

# PROGRESS ON SANITATION AND DRINKING-WATER 

## 2010 UPDATE



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## 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.

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.




## 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.



[^0]
## 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.



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


- Sub-Saharan Africa, 330

Southern Asia, 222
Eastern Asia, 151

- South-eastern Asia, 83

Latin America \& Caribbean, 38
Western Asia, 21

- Commonwealth of Independent States, 17

Northern Africa, 13

- Oceania, 5

Developed regions, 4

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.

Sanitation: world is projected to miss the MDG target


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: <br> 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


## 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: 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

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


- Population growth 1990-2008
- Population gaining access 1990-2008

Figure 15 Population gaining access to improved sanitation compared to population growth, urban and rural, worldwide, 1990-2008
Seven out of 10 people
without improved
sanitation live in rural areas


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


Figure 17 Use of improved sanitation in rural areas, 2008

## 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

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

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

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.


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




# A CLOSER LOOK AT THE LADDERS 



## OPEN DEFECATION

## 1.1 billion people still defecate 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


India, 638

- Indonesia, 58
- China, 50
- Ethiopia, 49
- Pakistan, 48
- Nigeria, 33
- Sudan, 17
- Nepal, 15
- Brazil, 13

Niger, 12

- Rest of the world, 215

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


Open defecation declined considerably in all developing regions

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

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

## 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

|  | Use of Shared Sanitation, 2008 (\%) |  |  |
| :--- | :---: | :---: | :---: |
| Country | 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.


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



## 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

[^1]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 Africa ${ }^{4}$ 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 drinkingwater 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

## 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 countries ${ }^{5}$ 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


[^2]
## 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

## 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).

## JMP METHOD EXPLAINED

## Defining access to Sanitation and drinking-water


#### Abstract

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.


## Use of the following facilities:

- Flush or pour-flush to elsewhere (that is, not to piped sewer system, septic tank or pit latrine)
- Pit latrine without slab/open pit
- Bucket
- Hanging toilet or hanging latrine


## Shared facilities of any type

No facilities, bush or field

## Use of the following sources:

- Unprotected dug well
- Unprotected spring
- Cart with small tank or drum
- Tanker truck
- Surface water (river, dam, lake, pond, stream, canal, irrigation channel)
- Bottled water ${ }^{7}$

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.

[^3]
## 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 lineministries 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



| Number of people who gained access to improved sources of drinking－water 1990－2008 （thousand） |  |  |
| :---: | :---: | :---: |
|  | Unimproved |  |
|  |  | $\begin{aligned} & \text { Other } \\ & \text { improved } \end{aligned}$ |
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Number of people who gained access to improved sanitation 1990－2008（thousand）

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（PERCENTAGE OF POPULATION）

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Percentage urban population

Population（thousand）

Year

Country，area or territory

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| $\frac{\mathbb{1}}{\mathbb{E}}$ |  | Shared |  | $\infty \bigcirc$ | 1 | 욱․․ | 1110 | $\sim \mathrm{mm}$ | 1 1 | $\checkmark \underset{\sim}{\sim}$ | － | －ナ－ | 111 | ヲ～ | $\sim \mathrm{m}+$ | ナம⿱宀 | m |
| ぶ |  | mproved | ぶす | $\bigcirc$ | ¢ | さ $\begin{gathered}\text { n } \\ \text {－}\end{gathered}$ | 888 | がのう | ＇8＇ | $\checkmark m \times \sim$ | 888 | \＆¢ ¢ 윽 | ＇¢＇ | 78 | － | ก | べさ |
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| Percentage urban population |  |  |  | ¢ 寸 タ | 示边べ | ペヤำ | ¢ิ¢ | 尤さへ | ¢ $\sim_{\sim}^{\circ} 8$ | $\stackrel{\sim}{\sim}$ | $\stackrel{L}{\infty}_{\infty}^{\infty}$ |  | －¢ | 응 ${ }^{\circ}$ | 뇨 8 ¢ | \％${ }^{\text {\％}}$ | の ${ }_{\text {® }}^{\sim}$ |
| Population（thousand） |  |  |  |  |  |  | $\underset{0}{\text { ¢ }}$ ¢ |  |  |  <br> － m 영 |  | 앙웅 | $8 \stackrel{0}{\circ}$ ¢ |  |  |  |  |
| Year |  |  |  |  | , ò o o o | 家宗 |  | Bo | Bo | Bi | , O O O O O | ${ }^{0} \text { 人) }$ | $\mathrm{O}_{\mathrm{O}}^{\mathrm{O}} \mathrm{O} \text { O }$ | Bo | O- | OO |  |
| Country，area or territory |  |  | g $\frac{0}{2}$ $\frac{0}{3}$ 0 |  | $\begin{aligned} & \text { 픙 } \\ & \stackrel{\circ}{0} \end{aligned}$ | $\frac{5}{8}$ | $\begin{aligned} & \text { ne } \\ & \stackrel{y}{2} \\ & \hline 0 \end{aligned}$ |  |  |  |  |  |  |  | $\begin{aligned} & \text { 흘 } \\ & \stackrel{0}{\#} \\ & \ddot{u} \end{aligned}$ | $\begin{gathered} \stackrel{\rightharpoonup}{2} \\ \text { 要 } \end{gathered}$ |  |


| Number of people who gained |
| :---: |
| access to improved sources |
| of drinking－water 1990－2008 |
| （thousand） |

Unimproved

| 1 ¢ | へ¢ $¢$ | $\sim \sim \sim$ | $\underset{\infty}{\infty} \cong$ | 111 | 000 | 000 | $1 \underset{\sim}{\bullet}$ |  | 000 |  | $1 \stackrel{\llcorner }{\sim}$ | $\underset{\sim}{\bullet} \underset{\sim}{\bullet} \infty$ | $\underset{\sim}{9} \boldsymbol{a}$ | 000 | $\underset{+}{\circ} \underset{\sim}{\infty}$ | ナー○ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 m | $\hat{\sim}$ ¢ | $\underset{-1}{\infty} \underset{\sim}{\sim} \infty$ | $\stackrel{+}{\sim} \stackrel{\rightharpoonup}{m}$ | 11 ｜ | $\infty \downarrow 1$ | $\rightarrow \bigcirc \bigcirc$ | 1 п | 1 | $\sim \sim \sim$ |  | $\perp \underset{\leftarrow}{\sim}$ | $\begin{array}{lcc} \bullet & \sim \\ \bullet & \circ \\ \hline \end{array}$ | $\stackrel{\infty}{\sim} \stackrel{\infty}{\sim} \stackrel{1}{\sim}$ | 『•• |  | ナー○ |
| $\checkmark 6$ | மヘの | $\infty \quad \infty$ | $\checkmark \checkmark へ$ | $\underset{\sim}{\infty} 1$ | N চ ' | প্পী | -の |  | $\infty_{\circ}^{\infty} \infty_{\infty}^{\infty}$ |  | $1 \underset{\sim}{m} \underset{\downarrow}{\infty}$ | $\sigma \approx M$ | $\mathfrak{n} \boldsymbol{n}$ | ু ু ু | $\stackrel{0}{-} \wedge$ | ু |
| । M | $\underset{\&}{\sim} \underset{\sim}{\square}$ | $\infty_{0}^{\infty}{ }_{\circ}^{\infty}{ }_{\circ}^{\infty}$ | $\stackrel{\infty}{\sim} \stackrel{\infty}{m}$ | 111 | $880$ | $880$ | $\underset{\infty}{+}$ |  | $880$ |  | $1 \stackrel{\sim}{\infty}$ | ন ホ N | $\cdots \infty_{\infty}^{-\infty}$ | 옹응 | けか～ | পু প8 |
| $1 \underset{\sim}{\infty}$ | $\vec{\sigma} \circ \stackrel{m}{\square}$ | $m m m$ | N～ホ | 111 | $\bigcirc \bigcirc 0$ | $\bigcirc \bigcirc 0$ | N |  | 000 |  |  | $\stackrel{m}{m} \stackrel{n}{N}$ | $\stackrel{+}{\mathrm{m}}$ | $\bigcirc 00$ | $\underset{\sim}{\sim} \underset{\leftarrow}{\sim}$ | $\infty \sim \square$ |
| $\stackrel{\text { }}{ }$ | 응 승 | $\underset{\sim}{6} \underset{N}{N}$ | $\infty \underset{\sim}{\infty} \underset{\sim}{\infty}$ | 111 | $\underset{\sim}{\infty} \infty \quad \text { । }$ | に 「○ | 16 | 1 | ナナナ |  | ' | $\hat{\omega}$ | $\underset{\forall}{\wedge}$ | mmm | $\stackrel{\llcorner }{m} \stackrel{n}{n}$ | o mo |
| $\bigcirc 0$ | $\bigcirc \bigcirc 0$ | - | $\bigcirc \bigcirc 0$ | N | $\infty \times$ | にூ இி | $1 \stackrel{\circ}{6}$ |  | ஜ் ட் க் |  | $1 \infty$ | Om | $\cdots \dot{\cdots}$ | 人 ৯ ब | ～mm | N ৯ ৷ু ু |
| $\underset{\succ}{\sim}$ | প্은 | ふへ へ | $\infty \underset{\sim}{\infty} \underset{\sim}{\bullet}$ | 111 | $880$ | $880$ | 1－ |  | $\begin{array}{lll} \circ & 8 \\ 0 & 0 \\ -1 & 0 \end{array}$ |  | べコ | $\hat{\dagger}$ | $\bullet \circ \text { ம }$ | O8 O | へが | $\text { ন }{ }_{\circ}^{\infty} \text { の }$ |
| $1 \text { ! }$ | $\infty \stackrel{\sim}{m} \stackrel{\bullet}{\sim}$ | $\checkmark$ | $\stackrel{n}{\sim} \underset{\sim}{\sim} \sim$ | $\infty \times$ | 000 | $\bigcirc 00$ | $\underset{\sim}{\sim}$ | 1 | 000 |  | ا | $\stackrel{n}{\sim} \text { に }$ | 6 mo | 000 | $\underset{\sim}{6} \underset{-1}{ }$ | $\rightarrow 00$ |
| ＇ | $\underset{N}{N} \sim$ |  | $\hat{\sigma}$ | ' | ナー○ | $\bigcirc \bigcirc$ | 1 1） | 1 | $っ て い$ |  | $\text { । M } \underset{+}{\square}$ | $\vec{\omega} \circ \stackrel{\rightharpoonup}{\circ}$ | $\underset{\sim}{m} \underset{\sim}{m} \infty$ | $\bigcirc \bigcirc \bigcirc$ | $\underset{\sim}{\infty} \text { n o }$ | 000 |
| $\underset{\sim}{\sim} \underset{\sim}{\bullet}$ | $\bigcirc \underset{\leftarrow}{\odot} \underset{\leftarrow}{\mathcal{Y}}$ | N ゥ へ | $\bigcirc$ | $\mathrm{N}^{\prime}$ | পু প্ প | OB O | $1 \underset{\infty}{\infty}$ | 1 | の ন ন |  | $\text { } 1 \sim \underset{\sim}{\circ}$ | $\stackrel{\downarrow}{\sim}$ | $\cdots \infty$ | OB O | ヲ | 옹 |
| $\stackrel{\bullet}{\succ}$ | N○ | ুু ুু | $\wedge_{\infty}^{\infty}{ }_{\infty}^{\infty}$ | ふ লু ৷ | O8 O | O8 O-9 | $1 \infty$ |  | $\text { O } 8$ |  | மை దை |  | ふু か | $808$ | $\text { i } \infty$ | 옹 |

Number of people who gained
access to improved sanitation 1990－2008（thousand）

| 1 | $8$ | 1 | $$ | 1 | $\stackrel{\infty}{-m}$ | $\stackrel{\square}{\sim}$ | 1 | 8 | 1 | 1 | $\frac{*}{\frac{*}{2}}$ | $\begin{aligned} & -1 \\ & \infty \\ & N \end{aligned}$ | $\begin{gathered} \infty \\ \underset{\circ}{\circ} \\ \sim \end{gathered}$ | 8 <br> 8 <br> -1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 111 | $\bigcirc \bigcirc \infty$ | 100 | Nへ® | 111 | 000 | 000 | 111 | 111 | $1 \mathrm{~m} \rightarrow$ | $1 \sim$ | $\neg-$ | 000 | N | $m \sim$ |
|  | $\sim \sim$ | 100 | －${ }_{\text {－}}^{\text {N }}$ | 111 | 000 | 000 | ${ }^{1} \mathbb{N}^{\prime}$ | $\sim \sim \sim$ | $1 \underset{\sim}{\sim} \underset{M}{N}$ | $1 \times \infty$ | $\rightarrow \sim \sim$ | 000 | ソ へ | $\bigcirc \bigcirc \bigcirc$ |
| 11 | 111 | 1 | mレヘ | 111 | 111 | 111 | 111 | 111 | 1 m | 1のゴ心 | $\sim \sim \sim$ | 11 | ペ ¢ ¢ | 1 I |
| 「矿1 | のココ |  | $\checkmark \infty \underset{\sim}{\sim}$ | 111 | O욱 | $808$ | 1 $\times 1$ |  | 1 ¢ M M | ＇ 0 | \% | $880$ | へのm | の $\mathrm{on}_{\circ}^{\infty}$ |
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| $10^{\circ} 1$ | $\bigcirc \sim+$ | ・す | $\checkmark\llcorner\infty$ | 111 | $808$ | $080$ | 1䞨 | のたへ | 1 ¢ | ＇-6 | ถু | $808$ | ナ | だめ の |
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| 11 | 111 | । $ナ$ | $\stackrel{\sim}{\sim}$ | 1 । | 111 | 11 I | 111 | 111 | 1 ¢ ¢ ¢ | $1 \stackrel{\sim}{\sim}$ | mmm | 11 | 寸 | 1 I |
| 181 | が | ¢๐ ¢ | 꾸N |  | 880 | $880$ | 1 ¢ ${ }^{\text {¢ }}$ | ুুの | 1 mm | ＇ | ฝ ¢ ¢ ¢ | $888$ | $\underset{\sim}{-1} \infty$ |  |

Percentage urban population

Population（thousand）

## Year

Country，area or territory






| Number access of drink | $\begin{aligned} & \text { peo } \\ & \text { imp } \\ & \text { s-wa } \\ & \text { hou } \end{aligned}$ | ho gained sources 90－2008 $\qquad$ |  | $\stackrel{ }{\circ}$ | \％ | $\begin{aligned} & \text { 8 } \\ & \text { n } \end{aligned}$ | $\stackrel{\Perp}{\underset{\sim}{\oplus}}$ |  |  | $\begin{aligned} & \stackrel{\rightharpoonup}{\infty} \\ & \stackrel{\sim}{\infty} \end{aligned}$ | $\stackrel{\bullet 0}{\stackrel{\circ}{\sim}}$ | \％ | $\stackrel{\square}{\circ}$ | $\begin{aligned} & \mathscr{\infty} \\ & \infty \\ & \infty \\ & \underset{子}{7} \end{aligned}$ |  |  | $\stackrel{\text { N}}{\stackrel{\sim}{\square}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Unimproved | 161 | 1 N | 000 | $\stackrel{\text { ® }}{\sim}$ | ¢ $\sim_{0}^{\infty}$ N | 1 ¢ ¢ ¢ | ＇ヲ゚ | パ¢ ¢ ¢ ¢ | $\stackrel{\infty}{\sim} \sim$ | －-0 | 000 | ～$\sim_{\sim}^{\sim}$ | N $\sim$ | O | のロ～ |
|  |  | Other improved | $1{ }^{\prime} 1$ | 101 | 1111 | m $\sim$ N | ¢ ¢ 涫 | ＇ | ＇${ }^{\text {N }}$ N | ¢ ¢ ¢ ¢－ | $\pm \infty \mathrm{m}$ | O＾V | 000 | กூٌ ${ }_{\text {¢゙® }}$ |  | 入入 1 | 16 m |
|  |  | Piped | ${ }^{\prime} \overrightarrow{o l}^{\prime}$ | ＇$\quad$＇ 1 | 111 |  | O 人 | ～にの | ＇ $8 \stackrel{\text { ¢ }}{ }$ | のO～ | $\sim_{\sim}^{\infty} \times \infty$ | めুুす。 | O－1 0 | $\bigcirc \bigcirc \sim \sim$ | の $0 \sim \sim$ | か \＆ | 1 $\stackrel{+}{\wedge}$ |
|  |  | $\begin{gathered} \text { Total } \\ \text { improved } \end{gathered}$ | ＇お＇ | ＇¢＇ | ＇OOOO | ～が | ก゙̃̃ャ | 1 绍 ${ }^{\circ}$ | ＇ 8 |  | N | 8 | 888 | N－m | 「へ8 | ぶু | －¢ ¢ |
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|  |  | Other improved | ＇${ }_{\sim}^{\infty}$＇ | 1 ${ }_{\sim}^{\infty} 1$ | 1111 | O $\overrightarrow{\mathrm{m}}$ N |  | ¢ ¢ \％8 | 1 m | のダin | へo $\underbrace{\text { ® }}$ | の～ヘヘ | 000 | ¢ ${ }_{\sim}^{\circ}$ | －¢ ¢ ¢ | ず， | 1 ¹0 |
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|  |  | $\begin{aligned} & \text { Total } \\ & \text { improved } \end{aligned}$ | ＇$\quad$＇ | ＇ $\mathrm{m}^{\prime}$ | ＇ $8 \bigcirc$ | 兵品8 | ¢ ¢゙びへ | ¢ ¢ ¢ ¢ | ¢ |  | 주 | 88 | 88 |  |  | ${ }_{\infty}^{\infty} \times$ | 寸 ¢ ⿺𠃊 |
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|  |  |  | $1+10$ | 000 | 1 1 1 | ～～$\sim^{\text {m }}$ | ® ¢ ¢ ¢ | ＇$\quad$ 迢 |  |  | の寸ー | ナ $\llcorner$ に | $\bigcirc 00$ | m ${ }_{\sim}^{\text {m }}$ | ¢ ® ®in | ～～～ | 1 m － |
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|  |  | $\begin{aligned} & \text { Total } \\ & \text { improved } \end{aligned}$ | ふুべ | ¢ ¢ ¢ ¢ | \％ 080 | のデ呺 | ¢ $\sim_{\infty}^{\infty}$ ¢ |  | ＇mo | － | のの | 888 | 888 | ○ $ু$ | の | ¢ ¢ ¢ ¢ | の号ご |
| Number access to 1990 |  | o gained anitation sand） | ヘ | 1 | F | $\underset{\sim}{\underset{\sim}{\sim}}$ | ？ － $\sim$ | 1 | 1 | $\stackrel{\text { ® }}{7}$ | $\begin{aligned} & \mathrm{o} \\ & \mathrm{~m} \end{aligned}$ | $\frac{2}{2}$ | $\stackrel{\square}{6}$ | $\begin{aligned} & \text { 앙 } \\ & \text { 글 } \end{aligned}$ | $\begin{aligned} & \text { ※ } \\ & \text { \% } \\ & \text { ᄋ } \end{aligned}$ | 1 | 1 |
|  |  | Open Defecation | 111 | 111 | 1111 | $\stackrel{\sim}{\sim} \times 1$ | 子゚～N | ${ }^{\prime} \times \sim$ | $1-$ | ¢ $)^{\circ} \mathrm{m}$ | ®j | 000 | 000 |  | ¢゙ल゙ ${ }_{\text {－}}$ | 111 | $1 \sim \sim$ |
| \％ |  | Unimproved facilitites | mmm | 1 1 | リーワー | $\infty$ の $\infty$ | 子吠 | ＇フ \％ | ＇تの | － | Noの | 000 | 000 | ～ナ 6 | 국 | へへ＇ | ${ }^{1} 0^{\infty}$ |
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| $\underset{\underline{E}}{\underline{E} \text { 읕 }}$ |  | mproved | ぶのू | 11 | ＇$ু$ の | ざ | の吅の | $\stackrel{\sim}{\sim} \stackrel{ }{\sim}$ | 1 | ํ N | \＆ | 888019 | 888 | $\stackrel{\infty}{\sim} \stackrel{\sim}{\sim}$ | m 寸 | $\infty_{\infty}^{\infty} \times 1$ | 18ำ |
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|  |  | Unimproved facilitites | ナ＋ | 16 ๑ | の | ～ | min ${ }_{\text {m }}^{\sim}$ | 1ダす | 1 | － | さのヘ | 000 | 000 | － 6 | $\underset{\sim}{\bullet} \sim \infty$ | むす＇ | 1 ¢ $๑$ |
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|  |  | mproved | ூ゙ロ日 | ＇ ふু | のタの日 | ¢ | $\stackrel{\infty}{*}$ へ ${ }_{\text {d }}$ | ＇M タ | ＇$\sim$ | － | ¢ ¢ ¢ | 888 | 88 | ¢ ก | $\stackrel{\infty}{\circ} \mathrm{m}$ ¢ | ¢ ¢ | 1セ゚セ |
|  | pula | urban on | $\underset{\sim}{\sim} \vec{m} \vec{m}$ | の日® © | の゙ツのハ |  | $\stackrel{\sim}{\sim} \times \vec{m}$ | $\stackrel{\sim}{\sim}$ | 유 N ${ }_{\sim}^{\infty}$ | ®io ${ }^{\circ} \mathrm{f}$ | ¢ 寸 ¢ | $8 \stackrel{\circ}{\circ}$ ® | ふふ欠ু | No ${ }_{\sim}^{\infty}$ N | m フ へ | ®ٌ ず ¢ | $\bigcirc{ }^{\circ}$ |
| Popula | on | ousand） | がす。 | $\underbrace{*}_{i} \underset{\sim}{\infty} \underset{\sim}{\sim}$ |  |  |  |  | 夺 |  |  | $\begin{aligned} & \text { in en } \\ & 0 \sim \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ | $\stackrel{\sim}{\sim} \stackrel{\sim}{\sim} \stackrel{n}{\sim}$ |  |  |  |  |
|  | Yea |  |  | , |  | So | So | O- | Bo | O | Bo | O |  | Ni | $\mathrm{O}_{\mathrm{O}}^{\mathrm{O}} \mathrm{O}$ | Bo | So |
| Country， | rea | territory | K <br> 0 <br> 0 <br> 0 <br>  |  | $\begin{aligned} & \text { E } \\ & \stackrel{E}{E} \\ & \hline \end{aligned}$ |  | $\begin{aligned} & \mathscr{E} \\ & \stackrel{E}{E} \end{aligned}$ |  |  | $\frac{\mathrm{E}}{\mathrm{I}}$ |  | $\begin{aligned} & \text { 증 } \\ & \text { ion } \\ & \text { 晋 } \end{aligned}$ |  | $\frac{\stackrel{\pi}{0}}{\underline{\underline{E}}}$ |  |  | － |


| Number access of drink |  | who gained d sources 990－2008 | N | $\begin{aligned} & \infty \\ & \\ & \sim \end{aligned}$ | $\begin{aligned} & \circ \\ & \stackrel{8}{\circ} \\ & \sim \end{aligned}$ | 宸 | $\begin{aligned} & \text { N } \\ & \cdots \\ & \text { + } \end{aligned}$ | $\begin{aligned} & \dot{N} \\ & N \\ & N \end{aligned}$ | $\frac{*}{Z}$ | ¢ $\sim$ $\sim$ | 1 | $\stackrel{\infty}{\wp}$ | 1 | 1 | $\frac{1}{2}$ | $\underset{\sim}{\underset{\sim}{\mathrm{N}}}$ | ¢ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Unimproved |  | 000 | 000 | 000 | $\wedge \wedge 6$ | 000 |  | $\checkmark$－ |  | $\sim \sim \sim_{0}$ | －ヵっ | $\stackrel{\sim}{\sim}$ | ＇Nั \％ | －r－ | 000 | ¢¢ $\sim_{\sim}^{\sim}$ |
|  |  | Other improved | $\bigcirc 00$ | $\bigcirc \bigcirc 0$ | －0 0 | M | $\wedge$＊ | $\sim \mathrm{m}$ ค | m＠ | ホ | $\sim \sim^{\sim}{ }^{1}$ | 111 | ＇ m ¢ | ＇ 0 | 1へへ | $1 \sim 1$ | べ $)^{\circ}$ |
|  |  | Piped |  | 8 O | இ888 | $\square{ }^{\circ}$ |  | ®ูゴ | Mo | $\stackrel{\text { の }}{\sim}$－${ }_{\sim}^{\circ}$ | $\stackrel{\text { n m }}{\text { m }}$ | 11 | 寸 ¢ ¢ | ＇ |  | ＇ | ＋0익 |
|  |  | Total improved | O-8 | $808$ | $888$ | লু ুু | $808$ | ゥ மீ ஆ | மூ ா டூ | M N 옹 | $\stackrel{\infty}{\square}_{\infty}^{\sim}$ | இু இ | ' No | $\text { ' } \underset{+}{\infty}$ | ; ூ ু | $88$ | $\vec{\circ}$ |
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|  |  | Piped | のタの | か～o | ios or | mヲす | め ぶ¢ | ¢ ¢ ¢ | $\stackrel{\infty}{\sim} \stackrel{0}{\sim}$ | 윽ํ | m ${ }^{1}$ | 11 | $\stackrel{\text { No }}{\text { N }}$ | ノ $几$ ナ | －カ8゚ | $1 \times$ | $\rightarrow$－ |
|  |  | Total improved |  |  | $880$ | $\infty \infty \infty$ | $808$ | নだ | Nーゥ | $\underset{\sim}{N} \underset{\sim}{m}$ | M 으 | ু ু த | ৷ M L | $1 \text { 아 }$ |  | $080$ | ㅅㅇ |
|  | Unimproved |  | $\bigcirc \bigcirc 0$ | 000 | 000 | $\sim \sim \sim$ | 000 | $\rightarrow \sim \sim$ |  | のツへ | $\sim_{\sim}^{\sim}{ }^{1}$ | ー－－ | $\sim \sim$ | ＇$\sim \sim \sim$ | $\bigcirc 00$ | 000 | $\underset{\sim}{\sim} \times m$ |
|  | $\begin{aligned} & \text { 이 } \\ & \text { O } \\ & \text { 흥 } \end{aligned}$ | Other improved | $\bigcirc \bigcirc 0$ | $\bigcirc \bigcirc 0$ | $\bigcirc 00$ | の $\infty$ ， | $m \sim \sim$ | $\rightarrow$～+ | $\infty$ N | ¢ | ¢® ${ }^{\text {a }}$ | 111 | ～$\sim_{\sim}^{1}$ | ＇ フ へ | $1 \times N$ | 000 | gூ nim |
|  |  | Piped | $080$ | $888$ | O80 | か8 ¢゙ | がog | がす | だか | べずす |  | 11 | ペかめ | $1 \stackrel{10}{\sim}$ | ＇ুুু | $880$ | の9\％ |
|  |  | Total improved | $880$ | 888 | 888 | ¢ \％\％\％ | 888 | の ${ }^{\infty}$ ¢ | ภ | न－${ }_{\text {¢ }}^{\text {m }}$ | セ゚⿺卜丿 | ুタুタ | め ¢ ¢ | ＇NN | 880 | 88 | ¢ Ñ |
| Number of people who gained access to improved sanitation 1990－2008（thousand） |  |  | $\stackrel{m}{\circ}$ | $\begin{aligned} & \infty \\ & \underset{N}{n} \\ & \sim \end{aligned}$ | 1 | $\stackrel{\llcorner }{\sim}$ | $\begin{aligned} & \text { N } \\ & \underset{\sim}{\prime} \\ & + \end{aligned}$ | 1 | $\frac{*}{\frac{*}{Z}}$ | $\begin{aligned} & \text { L̊ } \\ & \text { ® } \\ & \text { 几n } \end{aligned}$ | 1 | $\stackrel{\ominus}{\wedge}$ | 1 | 1 | 1 | 1 | ¢ |
|  | $\begin{aligned} & \text { 에 } \\ & 0 \\ & \text { o } \\ & \frac{1}{5} \\ & \frac{5}{5} \end{aligned}$ | Open Defecation | $\bigcirc 00$ | $\bigcirc 00$ | 111 | 000 | 000 | 100 | －○○ | －$\sim_{\sim}^{\sim} \stackrel{\square}{\sim}$ | へூ ¢ ${ }^{\text {® }}$ | $\bigcirc \bigcirc 0$ | 100 | ＇${ }_{6}$ | 100 | 11 | $\stackrel{\text { ® }}{\substack{ \\\text { O }}}$ |
| 历 |  | Unimproved facilitites | $\rightarrow$－r | 000 | 111 | $m * m$ | 000 | 100 | －rー | O ¢ ¢ | $\underset{\sim}{m}$ m 1 | 000 | 1 － | $1 \infty$ | $\mathfrak{\sim}$ | $1 \sim 1$ | $\cdots{ }_{-}^{\circ}$ 웃 |
|  |  | Shared | 11 | 111 | 111 | む J す | 111 | $1 \sim N$ | $\sim \sim \sim$ | $\bigcirc \sim \sim$ | － 1 | 111 | 1 mm | $1 \sim m$ | 10 | 11 | への戸 |
| $\underset{\underline{E}}{\underline{E}}$ | Improved |  |  |  | $111$ | M N m m o o |  | $\text { } \infty_{\infty}^{\infty}$ | めু べ | $\stackrel{\sim}{\sim}$ | $\stackrel{\bullet}{\sim}{\underset{m}{\prime}}^{\prime}$ | 욱욱 | ' mু ু | $1 \underset{\sim}{0} \text { n }$ | $\prime \infty$ | ＇ | ¢ั |
| $\bar{\square}$ | $\begin{aligned} & \text { 잉 } \\ & 0 \\ & \text { o } \\ & \frac{1}{5} \\ & 5 \end{aligned}$ | Open <br> Defecation | $\bigcirc 00$ | $\bigcirc \bigcirc 0$ | 111 | OO－1 | 000 | $1 \sim 0$ | N－O | $\stackrel{\sim}{\sim} \stackrel{\infty}{\sim}$ | $6_{6}^{6}$ 成 | $\bigcirc \bigcirc 0$ | 100 | 1 | 100 | 1 I | ゼ セั ゼ |
| ㄴㅇㅁㅇ |  | Unimproved facilitites | $\sim \sim \sim$ | $\bigcirc 00$ | 111 | n $n$ m | 000 | $1-\sim$ | ○－－ | ヲ ${ }_{\text {¢ }}^{\text {N }}$ | $\underset{\sim}{\sim}{ }^{1}$ | $\bigcirc 00$ | ） | $1 \infty$ | 1 ${ }_{\sim}^{\sim}$ N | 1 m 1 | mへえ |
| 上 |  | Shared | 111 | 111 | 111 | $\underset{\sim}{\sim} \sim$ | 111 | 1 $\rightarrow$－ | $\checkmark$ | $\stackrel{\sim}{\square} \stackrel{0}{\sim}$ | $\sim \sim 1$ | 111 | $1 \sim \sim$ | $1 \leftharpoondown \sim$ | 1 mm | 111 | ナ $\downarrow m$ |
|  | Improved |  | ¢ ¢ ¢ ¢ | O8808 | 111 | Mm m ¢ | 888 | ＇¢¢ の | ふó | へ m N | N ${ }^{1}$ | 888 | ুু | $1{ }^{\circ} \times \infty$ | 「「ス | ＇$\quad$＇ | $\underset{\sim}{\sim} \stackrel{\infty}{\sim} \stackrel{\sim}{\sim}$ |
| $$ |  | Open Defecation | $\bigcirc 00$ | $\bigcirc 00$ | 111 | －10 | 000 | 000 | 000 | m m N |  | $\bigcirc \bigcirc 0$ | 000 | $1 \sim_{\sim}^{\circ}$ | 100 | 000 | $\sigma \infty \infty$ |
|  |  | Unimproved facilitites | $\bigcirc \bigcirc 0$ | $\bigcirc 00$ | 111 | $\rightarrow \sim$ N | 000 | 000 | －○ 0 | $\stackrel{\sim}{\sim} \sim$ | $\underbrace{0}_{1} \mathrm{~m}$ I | $\bigcirc \bigcirc 0$ | －－－ | 10 m | 1 | 000 | へへへ |
|  |  | Shared | 111 | 111 | 111 | $\bigcirc \bigcirc$ | 111 | $\sim \sim \sim$ | mmm |  | への1 | 111 | ๑ | 1 － | 1 m m | 11 |  |
|  |  | mproved | $00800000$ |  | 111 | $\infty \sim \infty \sim \infty$ |  | $\infty \infty$ | ®๐の | ㄴN N | ${ }_{j}^{\infty} \underset{\sigma}{\prime}$ | 욱욱 | ずす ず | ＇$\because ¢$ | ＇$\sim$ N $\sim_{0}$ | 888 |  |
| Percentage urban population |  |  |  | இーデ | ¢ ${ }^{\circ} \stackrel{\infty}{\circ}$ | のペ ถั | ¢ ${ }_{0}$ | $\stackrel{\infty}{\sim}$ | மٌ ${ }_{\circ}$ | $\stackrel{\infty}{\sim}$ ㅇN | ¢0 m ¢ | ¢ $\infty_{\infty}^{\infty}$ | $\underset{\sim}{\infty} \stackrel{\sim}{m}$ ¢ | $\stackrel{\sim}{\sim}$ N ${ }^{\text {m }}$ | $\bigcirc 0_{0}^{\infty} 0_{0}^{\infty}$ | $\cdots \infty$ | $\stackrel{\text { ¢ }}{\sim}$ |
| Population（thousand） |  |  |  |  |  |  |  |  |  |  | へから | $\begin{aligned} & \underset{\sim}{\sim} \underset{\sim}{\sim} \underset{\sim}{\sigma} \\ & \underset{\sim}{\sim} \end{aligned}$ |  |  |  |  |  |
| Year |  |  |  |  |  |  |  |  | 옹ㅇㅇㅇㅇㅇㅇ |  | $\begin{aligned} & \text { OO O O } \\ & \text { O } \\ & \hline 1 \end{aligned}$ |  | $$ |  | $\begin{aligned} & \text { OO O } \\ & \text { O } \\ & \hline-1 \\ & \hline \end{aligned}$ | 옹 O | 옹ㅇㅇㅇ |
| Country |  | territory |  |  | \# | $\frac{8}{\pi}$ <br> $\stackrel{5}{5}$ <br> $\stackrel{10}{7}$ | $$ |  |  | $\underset{\substack{0}}{\mathbb{O}}$ |  |  |  |  | $\sum_{\Xi}^{\pi}$ |  | 읓 ¢ － |


| Number access of drink |  | ho gained sources 90－2008 $\qquad$ | $\stackrel{\text { N }}{\substack{\text {－} \\ \sim \\ \hline}}$ |  |  | ஃ | $\begin{aligned} & \text { ت} \\ & \underset{\sim}{*} \\ & \hline \end{aligned}$ | $\begin{aligned} & \circ \\ & \hline 8 \\ & \infty \end{aligned}$ | $\begin{aligned} & \cong 0 \\ & \stackrel{\otimes}{7} \\ & \end{aligned}$ | む | $\begin{aligned} & \stackrel{\circ}{\circ} \\ & \stackrel{+}{4} \end{aligned}$ | A | ～ |  | ®๐ | ㅊ | $\stackrel{\stackrel{7}{7}}{\stackrel{1}{4}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | nimproved |  | ¢ ¢＇ | 1 | 000 |  | OMN | N mo | Oのの | さ！ | 000 |  | 1 | 울 |  | $0^{\circ}$ |
|  |  | $\begin{aligned} & \text { Other } \\ & \text { improved } \end{aligned}$ | 广 $\sim_{\sim}^{\circ}$ | 111 | 111 | 1000 | N | mion | $\bigcirc \infty$ | －N | N゚～ | OOO | 1 1 $ু$ | 111 | む ${ }_{\text {N }}$ N | 000 | $\infty \wedge \wedge$ |
|  |  | Piped | $\exists \wedge \sim$ | 111 | 용 ${ }^{\circ}$ | O8\％ |  |  | Nのヘ |  |  | O8， | 1 1－ | 111 | － 0 ก | スタの | 人m $\infty_{\infty}$ |
|  |  | $\begin{aligned} & \text { Total } \\ & \text { improved } \end{aligned}$ | $\stackrel{\infty}{\circ} \stackrel{\infty}{\circ} \underbrace{\circ}_{0}$ | 过西 |  | O－901 | m | 9 98 |  |  |  | O80 | ถুூ゙す | 111 | 우우 | ুু | ぃ๐லす |
|  |  | proved | ¢ ¢ ¢ ¢ ¢ | ¢ ¢ ¢ 1 | 111 |  | ¢ | ¢ ¢ ¢ ¢ |  | $\cdots \mathrm{m}$ | －¢ ¢ ¢ | NOO | $\mathrm{m} \sim$－ | 111 | ォ ¢̧¢ ¢ |  | $\mathfrak{m} \sim \sim$ |
|  |  | Other improved | 戸 ヂゥ | 111 | 111 | ～N N | $\bigcirc \times \sim \sim$ |  | $\underset{\sim}{\sim} \sim_{\sim}^{\infty} \times$ |  | N $\mathrm{m}_{\text {m }}$ | 000 | 1 18 | 111 |  | $\bigcirc$ |  |
|  |  | Piped | $\mathrm{m} \sim \mathrm{O}$ | 111 | 夷荗 ${ }^{\prime}$ | か ¢ ¢ | ○～ナ | $\sim \sim \sim$ | ターが |  |  | 毋 8 － | 110 | 11 | $\bigcirc 0$－ |  | 오ำ |
|  |  | $\begin{aligned} & \text { Total } \\ & \text { improved } \end{aligned}$ | 䍖すご | 凩通 ${ }^{\prime}$ | 111 | O80 | $\bigcirc$ | m ¢ ¢ |  | － |  | ¢ 0 | の®の日 | 1 |  |  | ¢ |
|  |  | mproved | $\stackrel{\sim}{\sim} \stackrel{\text { N }}{\sim}$ | ¢ ¢＇ | 111 |  | $\approx \sim$ |  |  | $\bigcirc$ | ダの | $\bigcirc$ |  | $\bigcirc$ | ¢ ¢ ¢ ¢ ¢ |  | ＋ |
|  |  | Other improved | 号ス比 | 111 | 111 | 1000 | べ | ！¢ ¢ $0^{\text {a }}$ | $\infty$ |  | m ${ }^{\text {g f }}$ | 000 | 1 「び |  | －${ }_{\text {a }}^{\text {a }}$ | $\bigcirc 0$ | 6ロナ |
|  |  | Piped | ごこの | 111 | இぶ＇ | O-1 | べのコ |  | ®®ூの | 才 | ＋ | O80 | 1 | \％ | 品 | 88 | 8 ON |
|  |  | $\begin{aligned} & \text { Total } \\ & \text { improved } \end{aligned}$ | め ¢ ¢ ¢ | 䍐䍐1 | 11 | $\bigcirc 80$ | ® | のু | の8 | 88 | ¢0 | 888 | おুুু | 888 | ¢ ¢ | 88 | ถூ ¢ |
| Number of access to 1990－ | op | o gained anitation sand） | ¢ | $\begin{gathered} N \\ \underset{\infty}{N} \end{gathered}$ | 1 | ஃ | $\underset{\sim}{\mathrm{N}}$ | $\begin{gathered} \stackrel{~}{\mathbf{N}} \\ \stackrel{y}{*} \end{gathered}$ | $\begin{aligned} & \text { N } \\ & \text { N } \end{aligned}$ | O | $\underset{\sim}{\underset{\sim}{\sim}}$ | A | ¢ | ＇ | $\stackrel{\infty}{\stackrel{\infty}{n}}$ | \％ | $\begin{aligned} & \stackrel{N}{N} \\ & \text { ले } \end{aligned}$ |
|  |  | Open Defecation | す ¢ ¢ | 111 | 111 | 1000 | セٌ ¢ ¢ ¢ | 戸のの | $\llcorner\sim 0$ | N ${ }_{\sim}^{\text {N }}$ | ®～ゴ | 000 | 1 1 寸 | 111 | 寸 ¢ ¢ ¢ | $\bigcirc 0$ | $\underset{\sim}{\sim}$～${ }^{\text {＋}}$ |
| \％ |  | Unimproved facilitites | ล N $\ddagger$ | mmm | 111 | 000 | $\pm \hat{N}$ | $\wedge \wedge \infty$ | $\infty \sim$ | のம○ | mm Nom | OOO | ®ロ～ | 111 | ¢ ${ }_{\text {N }}$ | N N | い $\downarrow$～ |
|  |  | Shared | $\stackrel{\sim}{\sim} \sim \sim$ | 111 | 111 | 1 | $\cdots \infty$ | ® へ へ | $m+\sigma$ | 1 I | $\underset{\sim}{\sim} \sim \sim$ | 1 | ㅇํㄲ ㄲ | 1 । | ¢ 0 O |  | － 0 の |
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| $\begin{aligned} & \text { zo } \\ & \text { 은 } \\ & \hline 1 \end{aligned}$ |  | Unimproved facilitites | $\underset{\sim}{\infty} \sim$ | ナ＋ | 111 | 1000 | $\infty$～ | $\wedge \wedge \infty$ | $\bigcirc$ | N＾O | ¢m $\mathrm{m}_{\text {m }}$ | OOO | 110 | 111 | 戸のロ | mmm | のレナ |
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|  |  | mproved | $\stackrel{\sim}{\sim} \stackrel{n}{\sim}$ | べへの | 1 1 1 | 88 | ホ ！ |  | ゅが | 88 | ¢ | 888 | N $\infty_{\infty}^{m}$ | ＇ | ${ }^{\infty}$ | m | \＆¢ ¢ |
| Perc $\mathrm{p}$ | pula | urban n | ¢ ¢ ¢ 8 | ํํํํ | $\underbrace{\infty}_{0}$ ô | $\square_{\infty}{ }^{\text {d }}$ | －へ ${ }_{\text {N }}$ | N～の ${ }^{\text {a }}$ | ¢ ¢ ¢ ¢ | $\stackrel{\sim}{\sim}{ }_{\sim}^{\infty}{ }_{\sim}^{\infty}$ | $\sim_{\sim}^{\sim} \sim \sim \sim$ | さタデす | $\stackrel{\square}{\circ}$ | ® | ¢ ¢ 寸 | 寸 | スペ |
| Popula | n（t | usand） |  |  |  |  |  |  |  | － |  |  |  | $\stackrel{80}{0}{ }_{\sim}^{\circ}$ |  | ${ }_{4}^{4}$ |  |
|  | Year |  |  |  | So |  | Bo | Bo | , | So |  |  |  |  | No | No |  |
| Country， | rea | territory |  |  |  |  |  | $\frac{\sum_{0}^{5}}{\stackrel{\sum_{0}^{\omega}}{\omega}}$ | $\begin{aligned} & \frac{\boxed{\omega}}{N} \\ & \frac{\omega}{\omega} \\ & \frac{\omega}{\omega} \end{aligned}$ | $\begin{aligned} & \frac{0}{8} \\ & \frac{0}{0} \\ & \frac{0}{\omega} \end{aligned}$ | $\stackrel{\text { \％}}{\text { N／}}$ | $\frac{\stackrel{\text { g}}{\Sigma}}{\Sigma}$ |  |  |  |  | － $\stackrel{+}{6}$ $\stackrel{1}{2}$ |



| Number of people who gained access to improved sources of drinking－water 1990－2008 （thousand） |  |  | $\begin{aligned} & \text { 岕 } \\ & \text { H } \end{aligned}$ | § | F | H | Á | $\begin{aligned} & \text { 오 } \\ & \text { O } \end{aligned}$ |  |  | $\begin{aligned} & \text { O} \\ & \hline \end{aligned}$ | $\stackrel{\stackrel{\leftrightarrow}{\sim}}{\sim}$ | $\begin{aligned} & \stackrel{\rightharpoonup}{e} \\ & \stackrel{y}{n} \end{aligned}$ | $\infty$ $\stackrel{\sim}{1}$ $\stackrel{1}{2}$ | $\frac{*}{2}$ | \％ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Unimproved | セูチ | 000 | $\sim \sim \sim$ | 000 | ㅇN | $\pm \sim$ | のへ | $1 \underset{\sim}{\circ} \mathrm{O} \wedge$ | ®ヲ8 | $\dot{q}^{\infty} \stackrel{\ominus}{\sim}$ | $\mathfrak{N}_{\sim}^{\sim}$ |  | $1000$ |  | 111 |
|  |  | Other improved | m ¢～ | 111 | 111 | 000 | ぶ尔 | ¢\％\％in | 11 | ＊$\quad+$ | ～～～\％ | $\cdots \sim \sim$ | ำ | ローシ | ～$\sim \sim$ | の No | 1 |
|  |  | Piped | $\pm \mathrm{O}^{\circ}$ | 111 | 1 । | 8089 | N～せ ザ | N $\sim_{\text {N }}^{\text {m }}$ | 1 1 | \＆¢ ¢ |  |  |  | －${ }_{\sim}^{\text {m }}$ | $\infty \times \infty$ | かんの | 111 |
|  |  | $\begin{aligned} & \text { Total } \\ & \text { improved } \end{aligned}$ | ¢ | 888 | ¢ | 888 | ） |  | $\square_{\infty} \sim_{\infty}^{\prime}$ |  |  |  |  |  | 888 | ®のタ | 111 |
|  |  | proved | $\bigcirc \mathrm{O}$＋${ }_{\text {O }}^{0}$ | $\bigcirc 00$ | 0 mm | 000 | © $\sim \sim \sim \sim$ | の号 $\underbrace{}_{\text {m }}$ | $\sim$－ | ¢ ${ }_{\sim}^{\sim}$ | $\infty \times \infty$ | 边ずす | 숭 9 | ホ ${ }_{\sim}^{\infty} \xrightarrow{m}$ | 000 | 0 No | 111 |
|  |  | $\begin{aligned} & \text { Other } \\ & \text { improved } \end{aligned}$ | ® ${ }_{\text {¢ }}^{\text {m }}$ | ＇$\sim^{\prime}$ | 111 | 000 | ৪ ¢ ¢ ¢ | ํô | ＇ 1 | ー | ～～～$\sim_{\text {N }}^{\text {O }}$ |  | ¢ $\stackrel{\sim}{\sim}$ N ${ }_{\sim}^{\circ}$ | $0_{0}^{\circ}$ む̇ | べナ | $\pm$ mo | 111 |
|  |  | Piped | $\checkmark \sim \sim$ | ＇$\square^{\prime}$＇ |  | 8， 8 －18 | ${ }^{\circ} \boldsymbol{\sim}$ | の号® | 11 | 8 № | ＋mm | －べ | $\stackrel{\sim}{\sim}$ | $\infty$ |  | 8 ¢ 08 | 111 |
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|  |  | mproved | え $\sim_{\sim}^{\sim}$ | － 0 | N |  | $\bigcirc \underbrace{\infty}_{\sim} \infty$ |  | ล |  |  | $9^{\infty}$－ | 꾸응 |  | 000 | $\sim$ | 11 1 |
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|  |  | Piped | ¢ $\sim$ こ | 111 | 111 | OOO | ® ¢ ¢ ¢ |  | 11 | へু欠ু | て๐ถ |  | Mのさ | ¢ Br $^{8}$ | Кのタ | にヵの日 | 111 |
|  |  | $\begin{aligned} & \text { Total } \\ & \text { improved } \end{aligned}$ | のスペ | $\bigcirc$ | ¢ | 888 | ¢ | Кூ | m | の | ¢ ¢ | かのおの | ¢ ¢ ¢ | ふুু | O－10 $\square_{1} 8$ | ®のタ | 1 |
| Number of access to 1990－2 | rove | o gained sanitation sand） | $\begin{aligned} & \text { N } \\ & \underset{N}{N} \end{aligned}$ | \％ |  | H | 1 | $\begin{aligned} & \stackrel{-}{N} \\ & \stackrel{N}{*} \end{aligned}$ | 1 | \% | $\begin{aligned} & \infty \\ & \stackrel{\infty}{\mathrm{O}} \\ & -1 \end{aligned}$ | $\stackrel{\text { J }}{\stackrel{\text { N }}{N}}$ | $\begin{aligned} & \text { Ö } \\ & \stackrel{\circ}{\wedge} \end{aligned}$ |  | 1 | $\circ$ <br>  <br> $\square$ <br> - | 1 |
|  |  | Open Defecation | $\mathfrak{\sim} \sim \sim \sim$ | 00 | I | 000 | ～コ | ご ${ }_{0}^{\infty}$ | 1 ＇ | ～ヘ |  | m | mo ${ }_{\text {¢ }}$ |  | 11 | N | 111 |
| § |  | Unimproved facilitites | 꿍 | $\bigcirc 0$ | $0_{\sim}^{0} \infty 1$ | 000 | $\mathrm{m} \sim$ | $\stackrel{\infty}{\sim} \sim \stackrel{\sim}{\sim}$ | m® | Nのニ | ®iomoj |  | $\bigcirc \sim \sim \sim$ | $\xrightarrow{\circ} \mathrm{O}$－ | ＇O 0 | $\rightarrow 00$ | 111 |
|  |  | Shared | ¢ ¢ ¢ \％ | 111 | 111 | 111 | 11 | m $\downarrow ⿰ 丿 ⺄$ | 111 | かのの | 1 1 । | $\rightarrow$～$\quad$ ¢ | 60 | تす ¢ | 1 | 11 | 111 |
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| 言 |  | Open Defecation |  | 000 | 1 I | 000 | ¢ ${ }^{\text {m }}$ m | 청 | 111 | パへ |  | ＋ | 犬 ¢ ${ }_{\text {¢ }}$ | $\stackrel{\sim}{\sim} \sim$ | 111 | $\underset{\sim}{\sim}+0$ | 11 1 |
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|  |  | Shared | $\stackrel{\infty}{\sim}$ | 111 | 111 | 111 | 1 । | $\rightarrow \mathrm{m}$－ | 111 | ナナレ | 1 1 1 | －0ヶ | $\rightarrow$～$m$ | の～コ | 11 | 111 | 111 |
| 发を |  | proved | ¢ ${ }_{\sim}^{\sim} \sim$ | 888 | ¢ | 888 | 『゙「 | $\infty \times \sim$ | 发 べ | 吹砣 | テ～ | に ${ }_{\text {m }}^{\text {g }}$ | $\stackrel{\bullet}{\sim}$ No | ¢゚ำ8 | ＇ 80 | ¢o 68 | 11 |
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|  |  | mproved | ¢ֹल | 888 | 上ू on | 888 | へへべ | MNN | ค | のペぺ | $\stackrel{\infty}{\infty}$ | その日 | 「へか | ㅇํํํํ | め \％ơ | のヘの8 | 111 |
| $\begin{array}{r} \text { Perc } \\ \mathrm{p} \end{array}$ | tage | urban on | ¢¢ ¢ ¢ ¢ | m m O | இツু |  | $\overbrace{}^{\circ} \mathrm{N}$ N | mem | คำ |  | ロ～ำ | 98 号 8 | ダス | のタ゚ | い ${ }_{\text {® }}^{\text {® }}$ |  | №ㅇo |
| Popula | （t | usand） |  | N N N | 寸8 |  |  |  | にの～ |  |  |  | $\stackrel{\rightharpoonup}{\sim} \stackrel{\sim}{\sim}$ |  |  |  |  |
|  | Year |  |  | O8 | Bo | , | So |  | Bo | ${ }_{4}^{2} \text { 욱 }$ | Bo | O |  | Bo | Bo | So | $\mathrm{O}_{1}^{\circ} \mathrm{O}$ |
| Country， | ea | territory |  | $\frac{0}{2}$ |  | 令 3 O | $\begin{aligned} & \text { EI } \\ & \stackrel{y}{\overline{0}} \end{aligned}$ | $\begin{aligned} & \frac{5}{5} \\ & \frac{5}{5} \\ & \frac{5}{⿺ ⿻ ⿻ 一 ㇂ ㇒ 丶 ⿱ 口 一 心 ~} \end{aligned}$ | $\frac{\bar{\pi}}{\kappa_{0}^{0}}$ |  |  |  | 릉 |  |  |  |  |



| Number access of drink | peop mpro wate ousa | who gained sources 990－2008 | 1 | 1 | $\begin{aligned} & \circ \\ & \hline 8 \\ & \hline \end{aligned}$ | 1 | 8 | 1 | 1 | $\begin{aligned} & \text { \& } \\ & \hline \\ & \stackrel{+}{4} \end{aligned}$ | $\begin{aligned} & \text { §े } \\ & \text { ! } \end{aligned}$ | $\begin{aligned} & \circ \\ & \stackrel{\circ}{\circ} \\ & 6 \end{aligned}$ |  | 1 | 1 | $\stackrel{\ominus}{6}$ | N |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Unimproved |  | 1 | 1 ！¢ ¢ | 000 | 100 | $\bigcirc \bigcirc \bigcirc$ | ＇ $\mathrm{m}^{\prime}$ | 1 No | へすの | 000 | m | ¢n ¢ M | $1 の ヘ$ | 1 ！ | OOO | 000 |
|  |  | Other improved | 111 | ＇寸 M | 000 | 160 | 000 | 1成 1 | 1 윽 | へ | ， | セักำํ | mへ̃ | $1 \sim \sim$ | $1 \times \sim \mathrm{m}$ | 000 | 000 |
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|  |  | Total improved | 111 | - டٌ 毋ூ | $808$ | $180$ | OO | 101 | I No | mo ¢ | の | 人 08 | 边 6 ก | ＇$\quad$ のn | ถٌํㅇ | 8 | －880 |
|  | Unimproved |  | 111 | －¢゚カ | ¢ ¢ ¢ | 100 | －- － | ＇Ln｜ | ＇$\quad$ のだ | ¢ ${ }_{\text {N }}$ N | 000 | $\underset{\sim}{\infty} \underset{\sim}{\sim} \sim$ | ¥ ¢̧ ¢ | 1への | ＇i゙ | $\bigcirc \bigcirc$ | 000 |
|  |  | Other improved | 111 | 1 \％ | ¢ ¢ ¢ | $1 \infty$ | 000 | ＇${ }^{\text {d }}$＇ | 1への | ヲ $\ddagger$ ¢ | 000 | セ̛ Nั ¢ ¢ | OMOM ${ }_{\text {O }}$ | ＇ | 1 m O | 000 | $\rightarrow$ |
|  |  | Piped | 111 | $1 \sim \sim$ | を | がす。 | இダ 9 | $1 \rightarrow 1$ | 100 | $\stackrel{\sim}{\sim} \stackrel{\infty}{\sim} \times$ | $808$ | $\bigcirc \stackrel{\sim}{\sim}$ | のーナ | ＇$¢$ | 1 ${ }^{-1}$ | $080$ | இヲ ヲ |
|  |  | Total improved | 111 | ＇寸 ¢ | ¢ ¢ ¢ | $18$ | இダロ | ＇ٌٌ | 1への | ¢かへ | $\bigcirc$ | ®̃ |  | $1 \times \sim$ | ＇$\downarrow$ | 88 | 888 |
|  | Unimproved |  | 100 | $1 \stackrel{\sim}{\sim}$ | 000 | 100 | 000 | 161 | ＇${ }^{\text {¢ m m }}$ | $\sim \sim$ | 000 | のレ～ | $\stackrel{\sim}{\sim}$ へ | $\rightarrow \sim m$ | 1 寸－ | 000 | 000 |
|  | $\begin{aligned} & \text { 이 } \\ & \text { O } \\ & \text { 흐 } \end{aligned}$ | Other improved | 100 | 1 「 | 000 | $1+6$ | 000 | $1 \underset{\sim}{\infty} 1$ | 1 へ | ツヲ゚ | のー | 过 $\ddagger ~ M$ | のmへ | にヘの | ＇$\sim_{\sim}^{\sim}$ | 000 | 000 |
|  |  | Piped | $1 \pm 8$ | －$\sim_{\sim}^{\sim} \stackrel{\sim}{\sim}$ | O 0 | O－¢ ¢ ¢ | $880$ | 0¢ 1 | 1のぶ | ¢ ¢ ¢ ¢ | இু Я | ¢ กٌ | ¢O | あのヘ | ＇$\sim$ | $880$ | 888 |
|  |  | Total improved | $1 \pm 0$ | 1 セ ¢ ¢ | 888 | $\text { ' } 88$ | 888 | じ1 | ＇ | ¢ ¢ ¢ ¢ | 88 | ぶふ欠 |  | の®へ | ＇$\quad$ ¢ N | 888 | 888 |
| Number of people who gained access to improved sanitation 1990－2008（thousand） |  |  | 1 | 1 | $\begin{aligned} & \mathbf{\circ} \\ & \underset{\sim}{7} \end{aligned}$ | U | $\infty$ | 1 | 1 | $\begin{aligned} & \stackrel{\circ}{8} \\ & \underset{\sim}{\infty} \end{aligned}$ | $\begin{aligned} & \text { N } \\ & \text { in } \end{aligned}$ | $\begin{aligned} & \text { N } \\ & \stackrel{1}{2} \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { f } \\ & \infty \\ & \text { d } \end{aligned}$ | 1 | 1 | $\stackrel{\circ}{6}$ | N |
|  | $\begin{aligned} & \text { 우 } \\ & \text { O} \\ & \text { 을 } \\ & \text { ㄷ } \end{aligned}$ | Open Defecation | 111 | ＇${ }_{\text {N }}^{\text {d }}$ | 100 | 000 | 000 | 111 | ＇N040 | $\underset{\sim}{m} 0 \infty$ | 000 | 可へー | mo | 1 ¢ | 1 N | 000 | $\bigcirc \bigcirc 0$ |
|  |  | Unimproved facilitites | 111 | ＇$\underset{子}{\text { ¢ }}$ | －0 0 | 000 | 000 | ＇ 81 |  | の $\infty$ ம | 000 | $\underset{\sim}{m} \times$ | $\stackrel{\infty}{\sim} \stackrel{\sim}{\sim}$ | 1－て | $1 \infty 0$ | 000 | 000 |
|  |  | Shared | 111 | 1 $\sim$ N | 11 | 000 | 11 | 111 | $1 \underset{\sim}{\circ} \mathrm{\sim}$ | のの○ | 11 | $m+寸$ | 111 | 1 응 | 1 $\sim$ N | 111 | 111 |
|  | Improved |  | 1 | － | ®88 | 88 | $388$ | ＇ m | ＇$\sim^{\sim}$ N | タヘヘ | 888 | ○ ${ }_{\text {N }}$ | ¢ ¢ | ＇$\quad$ ¢ | 198 กٌก | 888 | 8 O |
|  | $\begin{aligned} & \text { 응 } \\ & 0 \\ & 0 \\ & 0 \\ & \underline{0} \\ & 5 \end{aligned}$ | Open Defecation | 111 | ＇ | ¢ ¢ ¢ | 000 | 000 | 111 | $1 \times m$ | む へ | 000 | $\bigcirc{ }_{\square}^{\circ} \infty$ |  | $1 \sim$ | $\stackrel{\sim}{\sim}$ | 000 | 000 |
|  |  | Unimproved facilitites | 111 | ＇${ }_{+}^{\circ}$ | ¢ | OO－ | 000 | $1 \sim 1$ | 1 のレ | 윽응 | 000 | $\stackrel{\sim}{\square} \infty$ | N ${ }_{\sim}^{\circ}$ N | $1 \sim m$ | $1 \infty$ | 000 | 000 |
|  |  | Shared | 111 | 1 ${ }_{\sim}^{\sim}$ | ¢ | 000 | 111 | 111 | 106 | $\infty \infty$ | 111 | Nmm | 111 | 1ヨコ | $\stackrel{\infty}{\sim}$ | 111 | 111 |
|  | Improved |  | 1 | － | ¢ | 80\％ $0^{\circ}$ | $888$ | $\stackrel{\sim}{\sim}$ | 106 |  | 888 | ¢ 0 欠̃ | $\stackrel{\sim}{\sim}{ }_{\sim}^{\sim}{ }_{\sim}^{\infty}$ | ＇$ٌ 8$ | ＇¢ ¢ n ¢ | $888$ | 888 |
|  |  | Open Defecation | $1 ヵ \sim$ | $1 \bullet+$ | 100 | 000 | 000 | 111 | 1 mm | $\sim \sim \sim$ | 000 | $\checkmark m \sim$ | 윽 욕 | 000 | 1 m N | 000 | 000 |
|  |  | Unimproved facilitites | 1 n N | ＇$\sim_{\sim}^{N}$ | －0 O | $\bigcirc 00$ | 000 | N N N | 1 $\underbrace{\circ}_{\square}$ | $\infty \quad$＋ | 000 | ＊mm | へ ${ }^{\text {N }}$ | $\rightarrow$－ | 1 ¢ 0 | 000 | 000 |
|  |  | Shared | 111 | ＇F才 | 111 | $\bigcirc 00$ | 111 | 11 | ＇${ }_{\sim} \times$ | 윽을 | 11 | へへへ | 111 | ののの | $1 \vec{m}$ | 11 | 111 |
|  |  | proved | ＇おべ | 1 N | ¢ 80 | 888 | $808$ | ¢ $\operatorname{on}_{\circ}^{\infty}$ | 1 ）¢ ก ก | －¢ ¢ ¢ |  | $\stackrel{\sim}{\infty} \hat{\infty}_{\infty}^{\infty}$ | $\mathrm{m}_{6}^{\infty} \stackrel{\infty}{\circ}$ 요 | 8888 | ＇ 8 ¢ | O－8 | 888 |
| Percentage urban population |  |  | ¢ ¢7 |  |  | மセ ¢ ¢ ¢ |  | $\stackrel{\square}{\square} \stackrel{\infty}{\sim}$ | OM M | べへ ${ }^{\text {® }}$ | セ゚セ |  | へ ${ }_{\text {M }}$ | $\underset{\sim}{\infty} \times \sim$ | $\stackrel{m}{\sim} \stackrel{\sim}{\sim}$ | M | M |
| Population（thousand） |  |  | $N \underset{\infty}{\sim}$ |  |  |  |  |  |  |  |  |  |  | ¢人 | $\begin{array}{ll} \hline 0_{0} & \infty \\ \infty & 0 \\ 0 \\ \hline \end{array}$ |  |  |
| Year |  |  | $\begin{aligned} & \text { OO O O } \\ & \text { O } \\ & \hline 1 \\ & \hline \end{aligned}$ |  | $$ |  | $$ | $\begin{aligned} & \circ \\ & \hline \text { O O O } \\ & \hline 1 \\ & \hline \end{aligned}$ |  |  |  |  | $$ | OO |  | $$ | $$ |
| Country，area or territory |  |  |  |  |  |  |  |  |  |  | $\begin{aligned} & \stackrel{\text { 틍 }}{\text { on }} \end{aligned}$ |  |  |  | O 0 0 0 0 0 |  |  |


| Number of people who gained access to improved sources of drinking－water 1990－2008 （thousand） |  |  | $\stackrel{\circ}{\circ}$ | 1 |  | 1 |  | $\stackrel{\rightharpoonup}{\circ}$ <br> $\stackrel{y}{\circ}$ <br> $\cdots$ <br>  <br>  | － | I | 号 | $\stackrel{\text { 几゙ }}{\substack{\text { N }}}$ | $\begin{aligned} & \text { İ } \\ & \text { in } \end{aligned}$ |  | $\stackrel{\rightharpoonup}{2}$ | N | $\begin{aligned} & \text { ® } \\ & \underset{\sim}{0} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Unimproved | ペッゴ | ＇ 9 \％ |  | 100 | ＇$\square_{\text {¢ }}^{\text {m }}$ | ごひ ¢ ¢ ¢ | O＾m | 100 |  | $00$ | $\xrightarrow[\sim]{\circ} \mathrm{O} \text { •- }$ | $1 \wedge 1$ | 000 | $0 \cdot \mathrm{~m}$ | in $\mathrm{m}_{\mathrm{m}}$ |
|  |  | Other improved |  | $1 \stackrel{\sim}{\sim}$ | が | $1 \infty \infty$ | ＇ m ת |  | 111 | $1 \stackrel{\sim}{\sim}$ | $\underset{\sim}{\sim} \times \infty$ |  | のレの | ＇ $\mathrm{m}^{\prime}$ | ＇${ }^{\text {m }}$ | 110 | \％¢ ¢ |
|  |  | Piped | Nへ $\sim_{\infty}$ | 1 mog |  | ＇ুুু | $1 \stackrel{\sim}{\square}$ | －ナー | 111 | 1 1 ¢ | இก゚ヤ゚ | も゚ロ | ㄴํㅇơ | ＇m＇ | ${ }^{1} \times 1$ | 1＇の | $\rightarrow$－ |
|  |  | $\begin{aligned} & \text { Total } \\ & \text { improved } \end{aligned}$ | ¢ ¢ ¢ | ＇ $8 \bigcirc$ | だ¢ \％ | ＇ 80 | No ${ }^{\circ}$ | g\％กn88 | のぶの | ＇ 88 |  |  | の | $1 m^{m} 1$ | 888 | むへ | \％กิ ¢̂ |
|  |  | proved | ヘัล | ＇に9） | تレ N | 1ヵワ | ＇ n m |  | Orm | 100 | さのヘ | m $\sim$～ | へ ${ }_{\text {® }}$ | ＇${ }_{\sim}^{\infty}$＇ | 000 | $\neg \wedge m$ | 6¢ |
|  |  | Other improved | N® $\sim_{\sim}^{\sim}$ |  |  |  | 1 ¢ |  | 111 | 1边 | ®～익 | ¢ 寸 ！¢ | のヲナ | ＇$\underbrace{\prime}$＇ | ＇g＇ | 110 |  |
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|  |  | $\begin{aligned} & \text { Total } \\ & \text { improved } \end{aligned}$ | ¢ூ 欠ু す | ＇ぶす | のタのタ | ＇88 | 9 | の $\mathrm{m}_{\infty} \hat{\infty}$ | そさ | ＇880 | の | にুのタ | の日 | へু | 88 |  | ® ¢ ¢ |
| Number access to 1990－ |  | o gained anitation sand） | $\begin{aligned} & \stackrel{\circ}{\infty} \\ & \stackrel{\circ}{\circ} \end{aligned}$ | I | $\begin{aligned} & \stackrel{N}{0} \\ & \stackrel{\sim}{7} \end{aligned}$ | 1 | I | だ | － | の | ๕ | $\begin{aligned} & \stackrel{\leftrightarrow}{8} \\ & \sim \end{aligned}$ | $\begin{aligned} & 0 \\ & 7 \\ & 7 \end{aligned}$ | $\begin{aligned} & \stackrel{\infty}{\oplus} \\ & \underset{\sim}{n} \end{aligned}$ | I | $\square$ | $\underset{\sim}{\circ}$ |
|  |  | $\begin{aligned} & \text { Open } \\ & \text { Defecation } \end{aligned}$ | $\bigcirc \mathrm{O}$ ๑ 0 | $1 \rightarrow$－ | 0 mo | 100 | ＇寸 M | \％タin in | 111 | 111 | 000 |  | $\sim \rightarrow 0$ | －－－ | 11 1 | 11 ம | 스N |
| $\pm$ |  | Unimproved facilitites | m～ | 16 ～ | 000 | 10 に | ＇${ }^{+}$ | $\pm \infty \infty$－ | ®in ${ }^{\text {a }}$ | －＊ | ○－ワ | $\neg$ ー 6 | $\cdots{ }_{\sim}^{\circ} \times$ | ーーい | 1 － | 욱 | $\pm \underset{\sim}{\square} \stackrel{0}{\sim}$ |
|  |  | Shared | $\checkmark \downarrow$－ | 1 mm | ナ $\downarrow$ | 160 | $1 \sim m$ | $\mathfrak{\sim} \mathfrak{N} \sim$ | 1 1 1 | 1 I | へNヘ | ＋ナ | $\neg \sim \sim$ | 111 | 111 | 11 | $\underset{\sim}{\sim}$～${ }^{\circ}$ |
| 쁱은 |  | mproved | めめめカ | ＇¢ す | かু¢ | ＇$\infty$ ¢ | ＇ | O～N $\sim$ N | テ ¢ \％ | ถ̌\％ | n | $\pm$ |  | ¢ \％\％\％ | ＇$¢$＇ | －m m | ¢ J ${ }_{\text {¢ }}$ |
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|  | 言 | Unimproved facilitites | いmo | 16 ～ | 000 | 1 응 | 1 ～${ }^{\circ}$ | －の ${ }^{\text {a }}$ | $8{ }_{\text {gn }}$ | －+ | O－ | ナ コ | $\stackrel{\sim}{\sim} \sim{ }^{\text {N }}$ | N N N | 16 1 | 示 | $\stackrel{\sim}{\sim}$ |
| $\frac{\mathbb{1}}{\overline{2}}$ |  | Shared | $\checkmark$ ๑⿱㇒⿺丄丅八 | 1 mm | $m+$－ | $1 \times$ N | N | ～ $0 \bigcirc 0$ | 1 1 1 | 111 | ヘヘヘ | $\bigcirc \wedge \infty$ | ～mm | 11 1 | 11 I | 11 | $\underset{\sim}{\infty} \times \sim$ |
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| $\begin{aligned} & \text { OU U } \\ & \text { U } \\ & \text { W } \\ & \end{aligned}$ |  | Open Defecation | 000 | 000 | $\sim \rightarrow 0$ | 100 | ＇えの | ホ ${ }_{\sim}^{\sim} \sim$ | $\frac{1}{2} \frac{1}{2}$ | 1 1 1 | 000 | m－0 | 000 | 000 | 1 1 | $11 \sim$ | ＋$\sim$ |
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## ANNEX B <br> GLOBAL AND REGIONAL SANITATION LADDERS: URBAN AND RURAL

Open defecation $\square$ Unimproved facilities
Shared



Northern Africa


Eastern Asia


South-eastern Asia


Western Asia

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



[^4]
## 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 drinkingwater 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.




[^0]:    Figure 2 Regional use of improved sanitation facilities in 2008 and percentage point change 1990-2008

[^1]:    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.

[^2]:    5 MICS and DHS surveys from 45 developing countries, 2005-2008.

[^3]:    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.

[^4]:    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

