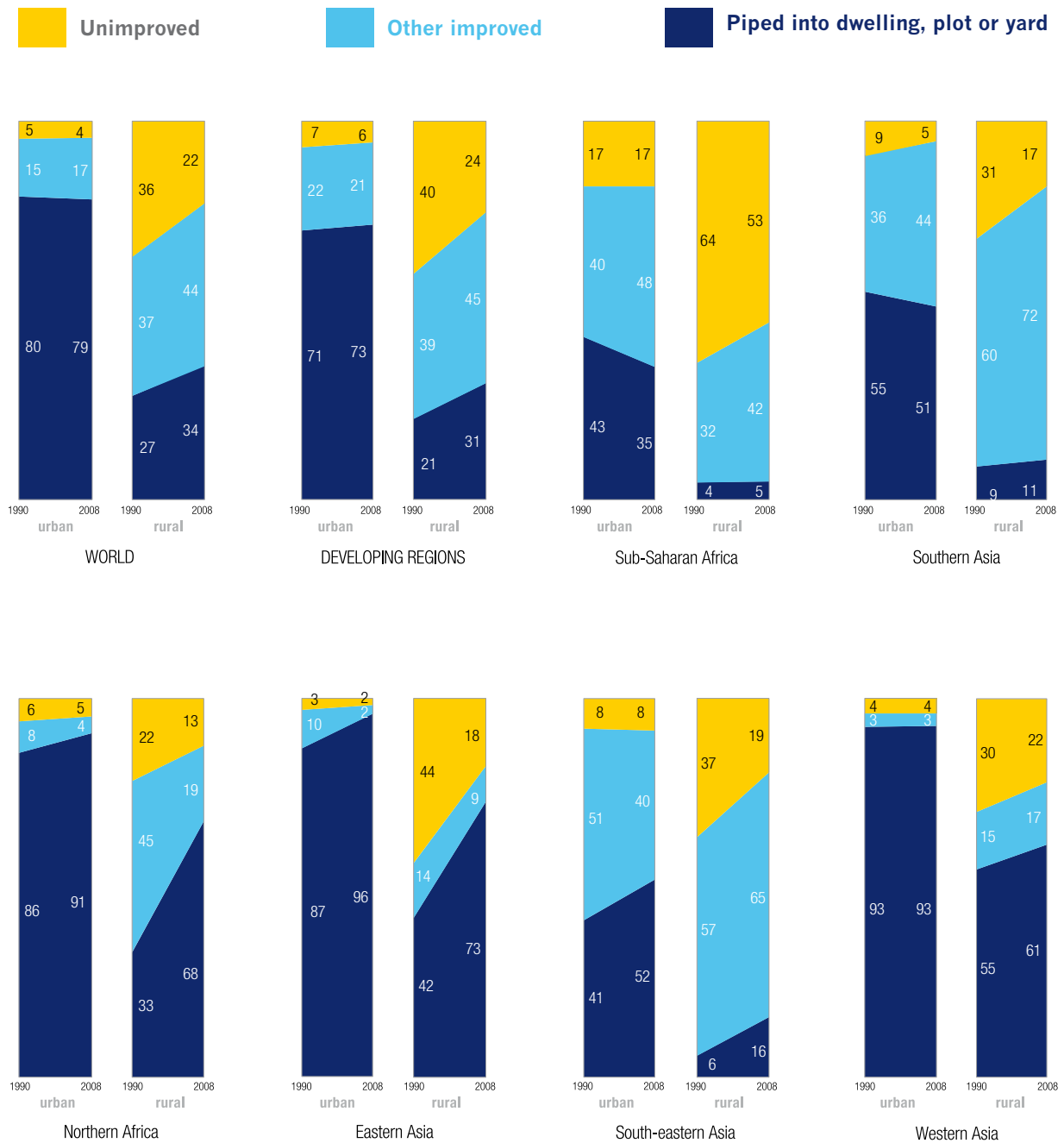


Figure C Urban and rural proportion of the population using a piped water connection, other improved drinking-water sources or an unimproved source, by MDG region, in 1990 and 2008

WITH ONLY FIVE YEARS TO GO UNTIL THE MDG TARGET DATE

2.6 billion people do not use improved sanitation

- Although 1.3 billion people have gained access to improved sanitation since 1990, the world is likely to miss the MDG sanitation target by a billion people.
- Open defecation rates have decreased from 25% in 1990 to 17% in 2008. Worldwide, 1.1 billion people practise open defecation, a decline of 167 million since 1990.
- With only 45% of the rural population using improved sanitation, rural areas lag far behind urban areas, where the rate is 76%.
- Seven out of ten people without improved sanitation live in rural areas, but the number of people in urban areas without improved sanitation is increasing because of rapid growth in urban populations.

884 million people do not use an improved source of drinking-water

- The world is on track to meet the MDG drinking-water target. In developing regions, 84% of the population uses an improved source of drinking-water.
- In urban areas the use of improved sources of drinking-water has been maintained at 96% since 2000, with over 1 billion more people now using such a source than in 1990. However, this increase is barely keeping up with urban population growth.
- The number of people living in rural areas who do not use an improved source of drinking-water is over five times the number living in urban areas.
- Worldwide, 37% of people not using an improved source of drinking-water live in Sub-Saharan Africa.



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