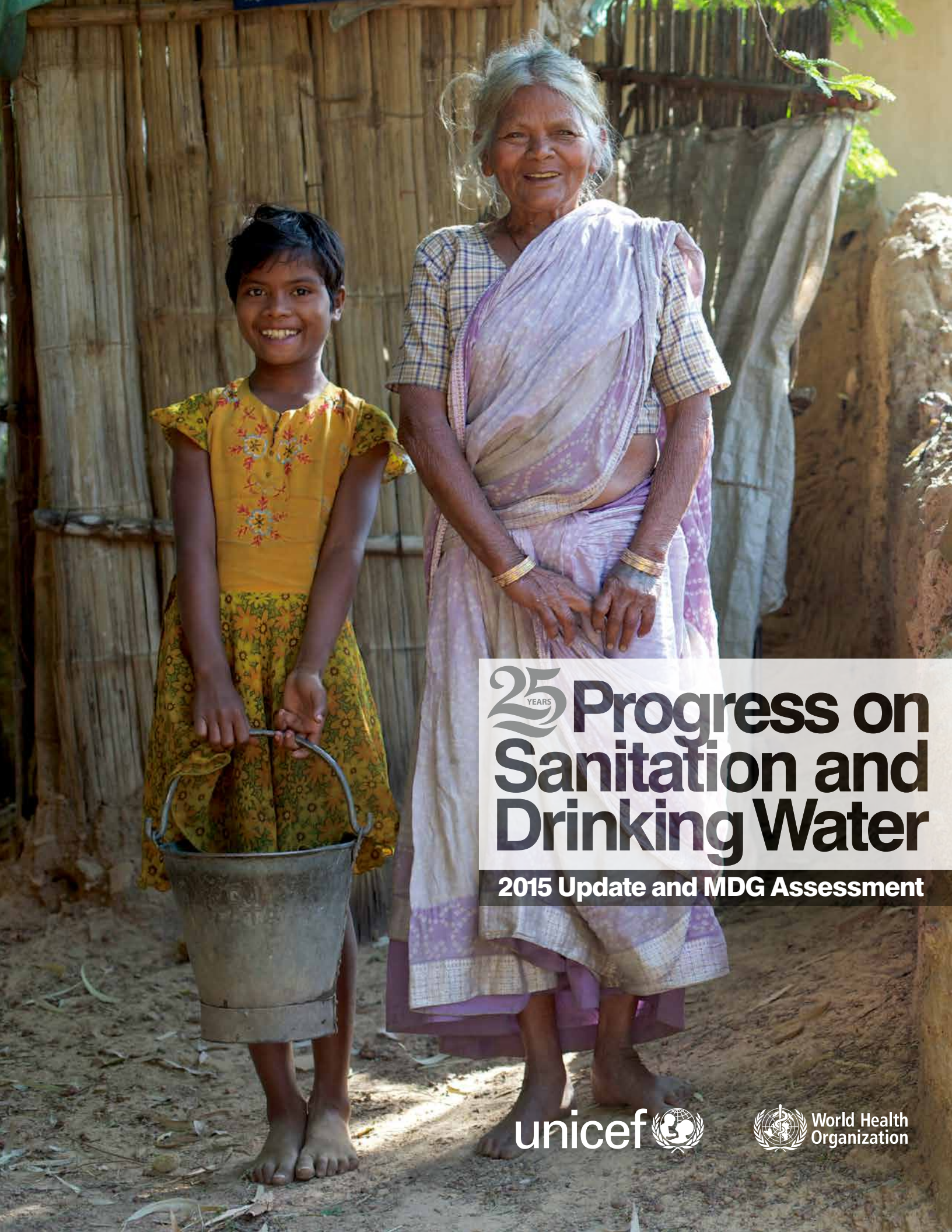

25 YEARS Progress on Sanitation and Drinking Water

2015 Update and MDG Assessment

unicef

World Health Organization

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Progress on Sanitation and Drinking Water

2015 Update and MDG Assessment

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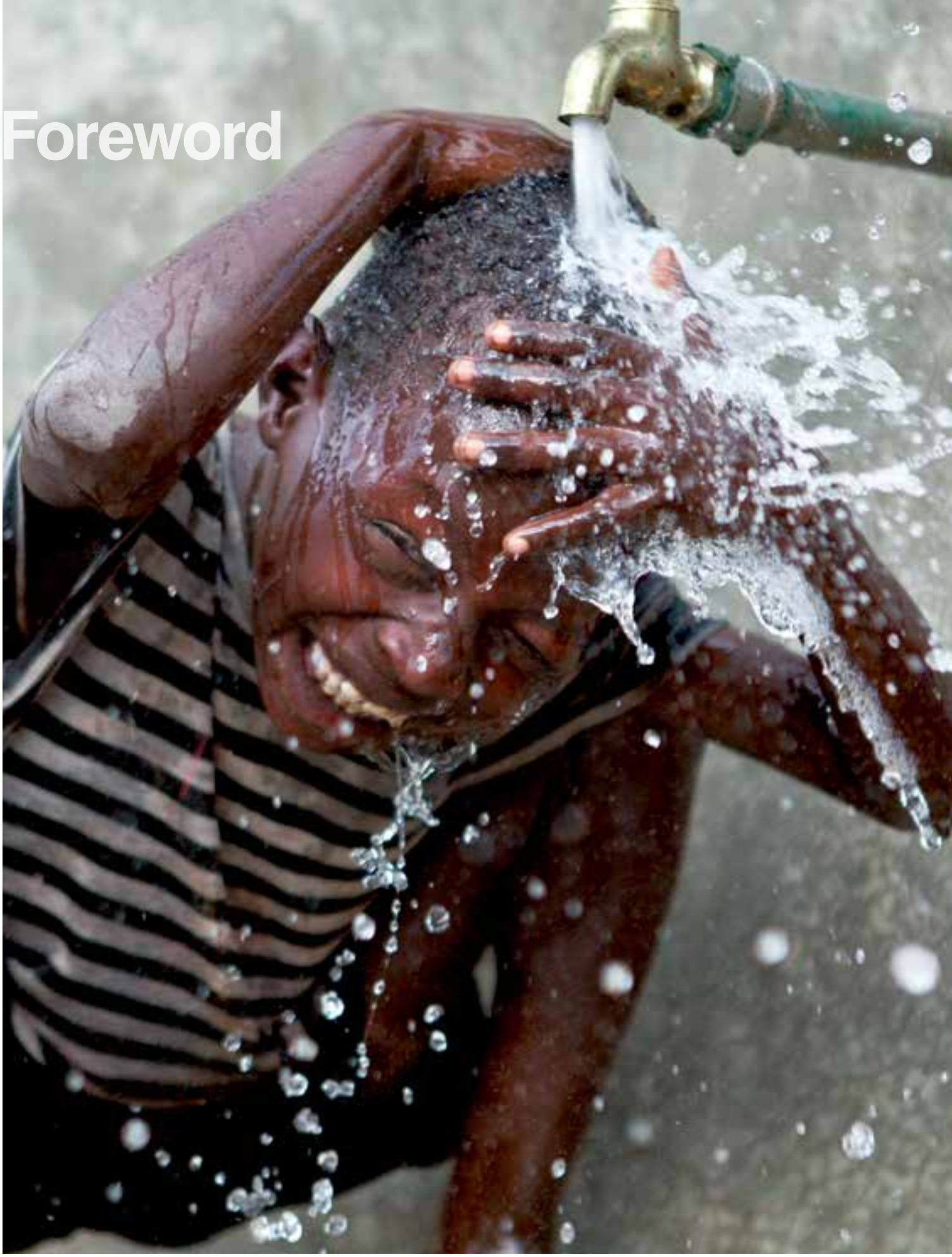
Foreword



The Millennium Development Goals (MDGs) – the framework that has been a key part of efforts to build a better world for the past 15 years – challenged the global community to reduce by half the proportion of the population without safe drinking water and basic sanitation. Throughout this period, the WHO/UNICEF Joint Monitoring Program (JMP) has monitored progress.

As the MDG era comes to a close, this report shows how far we have come. For example, in a major global achievement, the target for safe drinking water was met in 2010, well ahead of the MDG deadline of 2015. Over 90 per cent of the world's population now has access to improved sources of drinking water.

At the same time, the report highlights how far we still have to go. The world has fallen short on the sanitation target, leaving 2.4 billion without access to improved sanitation facilities.

The JMP has also tracked and presented data that shed light on a number of other issues, including inequalities such as the gap between urban and rural residents, the gender burden of water collection and the persistent exclusion of the poor from water and sanitation services.

The insights provided by the JMP data have enabled us to identify specific challenges and strengthen policy-making. For instance, we have seen that we must address not only the widespread need for sanitation, but also the difficult problem of open defecation, still practiced by almost a billion people. Open defecation is one of the clearest manifestations of extreme poverty.

That is why, in 2013, I launched a Call to Action on Sanitation on behalf of UN Secretary-General Ban Ki-moon. Our aim is to eliminate open defecation by 2025 and to strengthen the partnerships that can make this happen. Addressing the sanitation crisis goes to the heart of ensuring good health, a clean environment and human dignity for all.

Robust data, insightful analysis and compelling presentation will be important as we transition to the Sustainable Development Goals and their imperative to leave no one behind. UNICEF and WHO, through the JMP, have shown leadership in initiating the debate about future targets for water, sanitation and hygiene, and in bringing stakeholders together to discuss a vision for the future.

Water and sanitation are fundamental to human development and well-being. They are not just goals in their own right but also critical to the achievement of other development objectives such as adequate nutrition, gender equality, education and the eradication of poverty. Access to safe water and sanitation is also a human right, as recognized in 2010 by the United Nations General Assembly.

The United Nations looks forward to working with its partners across the world to successfully meet the water and sanitation challenge. By that, we can make a life of dignity a reality for millions and millions of people around the world.

Jan Eliasson
Deputy Secretary-General

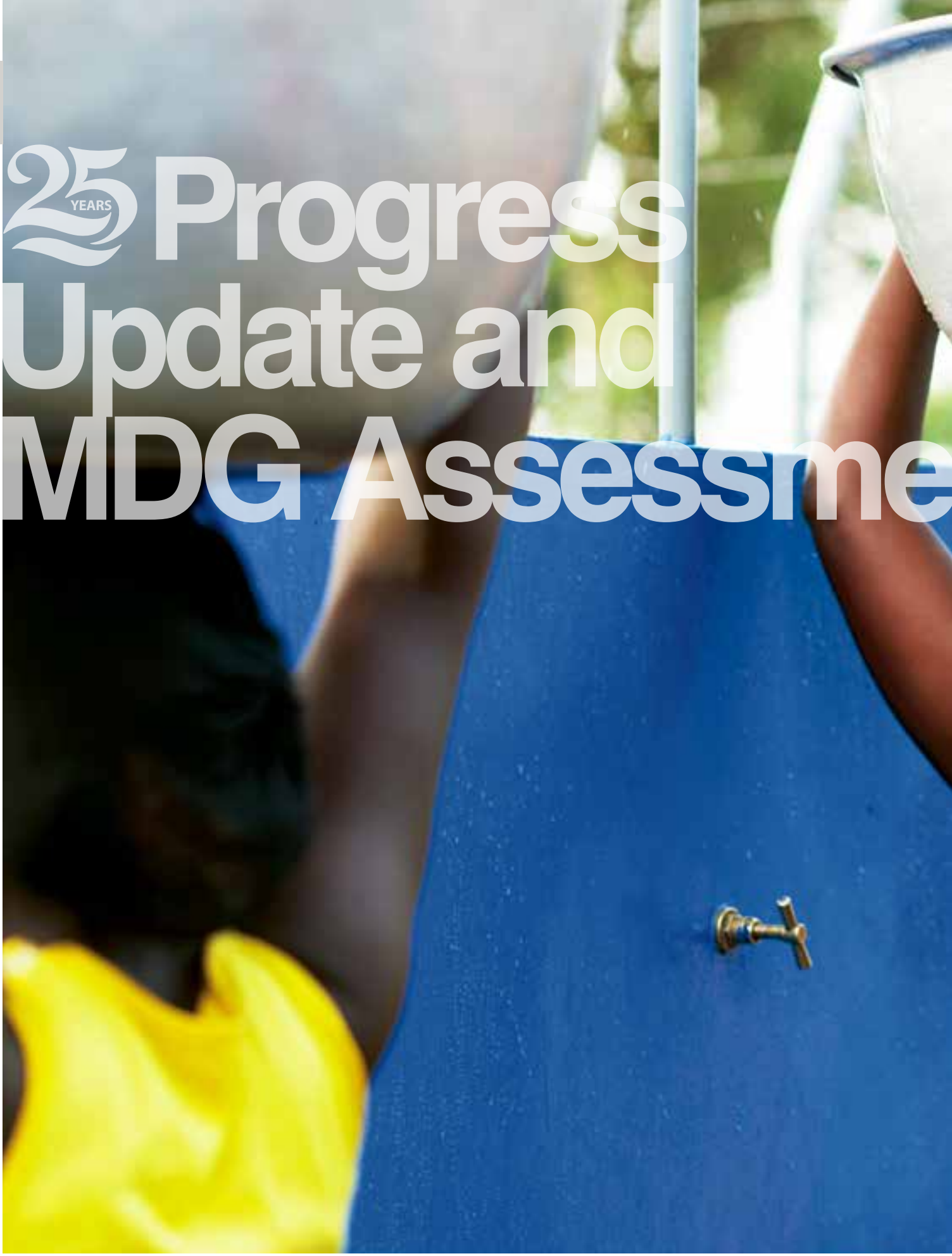
Progress on sanitation and drinking water: 2015 update and MDG assessment

SECTION A
Progress Update and MDG Assessment

SECTION B
Twenty-Five years of WASH Monitoring

ANNEXES

SECTION
A



25 YEARS Progress Update and MDG Assessme

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Introduction

In 2000 the Member States of the United Nations signed the Millennium Declaration, which later gave rise to the Millennium Development Goals (MDGs). Goal 7, to ensure environmental sustainability, included a target that challenged the global community to halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation. The WHO/UNICEF Joint Monitoring Program for Water Supply and Sanitation (JMP), which began monitoring the sector in 1990, has provided regular estimates of progress towards the MDG targets, tracking changes over the 25 years to 2015.

In 1990, global coverage of the use of improved drinking water sources and sanitation facilities stood at 76 per cent and 54 per cent, with respective MDG targets of 88 per cent and 77 per cent by 2015. The challenges were huge, as the global figures hid vast disparities in coverage between countries, many of which were battling poverty, instability and rapid population growth.

The JMP has monitored the changes in national, regional and global coverage, establishing a large and robust database and presenting analysis not only of the indicators detailed in the original framework for the MDGs, but also many other parameters. The analysis has helped shed light on the nature of progress and the extent to which the ambition and vision of the MDGs have been achieved. It has also helped to identify future priorities to be addressed in the post-2015 Sustainable Development Goals.

Despite significant progress in water and sanitation, much still remains to be done. This report shows how the world

has changed since 1990. It provides an assessment of progress towards the MDG target, and insight into the remaining challenges.

Section A provides an overview of progress against the parameters specified in the MDG target for water and sanitation, in both urban and rural areas. It presents data for the world as a whole, and compares progress across regions.

The report goes on to examine trends over the MDG period by region and by level of service. It pays particular attention to the numbers of people who have gained the highest level of service in drinking water supply – piped water on premises – and those with no service at all, who use surface water for drinking and practise open defecation.

In order to understand the nature of progress, it is important to look carefully at the way improvements in water and sanitation have benefited different socio-economic groups. This report sheds light on equality gaps between urban and rural dwellers, and between the richest and poorest segments of the population. It presents several new ways to visualize progress on extending service to the poor, designed to reveal the nature of inequalities and give the reader insight into the great challenge that still exists in ensuring that progress reaches everyone.

The JMP was established in 1990 and is celebrating its Jubilee Year in 2015. Section B provides a retrospective analysis of the evolution of water, sanitation and hygiene monitoring over the past 25 years.

Drinking Water

KEY MESSAGES

- The global MDG target for drinking water was met in 2010
- 91 per cent of the global population now uses an improved drinking water source
- Five developing regions met the drinking water target, but the Caucasus and Central Asia, Northern Africa, Oceania and sub-Saharan Africa did not
- 2.6 billion people have gained access to an improved drinking water source since 1990
- 96 per cent of the global urban population uses improved drinking water sources, compared with 84 per cent of the rural population
- Eight out of ten people still without improved drinking water sources live in rural areas
- The least developed countries did not meet the target, but 42 per cent of the current population has gained access to improved drinking water sources since 1990
- In 2015, 663 million people still lack improved drinking water sources

The MDG target for drinking water has been met

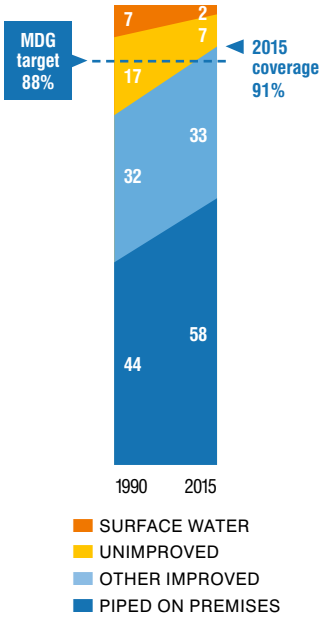


Fig.1 Trends in global drinking water coverage and MDG target (%), 1990–2015

Five developing regions achieved the MDG target for drinking water

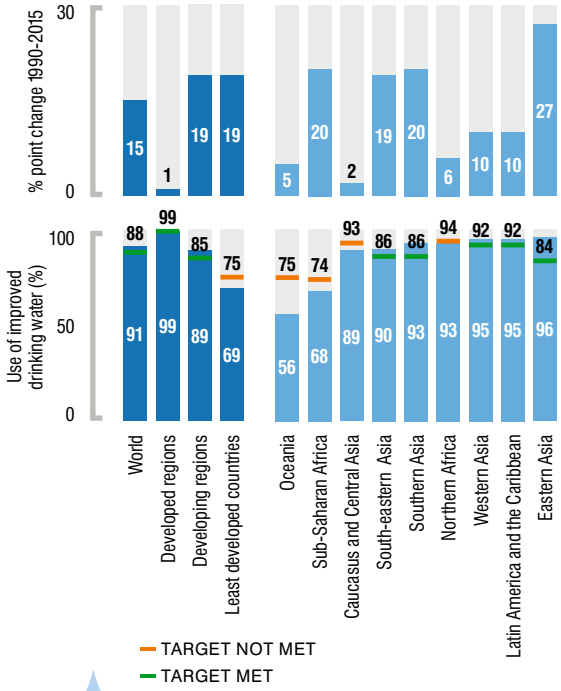


Fig.2 Use of improved drinking water sources and MDG target in 2015, and percentage point change from 1990 to 2015

147 countries[1] have met the MDG drinking water target

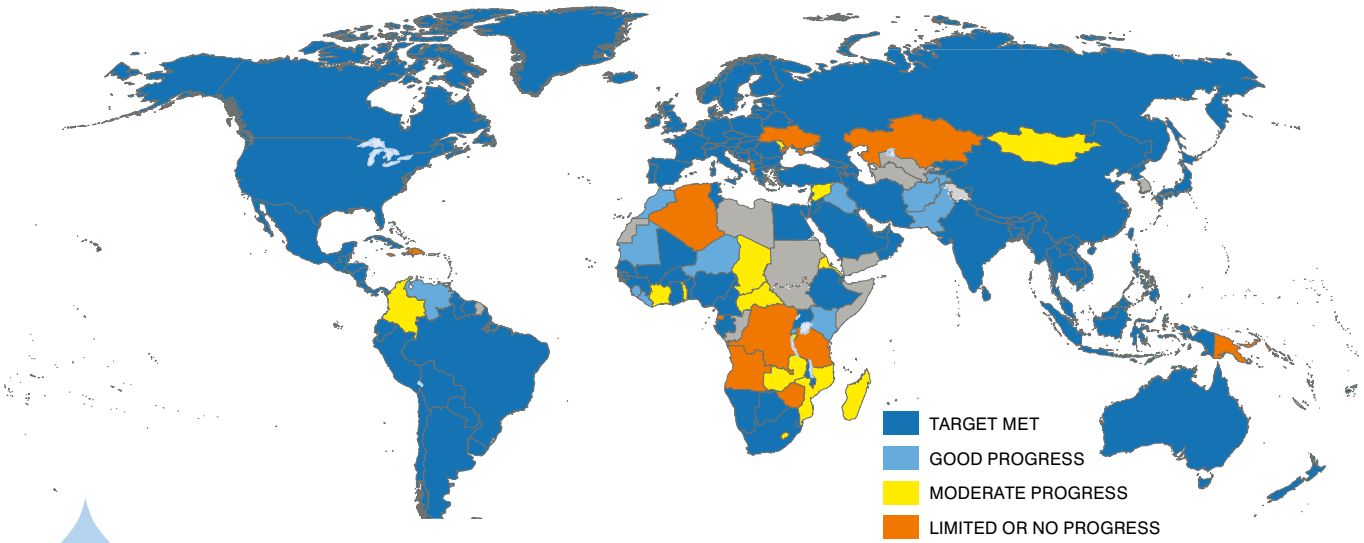


Fig.3 MDG target achievement for drinking water

[1] The JMP tracks progress for 215 countries, areas and territories, including all UN Member States. Statistics in this report refer to countries, areas, and territories.

Sanitation

KEY MESSAGES

- The global MDG target for sanitation has been missed by almost 700 million people
- 68 per cent of the global population now uses an improved sanitation facility
- The only developing regions to meet the sanitation target were the Caucasus and Central Asia, Eastern Asia, Northern Africa and Western Asia
- 2.1 billion people have gained access to an improved sanitation facility since 1990
- 82 per cent of the global urban population, and 51 per cent of the rural population, uses improved sanitation facilities
- Seven out of ten people without improved sanitation facilities, and nine out of ten people still practising open defecation, live in rural areas
- The least developed countries did not meet the sanitation target, and only 27 per cent of their current population has gained access to improved sanitation since 1990
- In 2015, 2.4 billion people still lack improved sanitation facilities

The world has missed the MDG sanitation target

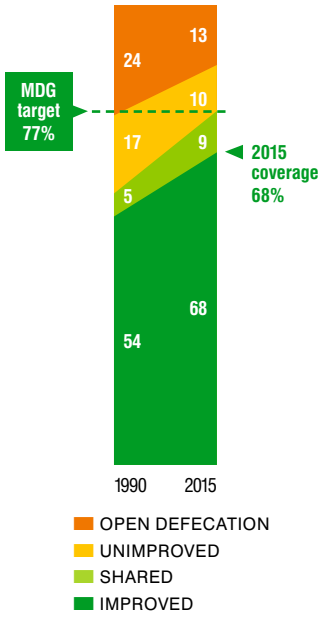


Fig.4 Trends in global sanitation coverage and MDG target (%), 1990–2015

Four developing regions achieved the MDG sanitation target

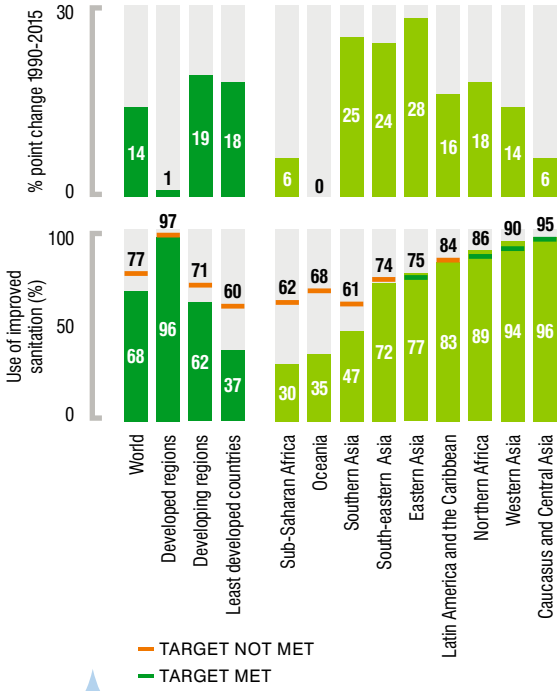


Fig.5 Use of improved sanitation and MDG target in 2015, percentage point change from 1990 to 2015

Only 95 countries have met the MDG sanitation target

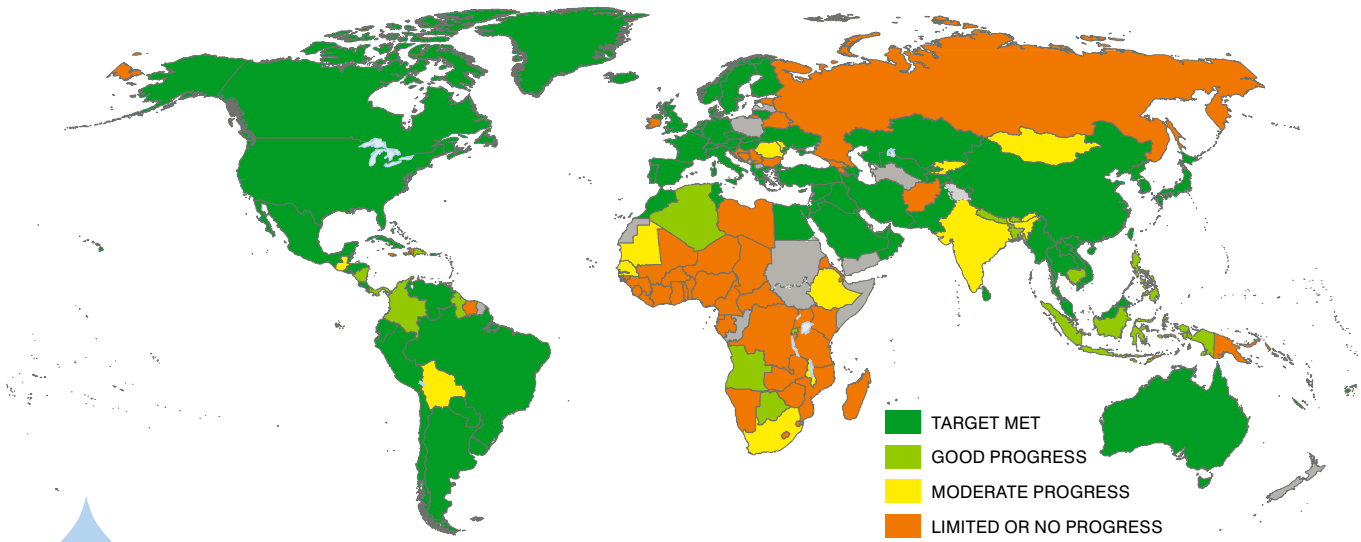


Fig.6 MDG target achievement for sanitation

Progress on Drinking Water, 1990–2015

The MDG target called for the proportion of the population without sustainable access to safe drinking water to be halved between 1990 and 2015. During the MDG period it is estimated that, globally, use of improved drinking water sources[1] rose from 76 per cent to 91 per cent. The MDG target of 88 per cent was surpassed in 2010, and in 2015, 6.6 billion people use an improved drinking water source. There are now only three countries with less than 50 per cent coverage, compared with 23 in 1990.

Despite the achievements of the MDG period, a great deal remains to be done. Behind the global headline figures, huge disparities in access remain. While many developed regions have now achieved universal access, coverage with improved drinking water sources varies widely in developing regions. The lowest levels of coverage are found in the 48 countries designated as the least developed countries by the United Nations, particularly those in sub-Saharan Africa (Fig. 7).

[1] In the absence of nationally representative data on the safety of drinking water for the majority of countries, the agreed proxy indicator for monitoring 'sustainable access to safe drinking water' during the MDG period has been 'use of an improved drinking water source' (see Annex 1 for further information on the JMP method).

Countries in which less than 50% of the population uses improved drinking water sources are all located in sub-Saharan Africa and Oceania

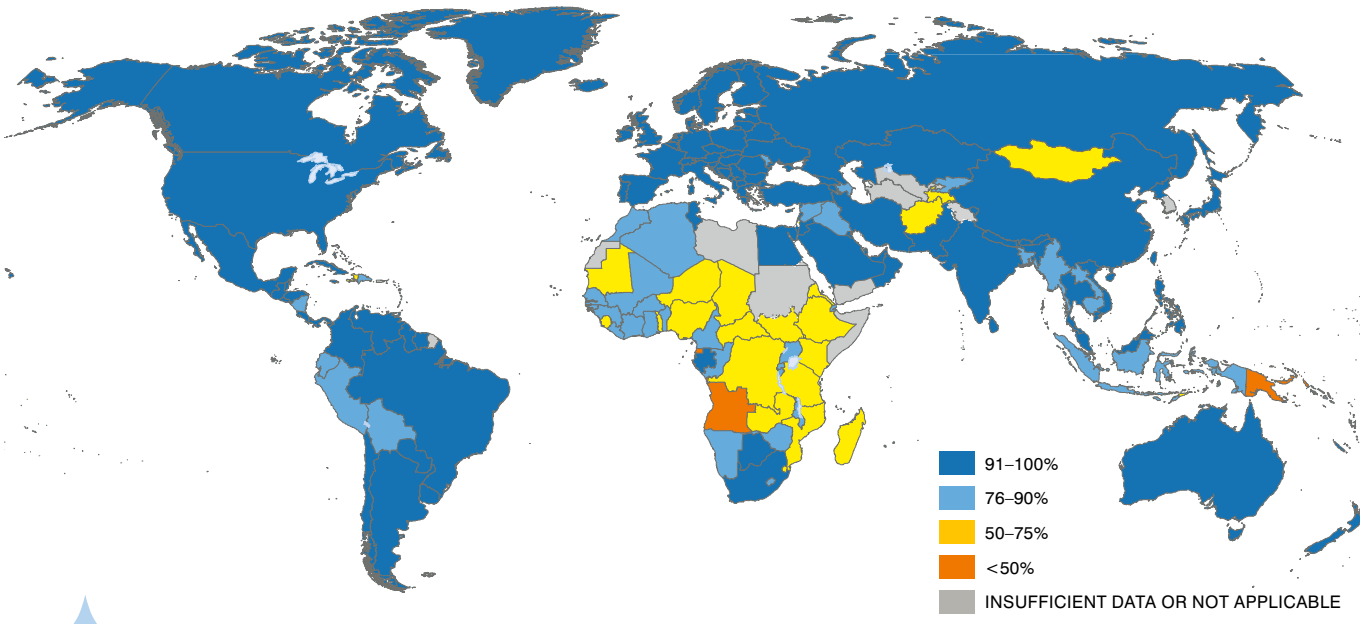


Fig.7 Proportion of the population using improved drinking water sources in 2015

More than a third of the current global population gained access to improved sources of drinking water since 1990

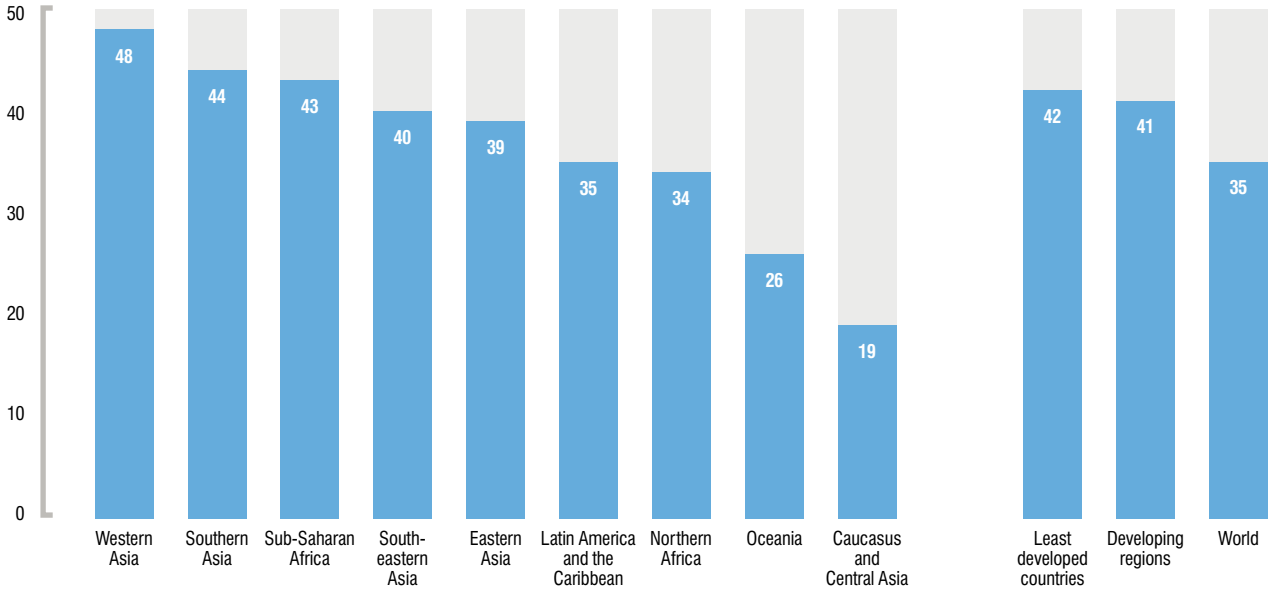


Fig. 8 Proportion of 2015 population who gained access to an improved drinking water source since 1990 (%), by region

Globally, 2.6 billion people have gained access to an improved drinking water source since 1990. In most regions, over one third of the 2015 population gained access during the MDG period (Fig. 8). Developing regions with low baselines and those experiencing rapid population growth have had to work much harder to maintain and extend coverage. Although sub-Saharan Africa missed the MDG target, over 40 per cent of the current population gained access since 1990.

In 2015, it is estimated that 663 million people worldwide still use unimproved drinking water sources, including unprotected wells and springs and surface water. The majority of them now live in two developing regions (Fig. 9). Nearly half of all people using unimproved drinking water sources live in sub-Saharan Africa, while one fifth live in Southern Asia.

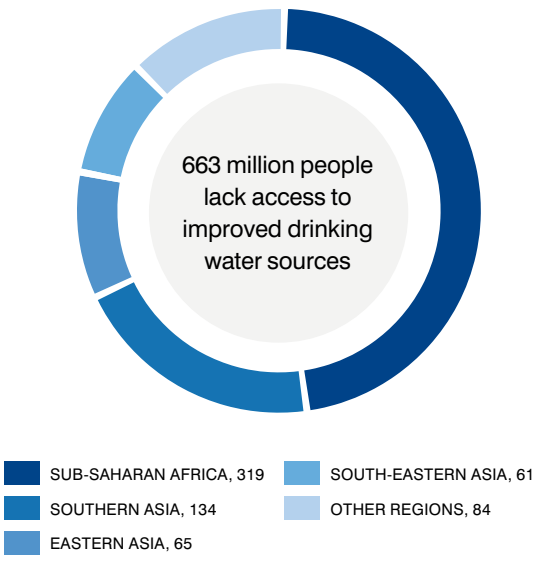


Fig. 9 Population without access to improved sources of drinking water in 2015, by region

All regions have increased access to improved sources of drinking water since 1990

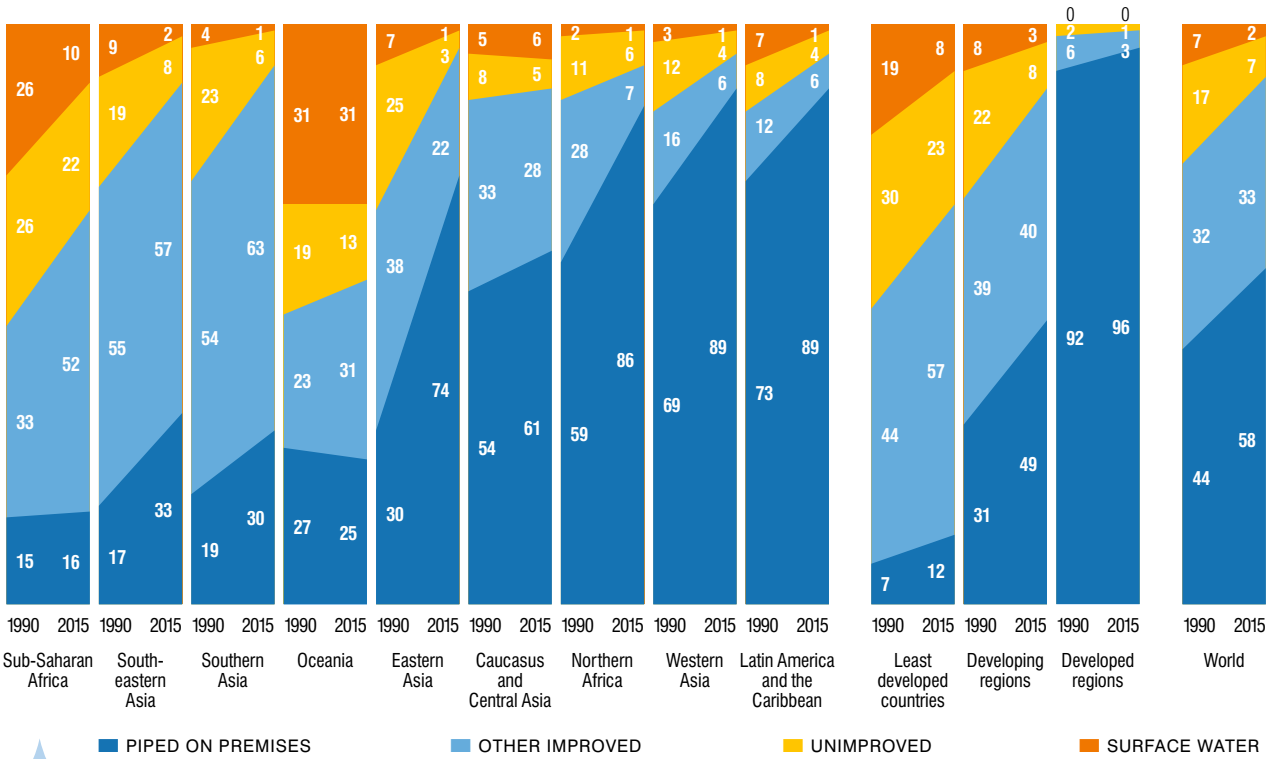


Fig.10 Trends in drinking water coverage (%), by region

Use of improved drinking water has increased in all regions of the world since 1990, but rates of progress have varied during the MDG period. Coverage in Eastern Asia increased dramatically – by 27 percentage points – and exceeded the MDG target, with over half a billion people gaining access in China alone. Access in Southern Asia and South-eastern Asia also rose steeply, by 20 and 19 per cent respectively, and these regions also met the target.

Sub-Saharan Africa fell short of the MDG target but still achieved a 20 percentage point increase in the use of improved sources of drinking water. This means 427 million people gained access during the MDG period – an average of 47,000 people per day for 25 years. Over the same period, the Caucasus and Central Asia and Oceania[2] achieved increases of just 2 per cent and 5 per cent, respectively, and also missed the target.

The least developed countries have faced the greatest challenges in meeting the MDG target, given low coverage and high population growth. Half of these are classified by the World Bank as 'fragile situations',[3] and many have been affected by conflict during the MDG period, but have nevertheless made progress. Between 1990 and 2015, the proportion of people in least developed countries using improved drinking water sources increased from 51 per cent to 69 per cent, but use of piped water on premises only increased from 7 per cent to 12 per cent.

Significant proportions of the population in sub-Saharan Africa and Oceania continue to use rivers, lakes, ponds and irrigation canals as their main source of drinking water. Since 1990 the proportion of the population using surface water has been more than halved in sub-Saharan Africa, but remains largely unchanged in Oceania.

[2] It should be kept in mind throughout this report that data from Oceania are limited. Estimates for each of the small island states in the region draw upon a very small number of data points, many of which date back several years, making it difficult to produce robust estimates for 2015.

[3] The World Bank, 'Harmonised List of Fragile Situations', 2015, <http://siteresources.worldbank.org/EXTLICUS/Resources/511777-1269623894864/FY15FragileSituationList.pdf>, accessed 10 May 2015.

Global rural-urban disparities have decreased, but large gaps remain

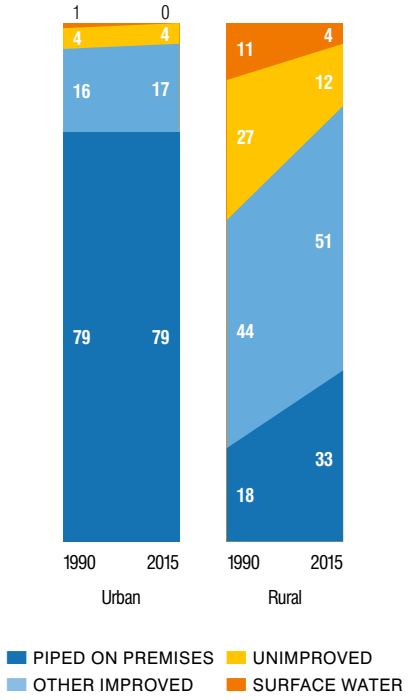


Fig.11 Trends in drinking water coverage (%), by rural and urban residence

The MDG water and sanitation targets called for reporting on progress in both rural and urban areas. In 1990 the majority of the global population (57 per cent) lived in rural areas, but since then the situation has reversed, and in 2015 the proportion living in urban areas is 54 per cent.

It is estimated that 96 per cent of the urban population now uses improved drinking water sources, compared with 84 per cent of the rural population.[4] Fig. 11 shows that the gap in coverage between rural and urban areas has steadily decreased since 1990. But while rural coverage has increased rapidly, urban coverage has stagnated. The number of people without access in rural areas has decreased by over half a billion, but the number without access in urban areas has not changed significantly.

[4] JMP estimates are based on national surveys and censuses. Official definitions of urban and rural vary across countries and may not be directly comparable. While all surveys are representative of total urban and rural populations, samples may not be representative of all population subgroups or those living in specific geographic locations, including informal settlements or remote rural areas.

Urban coverage with piped water on premises has also remained largely unchanged since 1990, whereas rural coverage has almost doubled. However, the gap between access to piped water on premises in urban and rural areas remains large. Four out of five people living in urban areas now have access to piped drinking water on premises, compared with just one in three people living in rural areas.

In 2015, the vast majority of those who do not have access to improved drinking water sources live in rural areas. It is estimated that 79 per cent of the people using unimproved sources and 93 per cent of people using surface water live in rural areas.

Nearly three quarters of the 2.6 billion people gaining access to an improved drinking water source over the MDG period use piped water on premises. Over half of the 951 million people gaining access to improved drinking water sources in rural areas and over three quarters of the 1.6 billion people gaining access in urban areas are using piped water.

However, the balance between increases in piped water on premises and increases in other improved sources has varied widely between regions. Fig. 12 shows that in most developing regions, coverage gains over the MDG period have been driven by gains in access to piped water on premises. This is particularly striking in Eastern Asia, which contributed 723 million new users of piped water on premises, with 694 million gaining access in China alone. Piped water on premises also dominated in Latin America and the Caribbean, Western Asia and Northern Africa. In these regions the number of users of other improved sources declined over the MDG period.

By contrast, in Southern Asia, South-eastern Asia and sub-Saharan Africa, coverage gains over the MDG period have been mainly driven by other improved sources. Since 1990, 471 million people in Southern Asia and 348 million people in sub-Saharan Africa gained access to other improved sources, such as wells and springs.

The rate of increase in piped water coverage has generally been higher in rural than in urban areas (Fig. 13). As a result, during the MDG period the rural-urban gap in access to piped water on premises has narrowed in all regions, except for Oceania, where neither urban nor rural coverage has changed. In sub-Saharan Africa, urban coverage has declined by ten percentage points.

Piped water on premises has driven coverage gains in some regions, while wells and springs have dominated in others

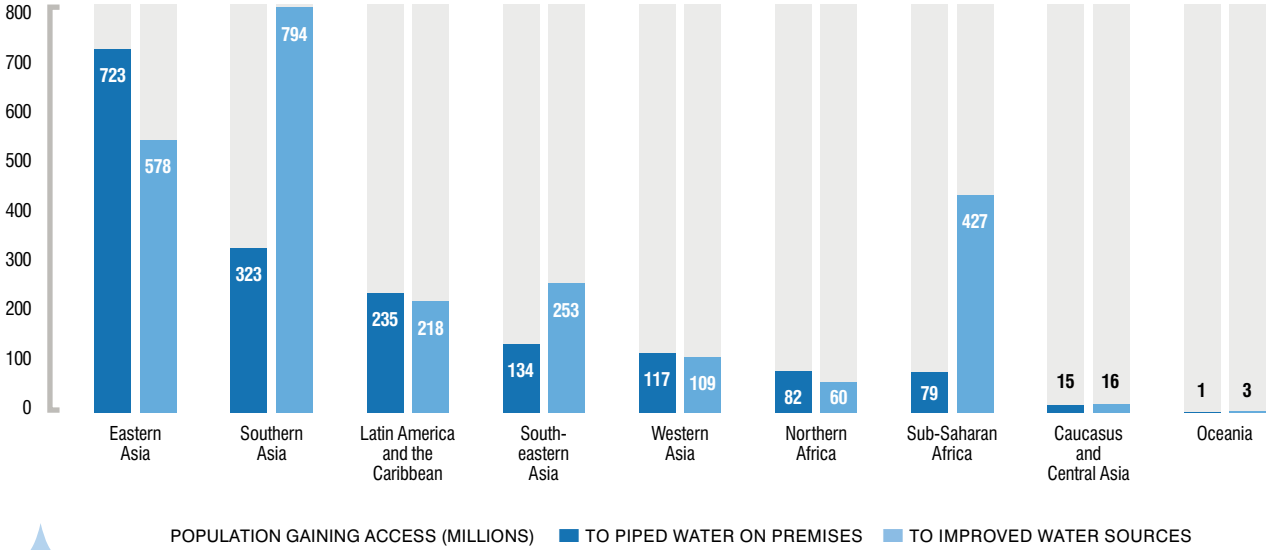


Fig.12 Population gaining access to improved drinking water sources and piped water on premises (1990–2015)

In most regions, use of piped water on premises has increased faster in rural areas, but urban coverage remains higher

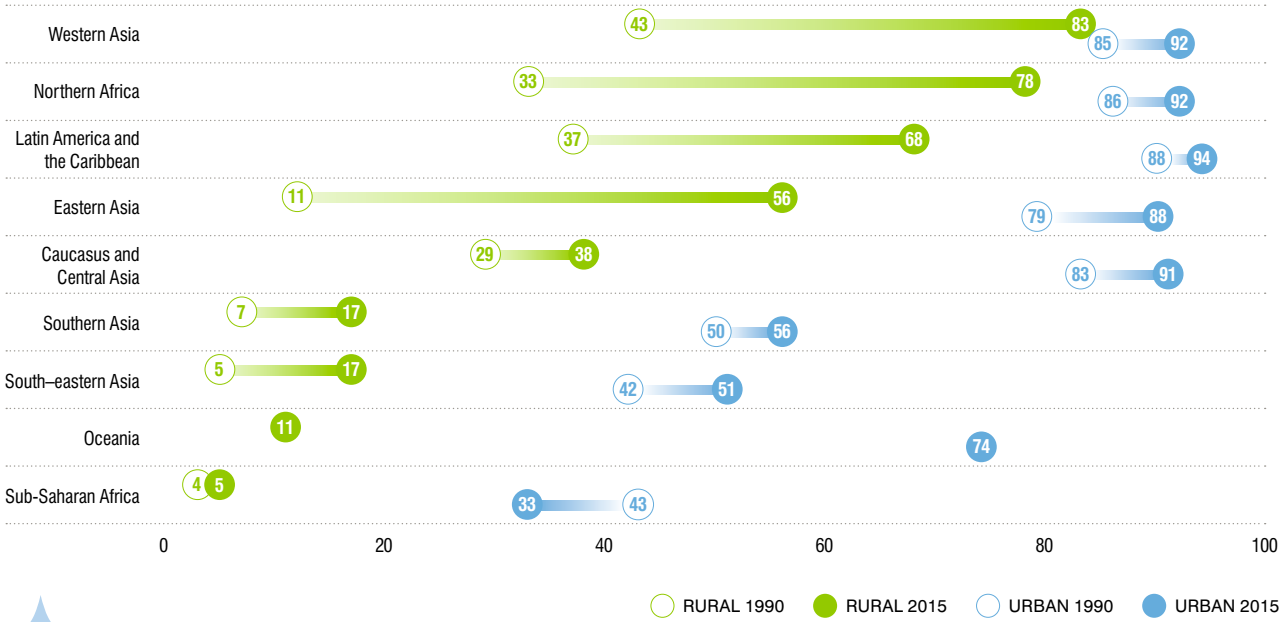


Fig.13 Rural-urban gap in coverage of piped water on premises by region (%), 1990–2015

While most regions recorded an overall increase in access to piped water on premises, a small number of countries have increased coverage of this higher level of service by more than 25 percentage points (Fig. 14). By increasing access from 28 per cent to 73 per cent, China significantly boosted the regional average for Eastern Asia. Despite slow regional progress in sub-Saharan Africa, Botswana, Egypt and Senegal all increased coverage by more than a third, as did Belize, El Salvador, Guatemala and Paraguay in Latin America and the Caribbean.

Of the 663 million people still using unimproved drinking water sources, those who use surface water face the greatest risks to their health and well-being. Those with no service at all, who have not benefited from any investment, are increasingly concentrated in three regions (Fig. 15). Rural populations are particularly disadvantaged, accounting for 93 per cent of the people using surface water. Seven out of ten of the 159 million people relying on water taken directly from rivers, lakes and other surface waters live in sub-Saharan Africa, eight times more than any other region.

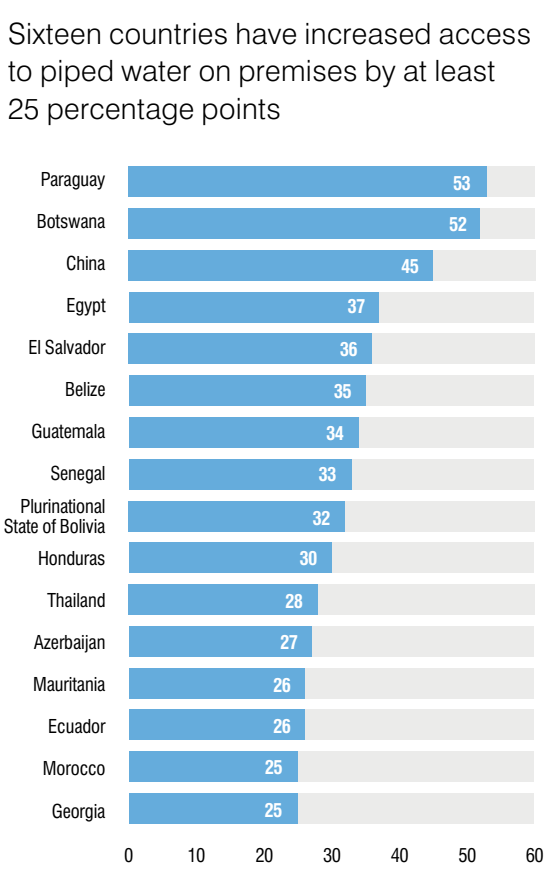


Fig.14 Percentage point increase in access to piped water on premises

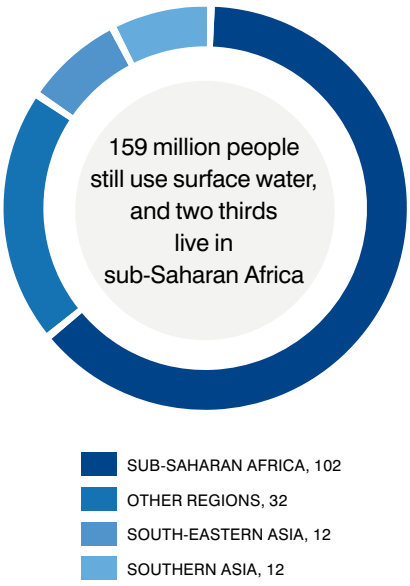


Fig.15 Population using surface water in 2015, by region

Progress on Sanitation, 1990–2015

The MDG target called for halving the proportion of the population without sustainable access to basic sanitation between 1990 and 2015. During the MDG period, it is estimated that use of improved sanitation facilities rose from 54 per cent to 68 per cent globally. The global MDG target of 77 per cent has therefore been missed by nine percentage points and almost 700 million people.

Despite encouraging progress on sanitation, much unfinished business remains from the MDG period. In addition to the shortfall against the global target, large disparities in access still exist. Almost all developed countries have achieved universal access, but sanitation coverage varies widely in developing countries. Since 1990 the number of countries with less than 50 per cent of the population using an improved sanitation facility has declined slightly, from 54 to 47, and countries with the lowest coverage are now concentrated in sub-Saharan Africa and Southern Asia (Fig. 16).

Nearly one third of the current global population has gained access to an improved sanitation facility since 1990, a total of 2.1 billion people. However, the proportion gaining access varies across developing regions (Fig. 17). Western Asia and Northern Africa have provided access to 50 per cent and 41 per cent of the current population since 1990. By contrast, sub-Saharan Africa has provided access to

In 47 countries, areas or territories, less than half the population uses improved sanitation in 2015

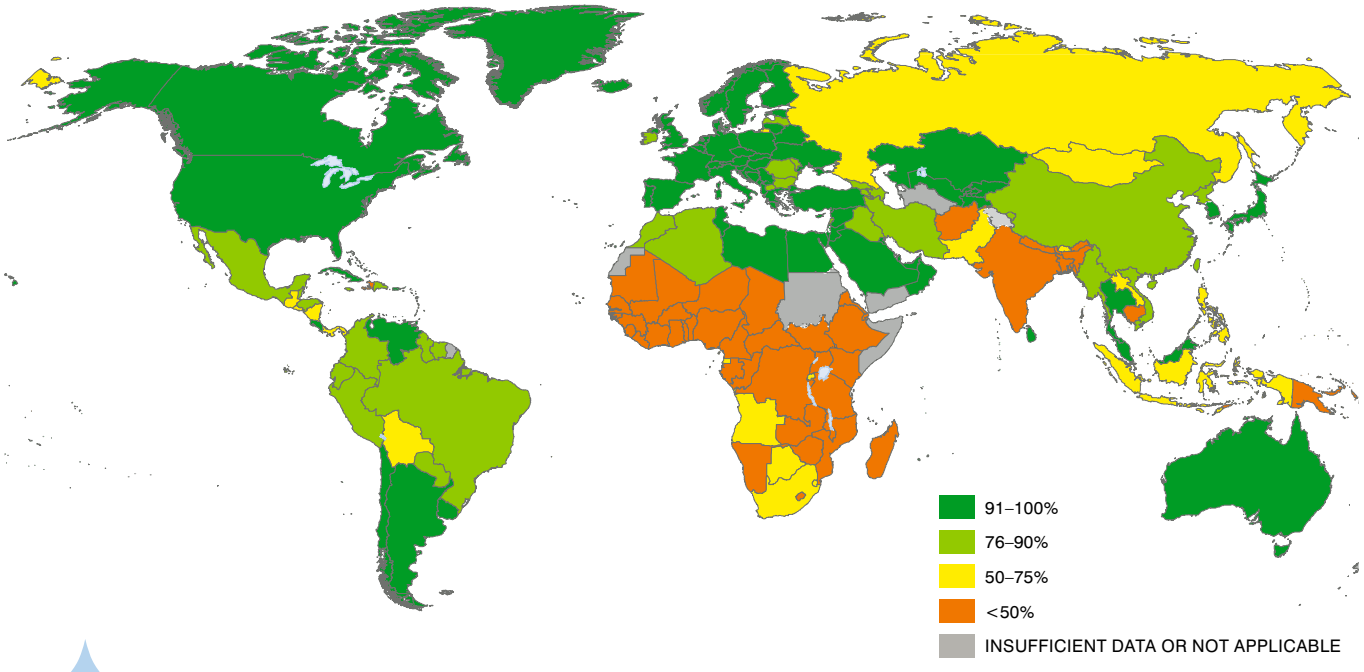


Fig. 16 Proportion of the population using improved sanitation facilities in 2015

Five regions have provided access to over one third of the current population since 1990

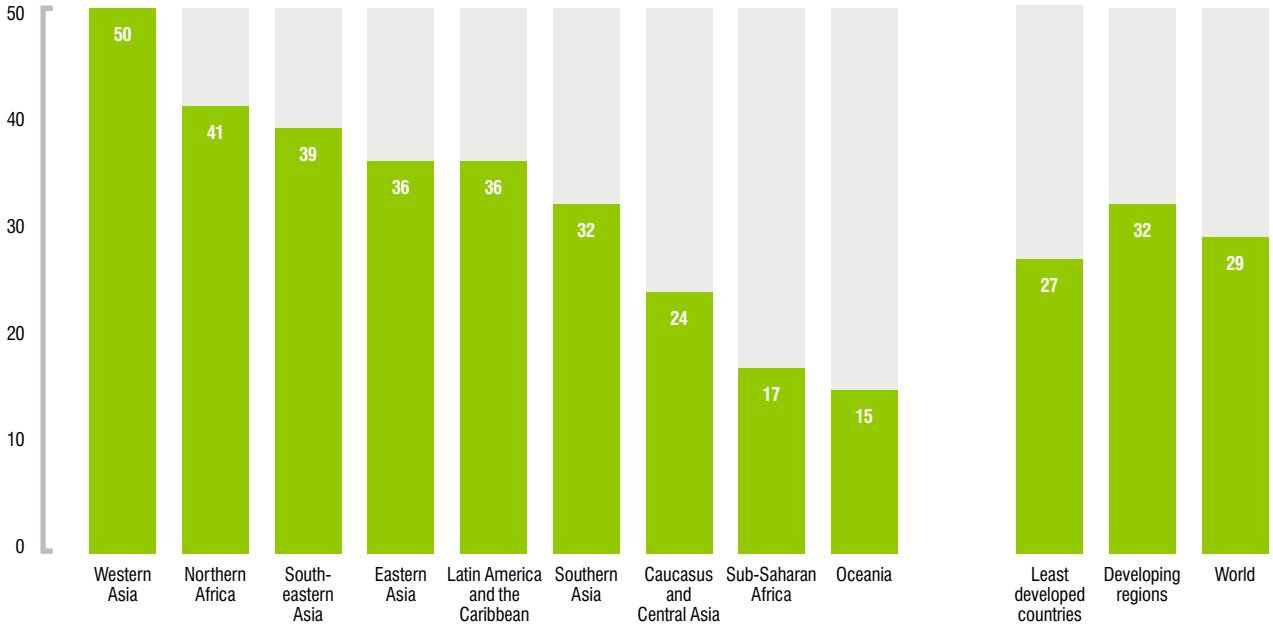


Fig.17 Proportion of the 2015 population who gained access to improved sanitation since 1990 (%), by region

less than 20 per cent of the current population. Despite failing to meet the target of halving the proportion of the population without access, Southern Asia nevertheless managed to provide access to 32 per cent of the current population.

In 2015 it is estimated that 2.4 billion people globally still use unimproved sanitation facilities. The vast majority live in just three regions (Fig. 18), with 40 percent in Southern Asia. There are now twice as many people using unimproved sanitation facilities in sub-Saharan Africa than in Eastern Asia. The nearly 700 million people who would have been served if the MDG target for sanitation had been met is equal to the number of unserved people in sub-Saharan Africa.

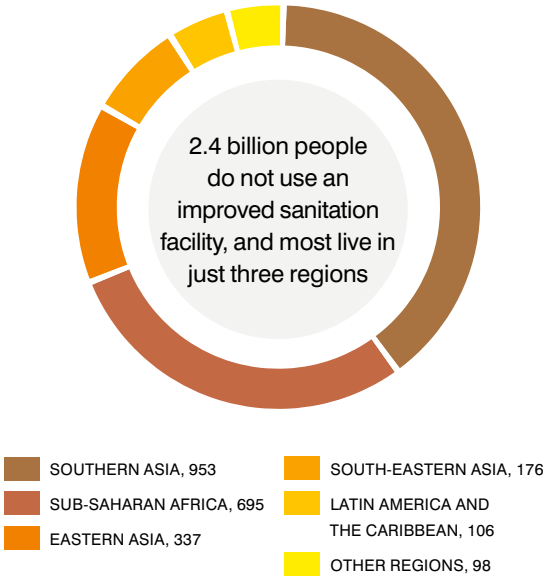


Fig.18 Population without improved sanitation in 2015, by region

Use of improved sanitation has increased in all regions except Oceania

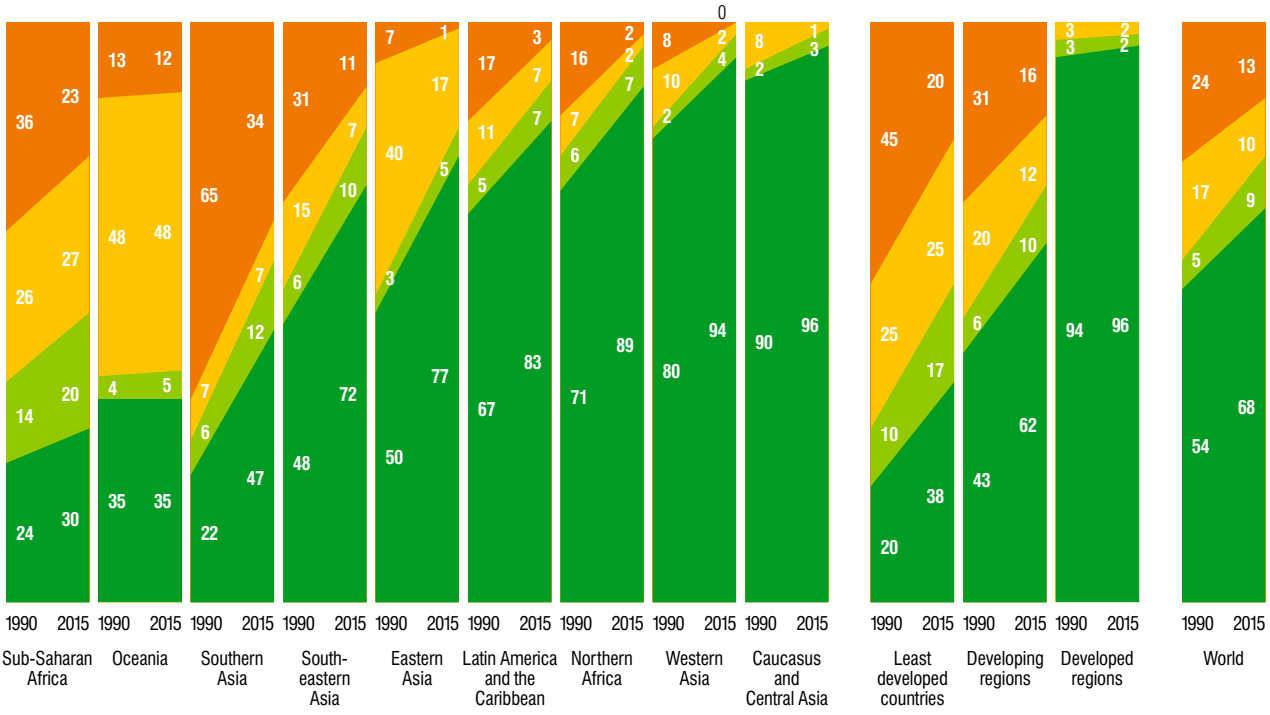


Fig.19 Trends in sanitation coverage (%), by region

Use of improved sanitation facilities increased in all regions, except for Oceania, but rates of progress varied widely. The Caucasus and Central Asia, Eastern Asia, Northern Africa and Western Asia were the only developing regions to meet the MDG target. Eastern Asia dramatically increased coverage – by 28 percentage points – to meet the target. South-eastern Asia also achieved a significant increase, of 24 per percentage points, but narrowly missed the target. While Southern Asia and sub-Saharan Africa had similarly low levels of coverage in 1990 (22 per cent and 24 per cent, respectively), the former increased coverage by 25 percentage points, while the latter only achieved a 6 per cent increase.

In Southern Asia, which had the lowest baseline coverage in 1990, 576 million people gained access to improved sanitation facilities during the MDG period – an average of 63,000 people per day for 25 years. Over the same period, improved sanitation coverage in sub-Saharan Africa and Oceania has stagnated. However, the vast majority (64 per cent) of those without access to improved sanitation in Southern Asia still practise open defecation, compared with 33 per cent in sub-Saharan Africa and just 18 per cent in Oceania.

Between 1990 and 2015, open defecation declined in all regions, with the most dramatic reductions seen in the least developed countries (from 45 per cent in 1990 to 20 per cent in 2015), representing an important first step on the sanitation ladder.

Globally, it is estimated that 82 per cent of the urban population now uses improved sanitation facilities, compared with 51 per cent of the rural population. Inequalities in access to improved sanitation between rural and urban areas have decreased during the MDG period. The number of people without access to improved sanitation in rural areas has decreased by 15 per cent, and open defecation rates have decreased from 38 per cent to 25 per cent.

Despite progress, sanitation coverage in rural areas still lags behind urban areas

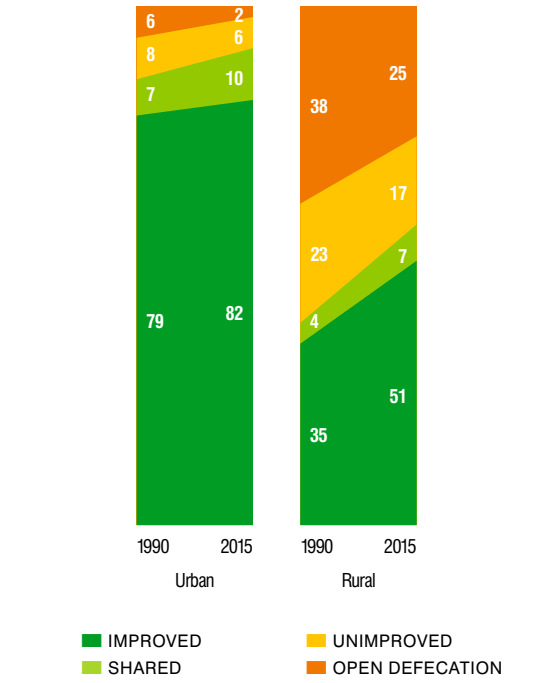


Fig. 20 Urban and rural trends in sanitation coverage (%)

During the same period, the urban population grew dramatically, by 73 per cent, whereas the rural population grew by just 11 per cent. Seven out of ten of the 2.1 billion people gaining access to improved sanitation since 1990 live in urban areas, but the proportion without access has declined by just 3 per cent.

Despite progress made during the MDG period, sanitation coverage in rural areas continues to lag behind urban areas. Globally, seven out of ten people without improved sanitation, and nine out of ten people practising open defecation, live in rural areas.

The JMP sanitation ladder differentiates between improved facilities and those of an otherwise improved type that are shared by more than one household. Limited data are available on sharing in many countries, but it is estimated that 638 million people worldwide are sharing sanitation facilities of an otherwise improved type in 2015. Use of shared sanitation is more common in some regions than others, most notably in sub-Saharan Africa and Southern Asia (Fig. 21). More households use shared sanitation facilities in these two regions than in all other regions combined.

Use of shared sanitation is widespread in both urban and rural areas. The total number of people sharing is greater in urban (398 million) than in rural settings (240 million). However, among those who use sanitation facilities of an otherwise improved type, the proportion that share these facilities with others is similar in urban (11 per cent) and rural (12 per cent) areas. Fig. 22 shows that in some countries the proportion of people sharing is higher in urban areas (as in Ethiopia, Nigeria and Uganda), while in others the proportion is higher in rural areas (notably in West Africa).

The nature of sharing can differ considerably, from sharing a facility with a small number of close neighbours to using facilities shared by many households. In order to differentiate, some have recommended setting a threshold, such as five or more households, known as 'limited sharing', and to include the population served by limited sharing in the 'improved' category. Others argue that even limited sharing has negative impacts on health and should not be considered 'improved'.

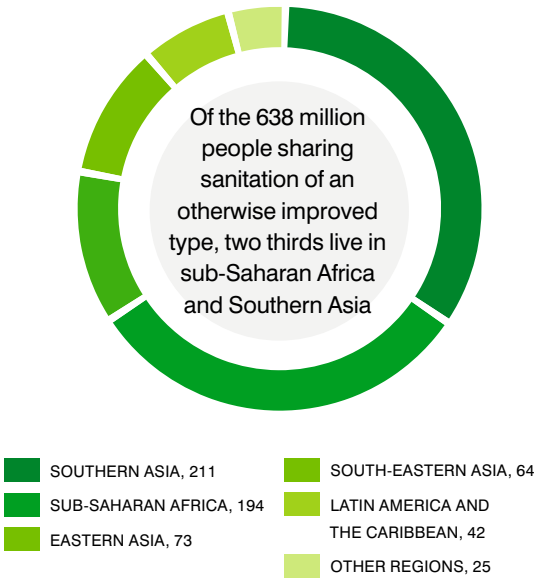


Fig. 21 Population using shared sanitation facilities of an otherwise improved type, 2015

Shared sanitation is widespread in both urban and rural settings

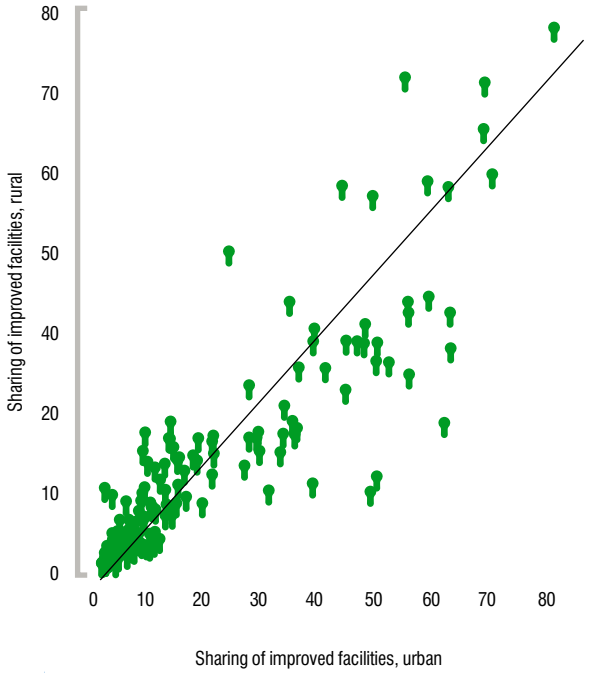


Fig. 22 Percentage of population using improved sanitation facilities, who share these facilities with others, rural and urban (2015)

Sixteen countries have reduced open defecation rates by at least 25 percentage points

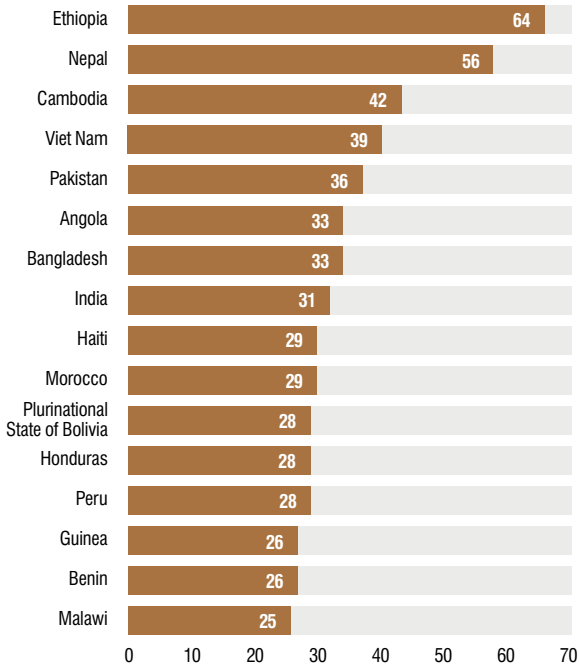


Fig. 23 Reduction in the proportion of population practising open defecation, from 1990 to 2015 (%)

Most countries still have very limited data on sharing of sanitation facilities (only 9 per cent have more than four surveys), even though the number of household surveys and censuses that collect information on sharing has increased substantially during the MDG period, from 239 in 2008 to over 400 in 2015. For even fewer countries – only 85 in 2015 – is it possible to distinguish limited sharing from any sharing.

During the MDG period, the elimination of open defecation has been increasingly recognized as a top priority for improving health, nutrition and productivity of developing country populations. In 1990, more than half the population in 16 countries practised open defecation, and more than ten percent in 62 countries. Open defecation has since declined by at least ten percentage points in 44 of these countries, and by more than 20 percentage points in 23. Sixteen countries have reduced open defecation by more than 25 percentage points during the MDG period (Fig. 23).

Ethiopia achieved the largest decrease in the proportion of the population practising open defecation (from 92 per cent in 1990 to 29 per cent in 2015), a reduction over five times greater than the regional average for the same period. Open defecation was practised by 44.3 million Ethiopians in 1990 and 28.3 million in 2015 – an average reduction of over 4 percentage points per year over 25 years.

The Southern Asia region, where the number of open defecators is highest, has also made significant improvements. Bangladesh, Nepal and Pakistan have all achieved reductions of more than 30 percentage points since 1990. The 31 per cent reduction in open defecation in India alone represents 394 million people, and significantly influences regional and global estimates.

Open defecation rates have been decreasing steadily since 1990, and it is estimated that fewer than one billion people (946 million) now practise open defecation worldwide. Two thirds live in Southern Asia, nearly three times as many

Substantially faster progress is needed to eliminate open defecation, especially in Southern Asia and sub-Saharan Africa

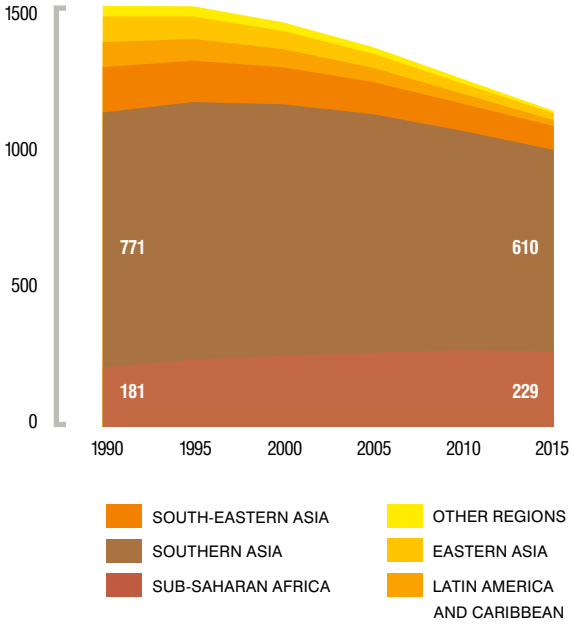


Fig. 24 Trends in population practising open defecation, by region

as in sub-Saharan Africa. However, the number of people practising open defecation in Southern Asia has declined only moderately, from 771 million in 1990 to 610 million in 2015, a reduction of just 21 per cent (Fig. 24). During the same period the number of people practising open defecation has actually increased in sub-Saharan Africa, and the region now accounts for a greater share of the global total than in 1990. All other regions recorded a reduction in open defecation in population terms between 1990 and 2015.

KEEPING UP WITH POPULATION GROWTH

Is progress on water and sanitation keeping up with population growth? Population growth has varied greatly by developing region. In Eastern Asia, the population has increased by a fifth (20 per cent) since 1990, whereas in sub-Saharan Africa it has almost doubled (94 per cent), and in Oceania it has increased by 68 per cent. In the latter two regions the increase in access to sanitation has not kept up with population growth, with only 36 per cent of the additional population gaining access in each region (Fig. 25).

Population growth has outpaced gains in sanitation and drinking water coverage, especially in urban areas

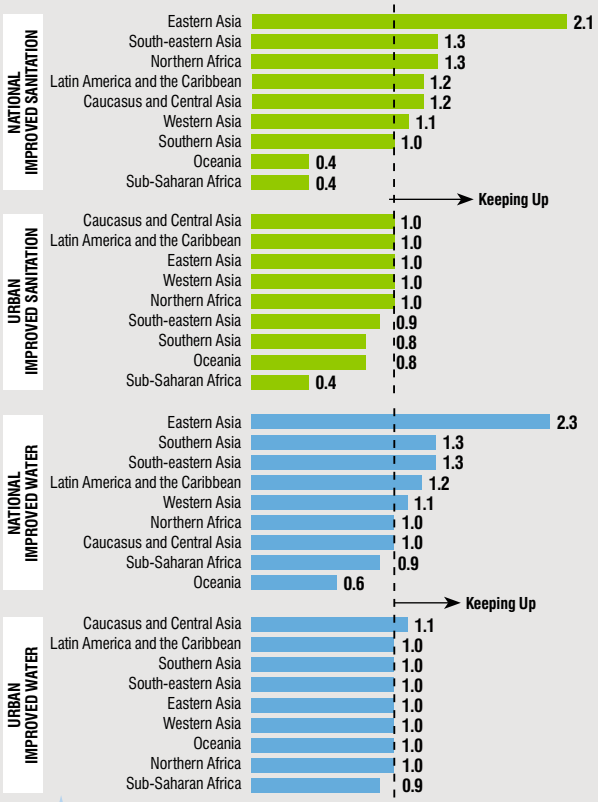


Fig. 25 Ratio of population gaining improved water and sanitation to population increase (1990–2015)

Population growth in urban areas has been a key feature of population dynamics in all regions, with the most pronounced changes taking place in four regions where the urban population has more than doubled: sub-Saharan Africa (an increase in urban population of 169 per cent), Eastern Asia (136 per cent), South-eastern Asia (115 per cent) and Western Asia (109 per cent). In Eastern Asia, gains in access to drinking water and sanitation not only kept up with, but far exceeded, population growth. By contrast, sub-Saharan Africa registered a decline in water or sanitation coverage in urban areas in 14 out of 46 countries.

Progress in Reducing Inequalities Between Rich and Poor

In previous reports, the JMP has drawn attention to inequalities in access to drinking water and sanitation between rural and urban areas, rich and poor, and other groups and the general population. The MDG target called for countries to halve the proportion of the population without access, but it is important to ask who has benefited from progress made during the MDG era, and who has been left behind.

An 'equity tree' (Fig. 26) is a useful way of visualizing multiple overlapping inequalities in access to water and sanitation between regions of the world, among countries within a region, between rich and poor, and between urban and rural areas within a given country. The example in Fig. 26 shows that the poorest fifth of the rural population in Kazakhstan has the same level of piped water coverage as sub-Saharan Africa.

Inequalities between rich and poor are found in all countries. In those countries where data from national surveys allow for the classification of households into wealth quintiles, it is possible to analyse inequalities in access to drinking water and sanitation between rich and poor in rural and urban areas. Analysis of trends is particularly important in order to assess whether inequalities in access and service levels are being progressively reduced over time.

Trends in coverage by wealth quintile can be analysed for countries in most developing regions over the period

Access to piped water on premises depends on location and wealth, as shown in Kazakhstan

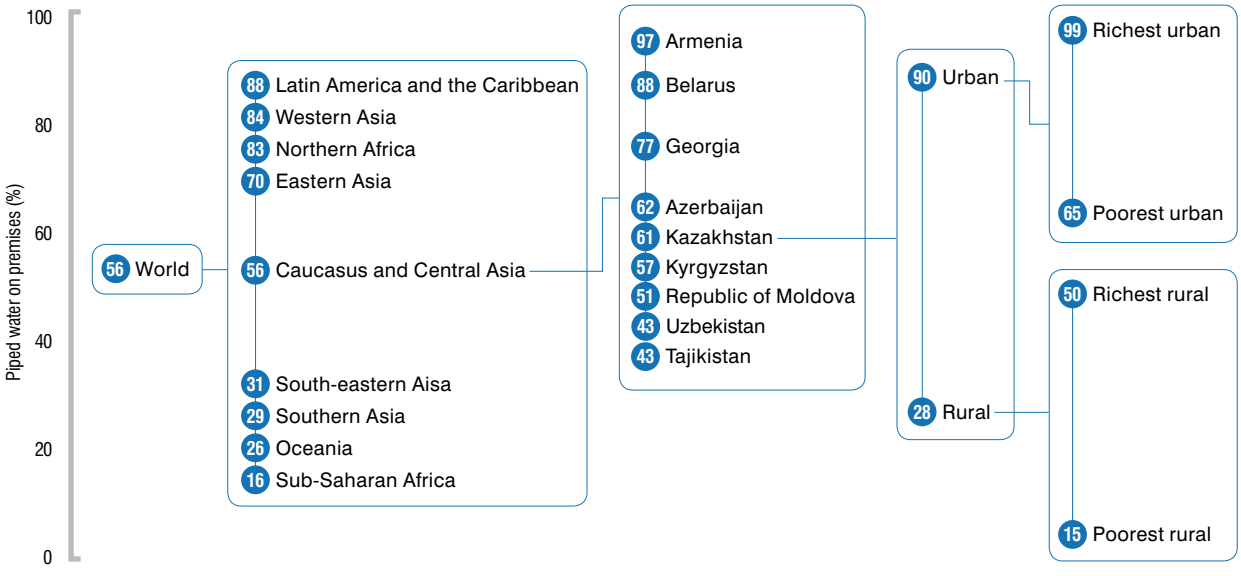


Fig. 26 Equity tree for piped water on premises, Kazakhstan 2012

Use of improved water and sanitation facilities varies by wealth quintile in urban and rural areas

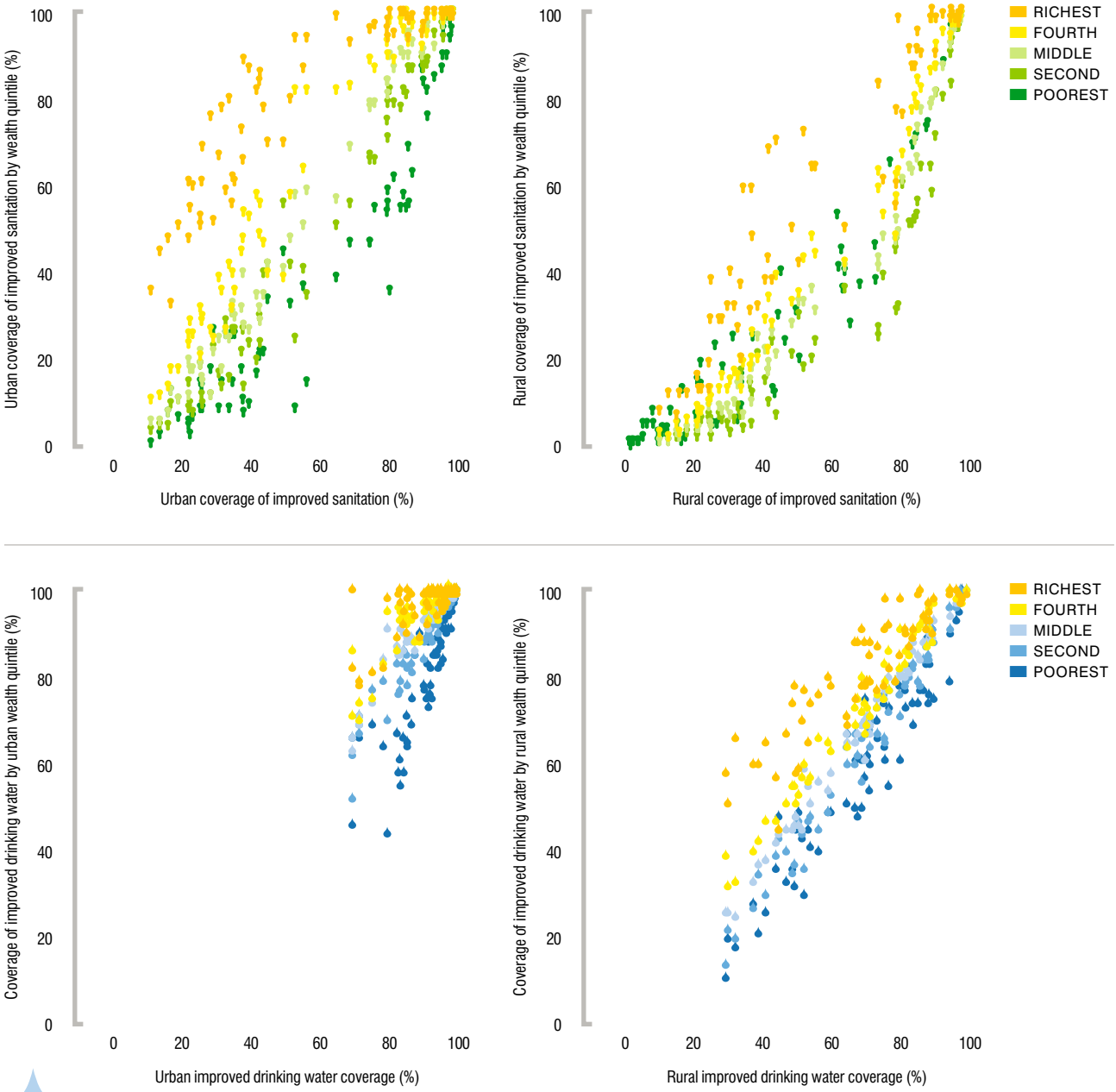


Fig. 27 Use of improved drinking water and sanitation facilities by urban and rural wealth quintile, % (2012)

1995–2012.[5] Fig. 27 shows sanitation and drinking water coverage for each wealth quintile in both rural and urban areas. Each country is represented by a vertical set of five dots arranged according to average coverage for that country. The vertical spread of the dots shows the extent to which coverage varies between the richest and the poorest quintiles in each country. The differing patterns of dots also highlight variations in the relative gaps between the richest, fourth, middle, second and poorest quintiles.

[5] Coverage estimates for wealth quintiles are based on a limited subset of surveys and may therefore differ from JMP national estimates for the same country.

Gaps remain in access to improved sanitation by wealth quintile in urban areas

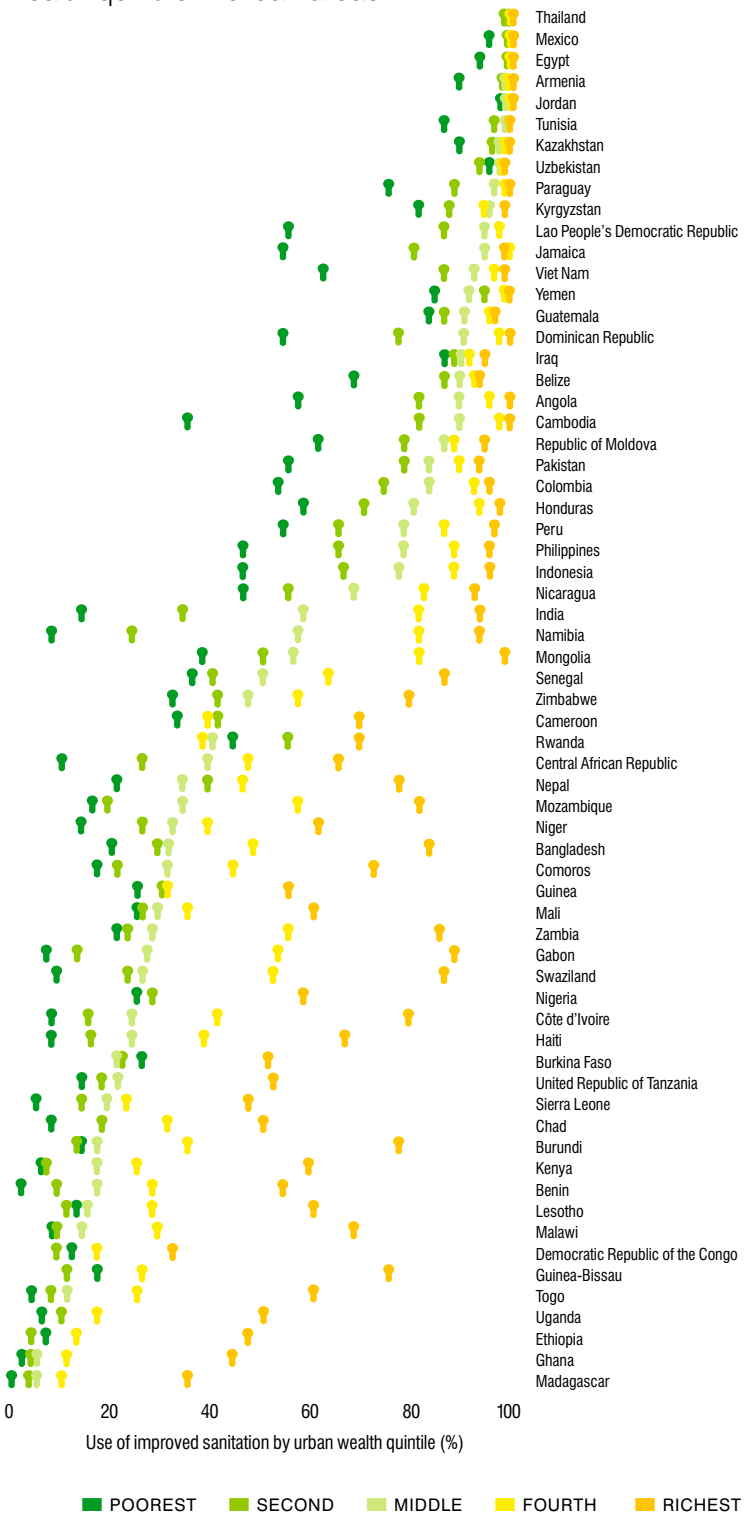


Fig. 28 Use of improved sanitation facilities by urban wealth quintile (%), 2012

The gap between the richest and poorest quintiles is an important measure of inequality. In general, the differences in coverage between the richest and poorest quintiles appear to be greater for sanitation than for drinking water (the dots on the sanitation figures are more widely spread apart). Inequalities in sanitation appear equally pronounced in urban and rural areas, while inequalities in access to drinking water are less pronounced in urban areas (the dots are closer together).

Another way to visualise inequalities is shown in Fig. 28. Countries are ordered by urban sanitation coverage in the middle wealth quintile, and the position of the dots for each country illustrates the gap between the different wealth quintiles. Progressive reduction of inequalities between wealth groups implies decreasing the gap between the wealth quintiles while increasing overall levels of coverage for the population.

In some countries, like Cambodia, there is a wide gap between the poorest quintile and the others; this is known as 'bottom inequality'. In other countries, such as Guinea-Bissau, there is a wide gap between the richest quintile and the others, known as 'top inequality'. Some countries have very large gaps between the richest and poorest quintiles, for instance, India and Namibia. In other countries the quintiles are more evenly spread and either have equally low coverage, as in the Democratic Republic of the Congo, or equally high coverage, as in Uzbekistan.

Access to improved sources of drinking water by wealth quintile in rural areas

Fig. 29 Use of improved drinking water sources by rural wealth quintile %, (2012)

Fig. 29 shows that the gaps in access between the richest and poorest wealth quintiles are generally smaller for rural drinking water than for urban sanitation. Similar patterns are observed, however, with examples of both bottom inequality (as in Iraq) and top inequality (Madagascar). In other countries, the quintiles are more evenly spread and either have equally low coverage (for instance, Guinea-Bissau) or, as in the case of the Dominican Republic, the desirable outcome of equally high coverage.

While gaps between the richest and poorest wealth quintiles in South-eastern Asia have narrowed, only Thailand has eliminated inequality in urban sanitation

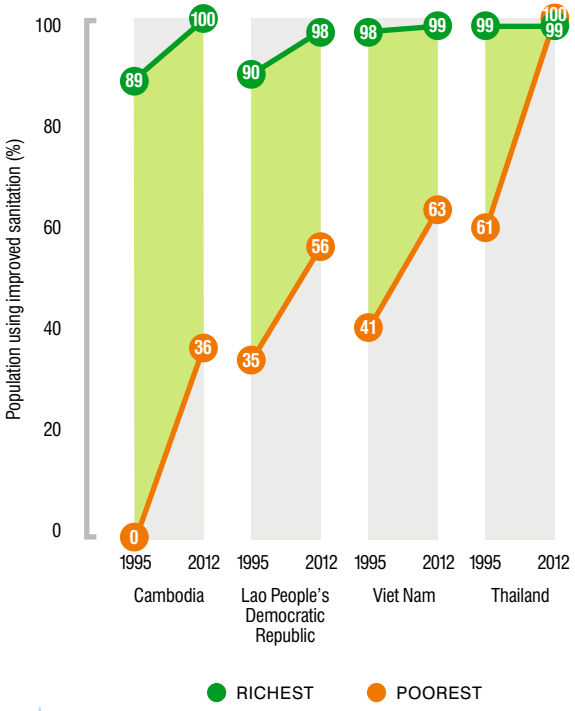


Fig. 30 Trends in use of improved sanitation in the richest and poorest urban wealth quintiles, 1995–2012

Use of improved drinking water sources among the poorest is catching up with the richest in rural areas of Latin America

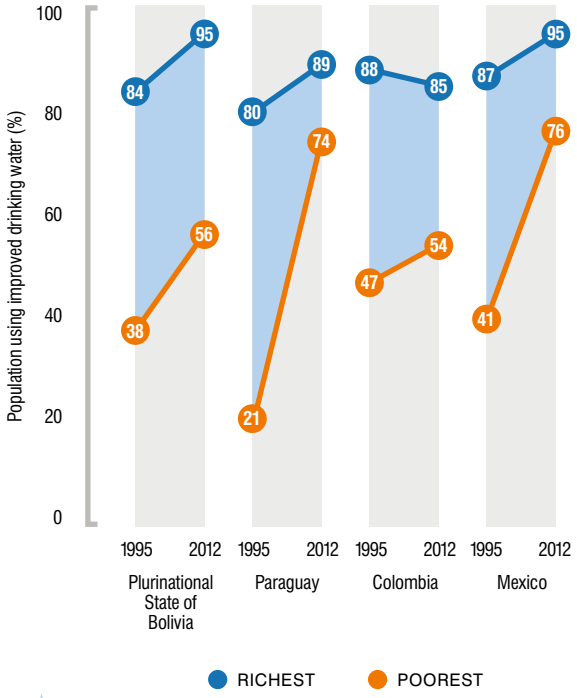


Fig. 31 Trends in use of improved drinking water in the richest and poorest rural wealth quintiles, 1995–2012

Inequalities between the richest and poorest 20 per cent of the population are found in all regions, but vary across rural and urban areas and according to the type and level of service. Using a subset of data from a few countries, it is possible to assess how the gap between the richest and poorest quintiles has changed during the MDG period.

Fig. 30 shows the change in access to urban sanitation for the richest and poorest wealth quintiles in four countries in South-eastern Asia, where the gap between the two groups exceeded 50 percentage points in 1995. Ideally, progress among the poor would be faster than among the rich, allowing the gap to narrow and ultimately disappear, forming a distinctive triangle shape in the figure. Between 1995 and 2012, access to improved sanitation did increase more rapidly among the poorest, but significant gaps remain in three of the countries. Only Thailand has so far succeeded in closing the gap between rich and poor.

In four countries in Latin America and the Caribbean, access to improved drinking water in rural areas is far higher among the richest than the poorest. But in all four countries, the poorest have made faster progress than the richest since 1995. Mexico and Paraguay have performed well in terms of rapid increases among the poorest. In Colombia, unfortunately, a drop in coverage among the richest has accelerated the narrowing of the gap.

The majority of the global population practising open defecation live in rural areas of Southern Asia. Fig. 32 shows that in 1995, rates of open defecation were high among the richest and extremely high among the poorest. Since 1995, rates of progress in reducing open defecation and closing the gap between rich and poor have varied widely. All countries achieved significant reductions amongst the richest, and three countries succeeded in eliminating open

Reductions in rural open defecation have been primarily among the richest in Southern Asia, except in Bangladesh

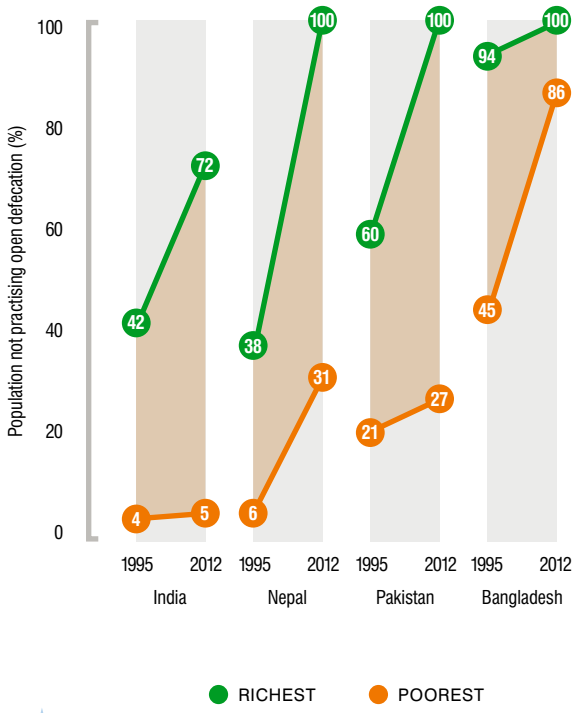


Fig.32 Trends in reduction of open defecation in the richest and poorest rural wealth quintiles 1995–2012

Use of piped water on premises is declining among the poorest wealth quintile in urban areas in several countries in the Caucasus and Central Asia

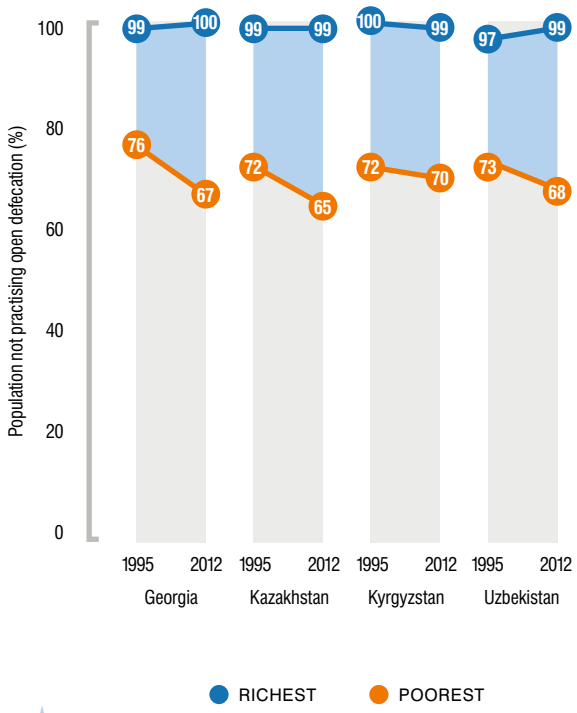


Fig.33 Trends in use of piped water on premises in the richest and poorest urban wealth quintiles, 1995–2012

defecation among this group. Progress among the poorest has been slower, and in India there has been very little change over the last 20 years. Bangladesh is the only country in the region where progress has been faster among the poorest and the gap has been reduced.

A markedly different pattern is seen in the Caucasus and Central Asia. In four countries in this region, access to piped water on premises is nearly universal for the richest, and has been since 1995. Among the poor, use of piped water on premises is at least 20 percentage points lower, and has decreased since 1995 in all four countries, widening the inequality gap.

In addition to measuring inequalities in existing coverage across quintiles and assessing changes in absolute and relative coverage among the richest and poorest quintiles, another useful measure of progress in reducing inequalities is the rate at which coverage is changing amongst the poorest.

Fig. 34 shows the current rate of open defecation among the poorest in rural areas and the annual rate at which open defecation has been reduced since 1995. Countries in the green zone above the diagonal line are achieving a rate of reduction that will lead to elimination of open defecation by 2030, while those that are below will take longer to achieve elimination. The figure also shows that a number of countries have negative rates of change and are experiencing an increase in open defecation amongst the poorest. Only 11 countries (out of 52) for which these data are available are currently on track to eliminate open defecation among the poorest in rural areas by 2030.

At current rates of reduction, open defecation will not be eliminated among the poorest in rural areas by 2030

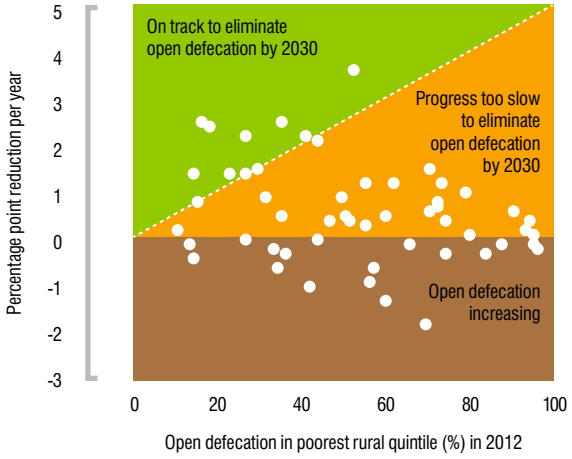


Fig. 34 Percentage annual reduction in open defecation among the poorest rural wealth quintiles, 1995–2012

The MDG target for water and sanitation called for the proportion of the population without access to safe drinking water and basic sanitation to be halved, and for progress to be tracked in both rural and urban areas – but it did not specify the reduction of inequalities between rich and poor. In many countries and regions, progress has been made towards the MDG target without significantly reducing inequalities.

Fig. 35 shows the reduction in the proportion of the poorest rural and urban populations without access to improved drinking water sources and improved sanitation facilities since 1995. Each country is represented by a circle, the size of which is proportional to its population. High-performing countries are in the upper right quadrant, where the reduction in the proportion of the poorest without access to improved water sources and improved sanitation facilities exceeds 50 per cent, signifying that these countries have reached the poorest in both urban and rural areas equally.

Only six countries succeeded in halving the proportion of the poorest without improved sanitation in both rural and urban

Few countries have halved the proportion of the poorest without access to drinking water and sanitation since 1995

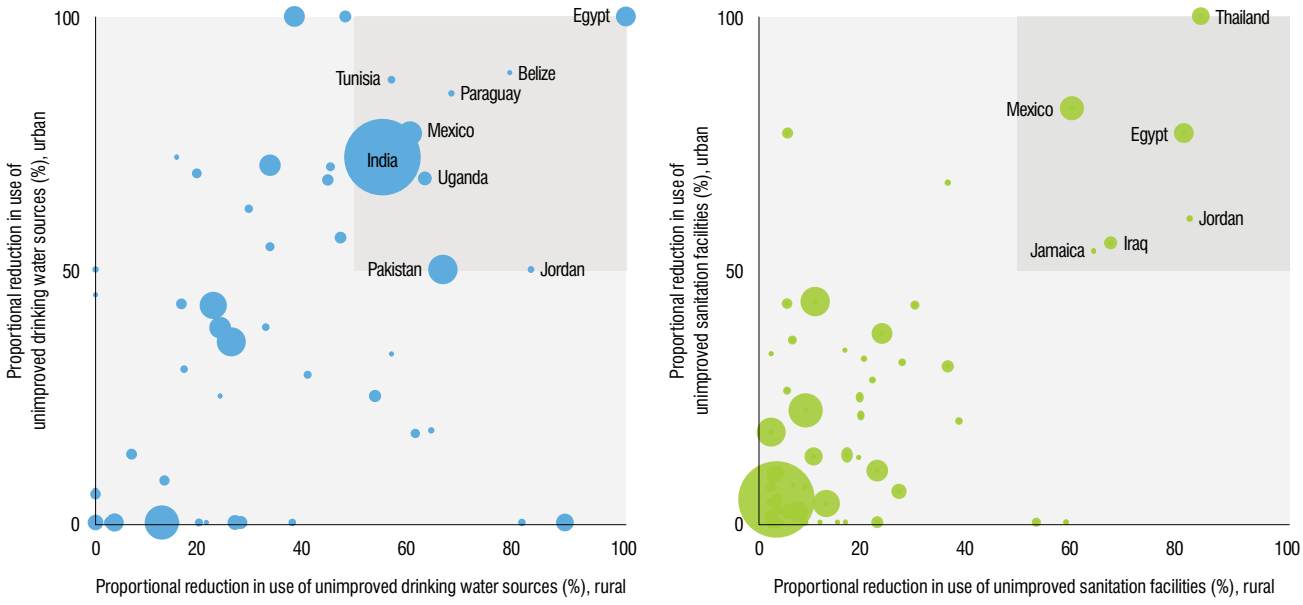


Fig. 35 Reduction in proportion of the poorest without access to improved water and sanitation, urban and rural (1995–2012)

areas: Egypt, Iraq, Jamaica, Jordan, Mexico and Thailand. More countries (9) succeeded in halving the proportion of the population without improved drinking water in both rural and urban areas: Belize, Egypt, Jordan, Mexico, Pakistan, Paraguay, Tunisia, Uganda and India. Only three countries have achieved both: Egypt, Jordan and Mexico.

While much remains to be done in order to extend services to those who still lack access to improved drinking water and sanitation, it is important to remember just how much the world has changed since 1990, and the extraordinary progress that has been made during the MDG era.

While the previous section has focused on the numbers of people who have gained access over the last 25 years, the next section considers where those numbers come from. It describes the evolution of global WASH monitoring and ongoing efforts to improve the availability and quality of data used to assess progress in reducing inequalities in access to water, sanitation and hygiene around the world.

The world has changed...

1990	2015
Global population was 5.3 billion	Global population is 7.3 billion
57% of the global population was rural	54% of the global population is urban
76% of the population used improved drinking water sources	91% of the population use improved drinking water sources
1.3 billion people lacked improved drinking water sources	663 million people lack improved drinking water sources
346 million people used surface water	159 million people use surface water
54% of the population used improved sanitation facilities	68% of the population use improved sanitation facilities
Nearly half the global population lacked improved sanitation	1 in 3 people lack improved sanitation
1 in 4 people worldwide practised open defecation (1.3 billion)	1 in 8 people worldwide practise open defecation (946 million)
In 87 countries, more than 90% of the population used improved drinking water sources	In 139 countries, more than 90% of the population use improved drinking water sources
In 23 countries, less than 50% of the population used improved drinking water sources	In 3 countries, less than 50% of the population use improved drinking water sources
In 61 countries, more than 90% of the population used improved sanitation facilities	In 97 countries, more than 90% of the population use improved sanitation facilities
In 54 countries, less than 50% of the population used improved sanitation facilities	In 47 countries, less than 50% of the population use improved sanitation facilities
147 countries have met the MDG drinking water target	
77 countries have met both the drinking water and the sanitation target	
95 countries have met the MDG sanitation target	

SECTION
B

25 YEARS of WASH Monitoring

JMP Contribution to the WASH Sector Over the Past 25 years

The WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (JMP) was established in 1990 and is celebrating its Jubilee Year in 2015. This section provides a retrospective analysis of the evolution of WASH monitoring over the past 25 years. It describes the contribution of the JMP in three key periods and shows how it has informed and responded to major developments in the WASH sector during each phase.

1. Establishing norms. The JMP has been instrumental in the development of norms used to benchmark progress in access to drinking water, sanitation and hygiene at the national, regional and global levels.

2. Informing decision-making. JMP estimates and analysis have informed the development of targets, policies and investment programmes for reducing inequalities in access to WASH.

3. Facilitating critical dialogue. The JMP has supported critical reflection among WASH stakeholders on key sector trends and the development of new approaches for monitoring progress.


PRITI

Twenty-Five Years of WASH Monitoring
Overview 1990–2015

- 1990: Delhi Declaration; World Summit for Children; Establishment of WSSCC
- 1991
- 1992: Dublin Statement on Water and Sustainable Development; United Nations Conference on Environment and Development – Rio
- 1993
- 1994
- 1995: WHO first World Health Report
- 1996
- 1997

1990-2000

Establishing a Global Monitoring System

- 1990 marked the end of the International Drinking Water Supply and Sanitation Decade. In response to calls to improve monitoring, WHO and UNICEF established a Joint Monitoring Programme on Water Supply and Sanitation.
- The New Delhi Statement, adopted by 115 countries, called for investment in low-cost technologies aimed at achieving 'some for all, rather than more for some', while the World Summit for Children adopted the goal of 'universal access to safe water and sanitation by the year 2000'.
- The JMP developed a new questionnaire-based Water and Sanitation Monitoring System, and WHO and UNICEF invested in supporting sector assessment, analysis and action at the country level.
- The JMP published Sector Monitoring Reports in 1992, 1993 and 1996, presenting information on trends in water and sanitation coverage, management and funding, and underlining the challenge of global monitoring given limited data and a lack of standardized indicators.
- Early reports provided separate estimates of rural and urban coverage in developing regions, broken down by type of technology, and used trends in total population served between 1990 and 1996 to estimate coverage in 2000.

2000-2010

Monitoring the Millennium Development Goal Targets

- 2000 marked the beginning of a new era of global monitoring. The Millennium Summit and the World Summit on Sustainable Development established new global targets for drinking water and sanitation, building on Vision 21, and the JMP was tasked with reporting on progress.
- The JMP report in 2000, published with the Water Supply and Sanitation Collaborative Council (WSSCC), marked an important shift in methodology by focusing primarily on data collected through national surveys and censuses rather than administrative reports, and by introducing a new classification based on technology type.
- The JMP collaborated with international household survey experts at Multiple Indicator Cluster Surveys (MICS) and Demographic and Health Surveys (DHS) to develop standardized questions and indicators for inclusion in national surveys and censuses. New survey methods for assessing water safety were also developed and piloted.

- 2005: Water For Life Decade (2005–2015)
- 2006: Human Development Report on Water
- 2007
- 2008: International Year of Sanitation
- 2009: Sanitation and Water for All Inaugural High Level Meeting; Declarations on the Human Right to Water and Sanitation by United Nations General Assembly and Human Rights Council; MDG Review Summit
- 2010

- Vision 21
- United Nations Millennium Declaration

- World Summit on Sustainable Development – Johannesburg
- General Comment No. 15 on the Human Right to Water and Sanitation

United Nations General Assembly adoption of MDG targets

1998 1999 2000 2001 2002 2003 2004

- The JMP conducted numerous country consultations and workshops to discuss the indicators used by different national authorities, significantly expanding the global database. Updates were published in 2004, 2006, 2008 and 2010, estimating global trends in coverage and assessing MDG progress.
- The JMP developed water and sanitation 'ladders' to visualize trends in service levels and drew attention to a broad range of issues relevant to policymakers, including open defecation, shared sanitation, handwashing, gender, and inequalities in service provision.
- The human right to safe drinking water was articulated in General Comment No. 15 of the Committee on Economic, Social and Cultural Rights in 2002 and reaffirmed by the United Nations General Assembly and Human Rights Council in 2010.

2010-2015

Laying the Foundations for Post-2015 Monitoring

- In 2010, the MDG review summit identified sanitation as one of the most off-track targets. Landmark declarations on the human rights to water and sanitation were endorsed by the majority of Member States. The Sanitation and Water for All global partnership held its inaugural High Level Meeting.
- The 2012 update reported that the MDG target for drinking water had been met in 2010, but that sanitation was still lagging. The United Nations Deputy Secretary-General launched a 'Call to Action' for all stakeholders to work together to accelerate progress on sanitation.
- The JMP convened task forces and collaborated with researchers to develop new methods for monitoring hygiene, water safety, management of excreta, and WASH in schools and health facilities.
- The 2014 update emphasized the unfinished business of the MDGs, with a special focus on progress in reducing inequalities in access within countries, including between urban and rural areas, rich and poor households, and other disadvantaged populations.
- The JMP provided technical support to agencies and Member States involved in developing indicators to support the post-2015 Sustainable Development Goals (SDGs).

First International Consultation on WASH post-2015 – Berlin

Second International Consultation on WASH post-2015 – The Hague

- United Nations Deputy Secretary-General Call to Action on Sanitation
- United Nations Thematic Consultation on Water and Sanitation

- Open Working Group on SDG report

- Third International Conference on Financing for Development
- United Nations Declaration on Sustainable Development

2011 2012 2013 2014 2015

25 YEARS

Twenty-Five Years of WASH Monitoring

Establishing a Global Monitoring System 1990–2000

- Delhi Declaration
- World Summit for Children
- Establishment of WSSCC

1990 | 1991

- Dublin Statement on Water and Sustainable Development
- United Nations Conference on Environment and Development – Rio de Janeiro

1992 | 1993

WHO first World Health Report

1994 | 1995

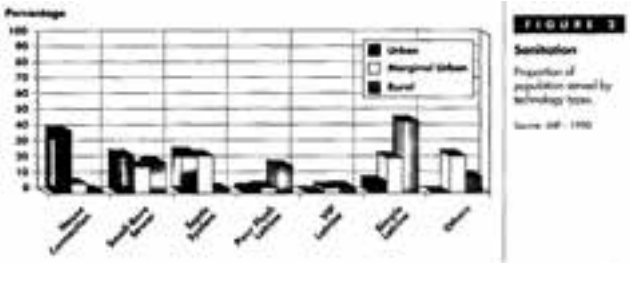
1990 marked the end of the United Nations General Assembly's International Drinking Water Supply and Sanitation Decade (1981–1990). Major reviews published by WHO and others identified steady progress in access to drinking water and sanitation since the 1960s, but underlined the need to strengthen monitoring in order to better track progress. In response, WHO and UNICEF established a Joint Monitoring Programme for Water Supply and Sanitation.

During the same year, the New Delhi statement – adopted by 115 countries at the Global Consultation on Safe Water and Sanitation – called for investment in low-cost technologies aimed at achieving 'some for all, rather than more for some'. Seventy-one Heads of State and Government, assembled for the World Summit for Children, adopted the goal of 'universal access to safe water and sanitation by the year 2000' to promote the survival, protection and development of children. The United Nations General Assembly called for an intensification of efforts to provide adequate and safe drinking water and sanitation for all by the end of the century.

The JMP started by developing a new Water and Sanitation Monitoring System (WASAMS) based on questionnaires provided to national authorities and invested heavily in supporting sector assessment, analysis and action at the country level. Specifying a small number of core indicators was an important step forward (Box 1), and special effort was made to disaggregate coverage data to show the range of facilities used in developing regions, including low-cost technologies. The initial series of Water Supply and Sanitation Sector Monitoring Reports published by the JMP emphasized the "strong synergistic effect between sector monitoring, planning and advocacy to increase coverage" and covered a wide range of issues relating to WASH sector management and financing as well as service coverage.

Early JMP reports underlined the challenge of global monitoring given limited data and the lack of standard indicators to assess trends over time. The first JMP report, published in 1992, presented baseline estimates for 1990 of the proportion of the population with access to 'functioning safe water supply' and the proportion with access to 'adequate

Source: *JMP* 1992



Source: *JMP* 1992

BOX 1
Monitoring lessons from the 1980s

- Most developing countries are ill-equipped to monitor many sector indicators simultaneously, especially if the indicators are themselves not easily measurable to begin with.
- The sector has not effectively used simple, measurable indicators essential to providing planners and decision-makers with relevant information.
- Through enhanced monitoring, it is possible to make optimal use of such data for more equitable resource allocation, planning and management.

Source: WHO/UNICEF Joint Monitoring Programme on WaterSupply and Sanitation, *Water Supply and Sanitation Sector Monitoring Report 1990: Baseline year,* JMP, Geneva, 1992.

excreta disposal' for 70 developing countries. The Annex included maps and tables showing separate estimates for rural, urban and total coverage for four developing regions. It noted that future reports would provide country by country estimates in a separate 'databook' and computer diskette.

Further assessments were published in 1993 and 1996, covering 82 and 84 countries, respectively. The 1993 report presented, for the first time, estimates of the total population served by different technologies in rural and urban areas of developing countries, highlighting the scale of the challenge faced in achieving the goal of universal access by the year 2000. The JMP also sought to focus increasingly on monitoring 'strategic parameters', such as coverage and finance, rather than 'operational parameters', such as water losses, tariffs, and operation and maintenance.

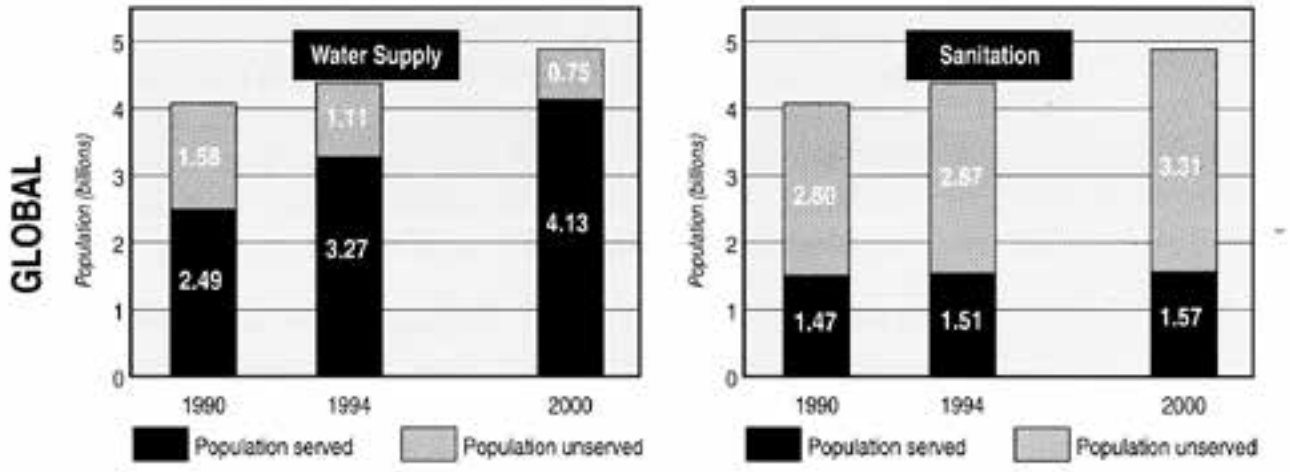
25 YEARS

Twenty-Five Years of WASH Monitoring

Establishing a Global Monitoring System 1990–2000

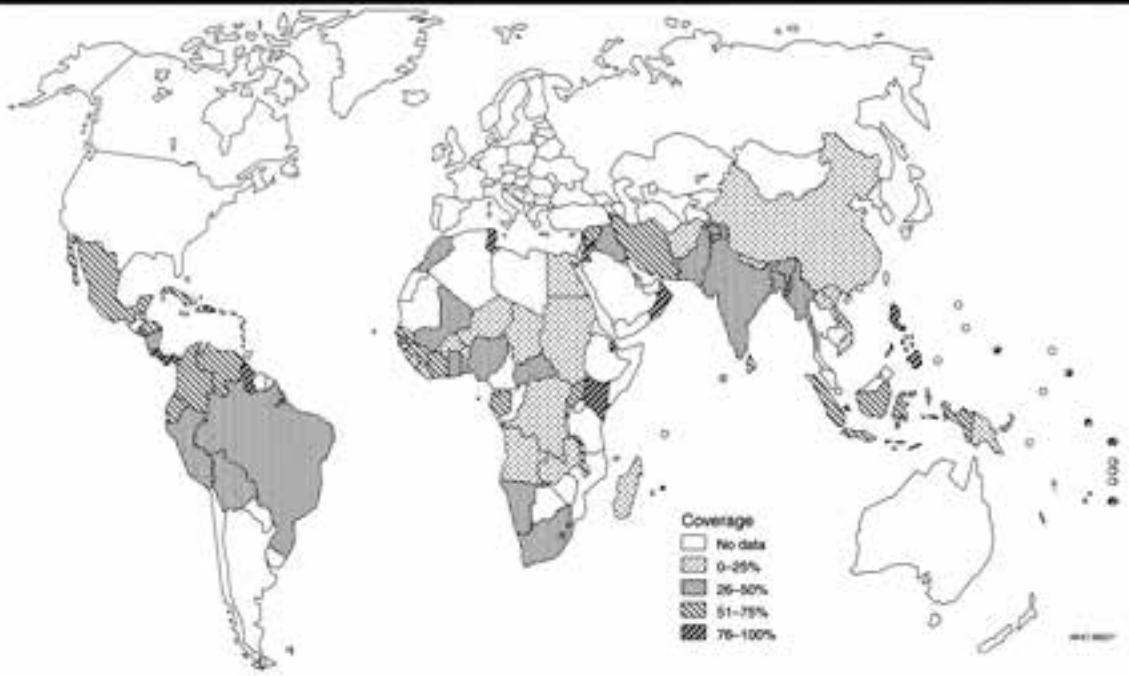
Figure 6.1 Coverage perspectives to the Year 2000

Note: Projections based on the assumption that 1990-1994 trends remain unchanged



Source: *JMP* 1996

Map 1.2 Sanitation service coverage (% of population served) at the end of 1994



Source: *JMP* 1996

BOX 2
Indicator definitions used by the JMP in the early 1990s

Safe drinking water coverage: Proportion of population with **access** to an **adequate amount** of **safe** drinking water located within a **convenient distance** from the user's dwelling

Sanitary means of excreta disposal coverage: Proportion of population with **access** to a **sanitary facility** for human excreta disposal in the dwelling or located within a **convenient distance** from the user's dwelling

For both definitions above, it should be noted that the words in bold should be defined at country level.

Source: WHO/UNICEF Joint Monitoring Programme on Water Supply and Sanitation, *Water Supply and Sanitation Sector Monitoring Report 1993: Sector status as of 31 December 1991,* JMP, New York, 1993.

BOX 3
VISION 21

- By 2015 to reduce by one half the proportion of people without access to hygienic sanitation facilities.
- By 2015 to reduce by one half the proportion of people without sustainable access to adequate quantities of affordable and safe water.
- By 2025 to provide water, sanitation and hygiene for all.

Source: Water Supply and Sanitation Collaborative Council, *Vision 21: A shared vision for hygiene, sanitation and water supply and a framework for action,* WSSCC, Geneva, 2000.

The reports drew attention to variations in estimates submitted by national authorities and the lack of standard definitions for access across countries (Box 2). They also highlighted some of the limitations of using data from routine administrative reporting systems that were thought to "underestimate infrastructure coverage because they do not take account of privately constructed facilities," and to "overestimate use by assuming all installations are operational and serving the intended populations." It was hoped that the planned expansion of internationally sponsored household surveys programmes would enable the collection of more reliable data directly from users in the future.

The 1996 report highlighted the need for more robust estimates to inform future target-setting. In addition to maps and tables showing country and regional coverage, charts were introduced showing changes in the total population served and unserved between 1990 and 1994 and projections for 2000. It showed that the goal of universal access by 2000 would not be achieved if 1990–1994 trends continued, and estimated that in 2000, three quarters of a billion people would still lack drinking water, and 3.3 billion would lack sanitation.

In 1997, the Water Supply and Sanitation Collaborative Council (WSSCC) initiated a series of country consultations to define a common vision for the WASH sector. The resulting report, *Vision 21: A shared vision for hygiene, sanitation and water supply and a framework for action*, outlined more realistic targets for the new millennium, taking into account JMP estimates (Box 3).

Twenty-Five Years of WASH Monitoring

Monitoring MDG Targets for Water and Sanitation 2000–2010

2000 > > > 2010

- **2000**
  - Vision 21
  - United Nations Millennium Declaration
- **2001**
- **2002**
  - World Summit on Sustainable Development – Johannesburg
  - General Comment No. 15 on the Human Right to Water and Sanitation
- **2003**
- **2004**
  - United Nations General Assembly adoption of MDG targets
- **2005**
  - Water For Life Decade (–2015)

The year 2000 marked the beginning of a new era of global monitoring. 'Vision 21–Water for People' was presented at the World Water Forum in The Hague. Later the same year, world leaders signed the Millennium Declaration, which led to the establishment of the Millennium Development Goals (MDGs). Goal 7, 'to ensure environmental sustainability', included a target for drinking water. A sanitation target was added at the World Summit on Sustainable Development (Rio+10) in Johannesburg in 2002. The final wording of MDG target 7.9 was approved by the United Nations General Assembly in 2004 (Box 4), and the JMP assumed responsibility for estimating and reporting on progress.

The Global Water Supply and Sanitation Assessment 2000 marked an important turning point for the JMP. Firstly, it aimed to cover the whole world, although data for many regions remained limited. Secondly, whereas previous reports had relied primarily on questionnaires completed by national authorities, the 2000 report included data collected from users through nationally representative surveys and censuses. Thirdly, it introduced a new classification for drinking water and sanitation. As such, the report sought to establish a monitoring methodology that would ensure more reliable and consistent estimates in the future (Bartram, J., et al., 'Global Monitoring of Water Supply and Sanitation: History, methods and future challenges', *International Journal of Environmental Research and Public Health,* vol. 11, no. 8, 11 August 2014, pp. 8137–8165).

Early reports had identified the lack of data and standardized measures for assessing the safety of drinking water sources and the adequacy of sanitation facilities as a key constraint to global monitoring. In order to be able to compare progress across countries with only limited data, the JMP developed a simple, technology-based classification of facilities. Drinking water sources were considered 'improved' if by nature of their construction they protected the source from outside contamination. Sanitation facilities

BOX 4
Evolution of the MDG targets for drinking water and sanitation

Millennium Summit (2000)
To halve, by the year 2015, the proportion of people who are unable to reach or to afford safe drinking water.

World Summit on Sustainable Development (2002)
Halve, by the year 2015, the proportion of people who are unable to reach or to afford safe drinking water and the proportion of people who do not have access to basic sanitation.

United Nations General Assembly (2004)
Halve, by the year 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation.

Source: Bartram, J., *Proceedings of the First Consultation on Post-2015 Monitoring of Drinking-Water and Sanitation, Berlin, 3–5 May 2011,* WHO/UNICEF JMP, 2011.

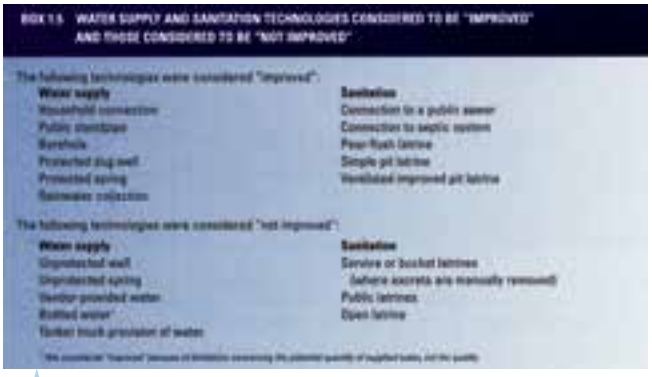


Fig. 36 Original 'improved' classification (JMP, 2006)

Human Development Report on Water

International Year of Sanitation

- **Sanitation and Water for All Inaugural High Level Meeting**
- **Declarations on the Human Right to Water and Sanitation by United Nations General Assembly and Human Rights Council**
- **MDG Review Summit**

2006 2007 2008 2009 2010

were defined as 'improved' if they hygienically separated human excreta from human contact. The initial classification shown in Fig. 36 has been refined over time and, while its limitations were acknowledged from the start, has proved to be a valuable indicator that can be readily applied in almost any context (Box 5).

In the early 2000s, the JMP actively supported the development of indicators used in national surveys and censuses. Integration of data from early rounds of international household survey programmes, including the Multiple Indicator Cluster Surveys (MICS), Demographic and Health Surveys (DHS) and Living Standard Measurement Surveys (LSMS),

BOX 5

Growth in references to 'improved water and sanitation' and the JMP since 2000

Since their introduction in 2000, the terms 'improved water' and 'improved sanitation' have gained widespread acceptance and are now routinely used in academic research, the popular press and within the WASH sector. Fig. shows citations of the terms in articles and books tracked by Google Scholar. Before 2000, the terms were only cited 10–20 times per year, but in 2014 there were over 700 citations. The term 'Joint Monitoring Programme' saw similar growth.

These trends are partly due to the increase in digital media over the past 15 years, but while citations for 'improved water' and 'improved sanitation' made up just 3 per cent of all citations on 'water and sanitation' from 1990 to 2000, they accounted for 9 per cent in 2014, reflecting a significant shift in the public discourse on water and sanitation.

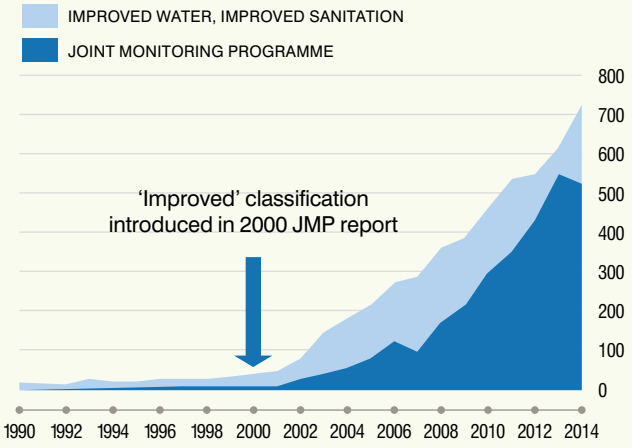


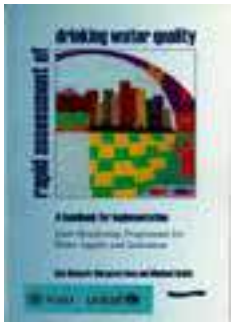
Fig. 37 Citations reported by Google Scholar, 1990–2014




proved challenging due to a lack of standardized response categories. From 2002 to 2004 the JMP convened a Harmonization Task Force comprising household survey experts and WASH sector experts to develop a standardized set of core questions on drinking water and sanitation for household surveys (Box 6).

The JMP core questions were quickly adopted by international survey programmes. They were disseminated by the International Household Survey Network (IHSN) and integrated in the United Nations Statistical Division recommendations for Population and Housing Censuses. They have since been used extensively in national surveys and censuses around the world. The result has been greater harmonization of questions and response categories, enabling the inclusion of data from a larger number of household surveys and censuses and making JMP estimates more robust.

The JMP also supported research to better understand the relationship between 'improved' drinking water sources and the quality of the water supplied. The Rapid Assessment of Drinking Water Quality (RADWQ) initiative used a cluster sampling approach to select individual drinking water sources to be tested for relevant microbial, chemical and physical parameters, and inspected to detect risks of contamination. The method was piloted in six countries: China, Ethiopia, Jordan, Nicaragua, Nigeria and Tajikistan. It provided a snapshot of drinking water quality and showed that piped water supplies are generally less likely to be contaminated than other improved sources.



The JMP published periodic updates highlighting disparities in coverage and assessing MDG progress. The growing use of household survey data enabled more robust assessments of the water and sanitation technologies actually being used. The 2000 report presented a breakdown of coverage by service types (household connection, other access, no access), and these early 'service ladders' were further elaborated in subsequent reports.

BOX 6
Core questions for use in household surveys

In 2006, the JMP published a list of standardized questions not only on the household's main source of drinking water and sanitation facility but also asking about sources of drinking water for cooking, responsibility for and time spent collecting drinking water (Box 7), treatment of drinking water in the home, sharing of sanitation facilities and disposal of child faeces. Since then, the document has been used widely and translated into local languages. It also provides guidance on the analysis of survey data and clarifies definitions of improved drinking water and sanitation and classification of bottled water and traditional latrines.

Q1. What is the main source of drinking-water for members of your household?	
Piped water into dwelling	>>Q4
Piped water to yard/plot	>>Q4
Public tap/standpipe	>>Q2
Tubewell/borehole	>>Q2
Protected dug well	>>Q2
Unprotected dug well	>>Q2
Protected spring	>>Q2
Unprotected spring	>>Q2
Rainwater collection	>>Q2
Bottled water	>>Q1A
Cart with small tank/drum	>>Q2
Tanker-truck	>>Q2
Surface water (river, dam, lake, pond, stream, canal, irrigation channels)	>>Q2
Other (specify)	>>Q4

Q6. What kind of toilet facility do members of your household usually use? *If "flush" or "pour flush" probe: where does it flush to?*	
Flush/pour flush to:	>>Q7
piped sewer system	>>Q7
septic tank	>>Q7
pit latrine	>>Q7
elsewhere	>>Q7
unknown place/not sure/DK where	>>Q7
Ventilated improved pit latrine (VIP)	>>Q7
Pit latrine with slab	>>Q7
Pit latrine without slab/open pit	>>Q7
Composting toilet	>>Q7
Bucket	>>Q7
Hanging toilet/hanging latrine	>>Q7
No facilities or bush or field	>>Q9
Other (specify)	>>Q7

Source: *JMP* 2006

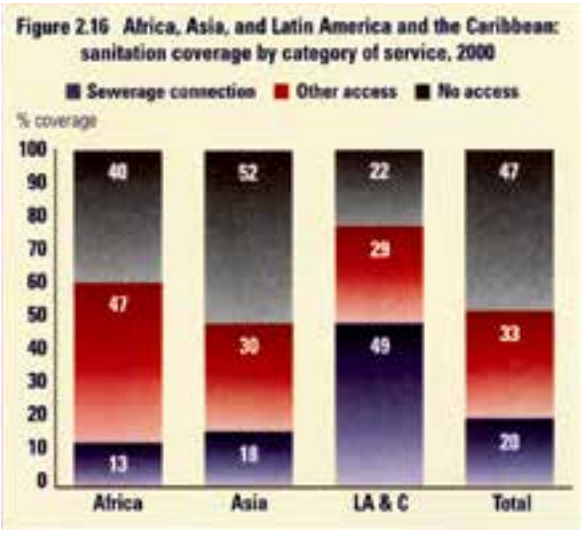
The 2004 report provided a 'mid-term' MDG assessment of progress based on 2002 estimates, marking the halfway point between 1990 and 2015. It declared the world 'on track' to meet the drinking water target but 'not on track' to meet the sanitation target. For the first time, a complete list of country, regional and global estimates was included in the back of the report, using newly established MDG regional groupings.

The 2006 report focused on urban-rural disparities. It showed that while rural coverage consistently lagged behind urban coverage, urban areas were struggling to keep pace with population growth. JMP data on inequalities in access were also used in the 2006 Human Development Report, which challenged the myth that the water crisis is the result of scarcity, arguing that poverty, power and inequality are at the heart of the problem.[6]

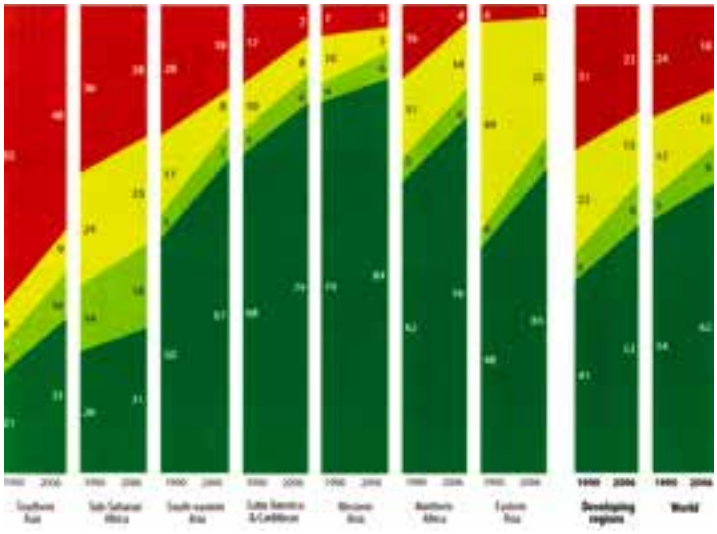
The 2008 JMP report focused on sanitation, marking the United Nations International Year of Sanitation. The concept of using a sanitation 'ladder' to analyse progress was further developed by dividing the use of unimproved sanitation into three groups: shared facilities (of an otherwise acceptable type), unimproved facilities, and open defecation (no facility). The report revealed that shared facilities and open defecation remained widespread in some regions and led to increased attention to these issues within the sector. Sanitation ladders have since become a regular feature of JMP reports.

The 2010 update provided a preliminary assessment of progress towards the MDG target in preparation for the 2010 United Nations General Assembly High Level Plenary on the MDGs. It confirmed earlier assessments that the world was on track to reach the drinking water target but projected to miss the sanitation target if trends remained unchanged, and it highlighted the influence of populous countries such as China and India on global rates of progress.

[6] United Nations Development Programme, *Human Development Report 2006: Beyond scarcity – Power, poverty and the global water crisis*, UNDP, New York, 2006.



Source: *JMP* 2000

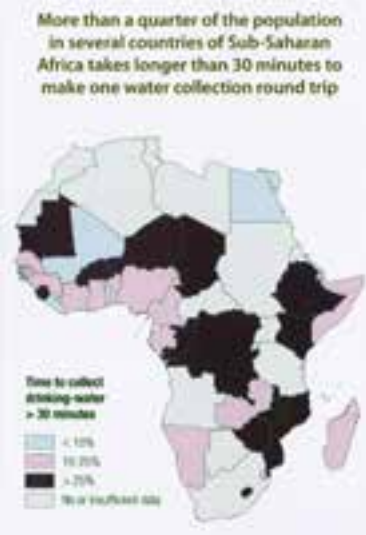


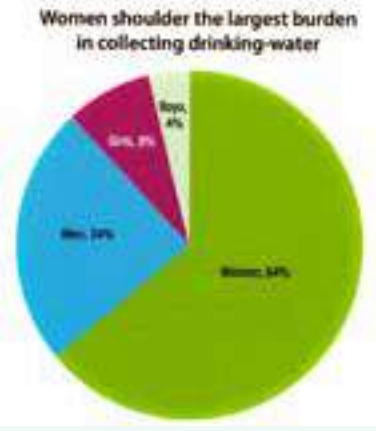
Source: *JMP* 2008

BOX 7

Collection time and gender dimensions of water hauling

The increasing availability of household surveys adopting the core questions has enabled the JMP to draw attention to the burden of collecting drinking water, and its health and gender dimensions. The 2010 update showed that in several countries in sub-Saharan Africa, over a quarter of households spend at least half an hour on a single trip to collect water. The physical and time burden of water hauling was found to fall primarily on women and girls, who are responsible for water collection in seven out of ten households in 45 developing countries.





Source: *JMP* 2010

Country engagements

Following the shift to survey data in 2000, WASH stakeholders in many countries did not understand or agree with JMP estimates, which sometimes showed large discrepancies with national coverage figures. The JMP held consultations with national authorities to review country estimates as well as the questions and indicators used in national surveys, and to identify reasons for differences in estimates produced by national statistical offices and other government departments. Workshops held in sub-Saharan Africa and Southern Asia led to improved estimates of open defecation rates in India (Box 8), harmonization of census questions in Eastern Africa, and the development of manuals to help survey teams correctly classify sanitation facilities in Madagascar and Mali.

Consultations with national authorities in China demonstrated that the linear regression method used by the JMP does not capture short-term trends, such as the recent rapid rise in piped water coverage in rural China. The JMP is considering alternatives to linear regression that could be used in post-2015 monitoring (see Box A1 in Annex 1).

Different types and sources of WASH data

The JMP primarily uses population-based data, derived from national censuses and household surveys, which ask household members to provide information on the types of water and sanitation facilities they are actually using (outcomes). However, these population-based estimates need to be considered alongside data compiled by government ministries on investments in WASH infrastructure (inputs), institutional performance (processes), and the number, type and quality of water and sanitation services provided to the population (outputs).

While the JMP focuses on outcomes, other monitoring instruments have tracked inputs and processes, and in some cases outputs. Country Status Overviews (CSOs) and WASH Bottleneck Analysis Tools (WASHBATs), supported by the World Bank and UNICEF respectively, track financial inputs and planning processes at the

BOX 8
JMP country engagement in India

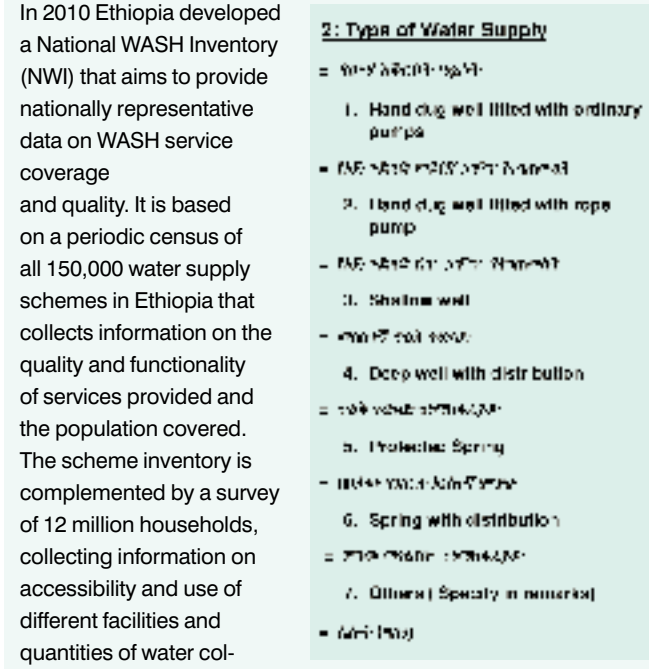
In 2008, when the JMP first published estimates showing that 18 per cent of the global population, and more than half of India's population, practised open defecation, the statistics were considered unbelievable. The JMP team had extensive discussions with Indian national authorities, which reported significantly lower figures, in order to understand the discrepancies. It was found that government estimates were based on administrative monitoring of villages declared to be 'open defecation-free', whereas JMP estimates were based on national household surveys and censuses. In 2009 the Secretary of Rural Development concluded that the latter provide a more accurate source of data on sanitation practices. National estimates were revised following the 2011 Census, which confirmed that 49.8 per cent of Indians defecated in the open. The results triggered a series of large-scale campaigns to improve sanitation in India.

country level. The UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS), led by WHO, collects data on human resources and financial inputs as well as institutional processes for a larger number of countries, primarily for regional and global reporting.

Institution-based sources of data are generally underdeveloped in low-income countries, but there has been a concerted effort in recent years to establish WASH sector management information systems (MIS), which might include inputs, processes, outputs and outcomes, and these are likely to be an increasingly important source of data in the future (Box 9).

BOX 9
The Ethiopian National WASH Inventory

In 2010 Ethiopia developed a National WASH Inventory (NWI) that aims to provide nationally representative data on WASH service coverage and quality. It is based on a periodic census of all 150,000 water supply schemes in Ethiopia that collects information on the quality and functionality of services provided and the population covered. The scheme inventory is complemented by a survey of 12 million households, collecting information on accessibility and use of different facilities and quantities of water collected. The NWI household survey information is comparable to data collected through other national surveys and has been approved by the Central Statistical Agency for use in national estimates of the population using improved drinking water and sanitation facilities.


2: Type of Water Supply

1. Hand dug well fitted with ordinary pumps
2. Hand dug well fitted with rope pump
3. Shallow well
4. Deep well with distribution
5. Protected Spring
6. Spring with distribution
7. Other (Specify in numerical)

Twenty-Five Years of WASH Monitoring

Laying the Foundations for Post-2015 Monitoring 2010–2015

First International Consultation on WASH post-2015 – Berlin

Second International Consultation on WASH post-2015 – The Hague

2010 2011 2012

The year 2010 marked a major review of the MDGs that triggered a renewed effort to accelerate progress towards the 2015 targets. In September, the United Nations General Assembly High Level Plenary on the MDGs called for increased efforts to 'keep the promise' and identified sanitation as one of the most off-track targets. Landmark declarations on the human rights to water and sanitation were also made by the General Assembly and Human Rights Council and endorsed by the majority of Member States. In the same year, the inaugural High Level Meeting of the Sanitation and Water for All (SWA) global partnership convened donor and developing country Governments to renew political and financial commitments aimed at accelerating progress in the most off-track regions and countries. JMP estimates were instrumental in informing decision-making in each of these fora.

BOX 10
Development of proposed post-2015 targets and indicators

International consultations based on working group recommendations resulted in the emergence of a shared vision among WASH sector stakeholders. There was broad consensus that post-2015 WASH targets and indicators should build on the MDGs and deal with 'unfinished business' while addressing recognized shortcomings of existing targets. Specifically, they should: include hygiene as a priority in all settings; reduce and eliminate inequalities in access between population subgroups; go beyond the household and include other priority settings; and call for progressive improvements in the quality of services based on the normative criteria of the human right to water and sanitation – that is, accessibility, acceptability, availability, quality and affordability.

By 2030:

- eliminate open defecation;
- achieve universal access to basic drinking water, sanitation and hygiene for households, schools and health facilities;
- halve the proportion of the population without access at home to safely managed drinking water and sanitation services; and
- progressively eliminate inequalities in access.

Source: WHO/UNICEF Joint Monitoring Programme on Water Supply and Sanitation, *WASH Post-2015: Proposed targets and indicators for drinking-water, sanitation and hygiene,* JMP, 2013

In 2011, WHO and UNICEF launched a series of international consultations on WASH in the post-2015 development agenda. The JMP subsequently established four working groups on 1) drinking water, 2) sanitation, 3) hygiene) and 4) equity and non-discrimination, comprising experts from developed and developing countries. The working groups consulted widely and made detailed technical recommendations on the formulation of targets, indicators and definitions that were subsequently consolidated and shared with experts and Member States involved in developing the post-2015 agenda (Box 10).

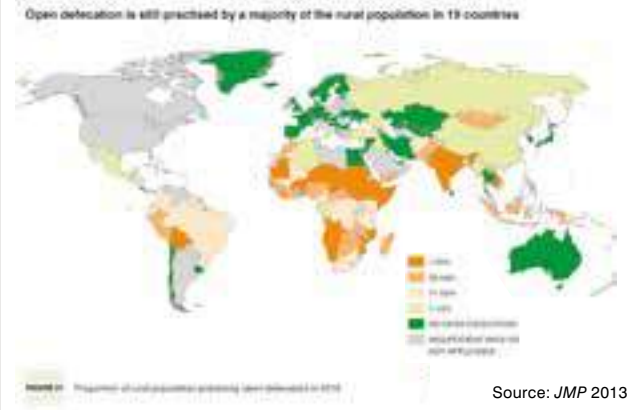
The JMP 2012 update announced that the MDG target for drinking water had been met in 2010. The announcement triggered a huge discussion among WASH sector stakeholders about the formulation of targets and indicators, and the need for more and better data on disparities and the safety and sustainability of drinking water services.

In 2013, the United Nations Deputy Secretary-General (DSG) launched a Call to Action on Sanitation. Citing JMP estimates, the DSG called upon the world to increase efforts to accelerate progress towards the MDG sanitation target, which was among the targets for which progress had fallen furthest behind. In particular, he called upon Governments, civil society, the private sector and United Nations agencies to pull together and help end the practice of open defecation by the year 2025.

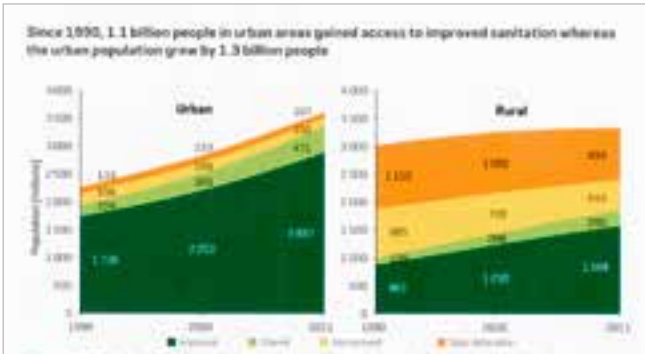
- United Nations Deputy Secretary-General Call to Action on Sanitation
- United Nations Thematic Consultation on Water and Sanitation
- Open Working Group on SDGs (–2014)

- Third International Conference on Financing for Development
- United Nations Declaration on Sustainable Development

2013 2014 2015



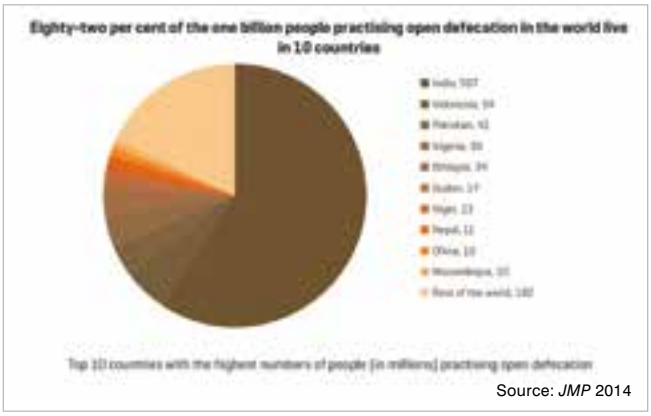
Source: *JMP* 2013



Source: *JMP* 2013

For the first time, the JMP issued an annual update in 2013, focusing mainly on progress on sanitation and, in particular, on trends in open defecation.

The JMP 2014 update focused on inequalities and the 'unfinished business' of the MDGs, including the shortfall in progress on sanitation and the need to extend access to remaining unserved populations.

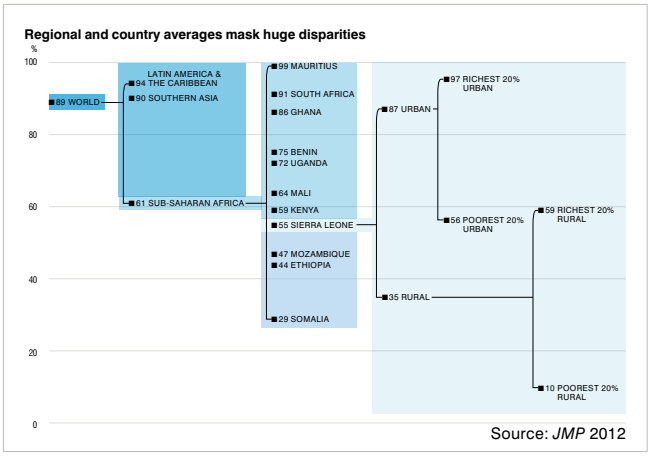


Source: *JMP* 2014

The JMP has drawn attention to disparities in access to drinking water and sanitation services since its very first report in 1992. From 2000 onwards, the use of household survey data provided more accurate information on the various technologies being used and enabled further disaggregation of coverage figures by wealth and other socio-economic characteristics. This has enabled the JMP to highlight multiple overlapping dimensions of inequality.

Visualizing inequalities in access to water and sanitation

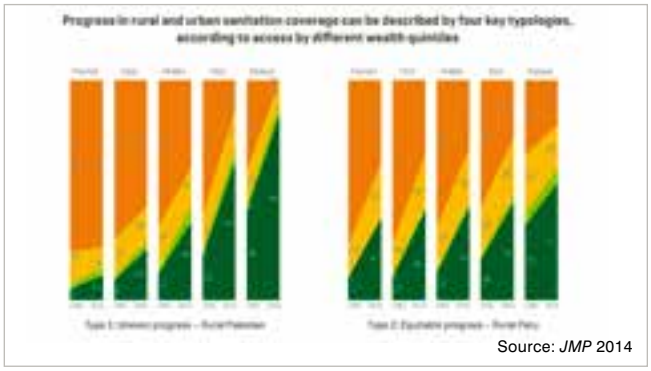
Equity trees have been used by the JMP since 2012 to draw attention to inequalities that would otherwise remain hidden. They unpack the averages based on different dimensions of inequality.



Source: *JMP* 2012

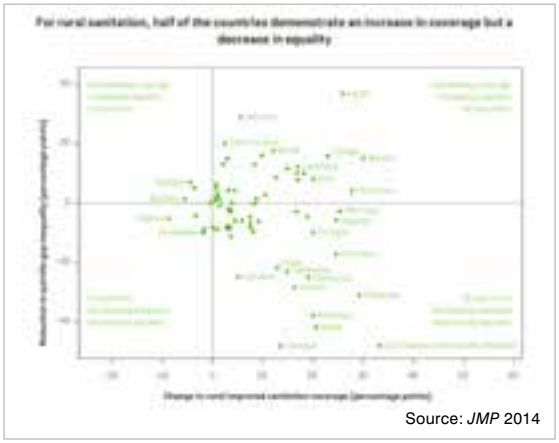
Ladders enabled the JMP to go beyond reporting the population with and without access to improved facilities and report disparities in service levels. The JMP has produced ladders for rural, urban and total populations at the subnational, country, regional and global levels.

Wealth quintiles. Household surveys typically collect information on a range of different assets, including access to water, sanitation and handwashing facilities. These assets can be combined in various ways to create a wealth index. This has enabled the JMP to analyse disparities in access to water and sanitation by wealth quintile and, as more data become available, to identify trends over time.


Source: *JMP* 2014

Gap analysis. The JMP has used many different techniques over the years to visualize 'gaps' in access and service levels between population subgroups. These range from simple bar charts and coverage maps to pie charts and ladders, and in recent reports have focused on whether disadvantaged groups are making faster progress than the general population – as is necessary in order to reduce inequalities in access.

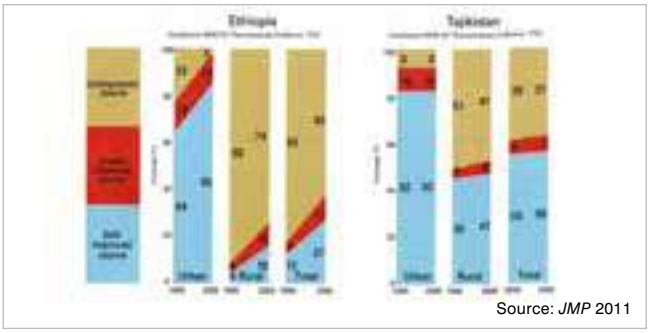
Further work is required in order to identify suitable data sources and methods for monitoring access in specific geographic locations, including informal urban settlements, and among disadvantaged groups or individuals, to cover intra-household inequalities based on factors such as age, sex or disability.


Source: *JMP* 2014

Improving drinking water quality and safety

In 2011, anticipating the achievement of the MDG target on drinking water, the JMP published a thematic report entitled *Drinking Water: Equity, safety and sustainability*. The report aimed to examine access to drinking water in more depth than is possible in regular JMP updates. It highlighted the challenges associated with global monitoring and the limitations of the MDG indicator 'use of an improved drinking water source' as a proxy for drinking water safety and sustainability. It discussed the risks associated with contamination of drinking water and strategies for management of water safety through sanitary inspections, water safety plans and household water treatment and safe storage. The report also included analysis of the results from rapid assessment of drinking water quality (RADWQ) surveys in five countries, which showed that 13 to 32 per cent of improved sources were contaminated at levels exceeding WHO guideline values in four of the five countries.

In 2012 the JMP commissioned a systematic review that estimated that at least 1.8 billion people globally used a source of drinking water that was faecally contaminated. These and other results were reviewed by the JMP Task Force on Drinking Water Quality, which recommended that monitoring of water safety should include both water quality testing and risk management and be based on a combination of data from multipurpose and dedicated surveys as well as administrative sources such as regulators.



Source: *JMP* 2011

The JMP also collaborated with MICS to develop a module for water quality testing in national surveys that has been piloted in five countries. For example, data from Ghana show that 57 per cent of improved sources are free from *E. coli* at the source, compared with 38 per cent at the household (Fig. 38). Over a fifth of samples collected in the household were found to be high-risk (22 per cent), and around 7 per cent of the population were estimated to be exposed to arsenic at levels exceeding the Ghanaian standard of 10 ppb. The results have informed the development of a National Drinking Water Management Framework. The JMP plans to support the rollout of water quality testing in other international survey programmes.

Water quality testing in household surveys shows large differences in risk level between source types in Ghana

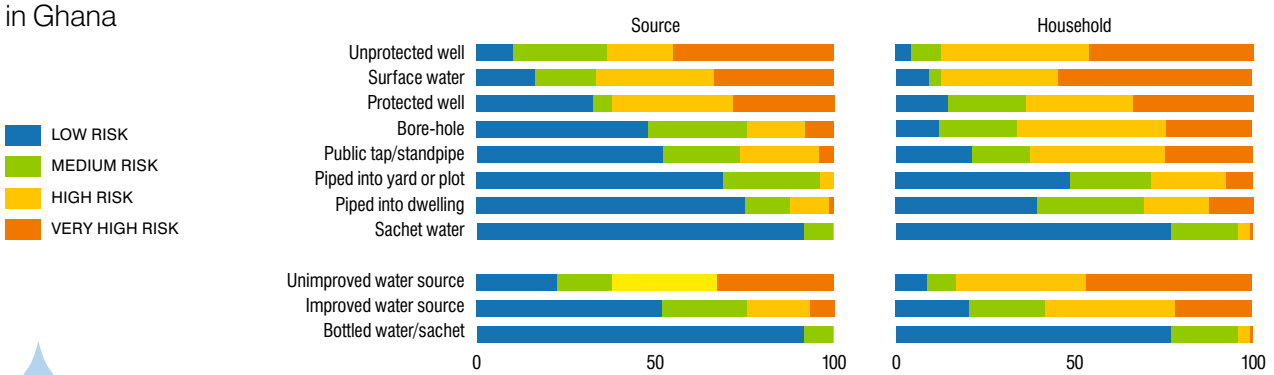


Fig. 38 Faecal contamination of drinking water in Ghana

Source: Ghana Living Standards Survey 2013.

Monitoring the sanitation chain

To date, JMP monitoring has focused primarily on the public health impacts of sanitation. A sanitation facility is considered improved if it hygienically separates human excreta from human contact, but this indicator does not address the subsequent management of faecal waste. Safe management comprises several stages along the 'faecal waste management chain', from containment through emptying, transport, treatment, and reuse or disposal.

A new Global Integrated Monitoring Initiative[7] is being developed to monitor elements of sustainable water and sanitation management that were not previously covered under MDG monitoring. The JMP is collaborating with this initiative on the development of a mass-balance framework for monitoring and classifying faecal waste flows as 'safe' and 'unsafe' for different purposes. In the example shown in Fig. 4, green arrows represent safe flows, while red arrows indicate unsafe discharges to the environment. Reliable data are scarce, but it is estimated that the majority of faecal wastes globally are currently discharged unsafely into the environment.

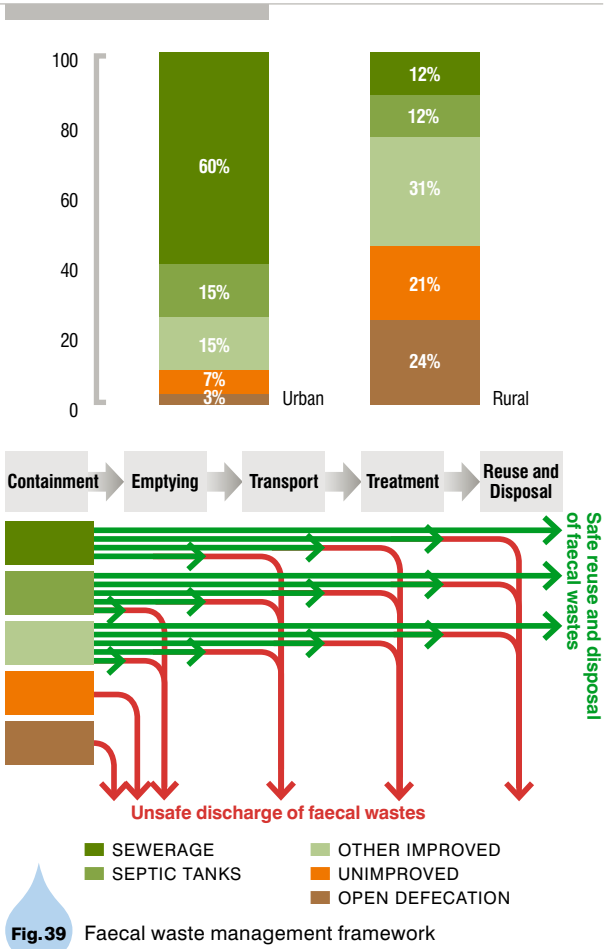


Fig. 39 Faecal waste management framework

JMP currently reports on containment at the user facility level through the 'improved' classification. This data can be further disaggregated to separately report proportions of populations accessing different types of sanitation, including sewage, septic tanks and other types of improved facilities, as well as unimproved facilities and open defecation. These are not routinely reported as separate rungs on the JMP sanitation ladder, since latrines, septic tanks, and sewered systems can all be safely managed. However, such disaggregation is essential to calculate safe management of faecal wastes.

Fig. 39 shows estimates of the population using these different types of sanitation facilities in 2010.[8] Sixty per cent of urban residents reported using facilities linked to sewers, compared to only 12 per cent in rural areas. Unimproved sanitation and open defecation, which by definition are not safely managed, accounted for 45 per cent of the population in rural areas, and 10 per cent of the urban population. By estimating the proportion of faecal wastes from these facilities that are discharged unsafely due to unhygienic emptying, ineffective transport and inadequate treatment, the total amount of safe and unsafe discharges of faecal wastes can be calculated.

The full benefits of improvements in access to sanitation and drinking water cannot be realized without good hygiene. The JMP expert working group on hygiene explored options for global monitoring of hygiene post-2015. Of the range of hygiene behaviours considered important for health, handwashing with soap was identified as a top priority in all settings. Menstrual hygiene management was also identified as a priority for improving the health, welfare and dignity of women and girls.

[7] http://www.unwater.org/gemi

[8] These estimates differ from conventional JMP figures in that the classification is solely based on infrastructure; 'other improved sanitation' includes both shared and unshared facilities.

Addressing hygiene

Handwashing with soap

In 2008 and 2009, the JMP supported a review by the monitoring group of the Public-Private Partnership on Handwashing, MICS, DHS and USAID. It was agreed that the most practical approach leading to reliable measurement of handwashing in national household surveys was observation of the place where household wash their hands and noting the presence of water and soap (or local alternative) at that location. This provides a measure of whether households have the necessary tools for handwashing and is a proxy for their behaviour. Observation by survey enumerators represents a more reliable, valid and efficient indicator for measuring handwashing behaviour than asking individuals to report their own behaviour.

Since the handwashing with soap survey questions were standardized in 2009, over 50 DHS and MICS surveys have included the module. These surveys reveal that current levels of handwashing with soap are low in many countries, especially in sub-Saharan Africa, where coverage is at most 50 per cent in the 38 countries for which data are currently available (Fig. 40). Disparities in access are found between different groups and by setting, including between urban and rural areas. As the number of countries with more than one survey increases, it will become possible to assess and compare trends over time.

Menstrual hygiene management

Access to basic facilities for menstrual hygiene management (MHM) is critically important for women's health, safety and dignity. Several essential elements are required, including clean materials to absorb or collect menstrual blood, a private place to change these materials as often as necessary, soap and water for washing the body as required, and access to safe and convenient facilities to dispose of used materials. Further, women and girls need access to basic information about the menstrual cycle and how to manage it with dignity and without discomfort or fear.

Globally, there is very little comparable information available on menstrual hygiene management. However, the lack of basic sanitation and drinking water facilities, as documented earlier in this report, suggests that many women lack a suitable place for managing menstruation. Assuming at least half of the 946 million people globally who lack any kind of facility and defecate in the open are female, a conservative estimate would suggest that at least 500 million women and girls lack adequate facilities for MHM.

Growing interest in monitoring WASH in institutional settings such as schools and health care facilities provides a useful entry point for monitoring MHM. The availability of adequate facilities in public places is generally easier to measure than within the privacy of the household. Questions to ascertain

Source: Ram, P., *Practical Guidance for Measuring Handwashing Behavior: 2013 update*, World Bank Water Supply and Sanitation Programme, 2013.

Emerging data on handwashing show that the presence of facilities with water and soap varies widely between countries and regions

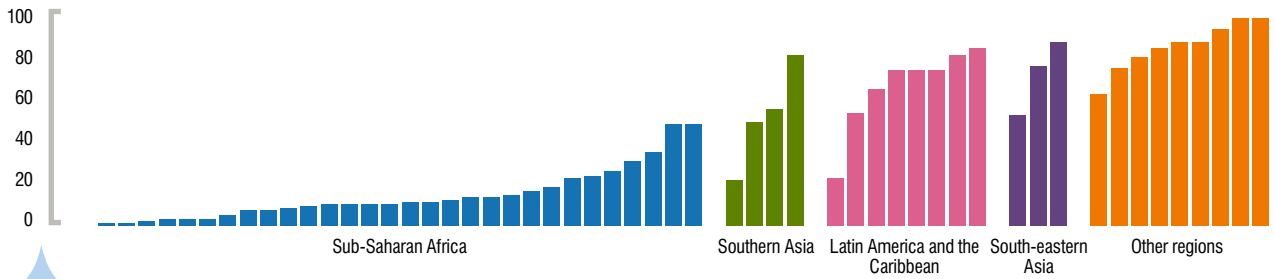


Fig. 40 Proportion of the population with a handwashing facility with soap and water (2009-2014)

knowledge, behaviour and access to facilities and materials are also being tested and validated for potential inclusion in household surveys, and may offer a complementary means of monitoring MHM.

Going beyond the household

Over the last 25 years, the JMP has primarily focused on access to WASH at the household level, but people often spend large amounts of time away from home. Monitoring access beyond the home is challenging given the diversity of settings and WASH needs. For the purpose of global monitoring post-2015, the JMP proposes to prioritize schools and health care facilities. Large numbers of people frequent these institutions, and the risks associated with inadequate WASH in these settings are high, as diseases may be transmitted more easily and have more serious impacts on vulnerable groups. While global norms and standards exist, systems for monitoring and reporting remain underdeveloped.

Globally, 69% and 66% of schools have access to adequate water and sanitation in 2013, respectively

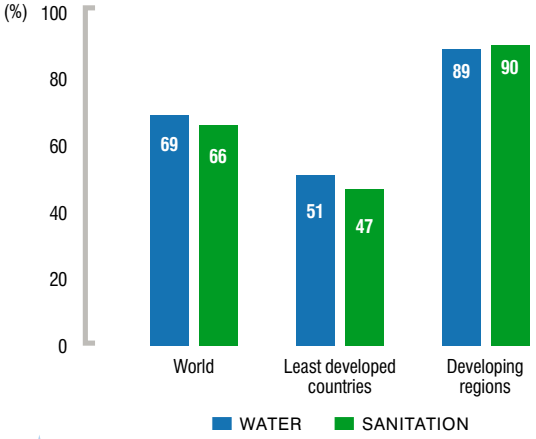


Fig. 40 Proportion of schools with drinking water and sanitation, 2013

Most countries monitor school water and sanitation through the EMIS; less than a third monitor hygiene

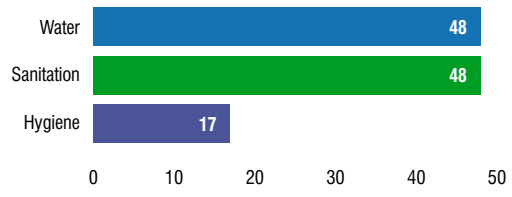


Fig. 41 Number of countries monitoring school WASH through EMIS

WHO and UNICEF recently completed reviews of the current status of data on WASH in schools and health care facilities. The reviews found that a growing number of National Ministries of Health and Education operate sector management information systems (HMIS and EMIS) that include information on WASH, but these systems remain weak in developing countries. Nationally representative surveys of schools and health care facilities provide another useful source of data. School surveys include UNESCO-supported formal education surveys and UNICEF-supported WASH in School (WinS) assessments. Health-oriented facility surveys include the USAID-supported Service Provision Assessment (SPA), the World Bank-supported Service Delivery Indicators (SDI) and the WHO-supported Service Availability and Readiness Assessment (SARA). Household surveys generally do not collect information on institutional WASH, but could potentially be used to collect information from facility users in the future.

WASH in schools

The 2015 *Advancing WASH in Schools Monitoring* report brings together the best data available and presents coverage information for primary schools in 138 developing regions and 11 developed regions, covering 83 per cent of the global population. Information was compiled from facility surveys, EMIS and secondary data sources and used to derive coverage estimates for 2008 and 2013. The review

Source: United Nations Children's Fund, Advancing WASH in Schools Monitoring, UNICEF, New York, 2015.

shows that data availability has increased since 2008 (48 out of 54 EMIS now include water and sanitation questions, but only 17 address hygiene), but indicator definitions vary greatly, making it difficult to compare progress over time and across countries. The report highlights the need to review definitions and standards and agree on a small number of core indicators that can be standardized across different data sources and aggregated for global monitoring.

WASH in health care facilities

In 2015, WHO published a global assessment of the extent to which health care facilities in low- and middle-income settings provide essential WASH services. The report draws on data representing 66,101 facilities from 54 countries, mostly in the regions of Africa, Latin America and the Caribbean, and South-eastern Asia. The majority of the data come from institutional surveys such as SPA, SDI, and SARA, but a number of other national and subnational surveys were reviewed.

The report shows that a large number of health care centres lack the most basic water, sanitation, and handwashing facilities. In the African region, 42 per cent of facilities lacked an improved water source within 500 metres. This is far below WHO minimum standards, which call for water supplies on premises. The review generally found sanitation facilities to be more common than water facilities, though as some of the surveys did not include observation of sanitation facilities, results may be inflated and may include non-functional or locked facilities.

Primary health care facilities are frequently the first point of care, especially for those in rural areas. They also are critical in responding to outbreaks of diseases, such as cholera or Ebola. Yet, the report shows that primary health clinics typically are much less likely to provide access to WASH services than hospitals. Lack of basic water, sanitation and hygiene facilities compromises the ability of health care workers to carry out proper infection prevention and control measures and demonstrate safe WASH practices to communities, both of which are especially important in controlling and stopping outbreaks.

Source: World Health Organization and United Nations Children's Fund, *Water, Sanitation and Hygiene in Health Care Facilities: Status in low- and middle-income countries and way forward,* WHO, Geneva, 2015.

Many health care facilities still lack basic water, sanitation and hygiene facilities

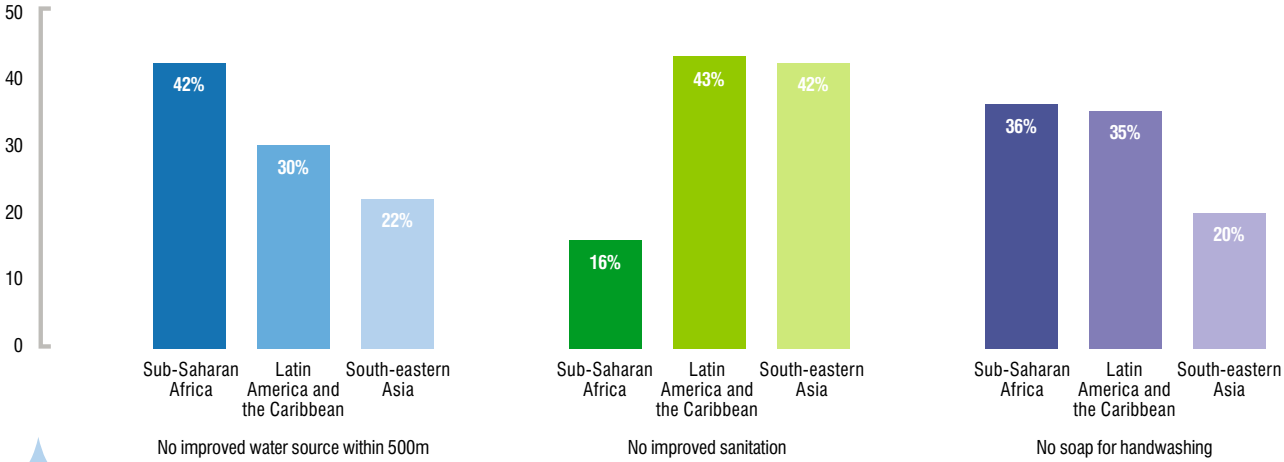


Fig. 42 Proportion of healthcare facilities without basic water, sanitation and hygiene facilities

Annexes

Annex 1
The JMP Method

Over the past 25 years the JMP has benefited enormously from the support and advice of experts, policymakers and practitioners working in the field of drinking water, sanitation and hygiene. The JMP regularly convenes technical advisory groups comprising experts in the field of water, sanitation and hygiene to provide technical advice on specific issues and methodological challenges related to monitoring the MDGs as well as laying the foundations for post-2015 monitoring. The JMP has also established a Strategic Advisory Group that meets annually to provide independent advice on the continued development of the JMP as a reliable and consistent source for estimates of access to drinking water and sanitation at the regional and global levels.

Definitions

The JMP is tasked with providing estimates that are comparable among countries and across time and monitors progress towards MDG target 7c for water and sanitation. To report on progress, the following definitions were adopted:

- An improved drinking water source is one that, by the nature of its construction, adequately protects the source from outside contamination, particularly faecal matter.
- An improved sanitation facility is one that hygienically separates human excreta from human contact. Sanitation facilities shared with other households are not considered to be improved.

The JMP has established a standard set of categories that are used to analyse national data on which the MDG trends and estimates are based (Fig. A1-2). These water and sanitation 'ladders' not only differentiate between improved and unimproved facilities but also provide additional information on service levels. The definitions and data sources used by the JMP are often different from those used by national governments. Estimates in this report may therefore differ from national estimates.

Data sources

This report draws on three main sources of information: household surveys, censuses and administrative reports for data on the use of drinking water sources and sanitation facilities, and population data from the United Nations Population Division.

During the MDG period, the amount and quality of information available on use of drinking water and sanitation facilities has improved dramatically. Since 2000, the number of nationally representative household surveys and censuses in the JMP database has increased six-fold from 272 to 1658 (Fig. A1–5). Together with data from administrative sources, there are now almost 2,000 datasets used in generating the JMP estimates. For the 2015 report, there was an average of eight datasets per country, with at least five for 142 countries (Fig. A1–6).

The population data used in this report, including the proportion of the population living in urban and rural areas, are those established by the United Nations Population Division, 2014 revision.

Estimation method

For each country, the JMP estimates are based on fitting a regression line to a series of data points from household surveys and and censuses (Fig A1-3) . Simple linear regression is used to estimate the proportion of the population using the following drinking water sources:

- Piped supplies on premises
- Improved drinking water sources
- Surface water

and sanitation facilities:

- Improved types of sanitation (including shared facilities of an improved type)
- Open defecation

The remaining population uses unimproved drinking water sources and unimproved sanitation facilities, respectively. Separate regressions are used for urban and rural areas with respective populations added to generate consistent national, regional and global estimates. The percentage of the population that shares a sanitation facility of an otherwise improved type is subtracted from the trend estimates of improved sanitation facilities. This is derived from the average of data

BOX A1
Alternatives to linear regression

When MDG monitoring commenced, linear regression was deemed the best method given the limited amount of often poorly comparable data. The greater availability of data increasingly allows for the exploration of more sophisticated modelling. In 2014, the JMP convened an expert task force to explore alternatives methods and their potential application after the MDGs. Linear regression was compared to piecewise, logit and quadratic regression as well as the use of generalized additive models (GAM). The task force reviewed the evidence on non-linear patterns, concluding that there was evidence of non-linear patterns for some countries but that for many there are still too few data points. More flexible approaches that can better account for curvature will continue to be explored by the JMP post-2015.

The linear regression method remains valid in many country contexts, but recent discussions with national authorities have highlighted its limitations. For example, consultations in China, showed that JMP estimates do not adequately reflect the rapid rise in rural piped water resulting from the billions of dollars invested during the Eleventh Five-Year Plan (2006–2010). Administrative reports published by the Ministry of Water Resources in 2015 estimate that rural coverage of piped water on premises has risen to 75 per cent. However, the JMP method, which is based on older national household surveys and censuses and assumes a continued linear trend, produces a significantly lower estimate of 55 per cent. Differences are frequently observed between administrative reports and estimates based on household surveys and censuses, but discussions with the National Bureau of Statistics also illustrated the impact of using linear and non-linear methods on coverage estimates and suggest that the latter may be more suitable in the context of rapidly accelerating increases in coverage (Fig A1–1).

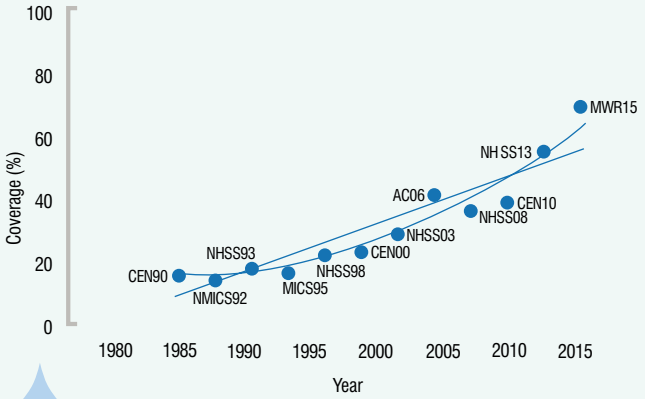


Fig. A1-1 Piped water on premises in rural China

from household surveys or censuses with such a ratio. For a small number of countries, one or two datapoints are available for a short timespan; in such cases an average value is used.

The most recent household survey or census available for most countries was typically conducted two to six years ago. As in previous reports, the JMP extends the regression line by at most two years to provide estimates that can be compared for a single year. Beyond this point the estimates remain unchanged for up to four years unless coverage is below 5 per cent or above 95 per cent, in which case the line is extended indefinitely.

MDG assessment

In this report we present estimates for coverage in 2015 in order to assess whether the MDG target 'to halve the proportion of the population without sustainable access to safe drinking water and basic sanitation' has been met, based on the MDG indicators:

- Use of an improved drinking water source
- Use of an improved sanitation facility

The MDG targets have been calculated for all countries with a suitable baseline year (1990 or 1995). At the global and regional level we assess whether the coverage in 2015 exceeds the target for 2015, using estimates rounded to the nearest percentage point. In recognition of the uncertainty introduced by the regression and by rounding, we classify countries as having met the water or sanitation target when the estimated coverage in 2015 is greater than or within one percentage point of the respective target.

As a result of newly available data, both recent and old, estimates may differ from earlier estimates for the same

Annex 1
The JMP Method

	DRINKING WATER LADDER	SANITATION LADDER
Unimproved	**Surface drinking water sources:** River, dam, lake, pond, stream, canal, irrigation channels.	**Open defecation:** when human faeces are disposed of in fields, forest, bushes, open open bodies of water, beaches or other open spaces or disposed of with solid waste.
Unimproved	**Unimproved drinking water sources:** Unprotected dug well, unprotected spring, cart with small tank/drum, tanker truck, bottled water.[1]	**Unimproved sanitation facilities:** do not ensure hygenic separation of human excreta from human contact. Unimproved facilities include pit latrines without a slab or platform, hanging latrines and bucket latrines.
Improved	**Other improved drinking water sources:** Public taps or standpipes, tube wells or boreholes, protected dug wells, protected springs, rainwater collection.	**Shared sanitation facilities:** Sanitation facilties of an otherwise acceptable type shared between two ir more households. Only facilities that are not shared or not public are considered improved.

Improved	**Piped water on premises:** Piped household water connection located inside the user's dwelling, plot or yard.	**Improved sanitation facilties:** are likely to ensure hygenic separation of human excreta from human contact. They include the following facilities:
		- Flush/pour flush to:
		  - piped sewer system
		  septic tank
		  - pit latrine
		- Ventilated improved pit (VIP) latrine
		- Pit latrine with slab
		- Composing toilet

[1] Bottled water is considered 'improved' for drinking only when the household uses an improved source for cooking and personal hygiene.

Fig. A1-2 The JMP drinking water and sanitation ladders

reference year (including the 1990 baseline year). This report supersedes all earlier assessments, including those in the JMP 2014 update.

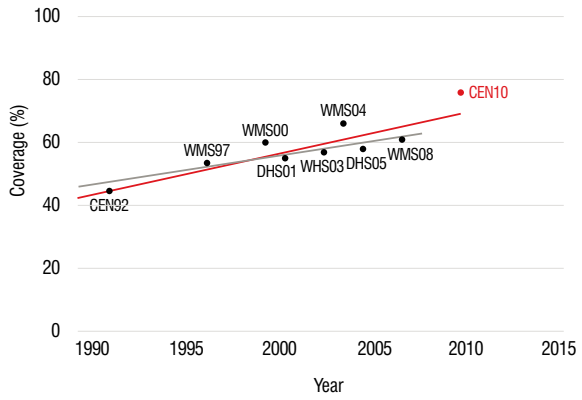


Fig. A1-3 Example of a JMP country file with regression lines

The proportion of datasets drawn from surveys increased from one third in 2000 to four out of five in 2015

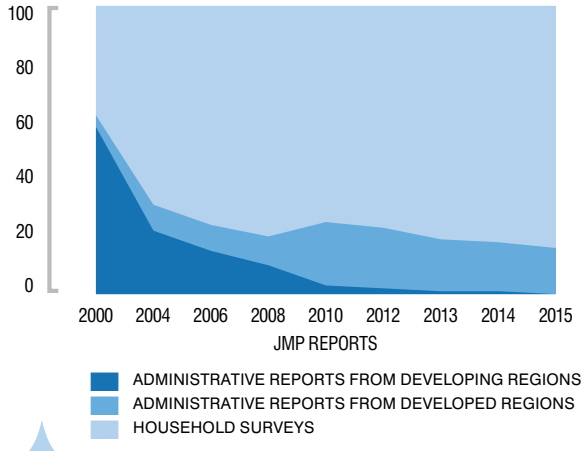


Fig. A1-4 The evolution of JMP data sources

The number of surveys and censuses in the JMP database has increased six-fold since 2000

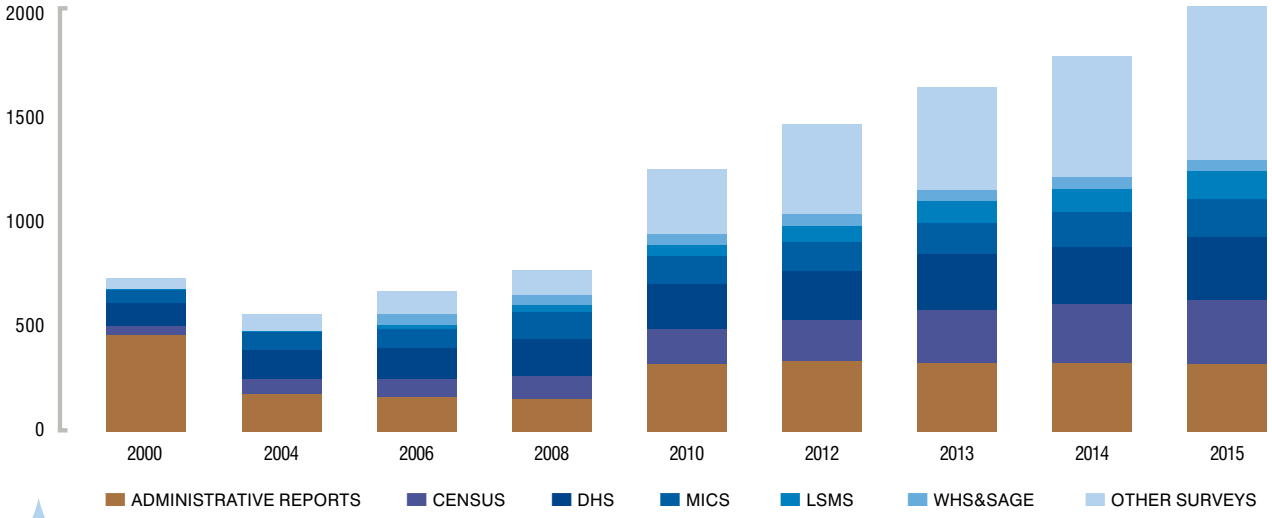


Fig. A1-5 Number of datasets by year of reporting

At least five datasets are available for 142 countries, representing over 90% of the world population

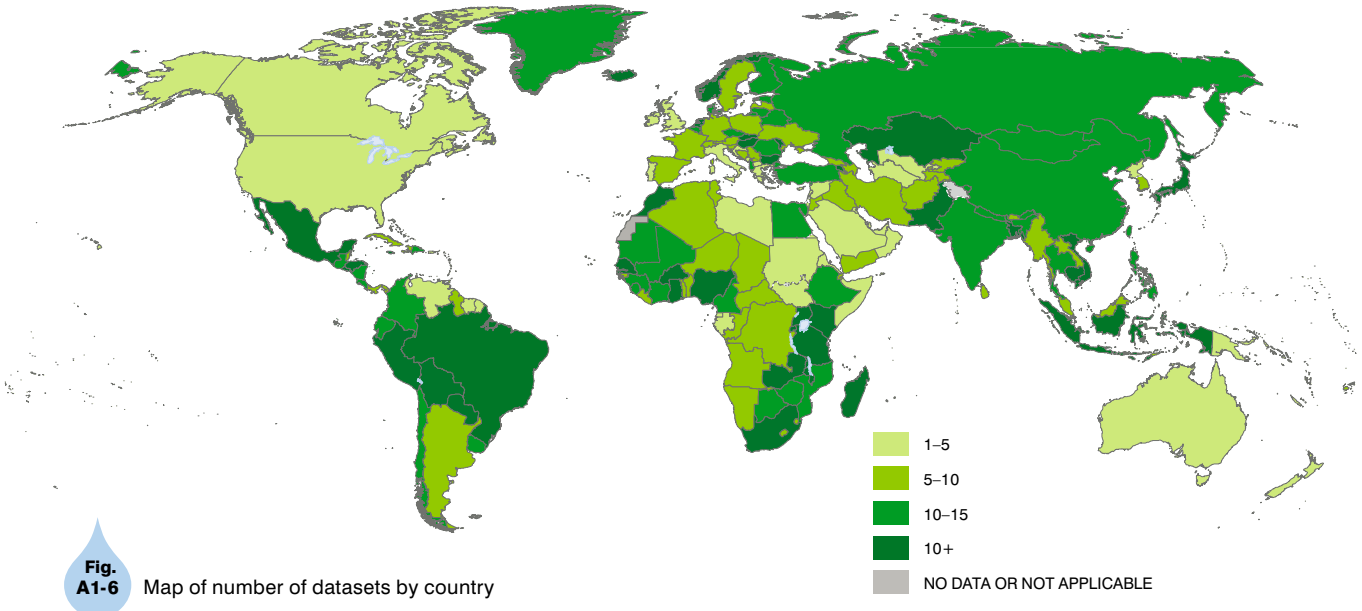


Fig. A1-6 Map of number of datasets by country

Annex 2

Millennium Development Goals: Regional Groupings

SUB-SAHARAN AFRICA
Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mayotte, Mozambique, Namibia, Niger, Nigeria, Réunion, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, Swaziland, Togo, Uganda, United Republic of Tanzania, Zambia, Zimbabwe

NORTHERN AFRICA
Algeria, Egypt, Libya, Morocco, Tunisia, Western Sahara

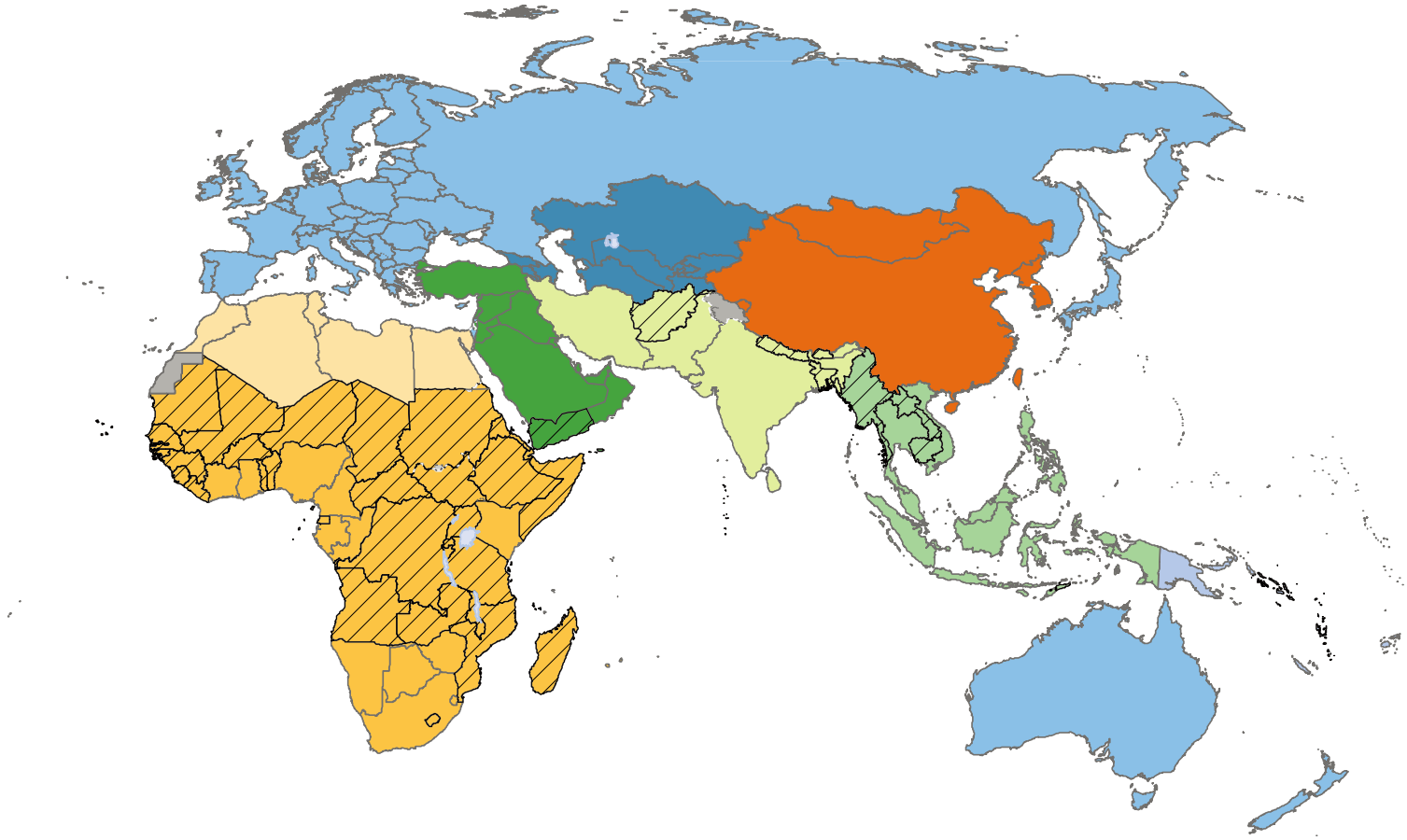
EASTERN ASIA
China, Democratic People's Republic of Korea, Mongolia, Republic of Korea

SOUTHERN ASIA
Afghanistan, Bangladesh, Bhutan, India, Iran (Islamic Republic of), Maldives, Nepal, Pakistan, Sri Lanka

SOUTH-EASTERN ASIA
Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste, Viet Nam

WESTERN ASIA
Bahrain, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Turkey, United Arab Emirates, West Bank and Gaza Strip, Yemen

OCEANIA
American Samoa, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, New Caledonia, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu



LATIN AMERICA AND THE CARIBBEAN

Anguilla, Antigua and Barbuda, Argentina, Aruba, Bahamas, Barbados, Belize, Bolivia (Plurinational State of), Brazil, British Virgin Islands, Cayman Islands, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Falkland Islands, French Guiana, Grenada, Guadeloupe, Guatemala, Guyana, Haiti, Honduras, Jamaica, Martinique, Mexico, Montserrat, Netherlands Antilles, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, Turks and Caicos Islands, United States Virgin Islands, Uruguay, Venezuela (Bolivarian Republic of)

CAUCASUS AND CENTRAL ASIA

Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan

Developed regions

Albania, Andorra, Australia, Austria, Belarus, Belgium, Bermuda, Bosnia and Herzegovina, Bulgaria, Canada, Channel Islands, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Faeroe Islands, Finland, France, Germany, Greece, Greenland, Hungary, Iceland, Ireland, Isle of Man, Israel, Italy, Japan, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Monaco, Montenegro, Netherlands, New Zealand, Norway, Poland, Portugal, Republic of Moldova, Romania, Russian Federation, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, The former Yugoslav Republic of Macedonia, Ukraine, United Kingdom of Great Britain and Northern Ireland, United States of America

Least developed countries

Afghanistan, Angola, Bangladesh, Benin, Bhutan, Burkina Faso, Burundi, Cambodia, Central African Republic, Chad, Comoros, Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Kiribati, Lao People's Democratic Republic, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, Solomon Islands, Somalia, South Sudan, Sudan, Timor-Leste, Togo, Tuvalu, Uganda, United Republic of Tanzania, Vanuatu, Yemen, Zambia

Annex 3
Country, Regional and Global Estimates on Water and Sanitation

Country, area or territory	Year	Population (x1,000)	Percentage urban population	Use of sanitation facilities (percentage of population) [1,2]												Progress towards MDG target [3]	Proportion of the 2015 population that gained access since 1990 (%)
				Urban				Rural				Total					
				Improved	Unimproved			Improved	Unimproved			Improved	Unimproved				
					Shared	Other Unimproved	Open Defecation		Shared	Other Unimproved	Open Defecation		Shared	Other Unimproved	Open Defecation		
Afghanistan	1990 2015	11 731 32 007	18 27	- 45	- 22	- 33	- 0	- 27	- 8	- 48	- 17	- 32	- 12	- 43	- 13	Limited or no progress	-
Albania	1990 2015	3 447 3 197	36 57	94 95	4 4	2 1	0 0	69 90	7 10	23 0	1 0	78 93	6 7	15 0	1 0	**Met target**	NA
Algeria	1990 2015	26 240 40 633	52 71	92 90	7 7	0 3	1 0	68 82	9 11	7 5	16 2	80 88	8 8	4 3	8 1	Good progress	36
American Samoa	1990 2015	47 74	81 94	- -	- -	- -	- -	- -	- -	- -	- -	61 62	36 37	2 0	1 1	Limited or no progress	24
Andorra	1990 2015	53 92	95 85	100 100	0 0	0 0	0 0	100 100	0 0	0 0	0 0	100 100	0 0	0 0	0 0	**Met target**	42
Angola	1990 2015	10 334 22 820	26 44	65 89	- -	1 10	34 1	8 22	- -	18 24	74 54	22 52	- -	14 18	64 30	Good progress	41
Anguilla	1990 2015	8 17	100 100	- 98	- -	- 0	- 2	NA NA	NA NA	NA NA	NA NA	- 98	- -	- 0	- 2	**Met target**	-
Antigua and Barbuda	1990 2015	62 92	35 24	- -	- -	- -	- -	- -	- -	- -	- -	75 -	- -	20 -	5 -	NA	-
Argentina	1990 2015	32 625 42 155	87 92	90 96	2 2	6 1	2 1	70 98	1 2	28 0	1 0	87 96	2 2	9 1	2 1	**Met target**	29
Armenia	1990 2015	3 545 2 989	67 63	95 96	3 3	2 1	0 0	- 78	- 3	- 19	- 0	- 89	- 3	- 8	- 0	Limited or no progress	NA
Aruba	1990 2015	62 104	50 42	- -	- -	- -	- -	- -	- -	- -	- -	99 98	- -	0 1	1 1	Limited or no progress	39
Australia	1990 2015	17 097 23 923	85 89	100 100	0 0	0 0	0 0	100 100	0 0	0 0	0 0	100 100	0 0	0 0	0 0	**Met target**	29
Austria	1990 2015	7 670 8 558	66 66	100 100	0 0	0 0	0 0	100 100	0 0	0 0	0 0	100 100	0 0	0 0	0 0	**Met target**	10
Azerbaijan	1990 2015	7 217 9 613	54 55	- 92	- 8	- 0	- 0	- 87	- 2	- 11	- 0	- 89	- 6	- 5	- 0	**Met target**	-
Bahamas	1990 2015	256 388	80 83	- -	- -	- -	- -	- -	- -	- -	- -	- 92	- 5	- 3	- 0	**Met target**	-
Bahrain	1990 2015	496 1 360	88 89	- -	- -	- -	- -	- -	- -	- -	- -	99 99	- -	1 1	0 0	**Met target**	63
Bangladesh	1990 2015	107 386 160 411	20 34	47 58	24 30	19 12	10 0	31 62	14 28	15 8	40 2	34 61	16 28	16 10	34 1	Good progress	38
Barbados	1990 2015	259 287	33 31	- -	- -	- -	- -	- -	- -	- -	- -	80 96	2 3	18 0	0 1	**Met target**	24
Belarus	1990 2015	10 260 9 260	66 77	94 94	6 6	0 0	0 0	97 95	2 2	1 3	0 0	95 94	4 5	1 1	0 0	Limited or no progress	NA

"-" = no data. "NA" = data not applicable

[1] For communication purposes in its report, JMP reports display these proportions as rounded integers, which together add to 100% for drinking water and sanitation, respectively. For its database, available on the website (www.wssinfo.org), the JMP uses unrounded estimates to achieve greater accuracy when converting coverage estimates into numbers of people with or without access. Any discrepancies between the published estimates and those derived from the JMP web site are due to the published estimates appearing rounded to the nearest integer.

[2] Simple linear regression is used to estimate the proportion of the population using the following drinking water sources: piped water on premises; improved drinking water sources; surface water and sanitation facilities; improved types of sanitation facilities; open defecation. The remaining population uses unimproved drinking water sources and unimproved sanitation facilities, respectively.

Country, area or territory	Year	Use of drinking water sources (percentage of population) [1,2]															Progress towards MDG target [3]	Proportion of the 2015 population that gained access since 1990 (%)
		Urban					Rural					Total						
		Improved					Improved					Improved						
		Total Improved	Piped on premises	Other improved	Unimproved	Surface water	Total Improved	Piped on premises	Other improved	Unimproved	Surface water	Total Improved	Piped on premises	Other improved	Unimproved	Surface water		
Afghanistan	1990	-	3	-	-	-	-	0	-	-	-	-	1	-	-	-	Good progress	-
	2015	78	31	47	20	2	47	5	42	46	7	55	12	43	39	6		
Albania	1990	10	98	2	0	0	-	-	-	-	-	-	-	-	-	-	Limited or no progress	NA
	2015	95	86	9	5	0	95	76	19	5	0	95	82	13	5	0		
Algeria	1990	97	87	10	3	0	85	47	38	13	2	91	67	2	81	1	Limited or no progress	24
	2015	84	82	2	16	0	82	64	18	18	0	84	77	47	6	0		
American Samoa	1990	-	-	-	-	-	-	-	-	-	-	94	65	29	6	-	**Met target**	41
	2015	-	-	-	-	-	-	-	-	-	-	100	92	8	0	0		
Andorra	1990	100	100	0	0	0	100	100	0	0	0	100	100	0	0	0	**Met target**	42
	2015	100	100	0	0	0	100	100	0	0	0	100	100	0	0	0		
Angola	1990	52	19	33	44	4	44	1	43	26	30	46	5	41	30	24	Limited or no progress	28
	2015	75	32	43	21	4	28	2	26	21	51	49	15	34	20	31		
Anguilla	1990	-	-	-	-	-	NA	NA	NA	NA	NA	-	-	-	-	-	**Met target**	-
	2015	95	-	-	5	-	NA	NA	NA	NA	NA	95	-	-	5	-		
Antigua and Barbuda	1990	-	-	-	-	-	-	-	-	-	-	97	61	36	3	-	**Met target**	32
	2015	-	-	-	-	-	-	-	-	-	-	98	-	-	2	-		
Argentina	1990	98	94	4	2	0	69	41	28	19	12	94	87	7	4	2	**Met target**	27
	2015	99	98	1	1	0	100	100	0	0	0	99	98	1	1	0		
Armenia	1990	98	94	4	2	0	-	52	-	-	-	-	81	-	-	-	**Met target**	NA
	2015	100	100	0	0	0	100	99	1	0	0	100	99	1	0	0		
Aruba	1990	-	-	-	-	-	-	-	-	-	-	91	90	1	9	0	**Met target**	44
	2015	-	-	-	-	-	-	-	-	-	-	98	94	5	2	0		
Australia	1990	100	-	-	0	0	100	-	-	0	0	100	-	-	0	0	**Met target**	29
	2015	100	-	-	0	0	100	-	-	0	0	100	-	-	0	0		
Austria	1990	100	100	0	0	0	100	100	0	0	0	100	100	0	0	0	**Met target**	10
	2015	100	100	0	0	0	100	100	0	0	0	100	100	0	0	0		
Azerbaijan	1990	85	65	20	14	1	50	11	39	29	21	69	40	29	20	11	**Met target**	35
	2015	95	89	6	5	0	78	38	40	17	5	87	66	21	11	2		
Bahamas	1990	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**Met target**	-
	2015	-	-	-	-	-	-	-	-	-	-	98	95	3	2	-		
Bahrain	1990	-	-	-	-	-	-	-	-	-	-	95	39	56	5	-	**Met target**	65
	2015	-	-	-	-	-	-	-	-	-	-	100	100	0	0	0		
Bangladesh	1990	81	23	58	17	2	65	0	65	28	7	68	5	63	26	6	**Met target**	41
	2015	87	32	55	13	0	87	1	86	13	0	87	12	75	13	0		
Barbados	1990	-	-	-	-	-	-	-	-	-	-	96	94	2	4	-	**Met target**	13
	2015	-	-	-	-	-	-	-	-	-	-	100	98	2	0	-		
Belarus	1990	100	-	-	0	0	99	-	-	1	0	99	-	-	1	0	**Met target**	NA
	2015	100	98	2	0	0	99	71	28	1	0	100	91	9	0	0		

"-" = no data. "NA" = data not applicable

[3] Global MDG target applied to countries, territories and areas. Method of assessment: "Met target" if 2015 coverage within 1 percentage point of target; "Good progress" if change in coverage between 1990 and 2015 exceeds 2/3 of target, "Moderate progress" if 1/3 to 2/3 and "Limited or no progress" if less than 1/3. Global and regional assessment: "Met target" if 2015 coverage equal to or greater than target.

Annex 3

Country, Regional and Global Estimates on Water and Sanitation

Country, area or territory	Year	Population (x1,000)	Percentage urban population	Use of sanitation facilities (percentage of population) [1,2]												Progress towards MDG target [3]	Proportion of the 2015 population that gained access since 1990 (%)
				Urban				Rural				Total					
				Improved	Unimproved			Improved	Unimproved			Improved	Unimproved				
					Shared	Other Unimproved	Open Defecation		Shared	Other Unimproved	Open Defecation		Shared	Other Unimproved	Open Defecation		
Belgium	1990 2015	9 978 11 183	96 98	99 99	1 1	0 0	0 0	99 99	1 1	0 0	0 0	99 99	1 1	0 0	0 0	**Met target**	11
Belize	1990 2015	188 348	47 44	77 93	5 7	14 0	4 0	75 88	7 8	9 2	9 2	76 91	6 7	11 1	7 1	**Met target**	50
Benin	1990 2015	5 001 10 880	34 44	18 36	16 32	15 7	51 25	1 7	1 10	3 7	95 76	7 20	6 19	8 8	79 53	Limited or no progress	17
Bermuda	1990 2015	60 66	100 100	- -	- -	- -	- -	NA NA	NA NA	NA NA	NA NA	- -	- -	- -	- -	NA	-
Bhutan	1990 2015	536 776	16 39	44 78	13 22	38 0	5 0	14 33	13 32	61 31	12 4	19 50	13 28	57 20	11 2	Good progress	37
Bolivia (Plurinational State of)	1990 2015	6 794 11 025	56 69	42 61	19 27	15 8	24 4	11 28	2 6	15 20	72 46	28 50	12 21	14 12	46 17	Moderate progress	33
Bosnia and Herzegovina	1990 2015	4 527 3 820	39 40	98 99	1 1	1 0	0 0	- 92	- 1	- 7	- 0	- 95	- 1	- 4	- 0	Limited or no progress	NA
Botswana	1990 2015	1 384 2 056	42 57	62 79	5 6	22 15	11 0	23 43	6 11	20 12	51 34	39 63	6 8	21 15	34 14	Good progress	37
Brazil	1990 2015	149 648 203 657	74 86	79 88	1 1	14 11	6 0	31 52	1 1	20 34	48 13	67 83	1 1	15 14	17 2	**Met target**	34
British Virgin Islands	1990 2015	16 24	38 42	- -	- -	- -	- -	- -	- -	- -	- -	98 98	- -	1 1	1 1	**Met target**	32
Brunei Darussalam	1990 2015	257 429	66 77	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	NA	-
Bulgaria	1990 2015	8 821 7 113	66 74	87 87	13 13	0 0	0 0	83 84	16 16	1 0	0 0	85 86	14 14	1 0	0 0	Limited or no progress	NA
Burkina Faso	1990 2015	8 811 17 915	14 30	44 50	32 36	13 5	11 9	2 7	3 10	6 8	89 75	8 20	7 18	7 7	78 55	Limited or no progress	16
Burundi	1990 2015	5 606 10 813	6 12	31 44	27 38	41 16	1 2	42 49	5 6	50 42	3 3	42 48	7 10	48 39	3 3	Limited or no progress	26
Cabo Verde	1990 2015	352 508	44 66	- 82	- -	- 3	- 15	- 54	- -	- 6	- 40	- 72	- -	- 4	- 24	**Met target**	-
Cambodia	1990 2015	9 057 15677	16 21	19 88	3 12	13 0	65 0	0 30	0 7	6 3	94 60	3 42	0 8	8 3	89 47	Good progress	41
Cameroon	1990 2015	12 070 23393	40 54	60 62	22 23	16 14	2 1	27 27	7 7	49 54	17 12	40 46	13 15	36 33	11 6	Limited or no progress	25
Canada	1990 2015	27 658 35 871	77 82	100 100	0 0	0 0	0 0	99 99	- -	1 1	- -	100 100	- -	0 0	0 0	**Met target**	23
Cayman Islands	1990 2015	26 59	100 100	96 96	- -	4 4	- -	NA NA	NA NA	NA NA	NA NA	96 96	- -	4 4	- -	Limited or no progress	53
Central African Republic	1990 2015	2 913 4 803	37 40	20 44	13 28	59 24	8 4	12 7	5 3	37 56	46 34	15 22	8 13	45 43	32 22	Limited or no progress	13
Chad	1990 2015	5 952 13 606	21 22	21 31	12 18	42 37	25 14	4 6	1 1	2 14	93 79	8 12	3 5	10 19	79 64	Limited or no progress	9
Chile	1990 2015	13 214 17 924	83 90	91 100	- -	5 0	4 0	53 91	- -	41 8	6 1	85 99	- -	10 1	5 0	**Met target**	37

Country, area or territory	Year	Use of drinking water sources (percentage of population) [1,2]															Progress towards MDG target [3]	Proportion of the 2015 population that gained access since 1990 (%)
		Urban					Rural					Total						
		Improved					Improved					Improved						
		Total Improved	Piped on premises	Other improved	Unimproved	Surface water	Total Improved	Piped on premises	Other improved	Unimproved	Surface water	Total Improved	Piped on premises	Other improved	Unimproved	Surface water		
Belgium	1990	100	100	0	0	0	100	96	4	0	0	100	100	0	0	0	Met target	11
	2015	100	100	0	0	0	100	100	0	0	0	100	100	0	0	0		
Belize	1990	87	73	14	12	1	60	21	39	29	11	73	45	28	21	6	Met target	60
	2015	99	89	10	1	0	100	74	26	0	0	100	81	19	0	0		
Benin	1990	73	15	58	18	9	49	0	49	23	28	57	5	52	21	22	Met target	52
	2015	85	34	51	14	1	72	5	67	25	3	78	18	60	20	2		
Bermuda	1990	-	-	-	-	-	NA	NA	NA	NA	NA	-	-	-	-	-	NA	-
	2015	-	-	-	-	-	NA	NA	NA	NA	NA	-	-	-	-	-		
Bhutan	1990	97	80	17	2	1	67	42	25	18	15	72	48	24	15	13	Met target	50
	2015	100	80	20	0	0	100	45	55	0	0	100	58	42	0	0		
Bolivia (Plurinational State of)	1990	91	80	11	8	1	40	17	23	18	42	68	52	16	13	19	Met target	48
	2015	97	96	1	3	0	76	59	17	4	20	90	84	6	4	6		
Bosnia and Herzegovina	1990	99	96	3	1	0	96	-	-	4	0	97	-	-	3	0	Met target	NA
	2015	100	93	7	0	0	100	83	17	0	0	100	87	13	0	0		
Botswana	1990	100	40	60	0	0	87	9	78	5	8	92	22	70	3	5	Met target	34
	2015	99	96	3	1	0	92	45	47	4	4	96	74	22	2	2		
Brazil	1990	96	92	4	4	0	68	38	30	18	14	88	78	10	8	4	Met target	33
	2015	100	98	2	0	0	87	70	17	10	3	98	94	4	2	0		
British Virgin Islands	1990	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NA	-
	2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Brunei Darussalam	1990	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NA	-
	2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Bulgaria	1990	100	96	4	0	0	100	66	34	0	0	100	86	14	0	0	Met target	NA
	2015	100	99	1	0	0	99	99	0	0	1	99	99	0	1	0		
Burkina Faso	1990	75	11	64	24	1	39	0	39	51	10	44	2	42	48	8	Met target	61
	2015	97	27	70	3	0	76	0	76	19	5	82	8	74	15	3		
Burundi	1990	96	32	64	2	2	67	1	66	23	10	69	3	66	21	10	Moderate progress	40
	2015	91	49	42	4	5	74	1	73	13	13	76	7	69	12	12		
Cabo Verde	1990	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	Met target	-
	2015	94	63	31	6	0	87	53	34	13	0	92	59	33	8	0		
Cambodia	1990	34	15	19	40	26	22	0	22	42	36	23	2	21	42	35	Met target	62
	2015	100	75	25	0	0	69	7	62	16	15	76	21	55	12	12		
Cameroon	1990	78	25	53	20	2	34	2	32	44	22	51	11	40	35	14	Met target	49
	2015	95	28	67	4	1	53	4	49	31	16	76	17	59	16	8		
Canada	1990	100	100	0	0	0	99	-	-	1	-	100	-	-	0	0	Met target	23
	2015	100	100	0	0	0	99	-	-	1	-	100	-	-	0	0		
Cayman Islands	1990	-	-	-	-	-	NA	NA	NA	NA	NA	-	-	-	-	-	Met target	-
	2015	97	91	6	3	-	NA	NA	NA	NA	NA	97	91	6	3	-		
Central African Republic	1990	80	8	72	18	2	46	0	46	35	19	59	3	56	28	13	Moderate progress	33
	2015	90	4	86	10	0	54	0	54	41	5	68	2	66	29	3		
Chad	1990	49	7	42	48	3	37	0	37	47	16	40	2	38	46	14	Moderate progress	33
	2015	72	25	47	28	0	45	1	44	52	3	51	6	45	46	3		
Chile	1990	99	98	1	1	0	48	38	10	25	27	90	88	2	5	5	Met target	32
	2015	100	100	0	0	0	93	93	0	7	-	99	99	0	1	-		

Annex 3

Country, Regional and Global Estimates on Water and Sanitation

Country, area or territory	Year	Population (x1,000)	Percentage urban population	Use of sanitation facilities (percentage of population) [1,2]												Progress towards MDG target [3]	Proportion of the 2015 population that gained access since 1990 (%)
				Urban				Rural				Total					
				Improved	Unimproved			Improved	Unimproved			Improved	Unimproved				
					Shared	Other Unimproved	Open Defecation		Shared	Other Unimproved	Open Defecation		Shared	Other Unimproved	Open Defecation		
China	1990 2015	1 165 429 1 401 587	26 56	68 87	5 6	24 7	3 0	40 64	2 3	49 31	9 2	48 76	3 5	42 18	7 1	**Met target**	37
Colombia	1990 2015	33 307 49 529	68 76	82 85	11 12	3 2	4 1	41 68	4 6	12 12	43 14	69 81	9 10	6 5	16 4	Good progress	35
Comoros	1990 2015	413 770	28 28	34 48	6 8	60 43	0 1	12 31	2 5	85 63	1 1	18 36	3 6	78 57	1 1	Moderate progress	26
Congo	1990 2015	2 383 4 671	54 65	- 20	- 42	- 36	- 2	- 6	- 9	- 65	- 20	- 15	- 30	- 47	- 8	NA	-
Cook Islands	1990 2015	18 21	58 75	- -	- -	- -	- -	- -	- -	- -	- -	- 98	- -	- 1	- 1	**Met target**	-
Costa Rica	1990 2015	3 079 5 002	50 77	94 95	3 3	2 2	1 0	83 92	4 5	9 3	4 0	88 95	4 4	6 1	2 0	**Met target**	40
Croatia	1990 2015	4 794 4 255	54 59	98 98	1 1	1 1	0 0	96 96	2 2	1 1	1 1	97 97	2 2	1 1	0 0	Limited or no progress	NA
Cuba	1990 2015	10 601 11 249	73 77	86 94	4 5	9 1	1 0	68 89	5 7	22 2	5 2	81 93	5 5	12 1	2 1	**Met target**	16
Cyprus	1990 2015	767 1 165	67 67	100 100	0 0	0 0	0 0	100 100	0 0	0 0	0 0	100 100	0 0	0 0	0 0	**Met target**	34
Czech Republic	1990 2015	10 326 10 777	75 73	99 99	1 1	0 0	0 0	99 99	1 1	0 0	0 0	99 99	1 1	0 0	0 0	**Met target**	4
Côte d'Ivoire	1990 2015	12 116 21 295	39 54	28 33	36 43	30 18	6 6	7 10	10 15	27 24	56 51	15 22	20 30	29 22	36 26	Limited or no progress	14
Democratic People's Republic of Korea	1990 2015	20 194 25 155	58 61	- 88	- 6	- 6	- 0	- 73	- 3	- 24	- 0	- 82	- 5	- 13	- 0	**Met target**	-
Democratic Republic of the Congo	1990 2015	34 911 71 246	31 42	30 29	27 26	39 42	4 3	14 29	7 13	60 42	19 16	19 29	13 19	54 42	14 10	Limited or no progress	19
Denmark	1990 2015	5 140 5 662	85 88	100 100	0 0	0 0	0 0	100 100	0 0	0 0	0 0	100 100	0 0	0 0	0 0	**Met target**	9
Djibouti	1990 2015	590 900	76 77	73 60	6 5	12 31	9 4	44 5	5 1	7 18	44 76	66 47	6 4	11 29	17 20	Limited or no progress	4
Dominica	1990 2015	71 68	68 68	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	NA	NA
Dominican Republic	1990 2015	7 245 10 652	55 79	82 86	10 11	5 1	3 2	62 76	11 14	8 4	19 6	73 84	11 11	6 2	10 3	Good progress	34
Ecuador	1990 2015	10 124 16 226	55 64	74 87	11 13	8 0	7 0	37 81	4 8	20 0	39 11	57 85	8 11	14 0	21 4	**Met target**	49
Egypt	1990 2015	56 337 84 706	43 43	92 97	3 3	4 0	1 0	59 93	4 7	21 0	16 0	73 95	4 5	14 0	9 0	**Met target**	46
El Salvador	1990 2015	5 344 6 426	49 67	72 82	6 7	18 10	4 1	31 60	2 5	33 28	34 7	51 75	4 6	26 16	19 3	**Met target**	32
Equatorial Guinea	1990 2015	374 799	35 40	- 80	- 11	- 6	- 3	- 71	- 6	- 18	- 5	- 75	- 8	- 13	- 4	Limited or no progress	-
Eritrea	1990 2015	3 273 6 738	16 23	59 45	- -	5 19	36 36	0 7	- -	0 4	100 89	9 16	- -	1 7	90 77	Limited or no progress	11

Country, area or territory	Year	Use of drinking water sources (percentage of population) [1,2]															Progress towards MDG target [3]	Proportion of the 2015 population that gained access since 1990 (%)
		Urban					Rural					Total						
		Improved					Improved					Improved						
		Total Improved	Piped on premises	Other improved	Unimproved	Surface water	Total Improved	Piped on premises	Other improved	Unimproved	Surface water	Total Improved	Piped on premises	Other improved	Unimproved	Surface water		
China	1990 2015	97 98	78 87	19 11	2 2	1 0	56 93	11 55	45 38	35 5	9 2	67 95	28 73	39 22	26 4	7 1	**Met target**	40
Colombia	1990 2015	97 97	95 94	2 3	3 3	0 0	69 74	38 68	31 6	14 7	1 19	88 91	77 88	11 3	6 4	6 5	Moderate progress	32
Comoros	1990 2015	96 93	32 62	64 31	3 7	1 0	88 89	9 29	79 60	4 11	8 0	90 90	16 38	74 52	4 10	6 0	Limited or no progress	42
Congo	1990 2015	95 96	- 37	- 59	4 4	1 0	- 40	3 2	- 38	- 33	- 27	- 76	- 25	- 51	- 15	- 9	NA	-
Cook Islands	1990 2015	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	100 100	- 77	- 23	0 0	0 0	**Met target**	15
Costa Rica	1990 2015	99 100	93 100	6 0	1 0	0 0	87 92	72 91	15 1	5 3	8 5	93 98	83 97	10 1	3 1	4 1	**Met target**	41
Croatia	1990 2015	100 100	- 100	- 0	0 0	0 0	96 100	- 100	- 0	3 0	1 0	98 100	- 100	- 0	2 0	0 0	**Met target**	NA
Cuba	1990 2015	94 96	77 83	17 13	6 4	0 0	- 90	- 59	- 31	- 7	- 3	- 95	- 78	- 17	- 4	- 1	**Met target**	-
Cyprus	1990 2015	100 100	100 100	0 0	0 0	0 0	100 100	100 100	0 0	0 0	0 0	100 100	100 100	0 0	0 0	0 0	**Met target**	34
Czech Republic	1990 2015	100 100	96 100	4 0	0 0	0 0	100 100	- 100	- 0	0 0	0 0	100 100	- 100	- 0	0 0	0 0	**Met target**	4
Côte d'Ivoire	1990 2015	90 93	50 66	40 27	10 6	0 1	67 69	5 15	62 54	17 26	16 5	76 82	23 43	53 39	14 15	10 3	Moderate progress	39
Democratic People's Republic of Korea	1990 2015	100 100	- 94	- 6	0 0	0 0	100 99	- 80	- 19	0 1	0 0	100 100	- 89	- 11	0 0	0 0	**Met target**	19
Democratic Republic of the Congo	1990 2015	86 81	48 17	38 64	13 16	1 3	25 31	1 1	24 30	39 52	36 17	44 52	15 8	29 44	31 37	25 11	Limited or no progress	31
Denmark	1990 2015	100 100	100 100	0 0	0 0	0 0	100 100	100 100	0 0	0 0	0 0	100 100	100 100	0 0	0 0	0 0	**Met target**	9
Djibouti	1990 2015	84 97	60 65	24 32	16 2	0 1	61 65	26 10	35 55	33 34	6 1	78 90	52 53	26 37	20 9	2 1	**Met target**	39
Dominica	1990 2015	96 96	- -	- -	4 4	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	NA	NA
Dominican Republic	1990 2015	97 85	93 76	4 9	3 15	0 0	76 82	45 58	31 24	13 14	11 4	87 85	72 72	15 13	8 14	5 1	Limited or no progress	25
Ecuador	1990 2015	84 93	76 93	8 0	15 7	1 0	61 76	38 72	23 4	21 9	18 15	74 87	59 85	15 2	17 7	9 6	**Met target**	41
Egypt	1990 2015	97 100	91 100	6 0	3 0	0 0	91 99	41 99	50 0	6 1	3 0	93 99	63 99	30 0	5 1	2 0	**Met target**	37
El Salvador	1990 2015	90 97	70 88	20 9	9 2	1 1	51 87	15 59	36 28	42 1	7 12	70 94	42 78	28 16	26 2	4 4	**Met target**	35
Equatorial Guinea	1990 2015	- 73	- 13	- 60	- 27	- 0	- 31	0 9	- 22	- 47	- 22	- 48	- 10	- 38	- 39	- 13	Limited or no progress	-
Eritrea	1990 2015	65 73	41 39	24 34	35 27	0 0	44 53	0 0	44 53	38 28	18 19	47 58	7 9	40 49	38 27	15 15	Moderate progress	35

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Country, area or territory	Year	Population (x1,000)	Percentage urban population	Use of sanitation facilities (percentage of population) [1,2]												Progress towards MDG target [3]	Proportion of the 2015 population that gained access since 1990 (%)
				Urban				Rural				Total					
				Improved	Unimproved			Improved	Unimproved			Improved	Unimproved				
					Shared	Other Unimproved	Open Defecation		Shared	Other Unimproved	Open Defecation		Shared	Other Unimproved	Open Defecation		
Estonia	1990 2015	1 565 1 280	71 68	97 98	2 2	1 0	0 0	96 97	3 3	1 0	0 0	97 97	2 3	1 0	0 0	Limited or no progress	NA
Ethiopia	1990 2015	48 043 98 942	13 19	20 27	30 40	11 27	39 6	0 28	0 8	0 30	100 34	3 28	4 14	1 29	92 29	Moderate progress	27
Fiji	1990 2015	728 893	42 54	85 93	4 5	10 2	1 0	37 88	2 5	53 7	8 0	57 91	3 5	35 4	5 0	**Met target**	45
Finland	1990 2015	4 987 5 461	79 84	99 99	1 1	0 0	0 0	88 88	12 12	0 0	0 0	97 98	3 2	0 0	0 0	**Met target**	9
France	1990 2015	56 846 64 983	74 80	99 99	1 1	0 0	0 0	99 99	1 1	0 0	0 0	99 99	1 1	0 0	0 0	**Met target**	12
French Guiana	1990 2015	117 262	75 84	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	NA	-
French Polynesia	1990 2015	198 283	58 56	- -	- -	- -	- -	- -	- -	- -	- -	98 98	- -	0 1	2 1	**Met target**	30
Gabon	1990 2015	947 1 751	69 87	- 43	- 36	- 20	- 1	- 32	- 19	- 45	- 4	- 42	- 34	- 22	- 2	Limited or no progress	-
Gambia	1990 2015	917 1 970	38 60	- 62	- 31	- 7	- 0	- 55	- 14	- 27	- 4	- 59	- 24	- 15	- 2	Limited or no progress	-
Georgia	1990 2015	5 460 4 305	55 54	97 95	3 3	0 2	0 0	99 76	1 1	0 21	0 2	98 86	2 2	0 11	0 1	Limited or no progress	NA
Germany	1990 2015	80 487 82 562	73 75	99 99	1 1	0 0	0 0	99 99	1 1	0 0	0 0	99 99	1 1	0 0	0 0	**Met target**	3
Ghana	1990 2015	14 629 26 984	36 54	13 20	46 73	31 0	10 7	4 9	20 45	47 12	29 34	7 15	29 60	42 6	22 19	Limited or no progress	11
Greece	1990 2015	10 161 11 126	71 78	96 99	1 1	3 0	0 0	83 98	2 2	7 0	8 0	92 99	1 1	5 0	2 0	**Met target**	15
Greenland	1990 2015	56 57	80 86	100 100	0 0	0 0	0 0	100 100	0 0	0 0	0 0	100 100	0 0	0 0	0 0	**Met target**	3
Grenada	1990 2015	96 107	33 36	- -	- -	- -	- -	- -	- -	- -	- -	98 98	- -	1 1	1 1	**Met target**	10
Guadeloupe	1990 2015	385 470	96 98	- 97	- -	- 3	- -	- -	- -	- -	- -	- -	- -	- -	- -	NA	-
Guam	1990 2015	130 170	91 95	- -	- -	- -	- -	- -	- -	- -	- -	89 90	9 9	2 1	0 0	Limited or no progress	22
Guatemala	1990 2015	8 890 16 255	41 52	70 78	14 16	11 4	5 2	31 49	8 12	27 30	34 9	47 64	10 14	21 17	22 5	Moderate progress	38
Guinea	1990 2015	6 020 12 348	28 37	18 34	23 45	54 21	5 0	5 12	3 9	37 55	55 24	8 20	9 22	42 43	41 15	Limited or no progress	16
Guinea-Bissau	1990 2015	1 017 1 788	28 49	- 34	- 28	- 36	- 2	- 8	- 4	- 55	- 33	- 21	- 16	- 46	- 17	Limited or no progress	-
Guyana	1990 2015	725 808	30 29	85 88	8 8	6 4	1 0	72 82	8 9	16 9	4 0	76 84	8 9	13 7	3 0	Good progress	16
Haiti	1990 2015	7 110 10 604	29 59	33 34	38 38	16 20	13 8	11 19	8 13	18 33	63 35	18 28	16 28	18 25	48 19	Limited or no progress	16

Country, area or territory	Year	Use of drinking water sources (percentage of population) [1,2]															Progress towards MDG target [3]	Proportion of the 2015 population that gained access since 1990 (%)
		Urban					Rural					Total						
		Improved					Improved					Improved						
		Total Improved	Piped on premises	Other improved	Unimproved	Surface water	Total Improved	Piped on premises	Other improved	Unimproved	Surface water	Total Improved	Piped on premises	Other improved	Unimproved	Surface water		
Estonia	1990	100	93	7	0	0	97	52	45	3	0	99	81	18	1	0	Met target	NA
	2015	100	100	0	0	0	99	90	9	1	0	100	97	3	0	0		
Ethiopia	1990	84	10	74	8	8	3	0	3	43	54	13	1	12	39	48	Met target	51
	2015	93	56	37	6	1	49	1	48	35	16	57	12	45	30	13		
Fiji	1990	94	92	2	6	0	80	32	48	15	5	86	57	29	11	3	Met target	26
	2015	100	96	4	0	0	91	36	55	5	4	96	68	28	2	2		
Finland	1990	100	97	3	0	0	100	85	15	0	0	100	94	6	0	0	Met target	9
	2015	100	100	0	0	0	100	100	0	0	0	100	100	0	0	0		
France	1990	100	100	0	0	0	100	96	4	0	0	100	99	1	0	0	Met target	13
	2015	100	100	0	0	0	100	100	0	0	0	100	100	0	0	0		
French Guiana	1990	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NA	-
	2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
French Polynesia	1990	-	-	-	-	-	-	-	-	-	-	100	98	2	0	0	Met target	30
	2015	-	-	-	-	-	-	-	-	-	-	100	98	2	0	0		
Gabon	1990	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Met target	-
	2015	97	72	25	2	1	67	15	52	5	28	93	65	28	2	5		
Gambia	1990	86	27	59	14	0	70	1	69	30	0	76	11	65	24	0	Met target	55
	2015	94	52	42	6	0	84	5	79	16	0	90	33	57	10	0		
Georgia	1990	96	82	14	4	0	73	23	50	27	0	85	56	29	15	0	Met target	NA
	2015	100	96	4	0	0	100	62	38	0	0	100	80	20	0	0		
Germany	1990	100	100	0	0	0	100	97	3	0	0	100	99	1	0	0	Met target	3
	2015	100	100	0	0	0	100	100	0	0	0	100	100	0	0	0		
Ghana	1990	84	41	43	8	8	39	2	37	11	50	56	16	40	9	35	Met target	59
	2015	93	32	61	7	0	84	3	81	8	8	89	19	70	7	4		
Greece	1990	100	99	1	0	0	93	84	9	7	0	98	95	3	2	0	Met target	11
	2015	100	100	0	0	0	100	100	0	0	0	100	100	0	0	0		
Greenland	1990	100	100	0	0	0	100	100	0	0	0	100	100	0	0	0	Met target	3
	2015	100	100	0	0	0	100	100	0	0	0	100	100	0	0	0		
Grenada	1990	-	-	-	-	-	-	-	-	-	-	97	-	-	3	0	Limited or no progress	9
	2015	-	-	-	-	-	-	-	-	-	-	97	-	-	3	0		
Guadeloupe	1990	98	98	0	2	-	100	100	0	0	0	98	98	0	2	-	Met target	19
	2015	99	99	0	1	-	100	100	0	0	0	99	99	0	1	-		
Guam	1990	-	-	-	-	-	-	-	-	-	-	100	99	1	0	0	Met target	23
	2015	-	-	-	-	-	-	-	-	-	-	100	98	2	0	0		
Guatemala	1990	90	69	21	8	2	67	37	30	16	17	77	50	27	12	11	Met target	51
	2015	98	97	1	2	0	87	71	16	6	7	93	85	8	3	4		
Guinea	1990	86	19	67	7	7	39	0	39	8	53	52	5	47	8	40	Met target	51
	2015	93	37	56	7	0	67	1	66	25	8	77	14	63	18	5		
Guinea-Bissau	1990	47	14	33	53	0	32	0	32	63	5	36	4	32	60	4	Met target	59
	2015	99	11	88	0	1	60	0	60	37	3	79	6	73	19	2		
Guyana	1990	93	79	14	6	1	74	42	32	20	6	79	53	26	17	4	Met target	27
	2015	98	76	22	2	0	98	64	34	0	2	98	67	31	1	1		
Haiti	1990	91	24	67	4	5	50	1	49	28	22	62	8	54	21	17	Limited or no progress	16
	2015	65	13	52	35	0	48	5	43	46	6	58	10	48	39	3		

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Country, area or territory	Year	Population (x1,000)	Percentage urban population	Use of sanitation facilities (percentage of population) [1,2]												Progress towards MDG target [3]	Proportion of the 2015 population that gained access since 1990 (%)
				Urban				Rural				Total					
				Improved	Unimproved			Improved	Unimproved			Improved	Unimproved				
					Shared	Other Unimproved	Open Defecation		Shared	Other Unimproved	Open Defecation		Shared	Other Unimproved	Open Defecation		
Honduras	1990 2015	4 904 8 424	40 55	70 87	7 9	14 4	9 0	33 78	2 4	16 7	49 11	48 83	4 7	15 5	33 5	**Met target**	55
Hungary	1990 2015	10 385 9 911	66 71	98 98	2 2	0 0	0 0	99 99	1 1	0 0	0 0	98 98	2 2	0 0	0 0	**Met target**	NA
Iceland	1990 2015	255 337	91 94	99 99	1 1	0 0	0 0	100 100	0 0	0 0	0 0	99 99	1 1	0 0	0 0	**Met target**	24
India	1990 2015	868 891 1 282 390	26 33	49 63	16 21	6 6	29 10	6 28	1 5	2 6	91 61	17 40	5 10	3 6	75 44	Moderate progress	28
Indonesia	1990 2015	178 633 255 709	31 54	61 72	8 10	12 5	19 13	24 47	6 12	21 12	49 29	35 61	7 11	18 8	40 20	Good progress	36
Iran (Islamic Republic of)	1990 2015	56 362 79 476	56 73	78 93	6 7	16 0	0 0	62 82	13 18	23 0	2 0	71 90	9 10	19 0	1 0	**Met target**	39
Iraq	1990 2015	17 518 35 767	70 69	- 86	- 11	- 3	- 0	- 84	- 9	- 7	- 0	- 86	- 10	- 4	- 0	**Met target**	-
Ireland	1990 2015	3 531 4 727	57 63	88 89	8 8	4 3	- -	92 93	5 5	3 2	- -	89 90	7 7	4 3	- -	Limited or no progress	24
Israel	1990 2015	4 499 7 920	90 92	100 100	0 0	0 0	0 0	100 100	0 0	0 0	0 0	100 100	0 0	0 0	0 0	**Met target**	43
Italy	1990 2015	56 832 61 142	67 69	99 99	0 0	1 1	0 0	100 100	0 0	0 0	0 0	100 100	0 0	0 0	0 0	**Met target**	7
Jamaica	1990 2015	2 365 2 813	49 55	79 80	19 19	1 0	1 1	81 84	13 14	5 1	1 1	80 82	16 17	3 0	1 1	Limited or no progress	15
Japan	1990 2015	122 249 126 818	77 93	100 100	0 0	0 0	0 0	100 100	0 0	0 0	0 0	100 100	0 0	0 0	0 0	**Met target**	4
Jordan	1990 2015	3 358 7690	73 84	98 99	1 1	1 0	0 0	95 99	1 1	1 0	3 0	97 99	1 1	1 0	1 0	**Met target**	56
Kazakhstan	1990 2015	16 172 16 770	56 53	96 97	3 3	1 0	0 0	97 98	1 1	1 1	1 0	96 98	2 2	1 0	1 0	**Met target**	5
Kenya	1990 2015	23 446 46 749	17 26	27 31	41 48	29 18	3 3	24 30	16 19	38 36	22 15	25 30	20 27	36 31	19 12	Limited or no progress	18
Kiribati	1990 2015	71 106	35 44	43 51	9 11	4 18	44 20	20 31	2 3	14 17	64 49	28 40	5 7	10 17	57 36	Moderate progress	21
Kuwait	1990 2015	2 060 3 583	98 98	100 100	- -	0 0	0 0	100 100	- -	0 0	0 0	100 100	- -	0 0	0 0	**Met target**	43
Kyrgyzstan	1990 2015	4 395 5 708	38 36	93 89	7 7	0 4	0 0	90 96	3 3	6 1	1 0	91 93	4 4	5 3	0 0	Moderate progress	23
Lao People's Democratic Republic	1990 2015	4 245 7 020	15 39	- 94	- 4	- 1	- 1	- 56	- 2	- 5	- 37	- 71	- 3	- 3	- 23	**Met target**	-
Latvia	1990 2015	2 664 2 031	69 67	- 91	- 8	- 1	- 0	- 82	- 2	- 16	- 0	- 88	- 6	- 6	- 0	NA	NA
Lebanon	1990 2015	2 703 5 054	83 88	- -	- -	- -	- -	- -	- -	- -	- -	- 81	- -	- 19	- 0	NA	-
Lesotho	1990 2015	1 598 2 120	14 27	- 37	- 34	- 25	- 4	- 28	- 4	- 25	- 43	- 30	- 12	- 25	- 33	Limited or no progress	-

Country, area or territory	Year	Use of drinking water sources (percentage of population) [1,2]															Progress towards MDG target [3]	Proportion of the 2015 population that gained access since 1990 (%)
		Urban					Rural					Total						
		Improved					Improved					Improved						
		Total Improved	Piped on premises	Other improved	Unimproved	Surface water	Total Improved	Piped on premises	Other improved	Unimproved	Surface water	Total Improved	Piped on premises	Other improved	Unimproved	Surface water		
Honduras	1990 2015	92 97	85 97	7 0	7 3	1 0	60 84	44 82	16 2	5 13	35 3	73 91	60 90	13 1	6 8	21 1	**Met target**	49
Hungary	1990 2015	98 100	94 98	4 2	2 0	0 0	92 100	73 100	19 0	8 0	0 0	96 100	87 98	9 2	4 0	0 0	**Met target**	NA
Iceland	1990 2015	100 100	100 100	0 0	0 0	0 0	100 100	100 100	0 0	0 0	0 0	100 100	100 100	0 0	0 0	0 0	**Met target**	24
India	1990 2015	89 97	47 54	42 43	10 3	1 0	64 93	6 16	58 77	32 6	4 1	71 94	16 28	55 66	26 5	3 1	**Met target**	46
Indonesia	1990 2015	89 94	25 33	64 61	10 6	1 0	61 79	2 9	59 70	31 18	8 3	69 87	9 22	60 65	25 11	6 2	**Met target**	39
Iran (Islamic Republic of)	1990 2015	99 98	97 94	2 4	1 2	0 0	84 92	67 86	17 6	12 8	4 0	92 96	84 92	8 4	6 4	2 0	**Met target**	31
Iraq	1990 2015	95 94	95 83	0 11	3 5	2 1	39 70	29 57	10 13	15 23	46 7	78 87	75 75	3 12	7 10	15 3	Good progress	48
Ireland	1990 2015	96 98	96 98	0 0	4 2	- -	97 98	96 98	1 0	3 2	- -	96 98	96 98	0 0	4 2	- -	**Met target**	26
Israel	1990 2015	100 100	100 100	0 0	0 0	0 0	100 100	98 100	2 0	0 0	0 0	100 100	100 100	0 0	0 0	0 0	**Met target**	43
Italy	1990 2015	100 100	100 100	0 0	0 0	0 0	100 100	97 100	3 0	0 0	0 0	100 100	99 100	1 0	0 0	0 0	**Met target**	7
Jamaica	1990 2015	98 97	89 90	9 7	2 3	0 0	88 89	35 49	53 40	3 8	9 3	93 94	62 72	31 22	2 5	5 1	Limited or no progress	16
Japan	1990 2015	100 100	97 99	3 1	0 0	0 0	100 100	86 95	14 5	0 0	0 0	100 100	94 98	6 2	0 0	0 0	**Met target**	4
Jordan	1990 2015	99 98	97 93	2 5	1 2	0 0	90 92	86 80	4 12	9 7	1 1	96 97	94 91	2 6	4 3	0 0	**Met target**	55
Kazakhstan	1990 2015	97 99	85 91	12 8	3 1	0 0	90 86	24 28	66 58	6 13	4 1	94 93	58 61	36 32	4 6	2 1	Limited or no progress	2
Kenya	1990 2015	92 82	55 45	37 37	5 13	3 5	33 57	10 14	23 43	19 15	48 28	43 63	17 22	26 41	16 15	41 22	Good progress	42
Kiribati	1990 2015	74 87	43 67	31 20	26 13	- -	36 51	16 9	20 42	64 49	- -	50 67	26 35	24 32	50 33	- -	Good progress	34
Kuwait	1990 2015	99 99	- -	- -	1 1	0 0	99 99	- -	- -	1 1	0 0	99 99	- -	- -	1 1	0 0	**Met target**	42
Kyrgyzstan	1990 2015	96 97	80 88	16 9	3 2	1 1	62 86	22 42	40 44	9 4	29 10	75 90	44 58	31 32	6 3	19 7	**Met target**	32
Lao People's Democratic Republic	1990 2015	- 86	- 64	- 22	- 14	- 0	- 69	3 6	- 63	- 24	- 7	- 76	- 28	- 48	- 20	- 4	**Met target**	-
Latvia	1990 2015	100 100	- 97	- 3	0 0	0 0	95 98	- 83	- 15	5 2	0 0	98 99	- 92	- 7	2 1	0 0	**Met target**	NA
Lebanon	1990 2015	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- 99	- 77	- 22	- 1	- -	**Met target**	-
Lesotho	1990 2015	93 95	26 70	67 25	7 5	0 0	75 77	2 4	73 73	23 22	2 1	77 82	6 22	71 60	21 18	2 0	Moderate progress	23

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Country, Regional and Global Estimates on Water and Sanitation

Country, area or territory	Year	Population (x1,000)	Percentage urban population	Use of sanitation facilities (percentage of population) [1,2]												Progress towards MDG target [3]	Proportion of the 2015 population that gained access since 1990 (%)
				Urban				Rural				Total					
					Unimproved				Unimproved				Unimproved				
				Improved	Shared	Other Unimproved	Open Defecation	Improved	Shared	Other Unimproved	Open Defecation	Improved	Shared	Other Unimproved	Open Defecation		
Liberia	1990 2015	2 103 4 503	55 50	- 28	- 31	- 14	- 27	- 6	- 19	- 7	- 68	- 17	- 25	- 10	- 48	Limited or no progress	-
Libya	1990 2015	4 260 6 317	76 79	97 97	- -	3 3	- -	96 96	- -	4 4	- -	97 97	- -	3 3	- -	Limited or no progress	31
Lithuania	1990 2015	3 697 2 999	68 67	91 97	2 2	7 1	- -	66 83	2 2	32 15	- -	83 92	2 2	15 6	- -	**Met target**	NA
Luxembourg	1990 2015	382 543	81 90	98 98	2 2	0 0	0 0	99 99	1 1	0 0	0 0	98 98	2 2	0 0	0 0	**Met target**	29
Madagascar	1990 2015	11 546 24 235	24 35	15 18	23 27	38 37	24 18	8 9	11 13	21 26	60 52	9 12	14 18	26 30	51 40	Limited or no progress	8
Malawi	1990 2015	9 447 17 309	12 16	46 47	36 37	14 15	4 1	27 40	14 21	26 34	33 5	29 41	17 24	25 31	29 4	Moderate progress	25
Malaysia	1990 2015	18 211 30 651	50 75	90 96	4 4	5 0	1 0	83 96	4 4	5 0	8 0	86 96	4 4	6 0	4 0	**Met target**	45
Maldives	1990 2015	216 358	26 46	98 97	2 2	0 1	0 0	58 98	1 2	10 0	31 0	68 98	1 2	8 0	23 0	**Met target**	57
Mali	1990 2015	7 964 16 259	23 40	31 38	35 43	29 17	5 2	9 16	6 10	48 59	37 15	14 25	13 23	43 42	30 10	Limited or no progress	18
Malta	1990 2015	375 431	90 95	100 100	0 0	0 0	0 0	100 100	0 0	0 0	0 0	100 100	0 0	0 0	0 0	**Met target**	13
Marshall Islands	1990 2015	47 59	65 73	77 84	11 12	10 2	2 2	41 56	9 13	29 10	21 21	65 77	10 12	17 4	8 7	Good progress	25
Martinique	1990 2015	358 406	86 89	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	NA	-
Mauritania	1990 2015	2 024 4 080	41 60	29 58	10 20	37 10	24 12	6 14	3 5	17 12	74 69	16 40	6 14	25 11	53 35	Moderate progress	32
Mauritius	1990 2015	1 056 1 254	44 40	93 94	6 6	1 0	0 0	89 93	6 7	5 0	0 0	91 93	6 6	3 1	0 0	Moderate progress	16
Mexico	1990 2015	86 077 125 236	71 79	79 88	9 10	2 2	10 0	34 74	5 11	10 11	51 4	66 85	8 10	4 4	22 1	**Met target**	40
Micronesia (Federated States of)	1990 2015	96 104	26 22	49 85	- -	46 10	5 5	9 49	- -	80 40	11 11	19 57	- -	72 33	9 10	Good progress	39
Monaco	1990 2015	31 35	100 100	100 100	0 0	0 0	0 0	NA NA	NA NA	NA NA	NA NA	100 100	0 0	0 0	0 0	**Met target**	13
Mongolia	1990 2015	2 184 2 923	57 72	65 66	31 32	3 1	1 1	- 43	- 30	- 0	- 27	- 60	- 31	- 0	- 9	Moderate progress	-
Montenegro	1990 2015	615 622	48 64	- 98	- 2	- 0	- 0	- 92	- 2	- 6	- 0	- 96	- 2	- 2	- 0	NA	-
Montserrat	1990 2015	11 6	13 15	- -	- -	- -	- -	- -	- -	- -	- -	70 -	8 -	10 -	12 -	NA	NA
Morocco	1990 2015	24 675 33 955	48 60	81 84	14 14	0 2	5 0	26 66	3 8	2 3	69 23	52 77	8 12	2 2	38 9	**Met target**	39
Mozambique	1990 2015	13 568 27 122	25 32	34 42	7 8	29 37	30 13	2 10	0 2	23 36	75 52	10 21	2 4	24 36	64 39	Limited or no progress	15

Country, area or territory	Year	Use of drinking water sources (percentage of population) [1,2]															Progress towards MDG target [3]	Proportion of the 2015 population that gained access since 1990 (%)
		Urban					Rural					Total						
		Improved			Unimproved	Surface water	Improved			Unimproved	Surface water	Improved			Unimproved	Surface water		
		Total Improved	Piped on premises	Other improved			Total Improved	Piped on premises	Other improved			Total Improved	Piped on premises	Other improved				
Liberia	1990	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	Good progress	-
	2015	89	4	85	9	2	63	1	62	5	32	76	2	74	7	17		
Libya	1990	72	-	-	28	-	68	-	-	32	-	71	-	-	29	-	NA	-
	2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Lithuania	1990	94	89	5	6	-	72	45	27	28	-	87	74	13	13	-	**Met target**	NA
	2015	100	99	1	0	0	90	81	9	10	-	97	93	4	3	-		
Luxembourg	1990	100	100	0	0	0	100	98	2	0	0	100	100	0	0	0	**Met target**	30
	2015	100	100	0	0	0	100	100	0	0	0	100	100	0	0	0		
Madagascar	1990	71	22	49	14	15	17	2	15	30	53	29	6	23	27	44	Moderate progress	37
	2015	82	16	66	12	6	35	2	33	34	31	52	7	45	26	22		
Malawi	1990	91	37	54	6	3	36	2	34	45	19	42	6	36	41	17	**Met target**	67
	2015	96	33	63	4	0	89	3	86	10	1	90	8	81	9	1		
Malaysia	1990	95	88	7	5	0	86	65	21	12	2	90	76	14	9	1	**Met target**	45
	2015	100	100	0	0	0	93	86	7	5	2	98	96	2	1	1		
Maldives	1990	100	50	50	0	0	91	0	91	9	0	93	13	80	7	0	**Met target**	42
	2015	100	99	1	0	0	98	1	97	2	0	99	46	53	1	0		
Mali	1990	53	18	35	45	2	19	0	19	71	10	27	4	23	65	8	**Met target**	64
	2015	97	37	60	3	0	64	2	62	34	2	77	16	61	22	1		
Malta	1990	100	100	0	0	0	98	98	0	2	0	100	100	0	0	0	**Met target**	13
	2015	100	100	0	0	0	100	100	0	0	0	100	100	0	0	0		
Marshall Islands	1990	91	4	87	9	-	94	0	94	6	-	92	3	89	8	-	**Met target**	20
	2015	94	4	90	6	-	98	0	98	2	-	95	3	92	5	-		
Martinique	1990	-	-	-	-	-	100	-	-	0	0	-	-	-	-	-	**Met target**	-
	2015	100	100	0	0	0	100	-	-	0	0	100	-	-	0	0		
Mauritania	1990	35	15	20	64	1	25	0	25	66	9	29	6	23	65	6	Good progress	43
	2015	58	40	18	42	0	57	21	36	39	4	58	33	25	41	1		
Mauritius	1990	100	99	1	0	0	99	98	1	1	0	99	99	0	1	0	**Met target**	16
	2015	100	100	0	0	0	100	100	0	0	0	100	100	0	0	0		
Mexico	1990	91	86	5	5	4	59	49	10	8	33	82	75	7	6	12	**Met target**	40
	2015	97	96	1	3	0	92	79	13	8	0	96	92	4	4	0		
Micronesia (Federated States of)	1990	94	-	-	3	3	90	-	-	2	8	91	-	-	2	7	Limited or no progress	5
	2015	95	42	53	2	3	87	36	51	5	8	89	37	52	4	7		
Monaco	1990	100	100	0	0	0	NA	NA	NA	NA	NA	100	100	0	0	0	**Met target**	13
	2015	100	100	0	0	0	NA	NA	NA	NA	NA	100	100	0	0	0		
Mongolia	1990	77	44	33	18	5	22	2	20	23	55	53	26	27	20	27	Moderate progress	25
	2015	66	33	33	34	0	59	2	57	25	16	64	24	40	32	4		
Montenegro	1990	99	99	0	1	0	-	-	-	-	-	-	-	-	-	-	NA	-
	2015	100	94	6	0	0	99	66	33	1	0	100	84	16	0	0		
Montserrat	1990	-	-	-	-	-	-	-	-	-	-	97	91	6	3	-	**Met target**	NA
	2015	-	-	-	-	-	-	-	-	-	-	99	96	3	1	-		
Morocco	1990	94	75	19	6	0	53	4	49	42	5	73	38	35	24	3	Good progress	33
	2015	99	91	8	1	0	65	23	42	29	6	85	64	21	13	2		
Mozambique	1990	72	20	52	25	3	23	1	22	45	32	35	6	29	40	25	Moderate progress	33
	2015	81	25	56	15	4	37	1	36	48	15	51	9	42	38	11		

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Country, Regional and Global Estimates on Water and Sanitation

Country, area or territory	Year	Population (x1,000)	Percentage urban population	Use of sanitation facilities (percentage of population) [1,2]												Progress towards MDG target [3]	Proportion of the 2015 population that gained access since 1990 (%)
				Urban				Rural				Total					
				Improved	Unimproved			Improved	Unimproved			Improved	Unimproved				
					Shared	Other Unimproved	Open Defecation		Shared	Other Unimproved	Open Defecation		Shared	Other Unimproved	Open Defecation		
Myanmar	1990 2015	42 123 54 164	25 34	- 84	- 13	- 2	- 1	- 77	- 11	- 6	- 6	- 80	- 12	- 4	- 4	**Met target**	-
Namibia	1990 2015	1 415 2 392	28 47	61 54	23 21	5 5	11 20	10 17	2 4	6 6	82 73	24 34	8 12	6 6	62 48	Limited or no progress	20
Nauru	1990 2015	9 11	100 100	66 66	31 31	2 0	1 3	NA NA	NA NA	NA NA	NA NA	66 66	31 31	2 0	1 3	Limited or no progress	9
Nepal	1990 2015	18 111 28 441	9 19	35 56	24 37	7 1	34 6	1 43	0 13	6 7	93 37	4 46	2 18	6 4	88 32	Good progress	43
Netherlands	1990 2015	14 890 16 844	69 90	98 98	2 2	0 0	0 0	100 100	0 0	0 0	0 0	98 98	2 2	0 0	0 0	**Met target**	11
New Caledonia	1990 2015	169 263	60 70	- -	- -	- -	- -	- -	- -	- -	- -	100 100	- -	0 0	0 0	**Met target**	36
New Zealand	1990 2015	3 398 4 596	85 86	- -	- -	- -	- -	88 -	- -	12 -	- -	- -	- -	- -	- -	NA	-
Nicaragua	1990 2015	4 138 6 257	52 59	60 76	8 10	27 12	5 2	26 56	3 7	27 23	44 14	44 68	6 9	27 16	23 7	Good progress	39
Niger	1990 2015	7 754 19 268	15 19	19 38	14 28	40 20	27 14	1 5	1 3	2 6	96 86	4 11	3 7	7 9	86 73	Limited or no progress	9
Nigeria	1990 2015	95 617 183 523	30 48	38 33	43 38	12 14	7 15	38 25	16 11	15 30	31 34	38 29	24 24	14 22	24 25	Limited or no progress	9
Niue	1990 2015	2 1	31 40	- -	- -	- -	- -	- -	- -	- -	- -	- 100	- -	- 0	- 0	**Met target**	NA
Northern Mariana Islands	1990 2015	44 66	90 92	- -	- -	- -	- -	- -	- -	- -	- -	69 80	16 19	15 1	0 0	Good progress	34
Norway	1990 2015	4 240 5 143	72 80	98 98	2 2	0 0	0 0	98 98	2 2	0 0	0 0	98 98	2 2	0 0	0 0	**Met target**	17
Oman	1990 2015	1 810 4 158	66 78	95 97	- -	1 0	4 3	55 95	- -	8 0	37 5	82 97	- -	3 0	15 3	**Met target**	61
Pakistan	1990 2015	111 091 188 144	31 39	66 83	6 7	20 9	8 1	5 51	1 10	27 18	67 21	24 64	2 9	25 14	49 13	**Met target**	50
Palau	1990 2015	15 21	70 87	63 100	- -	37 0	- 0	8 100	- -	92 0	- 0	46 100	- -	54 0	- 0	**Met target**	67
Panama	1990 2015	2 487 3 988	54 67	76 84	7 8	15 7	2 1	39 58	4 6	34 27	23 9	59 75	6 7	23 15	12 3	Good progress	38
Papua New Guinea	1990 2015	4 158 7 632	15 13	62 56	10 9	25 31	3 4	13 13	3 3	66 71	18 13	20 19	4 3	60 67	16 11	Limited or no progress	8
Paraguay	1990 2015	4 250 7 033	49 60	74 95	3 5	22 0	1 0	32 78	0 1	64 21	4 0	52 89	2 3	43 8	3 0	**Met target**	57
Peru	1990 2015	21 772 31 161	69 79	70 82	9 10	6 7	15 1	14 53	1 4	11 23	74 20	53 76	6 9	8 10	33 5	**Met target**	39
Philippines	1990 2015	61 949 101 803	49 44	69 78	17 19	7 0	7 3	46 71	12 18	19 1	23 10	57 74	14 18	14 1	15 7	Good progress	39
Poland	1990 2015	38 150 38 222	61 61	94 98	1 1	5 1	0 0	- 97	- 1	- 2	- 0	- 97	- 1	- 2	- 0	NA	-

Country, area or territory	Year	Use of drinking water sources (percentage of population) [1,2]															Progress towards MDG target [3]	Proportion of the 2015 population that gained access since 1990 (%)
		Urban					Rural					Total						
		Improved					Improved					Improved						
		Total Improved	Piped on premises	Other improved	Unimproved	Surface water	Total Improved	Piped on premises	Other improved	Unimproved	Surface water	Total Improved	Piped on premises	Other improved	Unimproved	Surface water		
Myanmar	1990	80	17	63	8	12	51	1	50	18	31	58	5	53	15	27	Met target	35
	2015	93	19	74	7	0	74	3	71	18	8	81	8	73	14	5		
Namibia	1990	99	82	17	1	0	58	13	45	31	11	70	32	38	22	8	Met target	50
	2015	98	69	29	2	0	85	34	51	0	15	91	51	40	1	8		
Nauru	1990	-	-	-	-	-	NA	NA	NA	NA	NA	-	-	-	-	-	NA	-
	2015	97	68	29	3	-	NA	NA	NA	NA	NA	97	68	29	3	-		
Nepal	1990	97	45	52	2	1	63	2	61	30	7	66	6	60	27	7	Met target	50
	2015	91	50	41	8	1	92	18	74	6	2	92	24	68	6	2		
Netherlands	1990	100	100	0	0	0	100	100	0	0	0	100	100	0	0	0	Met target	12
	2015	100	100	0	0	0	100	100	0	0	0	100	100	0	0	0		
New Caledonia	1990	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NA	-
	2015	-	-	-	-	-	-	-	-	-	-	98	94	4	2	-		
New Zealand	1990	100	100	0	0	0	100	100	0	0	0	100	100	0	0	0	Met target	26
	2015	100	100	0	0	0	100	100	0	0	0	100	100	0	0	0		
Nicaragua	1990	91	82	9	8	1	53	18	35	32	15	73	51	22	19	8	Met target	39
	2015	99	91	8	1	0	69	31	38	25	6	87	66	21	10	3		
Niger	1990	61	22	39	38	1	29	0	29	68	3	34	4	30	63	3	Good progress	45
	2015	100	41	59	0	0	49	1	48	48	3	58	9	49	39	3		
Nigeria	1990	76	32	44	18	6	25	3	22	25	50	40	12	28	23	37	Met target	48
	2015	81	3	78	16	3	57	1	56	27	16	69	2	67	21	10		
Niue	1990	-	-	-	-	-	-	-	-	-	-	99	98	1	1	-	Met target	NA
	2015	-	-	-	-	-	-	-	-	-	-	99	98	1	1	-		
Northern Mariana Islands	1990	-	-	-	-	-	-	-	-	-	-	94	71	23	6	-	Met target	35
	2015	-	-	-	-	-	-	-	-	-	-	98	84	13	2	-		
Norway	1990	100	100	0	0	0	100	100	0	0	0	100	100	0	0	0	Met target	18
	2015	100	100	0	0	0	100	100	0	0	0	100	100	0	0	0		
Oman	1990	83	30	53	13	4	70	3	67	20	10	79	21	58	15	6	Met target	59
	2015	95	85	10	1	4	86	39	47	14	-	93	74	19	7	-		
Pakistan	1990	96	51	45	3	1	82	9	73	7	11	86	22	64	6	8	Good progress	40
	2015	94	61	33	6	0	90	25	65	7	3	91	39	52	7	2		
Palau	1990	98	98	0	2	-	72	72	0	28	-	90	90	0	10	-	NA	-
	2015	97	97	0	3	-	-	-	-	-	-	-	-	-	-	-		
Panama	1990	98	95	3	2	0	67	63	4	20	13	84	80	4	10	6	Met target	42
	2015	98	97	1	2	0	89	83	6	6	5	95	92	3	3	2		
Papua New Guinea	1990	87	61	26	7	6	24	4	20	27	49	34	12	22	23	43	Limited or no progress	22
	2015	88	55	33	9	3	33	3	30	19	48	40	9	31	18	42		
Paraguay	1990	85	61	24	14	1	23	0	23	65	12	53	30	23	40	7	Met target	66
	2015	100	93	7	0	0	95	68	27	5	0	98	83	15	2	0		
Peru	1990	88	73	15	11	1	44	13	31	28	28	74	55	19	17	9	Met target	35
	2015	91	86	5	8	1	69	48	21	16	15	87	78	9	9	4		
Philippines	1990	91	43	48	7	2	77	9	68	16	7	84	25	59	12	4	Met target	41
	2015	94	59	35	6	0	90	30	60	6	4	92	43	49	5	3		
Poland	1990	99	98	1	1	0	87	77	10	13	0	94	90	4	6	0	Met target	4
	2015	99	99	0	1	0	97	97	0	3	0	98	98	0	2	0		

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Country, area or territory	Year	Population (x1,000)	Percentage urban population	Use of sanitation facilities (percentage of population) [1,2]												Progress towards MDG target [3]	Proportion of the 2015 population that gained access since 1990 (%)
				Urban				Rural				Total					
				Improved	Unimproved			Improved	Unimproved			Improved	Unimproved				
					Shared	Other Unimproved	Open Defecation		Shared	Other Unimproved	Open Defecation		Shared	Other Unimproved	Open Defecation		
Portugal	1990 2015	9 899 10 610	48 63	97 100	0 0	3 0	0 0	89 100	0 0	11 0	0 0	93 100	0 0	7 0	0 0	**Met target**	13
Puerto Rico	1990 2015	3 518 3 680	93 94	- -	- -	- -	- -	- -	- -	- -	- -	99 99	- -	0 0	1 1	**Met target**	4
Qatar	1990 2015	477 2 351	93 99	- -	- -	- -	- -	- -	- -	- -	- -	100 98	0 0	0 2	0 -	Limited or no progress	78
Republic of Korea	1990 2015	42 972 49 750	74 82	100 100	- -	0 0	0 0	100 100	- -	0 0	0 0	100 100	- -	0 0	0 0	**Met target**	14
Republic of Moldova	1990 2015	4 364 3 437	47 45	86 88	9 9	5 3	0 0	- 67	- 6	- 27	- 0	- 76	- 8	- 16	- 0	Moderate progress	NA
Romania	1990 2015	23 372 21 579	53 55	88 92	1 1	11 7	- -	50 63	1 1	49 36	- -	70 79	1 1	29 20	- -	Moderate progress	NA
Russian Federation	1990 2015	148 149 142 098	73 74	78 77	16 15	5 7	1 1	58 59	11 11	30 29	1 1	73 72	14 14	12 13	1 1	Limited or no progress	NA
Rwanda	1990 2015	7 215 12 428	5 29	61 59	25 24	11 16	3 1	32 63	4 8	56 27	8 2	33 62	5 13	55 23	7 2	Good progress	42
Réunion	1990 2015	611 895	81 95	98 98	- -	2 2	- -	95 95	- -	5 5	- -	98 98	- -	2 2	- -	**Met target**	32
Saint Kitts and Nevis	1990 2015	41 56	35 32	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	NA	-
Saint Lucia	1990 2015	138 185	29 19	80 85	6 7	7 1	7 7	78 92	6 7	3 0	13 1	78 91	6 7	5 0	11 2	**Met target**	32
Saint Vincent and the Grenadines	1990 2015	108 109	41 51	- -	- -	- -	- -	- -	- -	- -	- -	63 -	- -	33 -	4 -	NA	-
Samoa	1990 2015	163 193	21 19	94 93	5 5	1 2	0 0	92 91	6 6	2 3	0 0	93 91	6 6	1 3	0 0	Limited or no progress	13
San Marino	1990 2015	24 33	90 94	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	NA	-
Sao Tome and Principe	1990 2015	117 203	44 65	- 41	- 6	- 5	- 48	- 23	- 7	- 4	- 66	- 35	- 6	- 5	- 54	Moderate progress	-
Saudi Arabia	1990 2015	16 206 29 898	77 83	- -	- -	- -	- -	- -	- -	- -	- -	92 100	- -	3 0	5 0	**Met target**	50
Senegal	1990 2015	7 514 14 967	39 44	58 65	20 22	14 12	8 1	21 34	5 8	18 34	56 24	36 48	11 15	16 23	37 14	Moderate progress	30
Serbia	1990 2015	9 735 9 424	50 56	98 98	1 1	1 1	0 0	96 94	1 1	3 5	0 0	97 96	1 1	2 3	0 0	Limited or no progress	NA
Seychelles	1990 2015	69 94	49 54	- -	- -	- -	- -	- -	- -	- -	- -	98 98	- -	1 1	1 1	**Met target**	25
Sierra Leone	1990 2015	4 043 6 319	33 40	21 23	42 45	36 24	1 8	5 7	14 21	51 38	30 34	10 13	23 31	47 32	20 24	Limited or no progress	7
Singapore	1990 2015	3 016 5 619	100 100	99 100	- -	1 0	0 0	NA NA	NA NA	NA NA	NA NA	99 100	- -	1 0	0 0	**Met target**	47
Slovakia	1990 2015	5 278 5 458	56 54	99 99	1 1	0 0	0 0	98 98	2 2	0 0	0 0	99 99	1 1	0 0	0 0	**Met target**	3

Country, area or territory	Year	Use of drinking water sources (percentage of population) [1,2]															Progress towards MDG target [3]	Proportion of the 2015 population that gained access since 1990 (%)
		Urban					Rural					Total						
		Improved			Unimproved	Surface water	Improved			Unimproved	Surface water	Improved			Unimproved	Surface water		
		Total Improved	Piped on premises	Other improved			Total Improved	Piped on premises	Other improved			Total Improved	Piped on premises	Other improved				
Portugal	1990 2015	98 100	96 100	2 0	2 0	0 0	95 100	83 100	12 0	5 0	0 0	96 100	89 100	7 0	4 0	0 0	**Met target**	10
Puerto Rico	1990 2015	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	94 -	87 -	7 -	6 -	- -	NA	-
Qatar	1990 2015	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- 100	- 94	- 6	- 0	- 0	**Met target**	-
Republic of Korea	1990 2015	97 100	96 99	1 1	3 0	0 0	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	NA	-
Republic of Moldova	1990 2015	97 97	- 86	- 11	3 3	0 0	- 81	0 28	- 53	- 19	- 0	- 88	- 54	- 34	- 12	- 0	Moderate Progress	NA
Romania	1990 2015	94 100	88 -	6 -	6 0	- 0	52 100	13 -	39 -	48 0	- 0	74 100	53 -	21 -	26 0	- 0	**Met target**	NA
Russian Federation	1990 2015	98 99	87 94	11 5	2 1	0 0	82 91	33 69	49 22	17 6	1 3	93 97	73 87	20 10	7 2	0 1	**Met target**	NA
Rwanda	1990 2015	85 87	19 28	66 59	6 9	9 4	57 72	0 2	57 70	17 17	26 11	58 76	1 9	57 67	17 15	25 9	Good progress	42
Réunion	1990 2015	99 99	99 99	0 0	1 1	- -	98 98	98 98	0 0	2 2	- -	99 99	99 99	0 0	1 1	- -	**Met target**	32
Saint Kitts and Nevis	1990 2015	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	98 98	- -	- -	2 2	- -	**Met target**	26
Saint Lucia	1990 2015	95 100	81 91	14 9	5 0	- 0	91 96	63 87	28 9	9 4	- -	93 96	68 87	25 9	7 4	- -	**Met target**	27
Saint Vincent and the Grenadines	1990 2015	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	88 95	52 -	36 -	12 5	- -	**Met target**	8
Samoa	1990 2015	97 97	82 91	15 6	3 2	0 1	87 99	72 84	15 15	13 0	0 1	89 99	74 85	15 14	11 0	0 1	**Met target**	24
San Marino	1990 2015	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	NA	-
Sao Tome and Principe	1990 2015	- 99	- 39	- 60	- 1	- 0	- 94	- 22	- 72	- 2	- 4	- 97	- 33	- 64	- 1	- 2	**Met target**	-
Saudi Arabia	1990 2015	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	92 97	58 -	34 -	8 3	- -	**Met target**	47
Senegal	1990 2015	89 93	47 80	42 13	11 7	0 0	41 67	0 32	41 35	57 32	2 1	60 79	18 53	42 26	39 20	1 1	**Met target**	48
Serbia	1990 2015	100 99	97 96	3 3	0 1	0 0	99 99	- 91	- 8	1 1	0 0	99 99	- 94	- 5	1 1	0 0	**Met target**	NA
Seychelles	1990 2015	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	96 96	- 94	- 2	1 1	4 4	Limited or no progress	25
Sierra Leone	1990 2015	70 85	16 11	54 74	23 9	7 6	20 48	1 1	19 47	24 22	56 30	37 63	6 5	31 58	23 16	40 21	Good progress	39
Singapore	1990 2015	100 100	100 100	0 0	0 0	0 0	NA NA	NA NA	NA NA	NA NA	NA NA	100 100	100 100	0 0	0 0	0 0	**Met target**	46
Slovakia	1990 2015	100 100	98 96	2 4	0 0	0 0	100 100	88 100	12 0	0 0	0 0	100 100	94 98	6 2	0 0	0 0	**Met target**	3

Annex 3
Country, Regional and Global Estimates on Water and Sanitation

Country, area or territory	Year	Population (x1,000)	Percentage urban population	Use of sanitation facilities (percentage of population) [1,2]												Progress towards MDG target [3]	Proportion of the 2015 population that gained access since 1990 (%)
				Urban				Rural				Total					
				Improved	Unimproved			Improved	Unimproved			Improved	Unimproved				
					Shared	Other Unimproved	Open Defecation		Shared	Other Unimproved	Open Defecation		Shared	Other Unimproved	Open Defecation		
Slovenia	1990 2015	2 004 2 079	50 50	99 99	1 1	0 0	0 0	99 99	1 1	0 0	0 0	99 99	1 1	0 0	0 0	**Met target**	4
Solomon Islands	1990 2015	312 584	14 22	- 81	- -	- 10	- 9	- 15	- -	- 19	- 66	- 30	- -	- 16	- 54	NA	-
Somalia	1990 2015	6 322 11 123	30 40	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	NA	-
South Africa	1990 2015	36 793 53 491	52 65	64 70	24 26	10 3	2 1	38 61	10 16	25 15	27 8	51 66	17 22	18 8	14 4	Moderate progress	31
South Sudan	1990 2015	- 12 152	- 19	- 16	- 10	- 24	- 50	- 4	- 2	- 15	- 79	- 7	- 4	- 15	- 74	NA	NA
Spain	1990 2015	38 883 47 199	75 80	100 100	0 0	0 0	0 0	100 100	0 0	0 0	0 0	100 100	0 0	0 0	0 0	**Met target**	18
Sri Lanka	1990 2015	17 324 21 612	19 18	83 88	8 9	5 2	4 1	68 97	2 3	15 0	15 0	71 95	3 4	13 1	13 0	**Met target**	38
Sudan	1990 2015	25 773 39 613	25 34	52 -	12 -	28 -	8 -	18 -	5 -	29 -	48 -	27 -	7 -	28 -	38 -	NA	-
Suriname	1990 2015	407 548	66 66	99 88	- 9	1 3	0 0	- 61	- 11	- 10	- 18	- 79	- 10	- 5	- 6	Limited or no progress	-
Swaziland	1990 2015	863 1 286	23 21	63 63	29 29	6 7	2 1	44 56	15 18	10 9	31 17	49 57	18 21	8 8	25 14	Limited or no progress	25
Sweden	1990 2015	8 559 9 694	83 86	99 99	1 1	0 0	0 0	100 100	0 0	0 0	0 0	99 99	1 1	0 0	0 0	**Met target**	12
Switzerland	1990 2015	6 674 8 239	73 74	100 100	0 0	0 0	0 0	100 100	0 0	0 0	0 0	100 100	0 0	0 0	0 0	**Met target**	19
Syrian Arab Republic	1990 2015	12 452 22 265	49 58	95 96	4 4	1 0	0 0	75 95	4 5	4 0	17 0	85 96	4 4	2 0	9 0	**Met target**	48
Tajikistan	1990 2015	5 297 8 610	32 27	92 94	5 5	2 1	1 0	- 95	- 2	- 3	- 0	- 95	- 3	- 2	- 0	**Met target**	-
Thailand	1990 2015	56 583 67 401	29 50	89 90	10 10	0 0	1 0	86 96	4 4	0 0	10 0	87 93	5 7	0 0	8 0	**Met target**	20
The former Yugoslav Republic of Macedonia	1990 2015	2 010 2 109	58 57	93 97	3 3	4 0	0 0	- 83	- 4	- 11	- 2	- 91	- 4	- 4	- 1	NA	-
Timor-Leste	1990 2015	751 1 173	21 33	- 69	- 17	- 7	- 7	- 27	- 6	- 31	- 36	- 41	- 9	- 24	- 26	Limited or no progress	-
Togo	1990 2015	3 788 7 171	29 40	23 25	46 48	6 9	25 18	7 3	15 6	4 17	74 74	12 12	24 23	4 13	60 52	Limited or no progress	5
Tokelau	1990 2015	2 1	0 0	NA NA	NA NA	NA NA	NA NA	45 90	2 5	53 5	- -	45 90	2 5	53 5	- -	**Met target**	NA
Tonga	1990 2015	95 106	23 24	97 98	1 1	2 1	- -	94 89	1 1	5 10	- -	94 91	1 1	5 8	- -	Limited or no progress	7
Trinidad and Tobago	1990 2015	1 222 1 347	9 8	90 92	7 7	3 1	0 0	90 92	7 7	3 1	0 0	90 92	7 7	3 1	0 0	Moderate progress	10
Tunisia	1990 2015	8 135 11 235	58 67	94 97	2 2	2 1	2 0	43 80	5 10	4 8	48 2	73 92	3 5	2 2	22 1	**Met target**	39

Country, area or territory	Year	Use of drinking water sources (percentage of population) [1,2]															Progress towards MDG target [3]	Proportion of the 2015 population that gained access since 1990 (%)
		Urban					Rural					Total						
		Improved					Improved					Improved						
		Total Improved	Piped on premises	Other improved	Unimproved	Surface water	Total Improved	Piped on premises	Other improved	Unimproved	Surface water	Total Improved	Piped on premises	Other improved	Unimproved	Surface water		
Slovenia	1990	100	100	0	0	0	99	99	0	1	0	100	100	0	0	0	Met target	4
	2015	100	99	1	0	0	99	99	0	1	0	100	99	1	0	0		
Solomon Islands	1990	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NA	-
	2015	93	61	32	6	1	77	16	61	14	9	81	26	55	12	7		
Somalia	1990	-	0	-	-	-	-	0	-	-	-	-	0	-	-	-	NA	-
	2015	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-		
South Africa	1990	98	86	12	2	0	66	24	42	8	26	83	56	27	4	13	Met target	36
	2015	100	92	8	0	0	81	38	43	12	7	93	73	20	4	3		
South Sudan	1990	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NA	NA
	2015	67	6	61	16	17	57	1	56	17	26	59	2	57	17	24		
Spain	1990	100	99	1	0	0	100	100	0	0	0	100	99	1	0	0	Met target	18
	2015	100	100	0	0	0	100	100	0	0	0	100	100	0	0	0		
Sri Lanka	1990	92	37	55	8	0	63	7	56	28	9	68	12	56	25	7	Met target	41
	2015	99	73	26	1	0	95	25	70	5	0	96	34	62	4	0		
Sudan	1990	86	78	8	12	2	61	16	45	29	10	67	32	35	25	8	NA	-
	2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Suriname	1990	98	-	-	2	0	-	-	-	-	-	-	-	-	-	-	Met target	-
	2015	98	77	21	2	0	88	44	44	1	11	95	66	29	1	4		
Swaziland	1990	86	67	19	6	8	25	4	21	18	57	39	18	21	16	45	Met target	48
	2015	94	75	19	3	3	69	27	42	17	14	74	37	37	14	12		
Sweden	1990	100	100	0	0	0	100	100	0	0	0	100	100	0	0	0	Met target	12
	2015	100	100	0	0	0	100	100	0	0	0	100	100	0	0	0		
Switzerland	1990	100	100	0	0	0	100	99	1	0	0	100	100	0	0	0	Met target	19
	2015	100	100	0	0	0	100	100	0	0	0	100	100	0	0	0		
Syrian Arab Republic	1990	97	94	3	3	0	75	49	26	24	1	86	71	15	14	0	Moderate progress	42
	2015	92	91	1	8	0	87	81	6	12	1	90	87	3	10	0		
Tajikistan	1990	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Good progress	-
	2015	93	83	10	2	5	67	31	36	6	27	74	45	29	5	21		
Thailand	1990	96	74	22	4	0	84	10	74	14	2	87	29	58	11	2	Met target	24
	2015	98	76	22	2	0	98	37	61	2	0	98	57	41	2	0		
The former Yugoslav Republic of Macedonia	1990	100	-	-	0	0	99	-	-	1	0	99	-	-	1	0	Met target	5
	2015	100	99	1	0	0	99	83	16	1	0	99	92	7	1	0		
Timor-Leste	1990	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Good progress	-
	2015	95	47	48	4	1	61	14	47	28	11	72	25	47	20	8		
Togo	1990	79	14	65	20	1	35	0	35	36	29	48	4	44	31	21	Moderate progress	38
	2015	91	13	78	8	1	44	1	43	29	27	63	5	58	20	17		
Tokelau	1990	NA	NA	NA	NA	NA	90	-	-	10	-	90	-	-	10	-	Met target	NA
	2015	NA	NA	NA	NA	NA	100	-	-	0	0	100	-	-	0	0		
Tonga	1990	97	-	-	3	-	99	-	-	1	-	99	-	-	1	-	Met target	11
	2015	100	73	27	0	0	100	80	20	0	0	100	78	22	0	0		
Trinidad and Tobago	1990	92	72	20	6	2	92	72	20	6	2	92	72	19	7	2	Met target	12
	2015	95	84	11	5	0	95	84	11	5	0	95	84	12	5	0		
Tunisia	1990	96	90	6	4	0	64	20	44	34	2	83	60	23	16	1	Met target	38
	2015	100	95	5	0	0	93	57	36	6	1	98	82	16	2	0		

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Country, Regional and Global Estimates on Water and Sanitation

Country, area or territory	Year	Population (x1,000)	Percentage urban population	Use of sanitation facilities (percentage of population) [1,2]												Progress towards MDG target [3]	Proportion of the 2015 population that gained access since 1990 (%)
				Urban				Rural				Total					
				Improved	Unimproved			Improved	Unimproved			Improved	Unimproved				
					Shared	Other Unimproved	Open Defecation		Shared	Other Unimproved	Open Defecation		Shared	Other Unimproved	Open Defecation		
Turkey	1990 2015	53 995 76 691	59 73	96 98	1 1	3 1	0 0	64 86	2 2	30 12	4 0	83 95	1 1	14 4	2 0	**Met target**	36
Turkmenistan	1990 2015	3 668 5 373	45 50	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	NA	-
Turks and Caicos Islands	1990 2015	12 41	74 95	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	NA	-
Tuvalu	1990 2015	9 10	41 52	75 86	8 9	15 3	2 2	71 -	4 -	18 -	7 -	73 -	6 -	16 -	5 -	NA	-
Uganda	1990 2015	17 535 40 141	11 16	28 29	43 44	27 25	2 2	11 17	6 9	61 66	22 8	13 19	10 14	57 60	20 7	Limited or no progress	13
Ukraine	1990 2015	51 659 44 646	67 70	97 97	2 2	1 1	0 0	- 93	- 4	- 3	- -	- 96	- 3	- 1	- -	**Met target**	NA
United Arab Emirates	1990 2015	1 806 9 577	79 86	98 98	2 2	0 0	0 0	95 95	5 5	0 0	0 0	97 98	2 2	1 0	0 0	**Met target**	79
United Kingdom	1990 2015	57 214 63 844	78 83	99 99	1 1	0 0	0 0	100 100	0 0	0 0	0 0	99 99	1 1	0 0	0 0	**Met target**	10
United Republic of Tanzania	1990 2015	25 485 52 291	19 32	6 31	6 31	86 36	2 2	7 8	3 4	80 71	10 17	7 16	4 12	80 60	9 12	Limited or no progress	12
United States Virgin Islands	1990 2015	103 107	88 95	- -	- -	- -	- -	- -	- -	- -	- -	96 96	- -	4 4	- -	Limited or no progress	3
United States of America	1990 2015	254 507 325 128	75 82	100 100	- 0	0 0	0 0	99 100	- 0	1 0	- 0	100 100	- 0	0 0	0 0	**Met target**	22
Uruguay	1990 2015	3 110 3 430	89 95	93 97	3 3	0 0	4 0	81 93	2 2	4 5	13 0	92 96	2 3	1 1	5 0	**Met target**	13
Uzbekistan	1990 2015	20 555 29 710	40 36	95 100	- -	5 0	0 0	76 100	- -	24 0	0 0	84 100	- -	16 0	0 0	**Met target**	42
Vanuatu	1990 2015	147 264	19 26	- 65	- 33	- 1	- 1	- 55	- 15	- 28	- 2	- 58	- 20	- 20	- 2	Good progress	-
Venezuela (Bolivarian Republic of)	1990 2015	19 741 31 293	84 89	89 97	- -	6 0	5 3	45 70	- -	11 1	44 29	82 94	- -	7 1	11 5	**Met target**	43
Viet Nam	1990 2015	68 910 93 387	20 34	65 94	4 5	7 1	24 0	29 70	2 4	26 25	43 1	36 78	2 5	23 16	39 1	**Met target**	51
West Bank and Gaza Strip	1990 2015	2 081 4 549	68 75	96 93	- 7	3 0	1 0	- 90	- 10	- 0	- 0	- 92	- 8	- 0	- 0	Limited or no progress	-
Yemen	1990 2015	11 790 25 535	21 35	70 -	1 -	23 -	6 -	12 -	1 -	33 -	54 -	24 -	1 -	31 -	44 -	NA	-
Zambia	1990 2015	7 845 15 520	39 41	59 56	27 25	11 18	3 1	29 36	7 8	23 34	41 22	41 44	15 15	18 27	26 14	Limited or no progress	23
Zimbabwe	1990 2015	10 462 15 046	29 32	52 49	47 45	0 4	1 2	35 31	19 16	0 13	46 40	40 37	27 26	0 9	33 28	Limited or no progress	9

Country, area or territory	Year	Use of drinking water sources (percentage of population) [1,2]															Progress towards MDG target [3]	Proportion of the 2015 population that gained access since 1990 (%)
		Urban					Rural					Total						
		Improved					Improved					Improved						
		Total Improved	Piped on premises	Other improved	Unimproved	Surface water	Total Improved	Piped on premises	Other improved	Unimproved	Surface water	Total Improved	Piped on premises	Other improved	Unimproved	Surface water		
Turkey	1990 2015	94 100	91 100	3 0	6 0	0 0	75 100	55 100	20 0	24 0	1 0	86 100	76 100	10 0	14 0	0 0	**Met target**	39
Turkmenistan	1990 2015	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	NA	-
Turks and Caicos Islands	1990 2015	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	NA	-
Tuvalu	1990 2015	92 98	92 97	0 1	8 2	- -	89 97	89 97	0 0	11 3	- -	90 98	90 97	0 1	10 2	- -	**Met target**	16
Uganda	1990 2015	78 96	7 23	71 73	18 3	4 1	36 76	0 1	36 75	38 14	26 10	40 79	1 5	39 74	36 13	24 8	**Met target**	61
Ukraine	1990 2015	100 96	- 86	- 10	0 4	0 0	- 98	- 28	- 70	- 2	- 0	- 96	- 69	- 27	- 4	- 0	Limited or no progress	NA
United Arab Emirates	1990 2015	100 100	- -	- -	0 0	0 0	100 100	- -	- -	0 0	0 0	100 100	- -	- -	0 0	0 0	**Met target**	81
United Kingdom	1990 2015	100 100	100 100	0 0	0 0	0 0	100 100	98 100	2 0	0 0	0 0	100 100	100 100	0 0	0 0	0 0	**Met target**	10
United Republic of Tanzania	1990 2015	92 77	31 28	61 49	5 20	3 3	45 46	0 6	45 40	30 34	25 20	54 56	6 13	48 43	25 30	21 14	Limited or no progress	29
United States Virgin Islands	1990 2015	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	100 100	40 49	60 51	0 0	0 0	**Met target**	3
United States of America	1990 2015	100 99	100 99	0 0	0 1	0 -	94 98	91 97	3 1	6 2	- -	98 99	98 99	0 0	2 1	- -	**Met target**	22
Uruguay	1990 2015	98 100	95 100	3 0	2 0	0 0	70 94	49 86	21 8	28 5	2 1	95 100	90 99	5 1	5 0	0 0	**Met target**	14
Uzbekistan	1990 2015	97 98	86 -	11 -	1 1	2 1	85 -	37 -	48 -	8 -	7 -	90 -	57 -	33 -	5 -	5 -	NA	-
Vanuatu	1990 2015	94 99	49 61	45 38	6 1	0 0	55 93	11 25	44 68	37 0	8 7	62 94	18 35	44 59	31 1	7 5	**Met target**	60
Venezuela (Bolivarian Republic of)	1990 2015	93 95	87 90	6 5	6 5	1 0	68 78	44 53	24 25	15 13	17 9	89 93	81 86	8 7	7 6	4 1	Good progress	37
Viet Nam	1990 2015	90 99	43 61	47 38	4 1	6 0	56 97	0 10	56 87	26 2	18 1	63 98	9 27	54 71	21 1	16 1	**Met target**	51
West Bank and Gaza Strip	1990 2015	100 51	100 50	0 1	0 48	0 1	- 81	- 74	- 7	- 16	- 3	- 58	- 56	- 2	- 41	- 1	Limited or no progress	-
Yemen	1990 2015	96 -	84 -	12 -	3 -	1 -	59 -	12 -	47 -	34 -	7 -	66 -	27 -	39 -	28 -	6 -	NA	-
Zambia	1990 2015	88 86	47 36	41 50	11 12	1 2	24 51	1 2	23 49	44 30	32 19	49 65	19 16	30 49	31 23	20 12	Moderate progress	41
Zimbabwe	1990 2015	100 97	98 74	2 23	0 3	0 0	71 67	7 5	64 62	17 24	12 9	79 77	33 28	46 49	13 17	8 6	Limited or no progress	22

Annex 3
Country, Regional and Global Estimates on Water and Sanitation

Region	Year	Population (x1,000)	Percentage urban population	Use of sanitation facilities (percentage of population) [1,2]												Progress towards MDG target [3]	Proportion of the 2015 population that gained access since 1990 (%)
				Urban				Rural				Total					
				Improved	Unimproved			Improved	Unimproved			Improved	Unimproved				
					Shared	Other Unimproved	Open Defecation		Shared	Other Unimproved	Open Defecation		Shared	Other Unimproved	Open Defecation		
Sub-Saharan Africa	1990 2015	510 118 988 784	27 38	39 40	30 34	21 18	10 8	18 23	8 11	29 34	45 32	24 30	14 20	26 27	36 23	Not met	17
Northern Africa	1990 2015	119 863 177 451	49 56	90 92	6 7	2 1	2 0	54 86	5 8	12 2	29 4	71 89	6 7	7 2	16 2	**Met Target**	41
Eastern Asia	1990 2015	1 236 934 1 487 313	29 57	71 87	5 6	22 7	2 0	41 64	2 3	48 31	9 2	50 77	3 5	40 17	7 1	**Met Target**	36
Eastern Asia without China	1990 2015	71 505 85 727	71 77	- 82	- 10	- 6	- 2	- 51	- 7	- 17	- 25	- 68	- 9	- 10	- 13	Not met	-
Southern Asia	1990 2015	1 191 647 1 793 616	27 35	54 67	15 19	9 7	22 7	11 36	3 8	6 7	80 49	22 47	6 12	7 7	65 34	Not met	32
Southern Asia without India	1990 2015	322 757 511 225	29 40	66 77	11 15	17 8	6 0	26 57	8 16	18 14	48 13	37 65	8 16	19 11	36 8	Not met	41
South-eastern Asia	1990 2015	443 735 633 031	32 48	69 81	9 10	9 2	13 7	38 64	5 10	18 10	39 16	48 72	6 10	15 7	31 11	Not met	39
Western Asia	1990 2015	126 752 228 476	61 70	94 96	1 4	3 0	2 0	58 89	2 5	23 6	17 0	80 94	2 4	10 2	8 0	**Met Target**	50
Oceania	1990 2015	6 461 10 863	24 23	75 76	9 10	13 11	3 3	22 23	3 3	59 60	16 14	35 35	4 5	48 48	13 12	Not met	15
Latin America and the Caribbean	1990 2015	445 206 630 065	71 80	80 88	6 7	8 4	6 1	36 64	3 7	18 17	43 12	67 83	5 7	11 7	17 3	Not met	36
Caucasus and Central Asia	1990 2015	66 308 83 078	48 44	95 95	3 5	2 0	0 0	86 96	1 2	12 2	1 0	90 96	2 3	8 1	0 0	**Met Target**	24
Developed regions	1990 2015	1 153 510 1 268 643	72 78	96 97	3 2	1 1	0 0	90 91	3 2	7 7	0 0	94 96	3 2	3 2	0 0	Not met	10
Developing regions	1990 2015	4 147 024 6 032 677	35 49	69 77	10 13	12 7	9 3	29 47	4 8	25 17	42 28	43 62	6 10	20 12	31 16	Not met	32
Least developed countries	1990 2015	509 191 939 932	21 31	37 47	22 28	26 20	15 5	15 33	7 12	25 28	53 27	20 38	10 17	25 25	45 20	Not met	27
World	1990 2015	5 300 534 7 301 319	43 54	79 82	7 10	8 6	6 2	35 51	4 7	23 17	38 25	54 68	5 9	17 10	24 13	Not met	29

Region	Year	Use of drinking water sources (percentage of population) [1,2]															Progress towards MDG target [3]	Proportion of the 2015 population that gained access since 1990 (%)
		Urban					Rural					Total						
		Improved					Improved					Improved						
		Total Improved	Piped on premises	Other improved	Unimproved	Surface water	Total Improved	Piped on premises	Other improved	Unimproved	Surface water	Total Improved	Piped on premises	Other improved	Unimproved	Surface water		
Sub-Saharan Africa	1990 2015	83 87	43 33	40 54	13 11	4 2	34 56	4 5	30 51	32 29	34 15	48 68	15 16	33 52	26 22	26 10	Not met	43
Northern Africa	1990 2015	95 95	86 92	9 3	5 5	0 0	80 90	33 78	47 12	17 9	3 1	87 93	59 86	28 7	11 6	2 1	Not met	34
Eastern Asia	1990 2015	97 98	79 88	18 10	2 2	1 0	56 93	11 56	45 37	35 5	9 2	68 96	30 74	38 22	25 3	7 1	**Met target**	39
Eastern Asia without China	1990 2015	97 99	94 96	3 3	3 1	0 0	92 96	2 74	90 22	2 3	6 1	96 98	67 91	29 7	2 2	2 0	**Met target**	18
Southern Asia	1990 2015	90 96	50 56	40 40	9 4	1 0	66 91	7 17	59 74	29 8	5 1	73 93	19 30	54 63	23 6	4 1	**Met target**	44
Southern Asia without India	1990 2015	93 92	59 62	34 30	6 8	1 0	73 86	11 19	62 67	19 12	8 2	79 89	25 36	54 53	15 10	6 1	**Met target**	39
South-eastern Asia	1990 2015	90 95	42 51	48 44	7 5	3 0	63 86	5 17	58 69	25 10	12 4	72 90	17 33	55 57	19 8	9 2	**Met target**	40
Western Asia	1990 2015	95 96	85 92	10 4	4 4	1 0	70 90	43 83	27 7	22 8	8 2	85 95	69 89	16 6	12 4	3 1	**Met target**	48
Oceania	1990 2015	92 94	74 74	18 20	5 4	3 2	37 44	11 11	26 33	22 16	41 40	50 56	27 25	23 31	19 13	31 31	Not met	26
Latin America and the Caribbean	1990 2015	94 97	88 94	6 3	5 3	1 0	63 84	37 68	26 16	17 10	20 6	85 95	73 89	12 6	8 4	7 1	**Met target**	35
Caucasus and Central Asia	1990 2015	95 98	83 91	12 7	4 1	1 1	79 81	29 38	50 43	11 10	10 9	87 89	54 61	33 28	8 5	5 6	Not met	19
Developed countries	1990 2015	99 100	97 98	2 2	1 0	0 0	93 98	79 89	14 9	7 1	0 1	98 99	92 96	6 3	2 1	0 0	**Met target**	10
Developing countries	1990 2015	93 95	68 72	25 23	6 5	1 0	59 83	11 28	48 55	29 12	12 5	70 89	31 49	39 40	22 8	8 3	**Met target**	41
Least developed countries	1990 2015	80 86	29 32	51 54	16 12	4 2	43 62	2 3	41 59	34 27	23 11	51 69	7 12	44 57	30 23	19 8	Not met	42
World	1990 2015	95 96	79 79	16 17	4 4	1 0	62 84	18 33	44 51	27 12	11 4	76 91	44 58	32 33	17 7	7 2	**Met target**	35

Annex 4

Trends in Urban and Rural Drinking Water Coverage, 1990–2015

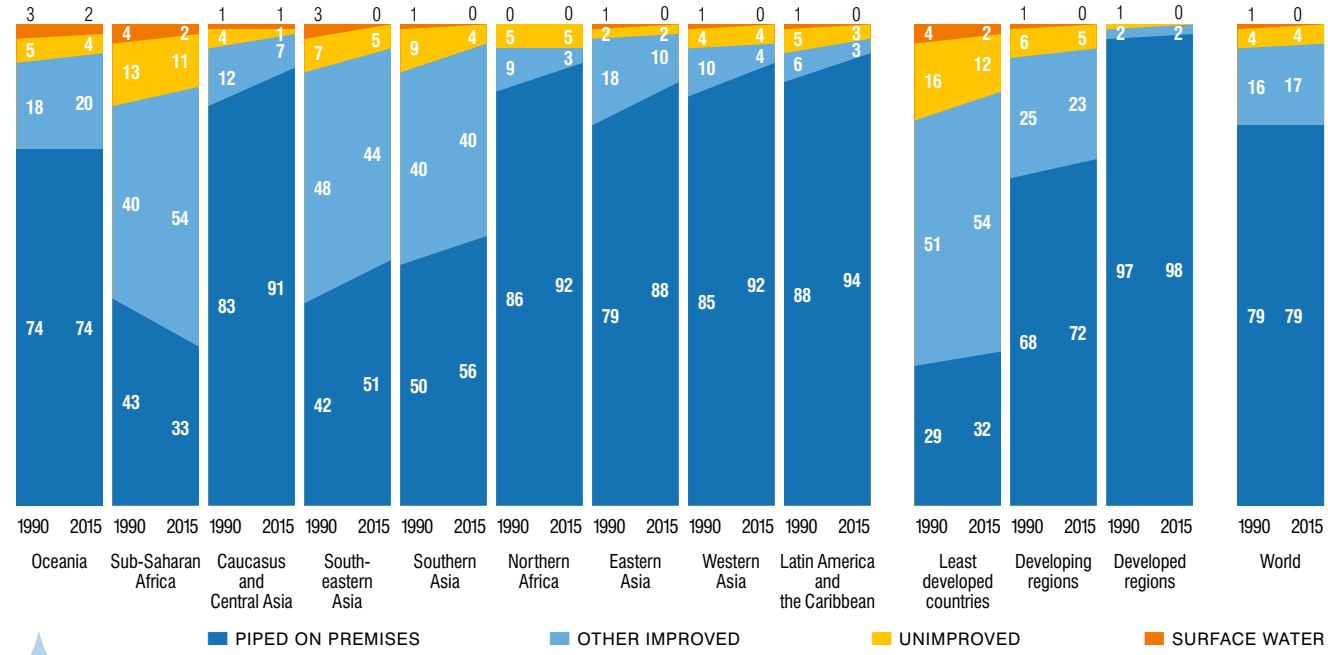

Fig. A5-1 Trends in urban drinking water coverage (%) in MDG regions and the world, 1990–2015

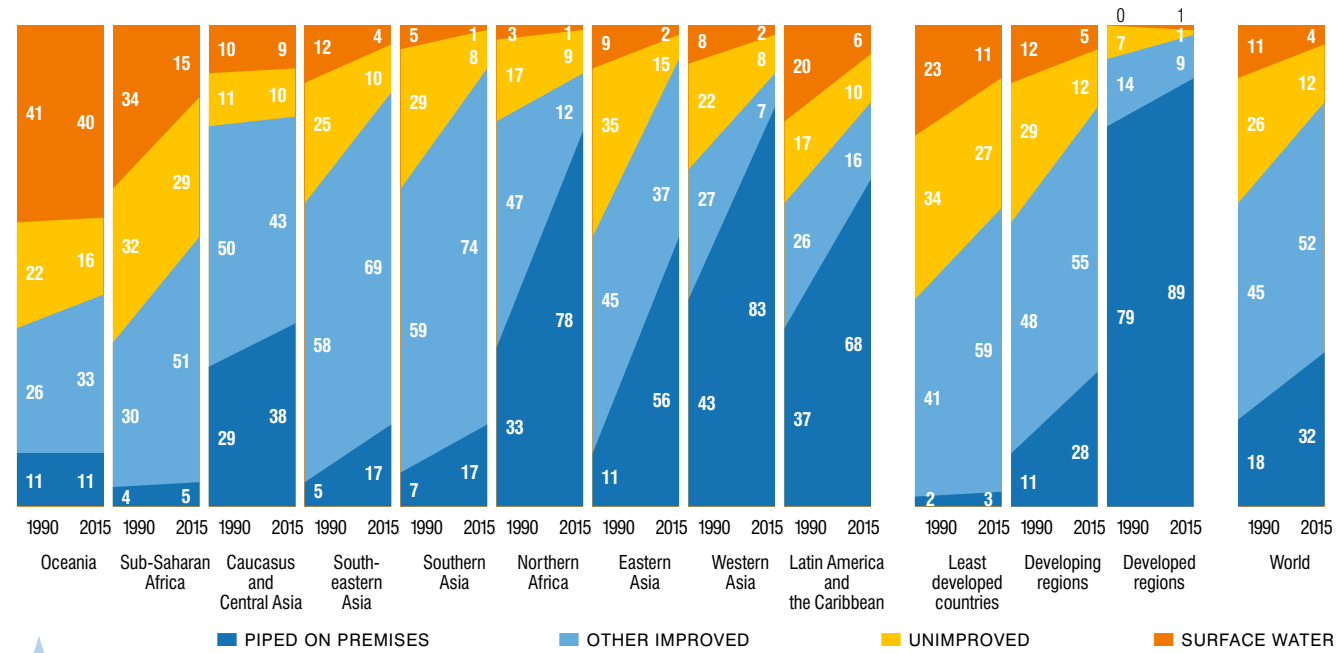

Fig. A5-2 Trends in rural drinking water coverage (%) in MDG regions and the world, 1990–2015

Annex 5

Trends in Urban and Rural Sanitation Coverage, 1990–2015

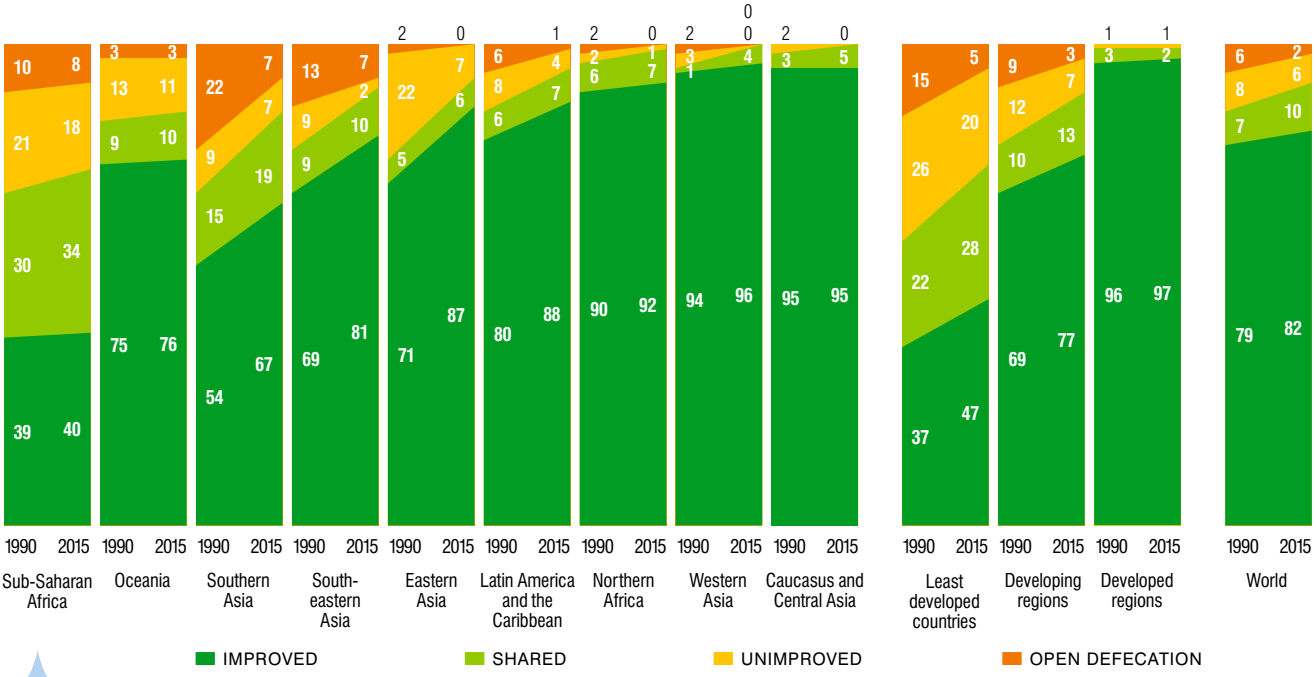

Fig. A6-1 Trends in urban sanitation coverage (%) in MDG regions and the world, 1990–2015

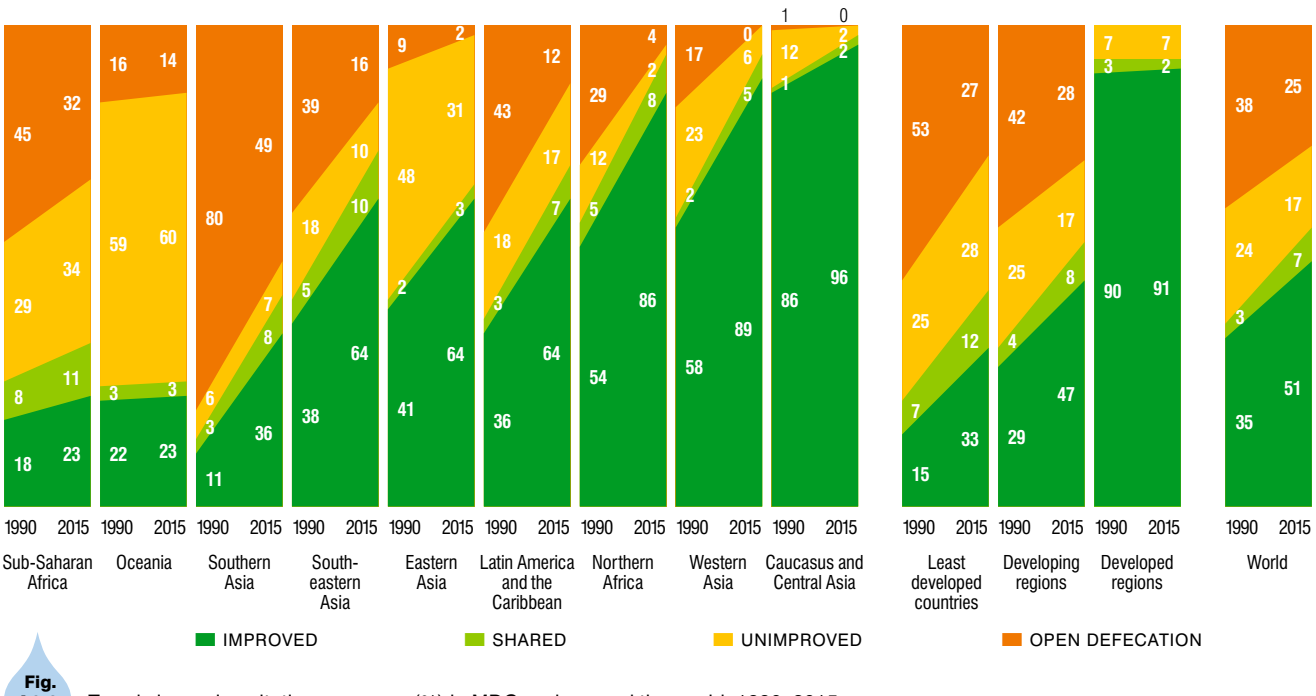

Fig. A6-2 Trends in rural sanitation coverage (%) in MDG regions and the world, 1990–2015

Annex 6

Country, Area or Territory Estimates on Handwashing

Country, area or territory	Year of survey	Population with a handwashing facility at home with soap and water (%)		
		Urban	Rural	Total
Afghanistan	2010-11	66	33	39
Armenia	2010	91	72	85
Bangladesh	2011	43	14	21
Barbados*	2012	72	72	72
Belize	2011	71	73	72
Benin	2011-12	14	6	9
Bhutan*	2010	88	75	79
Bosnia and Herzegovina	2011-12	97	95	96
Burkina Faso	2010	23	6	10
Burundi	2010	20	4	5
Cambodia	2010	83	44	51
Central African Republic	2010	19	11	14
Chad	2010	44	15	22
Comoros	2012	19	15	16
Costa Rica	2011	70	77	72
Côte d'Ivoire	2011-12	22	5	13
Democratic Republic of the Congo	2013-14	8	1	3
Equatorial Guinea	2011	26	20	23
Ethiopia	2011	4	0	1
Gambia*	2010	17	2	11
Ghana	2011	14	5	10
Guinea	2012	15	3	7
Guinea-Bissau	2010	6	1	3
Haiti	2012	29	16	22
Honduras	2011-12	80	78	79
Indonesia	2012	83	64	74
Iraq*	2011	95	81	91

Country, area or territory	Year of survey	Population with a handwashing facility at home with soap and water (%)		
		Urban	Rural	Total
Jamaica*	2011	52	53	52
Kyrgyzstan	2012	91	82	85
Liberia	2013	1	0	1
Malawi	2010	7	2	3
Mali	2012-13	23	6	10
Mauritania*	2011	40	22	30
Republic of Moldova*	2011	87	80	82
Mongolia*	2010	77	38	61
Mozambique	2011	20	7	11
Namibia	2013	61	31	47
Nepal	2011	75	43	48
Nigeria	2014	19	8	12
Pakistan	2012-13	74	44	54
Rwanda	2010	6	1	2
Senegal	2014	25	11	18
Serbia	2010	96	96	96
Sierra Leone	2013	18	2	7
Saint Lucia	2012	81	82	82
Suriname	2010	67	53	63
Swaziland	2010	50	26	34
Tajikistan	2012	88	66	73
Togo	2013-14	19	3	10
Tunisia	2011-12	86	62	78
Uganda	2011	13	7	8
Viet Nam	2010-11	91	82	85
Zambia	2013-14	24	5	13
Zimbabwe	2010-11	40	17	25

* From survey report and includes households with facilities, water and ash but for which soap was not observed

UN WATER

UN-Water is the United Nations (UN) inter-agency coordination mechanism for freshwater related issues, including sanitation. It was formally established in 2003 building on a long history of collaboration in the UN family. UN-Water is comprised of UN entities with a focus on, or interest in, water related issues as Members and other non-UN international organizations as Partners.

The work of UN-Water is organized around Thematic Priority Areas and Task Forces as well as awareness-raising campaigns such as World Water Day (22 March) and World Toilet Day (19 November).

The main purpose of UN-Water is to complement and add value to existing programmes and projects by facilitating synergies and joint efforts, so as to maximize system-wide coordinated action and coherence. By doing so, UN-Water seeks to increase the effectiveness of the support provided to Member States in their efforts towards achieving international agreements on water.

PERIODIC REPORTS:

World Water Development Report (WWDR) is the reference publication of the UN systemon the status of the freshwater resource. The Report is the result of the strong collaboration among UN-Water Members and Partners and it represents the coherent and integrated response of the UN system to freshwater-related issues and emerging challenges. The report production coordinated by the World Water Assessment Programme and the theme is harmonized with the theme of World Water Day (22 March). From 2003 to 2012, the WWDR was released every three years and from 2014 the Report is released annually to provide the most up to date and factual information of how water-related challenges are addressed around the world.

- ✓ Strategic outlook
- ✓ State, uses and management of water resources
- ✓ Global
- ✓ Regional assessments
- ✓ Triennial (2003-2012)
- ✓ Annual (from 2014)
- ✓ Links to the theme of World Water Day (22 March)

Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS) is produced by the World Health Organization (WHO) on behalf of UN-Water. It provides a global update on the policy frameworks, institutional arrangements, human resource base, and international and national finance streams in support of sanitation and drinking water. It is a substantive input into the activities of Sanitation and Water for All (SWA).

- ✓ Strategic outlook
- ✓ Water supply and sanitation
- ✓ Global
- ✓ Regional assessments
- ✓ Biennial (since 2008)

The WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation progress update is affiliated with UN-Water and presents the results of the global monitoring of progress towards MDG 7 target C: to halve, by 2015, the proportion of the population without sustainable access to safe drinking-water and basic sanitation. Monitoring draws on the findings of household surveys and censuses usually supported by national statistics bureaus in accordance with international criteria.

- ✓ Status and trends
- ✓ Water supply and sanitation
- ✓ Global
- ✓ Regional and national assessments
- ✓ Biennial (1990-2012)
- ✓ Annual updates (since 2013)

UN-WATER PLANNED PUBLICATIONS 2015

- UN-Water Analytical Brief on Wastewater Management
- UN-Water Analytical Brief on Water Efficiency
- UN-Water Analytical Brief on Water Quality Monitoring
- UN-Water Country Briefs
- UN-Water Policy Brief on Discrimination and the Right to Water and Sanitation
- UN-Water Report on the International Decade for Action 'Water for Life' 2005-2015

More Information on UN-Water Reports at www.unwater.org/publications

The MDG target for drinking water was met in 2010

- 91 per cent of the global population now uses an improved drinking water source
- 2.6 billion people have gained access to an improved drinking water source since 1990
- Since 1990, the number of countries with less than 50% coverage of improved drinking water has decreased from 23 to 3
- Eight out of ten people still without improved drinking water sources live in rural areas
- One in ten (663 million) people still lack improved drinking water sources

The world has missed the MDG target for sanitation by almost 700 million people

- 68 per cent of the global population now uses an improved sanitation facility
- 2.1 billion people have gained access to an improved sanitation facility since 1990
- In 2015, 47 countries have less than 50% coverage of improved sanitation
- Half the rural population uses improved sanitation facilities compared with four out five people in urban areas
- One in three (2.4 billion) people still lack improved sanitation facilities and one in eight people (946 million) practice open defecation

147 countries have met the MDG drinking water target

95 countries have met the MDG sanitation target

77 countries have met both the drinking water and the sanitation target

JMP website: www.wssinfo.org

unicef

World Health Organization

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