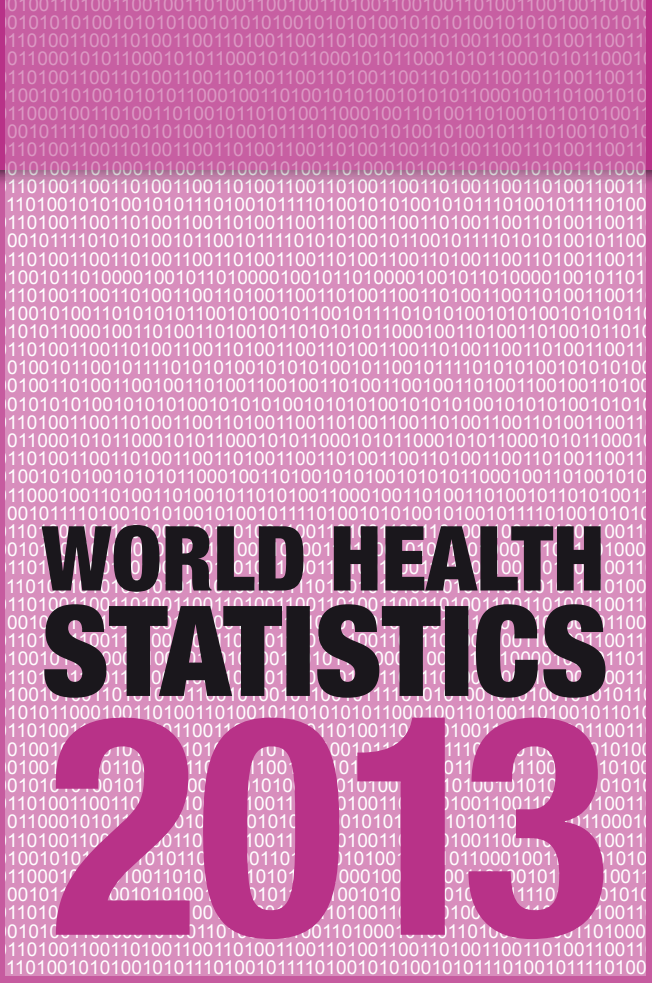


Part I

Health-related Millennium Development Goals

Summary of status and trends

More than a decade after world leaders adopted the Millennium Development Goals (MDGs) and associated targets substantial progress has been made in reducing child and maternal mortality, improving nutrition, and reducing morbidity and mortality due to HIV infection, tuberculosis and malaria. Although progress has accelerated in recent years in many countries with the highest rates of mortality, large gaps persist both among and within countries. Nevertheless, current trends continue to provide a sound basis for intensified collective action and the expansion of successful approaches to overcome the challenges posed by multiple crises and large inequalities.

Globally, significant progress has been made in reducing levels of mortality among children under five years of age. Between 1990 and 2011, under-five mortality declined by 41% from an estimated rate of 87 to 51 deaths per 1000 live births. The global rate of decline has also accelerated in the past decade, from 1.8% per annum between 1990 and 2000 to 3.2% per annum between 2000 and 2011. The WHO Western Pacific Region has experienced the largest reduction as well as the fastest acceleration of the decline in under-five mortality rates between 1990 and 2011 (Figure 1). Despite these successes, it is also clear that the current rates of decline remain insufficient to reach the global target of a two thirds reduction in 1990 levels of mortality by the year 2015.

At national level, 27 diverse countries have reached the MDG target ahead of 2015, including five countries that had very high child-mortality levels in 1990.[3] This suggests that rapid improvements are possible in a range of settings that vary in terms of their geographical characteristics, level of economic and social development, population size and epidemiological patterns. Of the 10 countries that experienced the fastest acceleration in the reduction of child mortality, seven had reversed the trend of an increasing under-five mortality rate in the 1990s to a rapid decline in the past decade.

[3] Countries with less than 500 000 population in 2011 were excluded from the analysis.

Figure 1. Relative rates of decline in under-five mortality rates, globally and by WHO region

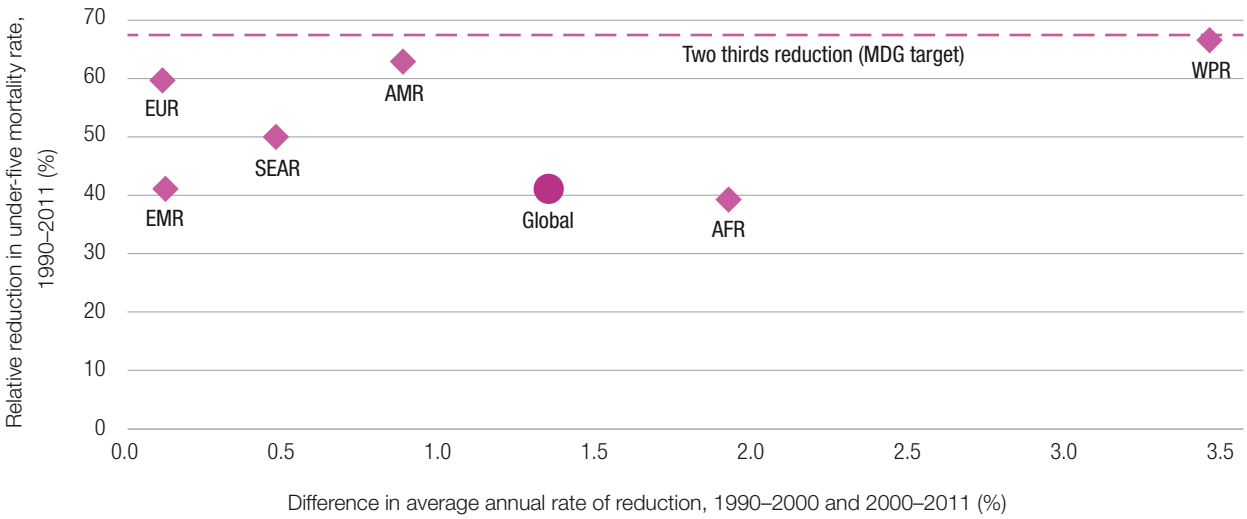
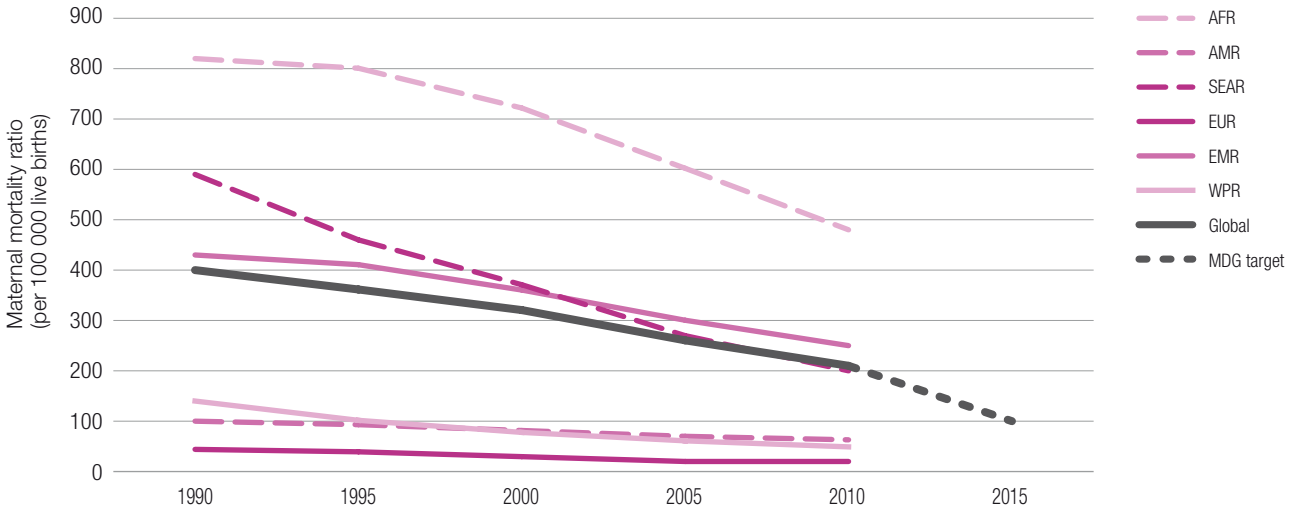


Figure 2. Regional and global trends in maternal mortality ratio, 1990–2010



In an estimated 35% of all deaths of children under five years of age, under-nutrition[4] is the underlying cause of death. The proportion of underweight children in developing countries declined from 28% to 17% between 1990 and 2011. Although this rate of progress is close to the rate required to meet the relevant target, significant variations persist between and within regions.

The total number of neonatal deaths decreased from 4.4 million in 1990 to 3.0 million in 2011. Neonatal mortality rates declined from 32 per 1000 live births to 22 per 1000 live births over the same period – a reduction of over 30%. This is a slower decline than for child mortality overall, and the proportion of deaths in children under five years of age that occur in the neonatal period increased from 36% in 1990 to 43% in 2011. Prematurity is the leading cause of neonatal deaths and is now the second leading cause of death in children under five years.

In 2011, global measles immunization coverage was 84% among children aged 12–23 months with 64% of WHO Member States reaching at least 90% coverage. Between 2000 and 2011, the estimated number of measles deaths decreased by 71% as more countries achieved high levels of immunization coverage.

A substantial reduction in maternal deaths has previously been noted – from 543 000 deaths in 1990 to an estimated 287 000 by 2010, with a global rate of decline in the maternal mortality ratio of 3.1% per annum over the same period. Nevertheless, this rate of decline would now need to double in order to achieve the MDG target of reducing the maternal mortality ratio by three quarters between 1990 and 2015. All six WHO regions have seen a decline in the maternal mortality ratio, but at different rates (Figure 2). The WHO African Region remains the region with the highest maternal mortality ratio. Approximately one quarter of countries with the highest maternal mortality ratio in 1990 (100 or more maternal deaths per 100 000 live births) have made insufficient progress or none.

In order to reduce maternal deaths, women need access to good-quality reproductive health services. In 2010, 63% of women aged 15–49 years who were married or in a consensual union were using some form of contraception. Although the proportion of women receiving antenatal care at least once during pregnancy was about 81% over the period 2005–2012, the figure dropped to around 55% for the recommended minimum of four visits or more. The proportion of births attended by skilled personnel – crucial for reducing perinatal,

4. Including underweight, suboptimal breastfeeding, and vitamin and mineral deficiencies.

neonatal and maternal deaths – was above 90% in three of the six WHO regions for the period 2005–2012. However, in the WHO African Region coverage remains at under 50%.

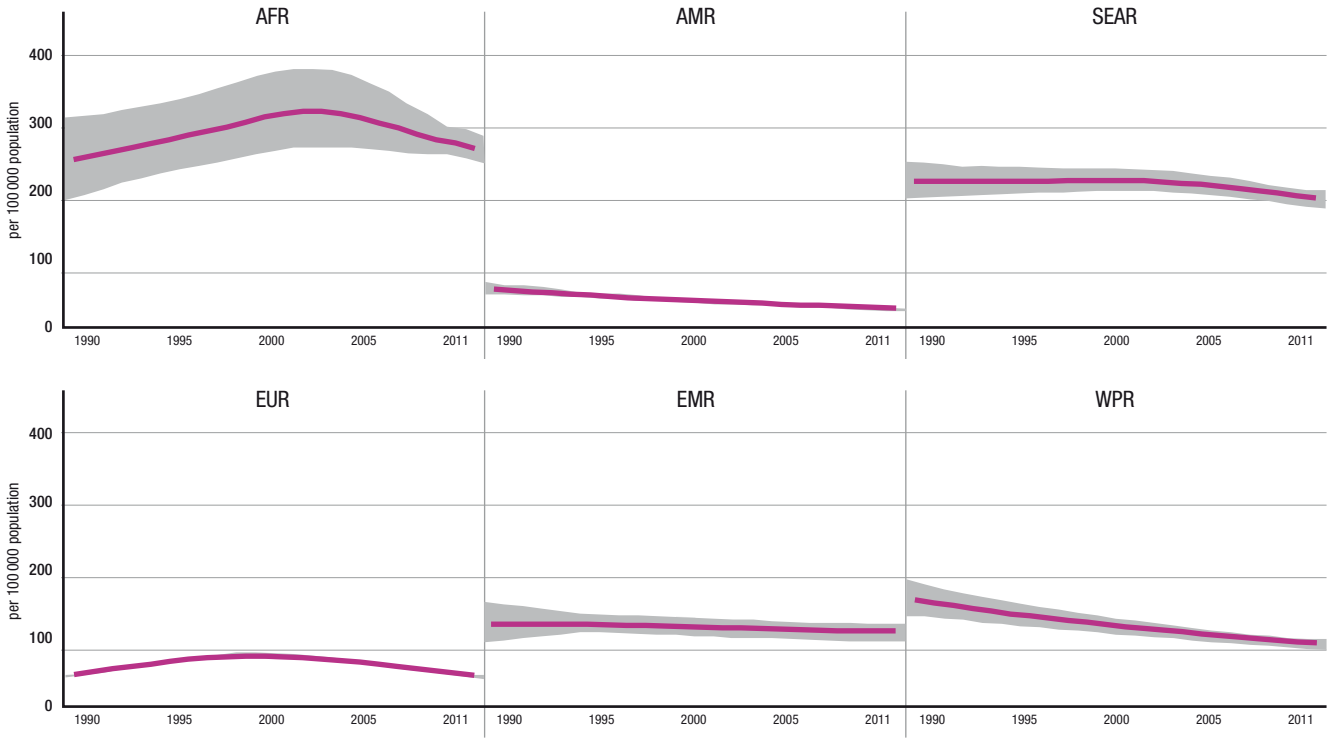
About 16 million adolescent girls between 15 years and 19 years of age give birth each year. Babies born to adolescent mothers account for approximately 11% of all births worldwide – with 95% of such births occurring in developing countries. In low- and middle-income countries, complications from pregnancy and childbirth are a leading cause of death among adolescent girls in this age group, and in 2008 there were an estimated three million unsafe abortions carried out on such girls. The adverse effects of adolescent childbearing also extend to the health of the infants. Perinatal deaths are 50% higher among babies born to mothers under 20 years of age than among those born to mothers aged 20–29 years. The neonates of adolescent mothers are also more likely to have a low birth weight, which may result in a higher rate of long-term health risks.

About half the world's population is at risk of contracting malaria, and an estimated 219 million cases of malaria led to 660 000 deaths in 2010. Country-level malaria estimates available for 2010 show that approximately 80% of estimated cases occur in 17 countries with 80% of estimated malaria deaths occurring in just 14 countries. The coverage of interventions such as the distribution of insecticide-treated nets and indoor residual spraying has greatly increased, and needs to be sustained in order to prevent the resurgence of disease and deaths.

The annual global number of new cases of tuberculosis has been slowly declining since 2006, and between 2010 and 2011 the number of such cases fell by 2.2%. Of the estimated 8.7 million new cases in 2011, about 13% involved people living with HIV. In all six WHO regions the incidence of tuberculosis is falling (Figure 3).[5] For the four years up to and including 2010, the global treatment-success rate has met or exceeded the target of 85% first set by the World Health Assem-

5. From: *Global Tuberculosis Report 2012*. Geneva, World Health Organization, 2012. See: http://www.who.int/tb/publications/global_report/. Shaded areas indicate uncertainty bands.

Figure 3. Estimated tuberculosis incidence rates by WHO region, 1990–2011



bly in 1991. Mortality due to tuberculosis has also fallen by 41% since 1990 and the world is on track to reach a 50% reduction by 2015.

The 2011 global estimate of 34 million people living with HIV represents an increase on previous years. As access to antiretroviral therapy in low- and middle-income countries improves (8 million people in such countries received treatment in 2011) it is expected that the population living with HIV will continue to grow as fewer people die from AIDS-related causes. In 2011, an estimated 2.5 million people worldwide were newly infected with HIV – over 20% less than the 3.2 million people newly infected in 2001. During the same year, an estimated 1.7 million people died from AIDS-related causes worldwide – 24% less than in 2005. Approximately 69% of all those living with HIV are in sub-Saharan Africa with the same region accounting for 70% of all deaths from AIDS-related causes in 2011 (Figure 4).

The term "neglected tropical diseases" refers to a group of 17 diseases that affect more than one billion people worldwide.[6] Although these diseases rarely cause outbreaks (with the exception of dengue and leishmaniasis), they thrive in the poorest and most marginalized communities, causing severe pain, permanent disability and death to millions of people. Some of these diseases are in decline. Dracunculiasis, for example, is on the verge of eradication, and the reported number of new cases of the chronic form of human African trypanosomiasis (caused by *Trypanosoma brucei gambiense*) fell by 76% between 1999 and 2011. However, the incidence of dengue has grown dramatically around the world in recent decades. Current estimates suggest there may be 50–100 million dengue infections worldwide every year.

MDG target 7.C calls for the proportion of the global population without sustainable access to safe drinking-water and basic sanitation to be halved by 2015 using 1990 as the baseline year. Since 2000, the progress made in achieving this target has been monitored biennially by the WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply and Sanitation[7] using two indicators disaggregated for urban and rural settings: (i) the proportion of the population that uses an improved source of drinking-water; and (ii) the proportion of the population that uses an improved sanitation facility. On the basis of these indicators, the JMP announced in its 2012 progress report that the drinking-water target had been met in 2010 when an estimated 89% of the world's population used an improved source of drinking-water compared with 76% in 1990. Despite this impressive progress, significant disparities remain between regions (Figure 5). The coverage levels of at least 90% recorded in four of the six WHO regions have not yet been achieved in the WHO African Region and the WHO Eastern Mediterranean Region. Based on the current rate of progress, these two regions will fall short of the 2015 target.

Beyond the regional and national averages, an even starker story unfolds when comparing the richest wealth quintiles to the poorest wealth quintiles of households in both urban and rural settings in unserved regions. Analysis of data from 35 countries in sub-Saharan Africa has shown that over 90% of the richest quintile in urban areas uses improved drinking-water sources compared with just over 60% of the poorest household quintile. In rural areas, the situation is even worse with such improved sources only available to one third of the poorest households (Figure 6).[8]

With regard to basic sanitation, Figure 5 highlights the ongoing slow rate of progress, with the present rate of improvement unlikely to result in the MDG target being met by 2015 globally. Even though almost 1.9 billion people have gained access to improved sanitation facilities since 1990, global coverage is currently estimated at just 64%. In 2011, more than one third of the global population (2.5 billion people) still lacked access to improved sanitation facilities.

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6. The diseases concerned are: Buruli ulcer; Chagas disease; cysticercosis; dengue; dracunculiasis; echinococcosis; endemic treponematoses; foodborne trematode infections; human African trypanosomiasis; leishmaniasis; leprosy; lymphatic filariasis, onchocerciasis; rabies; schistosomiasis; soil-transmitted helminthiases; and trachoma. The term "billion" is used here and throughout this document to mean a thousand million (10^9).

7. See: http://www.wssinfo.org/about-the-jmp/introduction/

8. *The Millennium Development Goals Report 2012*. New York, United Nations, 2012. See: http://www.un.org/en/development/desa/publications/mdg-report-2012.html.

Figure 4. Number of people living with HIV and number of deaths due to AIDS by WHO region, 2011

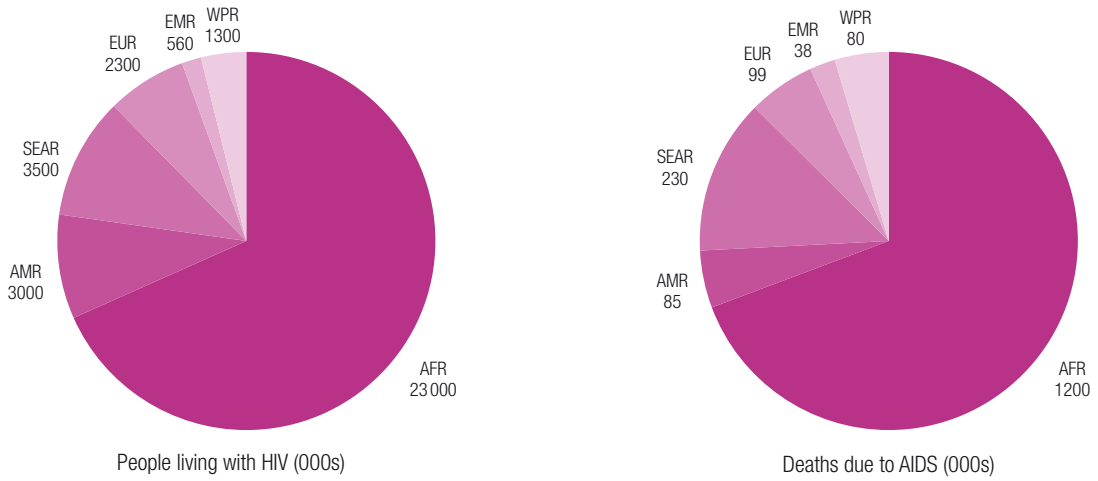


Figure 5. Proportion of population with access to improved drinking-water sources and improved sanitation, 1990–2011

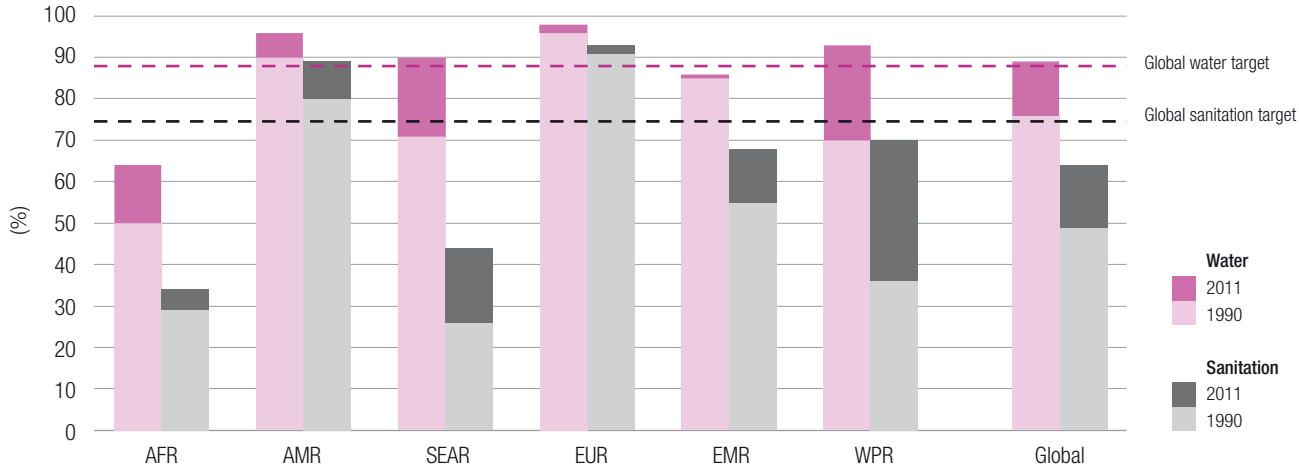
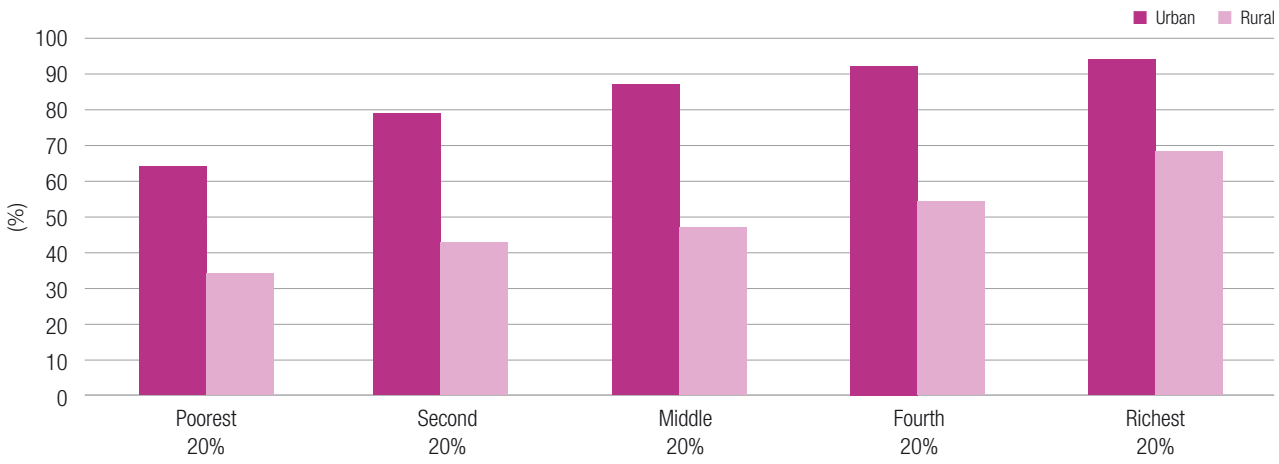


Figure 6. Proportion of population using improved drinking-water sources by wealth quintile – urban and rural residence, sub-Saharan Africa



Many people continue to face a scarcity of medicines in the public sector, forcing them to the private sector where prices can be substantially higher. Surveys undertaken from 2007 to 2012 indicated that the average availability of selected generic medicines in the public sector in low- and middle-income countries was only 57%. The price to patients of the lowest-priced generics in the private sector averaged five times the international reference prices, ranging up to about 16 times higher in some countries. Even the cost of the lowest-priced generics can put common treatments beyond the reach of low-income households in developing countries. The greatest price is paid by patients suffering chronic diseases. Even though effective treatments exist for the majority of conditions contributing to the global burden of chronic disease, universal access remains out of reach.

Given the very short time which now remains before the end of 2015, it is becoming ever more apparent that, despite the significant progress made, much will need to be done if the health-related MDGs are to be achieved. At the same time, great efforts will also be needed well beyond 2015 as the world faces up to the new challenges to be faced in sustaining and measuring meaningful progress, for example in the areas of ensuring access to safe drinking-water and basic sanitation (Box 1).

Box 1: Gearing up for the post-2015 challenges – drinking-water and basic sanitation

The original indicator for drinking-water quality used by the JMP on the recommendation of the United Nations General Assembly was the only globally viable proxy indicator available when MDG monitoring started. It was assumed that the application of the technology-based definition of "improved sources" of drinking-water directly implied a high probability of good drinking-water quality. Testing drinking-water quality more directly in a way that was in line with JMP methods and procedures for collecting data through nationally representative household surveys was not a feasible option. Even today, the option of measuring drinking-water quality in the context of household surveys is only beginning to emerge.

The resulting lack of correlation between the target ("safe" drinking-water) and the indicator (improved sources) was investigated through JMP pilot studies in five countries in 2004–2006.[9] Rapid assessments of drinking-water quality showed that the improved sources studied varied in the degree to which they accorded with WHO guidance in relation to microbial and chemical contamination,[10] and seldom achieved 100% accordance. As a result, improved sources cannot be equated with safe and clean drinking-water.

The unrelenting lack of sufficient progress in relation to access to basic sanitation has stimulated a renewed focus on this issue. Recent initiatives include the "Sustainable Sanitation: five-year drive to 2015" officially launched by the Secretary-General of the United Nations in June 2011. A vitally important aspect of global sanitation monitoring remains the assessment of "shared" sanitation – defined as improved sanitation that is shared between households. In many countries, a trend towards shared sanitation has accelerated rapidly, especially in urban areas. However, while shared sanitation offers governments an efficient way of expanding basic sanitation coverage levels, there are no clear criteria to distinguish between shared and public sanitation; with the latter considered to be unimproved. This issue is high on the JMP agenda and is currently the subject of a research programme. This programme will directly address the question of whether shared sanitation is indeed equivalent to improved sanitation facilities for individual households in terms of limiting the level of health risk, and will identify the health-risk criteria needed to effectively distinguish it from public sanitation.

In view of these realities, WHO and UNICEF have provided a platform, through the JMP, to develop evidence-based drinking-water, sanitation and hygiene targets and indicators as a contribution towards work on the post-2015 development agenda.[11] Through consultative efforts, a post-2015 global monitoring framework is being developed. Building on existing monitoring systems, this framework will bring on board human-rights considerations, extend monitoring beyond households (for example, to schools and health-care centres), and will consider not only basic access but also the attainment of higher service levels – all with a view to realize the vision of universal coverage.

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9. See: http://www.wssinfo.org/water-quality/introduction/

10. *Guidelines for drinking-water quality*. Fourth edition. Geneva, World Health Organization, 2011. See: http://www.who.int/water_sanitation_health/publications/2011/dwq_guidelines/en/

11. See: http://www.wssinfo.org/post-2015-monitoring/overview

Regional and country charts

Following the global and WHO regional summary shown in Figure 7, charts 1–13 provide country-by-country summaries[12] of national trends in MDG indicators for which data are available.

Depending on the availability of data for each indicator, there are two types of chart:

Chart type I

For six indicators – under-five mortality rate; maternal mortality ratio; HIV prevalence; tuberculosis mortality rate; population without access to improved drinking-water sources; and population without access to improved sanitation – the charts show the average annual rate of decline (AARD) since 1990 up to the latest available year (or for the year range indicated), and the overall AARD required for the country to achieve the relevant MDG by 2015. The country figures show data for the latest available year.

Chart type II

For seven indicators – measles immunization coverage among 1-year-olds; births attended by skilled health personnel; antenatal care coverage; unmet need for family planning; antiretroviral therapy coverage among people with advanced HIV infection; children aged < 5 years sleeping under insecticide-treated nets; and children aged < 5 years with fever who received treatment with any antimalarial – the charts show only data for the latest available year, along with an indication of a WHO or partner agency target.

... indicates data not available or not applicable.

Further details can be found in the country tables shown in **Part III** as indicated below each chart.

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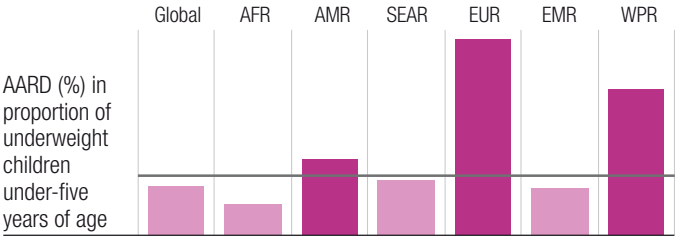
12. South Sudan became an independent state in July 2011 and a WHO Member State in September 2011. As the reported data shown here concern time periods before and after 2011, the term “Sudan (former)” refers to the state as it existed prior to July 2011 and is listed among the Member States.

Figure 7. Global and WHO Regional progress toward the achievement of health-related MDGs

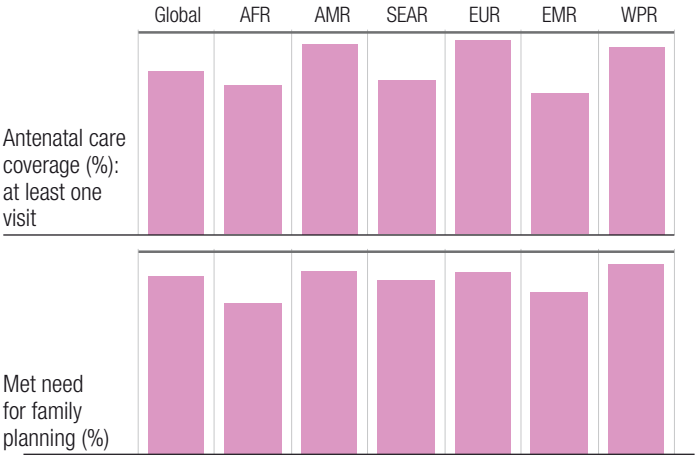
Target 1.C Halve, between 1990 and 2015, the proportion of people who suffer from hunger



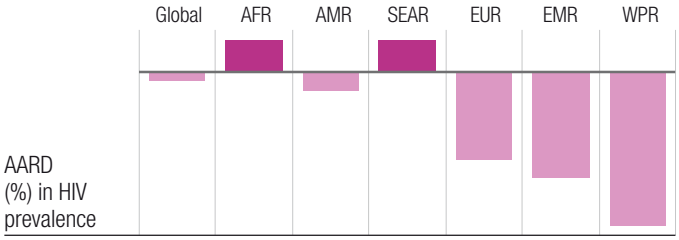
Target 4.A Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate

Target 5.A Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio

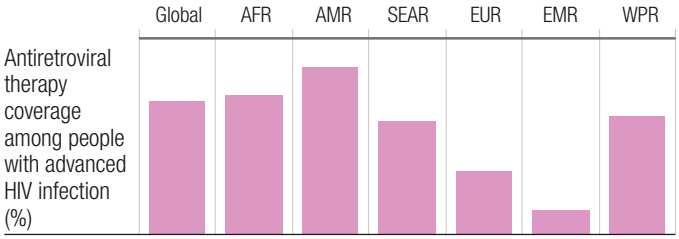
Target 5.B Achieve, by 2015, universal access to reproductive health



Target 6.A Have halted by 2015 and begun to reverse the spread of HIV/AIDS

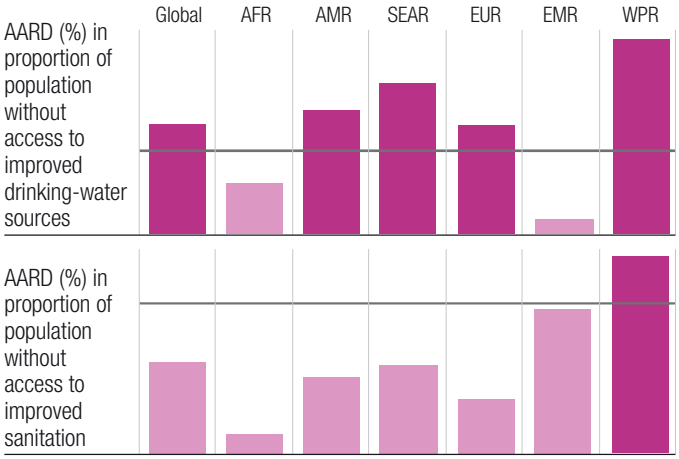


Target 6.B Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it



Target 6.C Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases

Target 7.C Halve, by 2015, the proportion of people without sustainable access to safe drinking-water

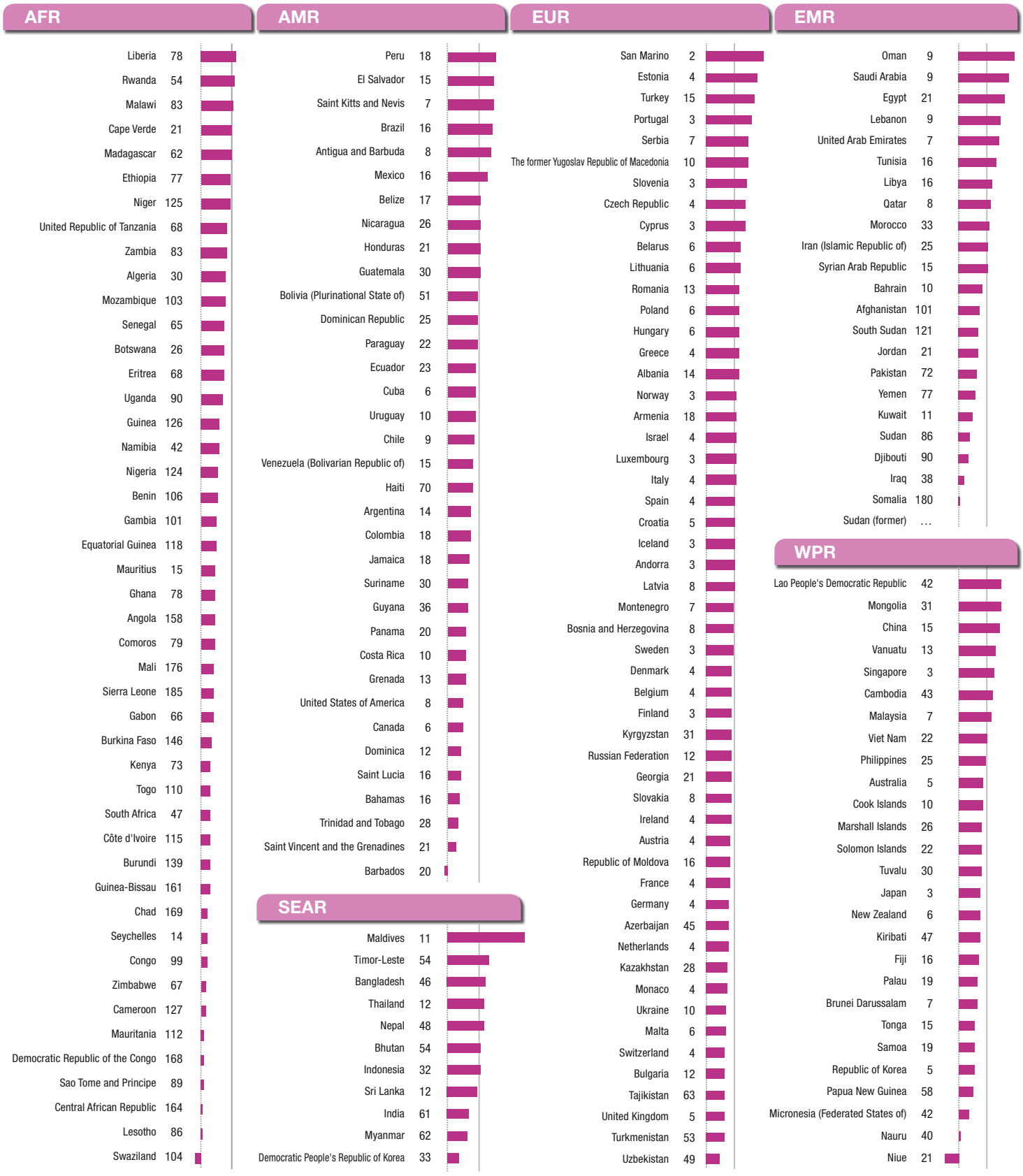


Key

■ On track ■ Insufficient progress

Grey horizontal lines indicate either the MDG (where available) or relevant WHO or partner agency target. For more details, see the relevant country charts. For the AARD (%) in proportion of underweight children under five years of age (1990–2011) and the AARD (%) in the incidence of malaria (2000–2010), see **Part III**, **Table 5** and the *World Malaria Report 2011* respectively for more details.

1 AARD (%) in under-five mortality rate, 1990–2011

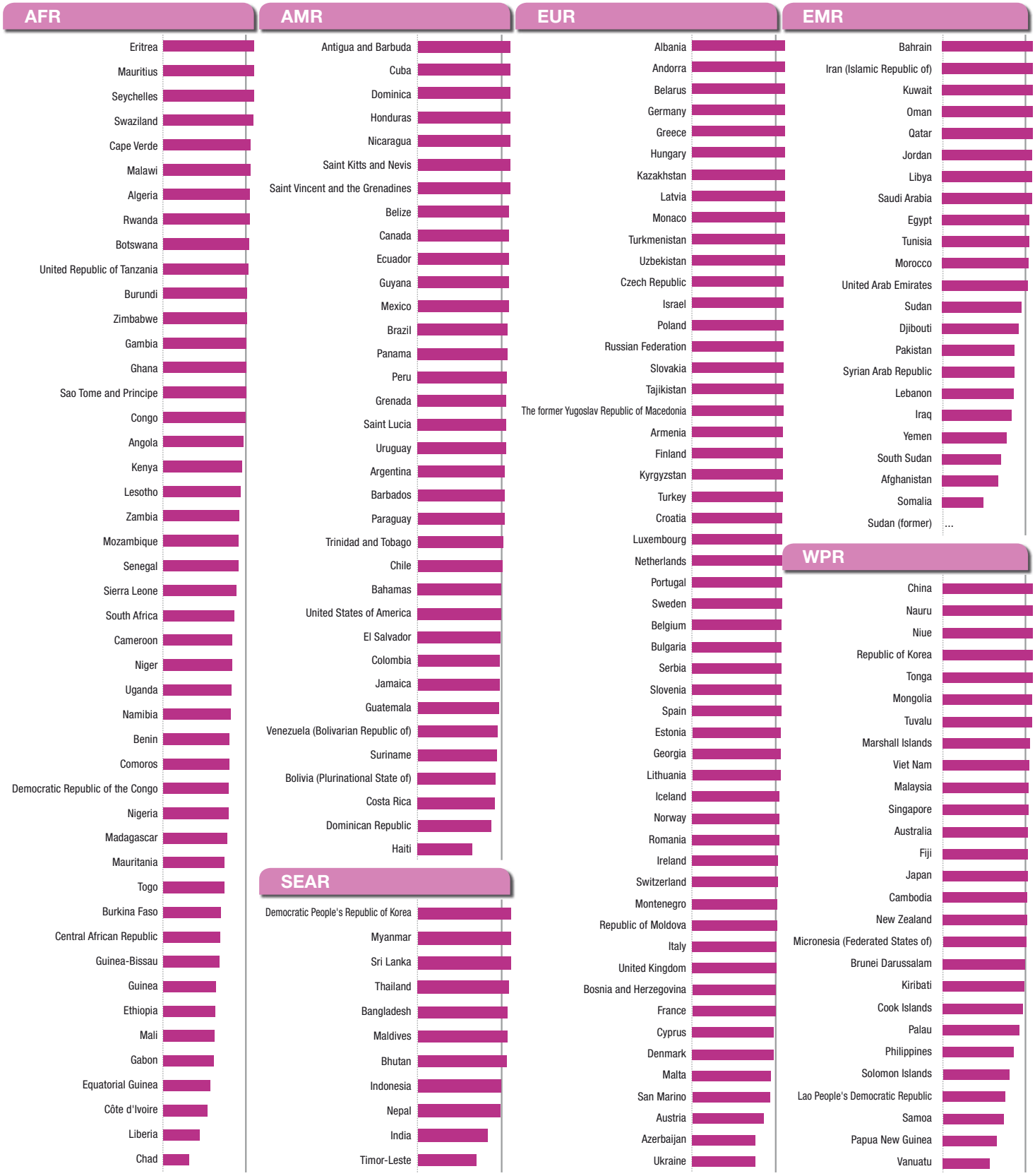


The under-five mortality rate is defined as the probability of dying by age 5 expressed as the total number of such deaths per 1000 live births. Within each WHO region, countries are sorted in descending order based on the AARD in this rate.

In order to reach the MDG target of reducing by two thirds the under-five mortality rate between 1990 and 2015, an AARD of 4.3% is needed and this is denoted by the vertical line. The numerical values show the estimated under-five mortality rate in each country in 2011. For countries with low levels of under-five mortality, the target AARD may not be applicable.

Further details may be found in **Part III**, **Table 1**.

2 Measles immunization coverage among 1-year-olds (%)

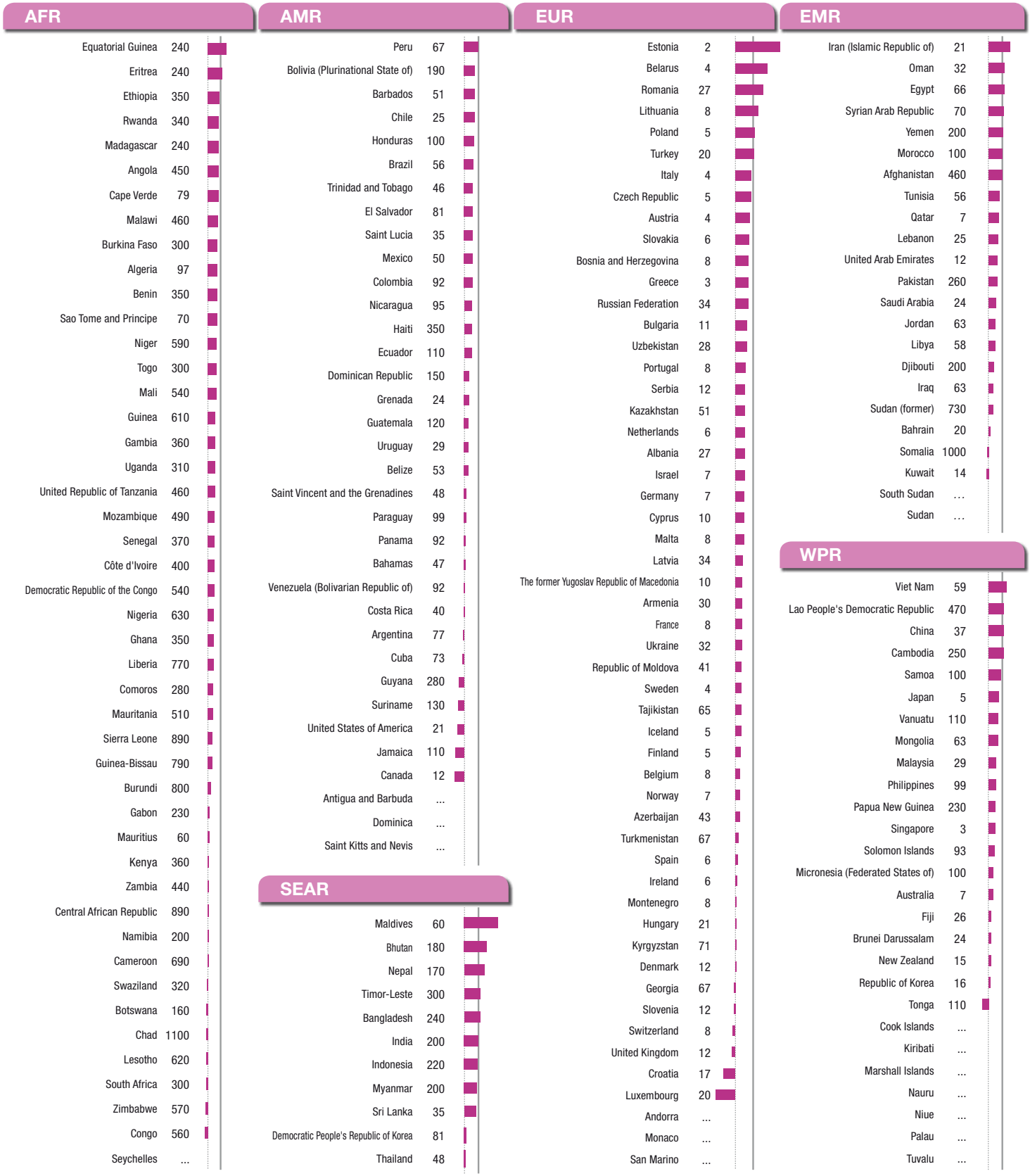


This chart shows the percentage of 1-year-olds fully immunized against measles. Within each WHO region, countries are sorted by the 2011 level.

The vertical line denotes the target of 90% coverage by 2015 set at the 2010 World Health Assembly.

Further details may be found in **Part III**, **Table 4**.

3 AARD (%) in maternal mortality ratio, 1990–2010

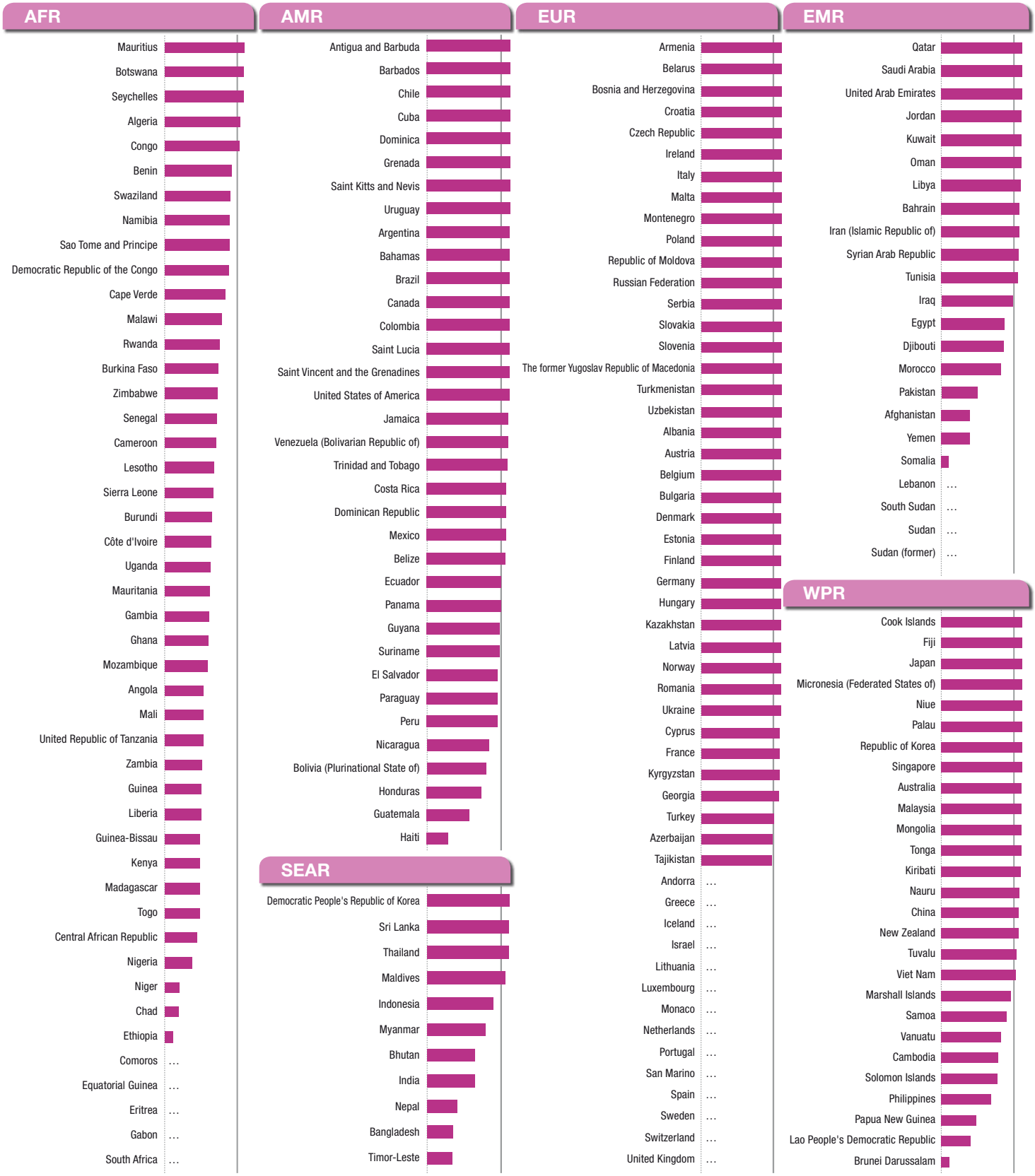


The maternal mortality ratio is defined as the number of maternal deaths per 100 000 live births. Within each WHO region, countries are sorted in descending order based on the AARD in this ratio. Unrounded values have been used to calculate the AARD.

In order to reach the MDG target of reducing the maternal mortality ratio by three quarters between 1990 and 2015, an AARD of 5.5% is needed and this is denoted by the vertical line. The numerical values show the estimated maternal mortality ratio for 2010. For countries with low levels of maternal mortality, the target AARD may not be applicable.

Further details may be found in **Part III**, **Table 2**.

4 Births attended by skilled health personnel (%)

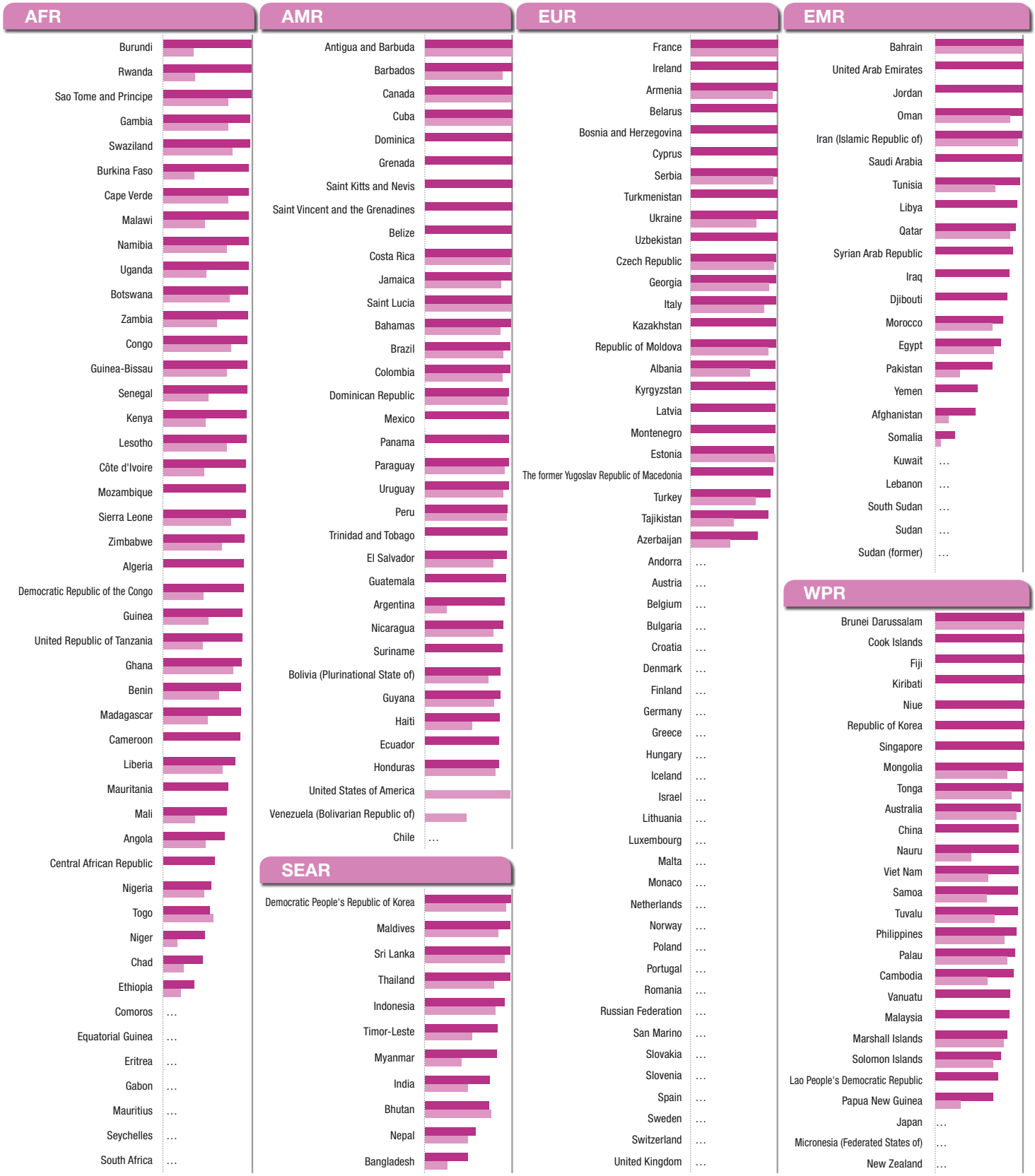


This chart shows the percentage of births attended by skilled health personnel. Within each WHO region, countries are sorted by the latest available data since 2005.

The vertical line denotes the global target of 90% coverage by 2015 set by the International Conference on Population and Development (ICPD+5).

Further details may be found in **Part III**, **Table 4**.

5 Antenatal care coverage (%): at least one visit and at least four visits

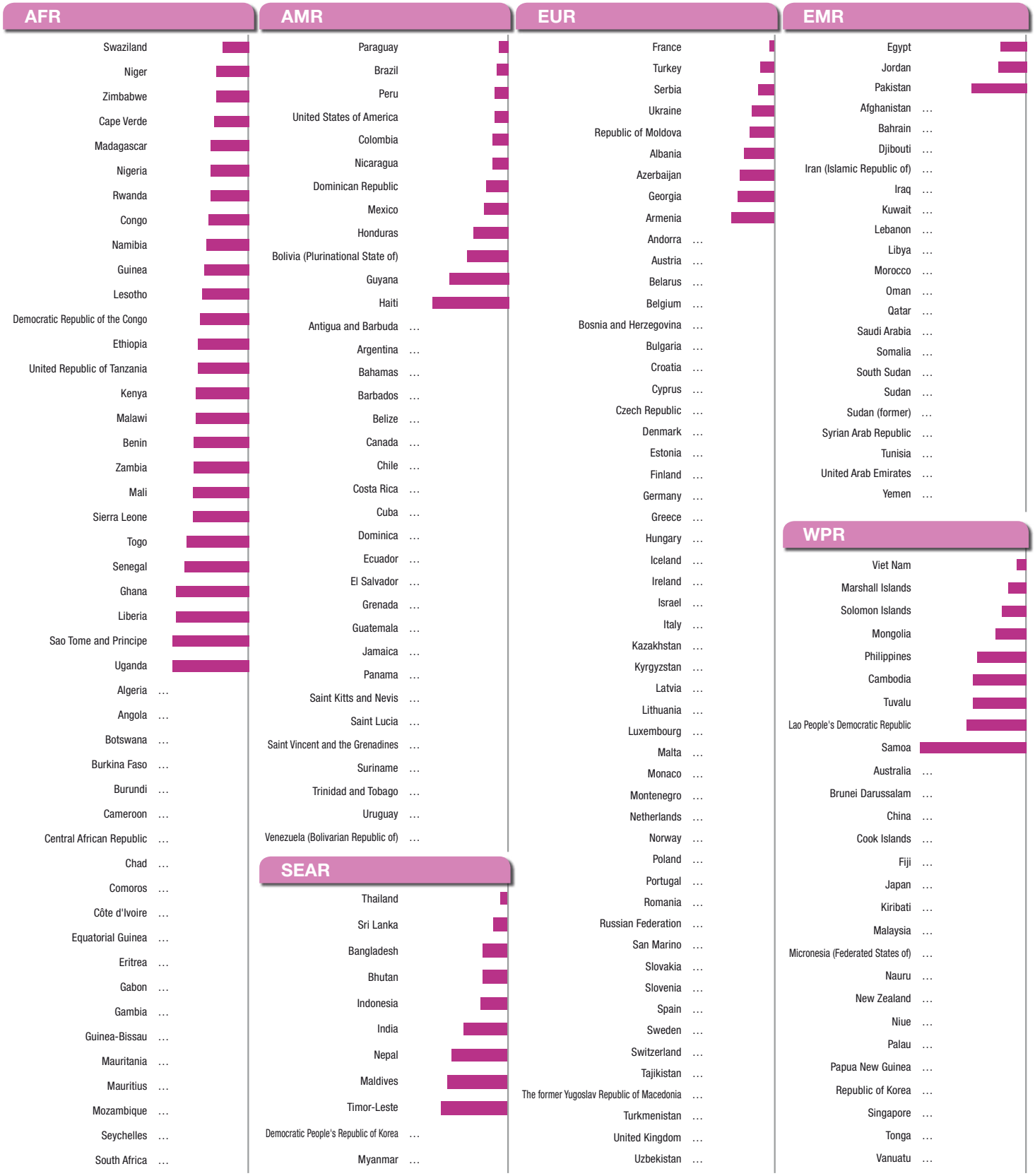


This chart shows the percentage of women who received antenatal care from skilled health personnel at least once and at least four times during pregnancy. Within each WHO region, countries are sorted by the latest available data since 2005 for at least one visit.

The vertical line denotes the global target of 100% coverage by 2015 set by the International Conference on Population and Development (ICPD+5).

Further details may be found in **Part III**, **Table 4**.

6 Unmet need for family planning (%)

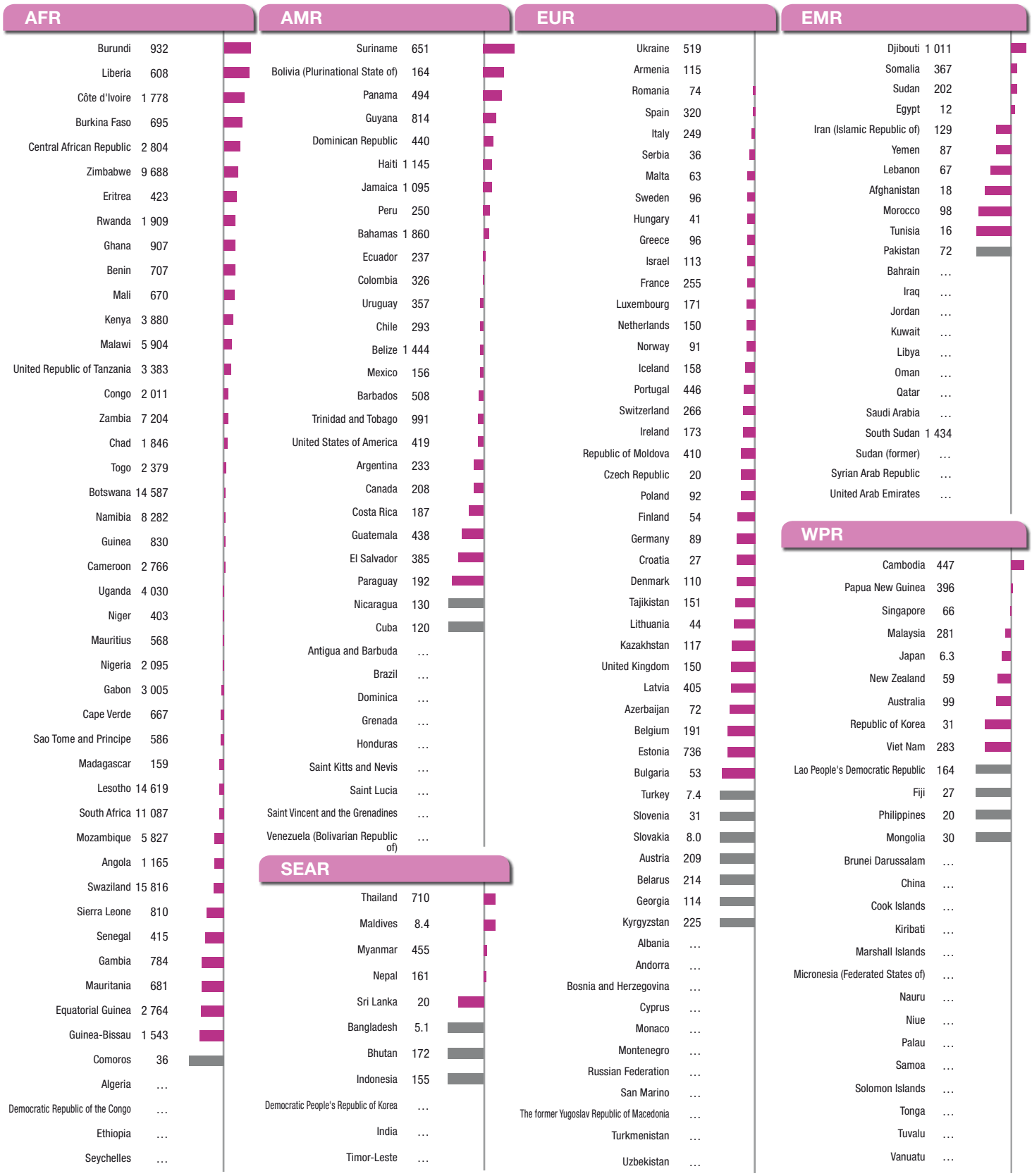


This chart shows the percentage of women who are fecund and sexually active but want to stop or delay childbearing and are not using any method of contraception. Within each WHO region, countries are sorted by the latest available data since 2005.

Achieving the MDG target of universal access to reproductive health by 2015 can be interpreted as 0% unmet need. The vertical line corresponds to 0% with the percentage of unmet need shown to the left of this line with a range of 50%.

Further details may be found in **Part III**, **Table 4**.

7 AARD (%) in HIV prevalence, 2001–2011

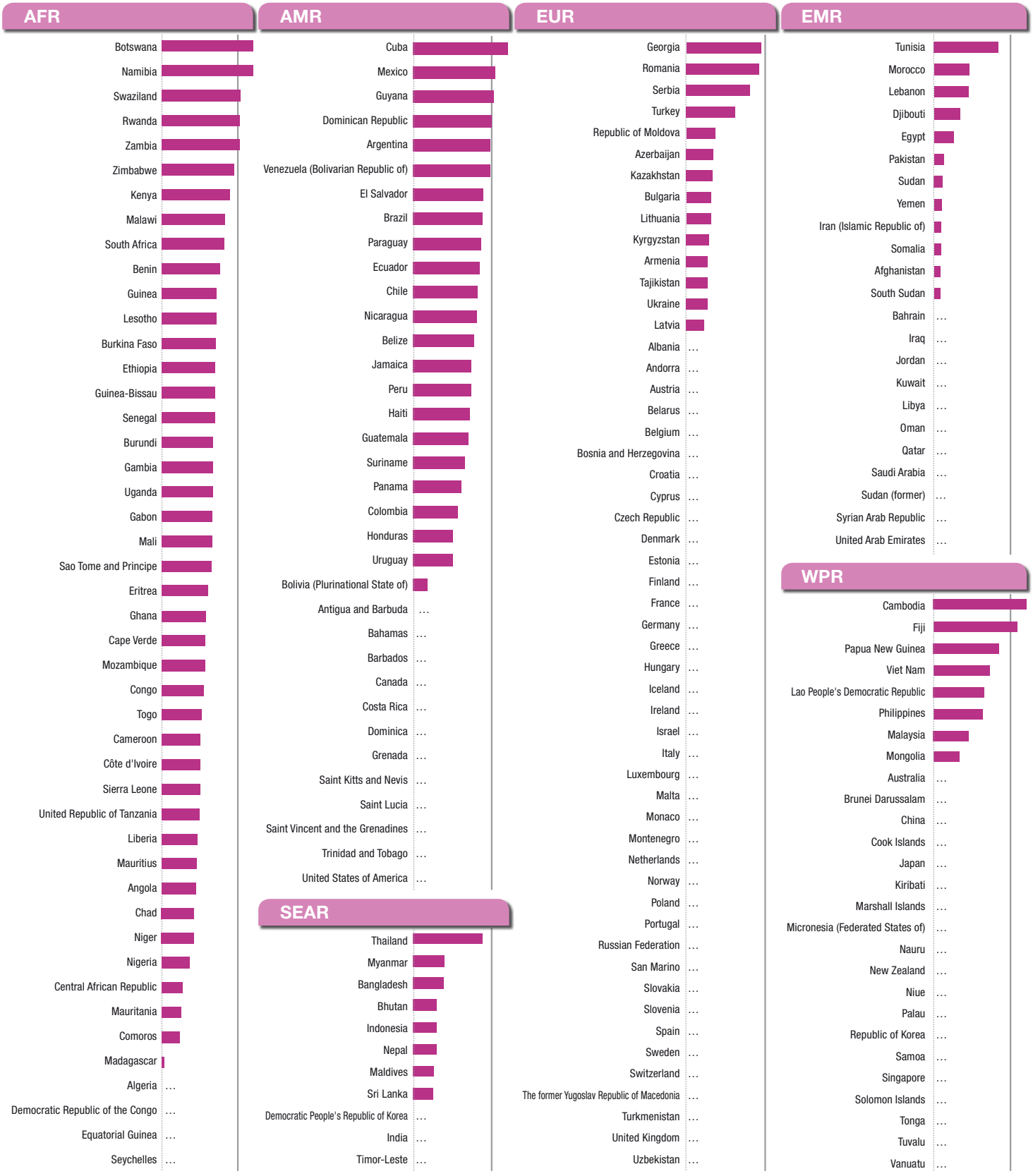


This chart shows the AARD in the estimated prevalence of HIV infections per 100 000 population per year for the period 2001–2011. Within each WHO region, countries are sorted in descending order based on the AARD in this rate.

The MDG target to halt by 2015 and begin to reverse the spread of HIV/AIDS can be interpreted as any AARD greater than 0%. The vertical line corresponds to an AARD of 0% with cut-off points of ±10% on either side. Grey bars indicate countries in which the AARD was less than -10%. The numerical values show estimated HIV prevalence per 100 000 population for 2011.

Further details may be found in **Part III**, **Table 2**.

8 Antiretroviral therapy coverage among people with advanced HIV infection (%)

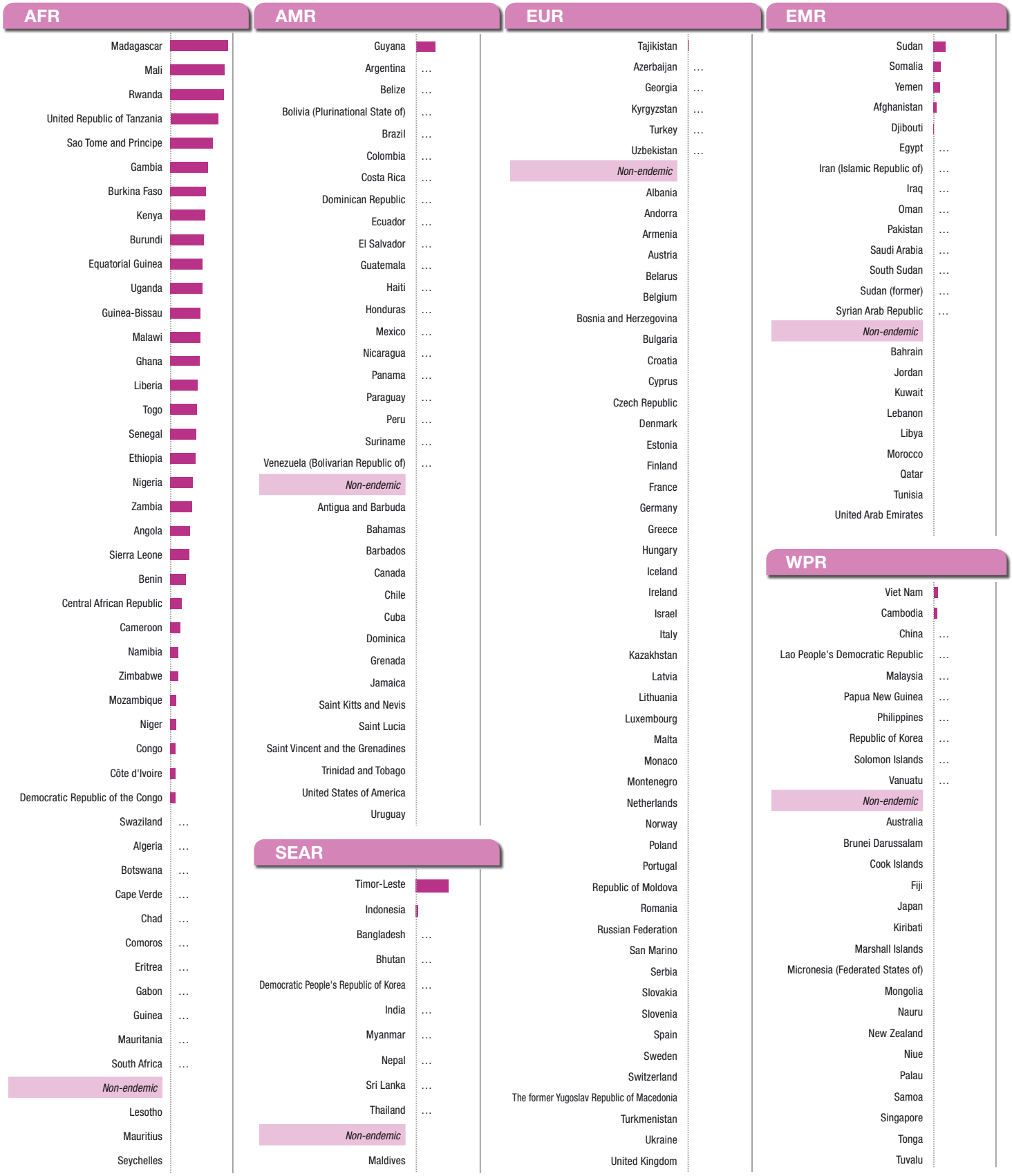


This chart shows estimated antiretroviral therapy coverage in 2011 based on the standards for treatment set out in the 2010 guidelines of the Joint United Nations Programme on HIV/AIDS. Within each WHO region, countries are sorted in descending order by the level of coverage achieved.

The vertical line denotes the target of universal access to antiretroviral therapy, defined as providing antiretroviral therapy to at least 80% of patients in need.

Further details may be found in **Part III**, **Table 4**.

9 Children aged <5 years sleeping under insecticide-treated nets (%)

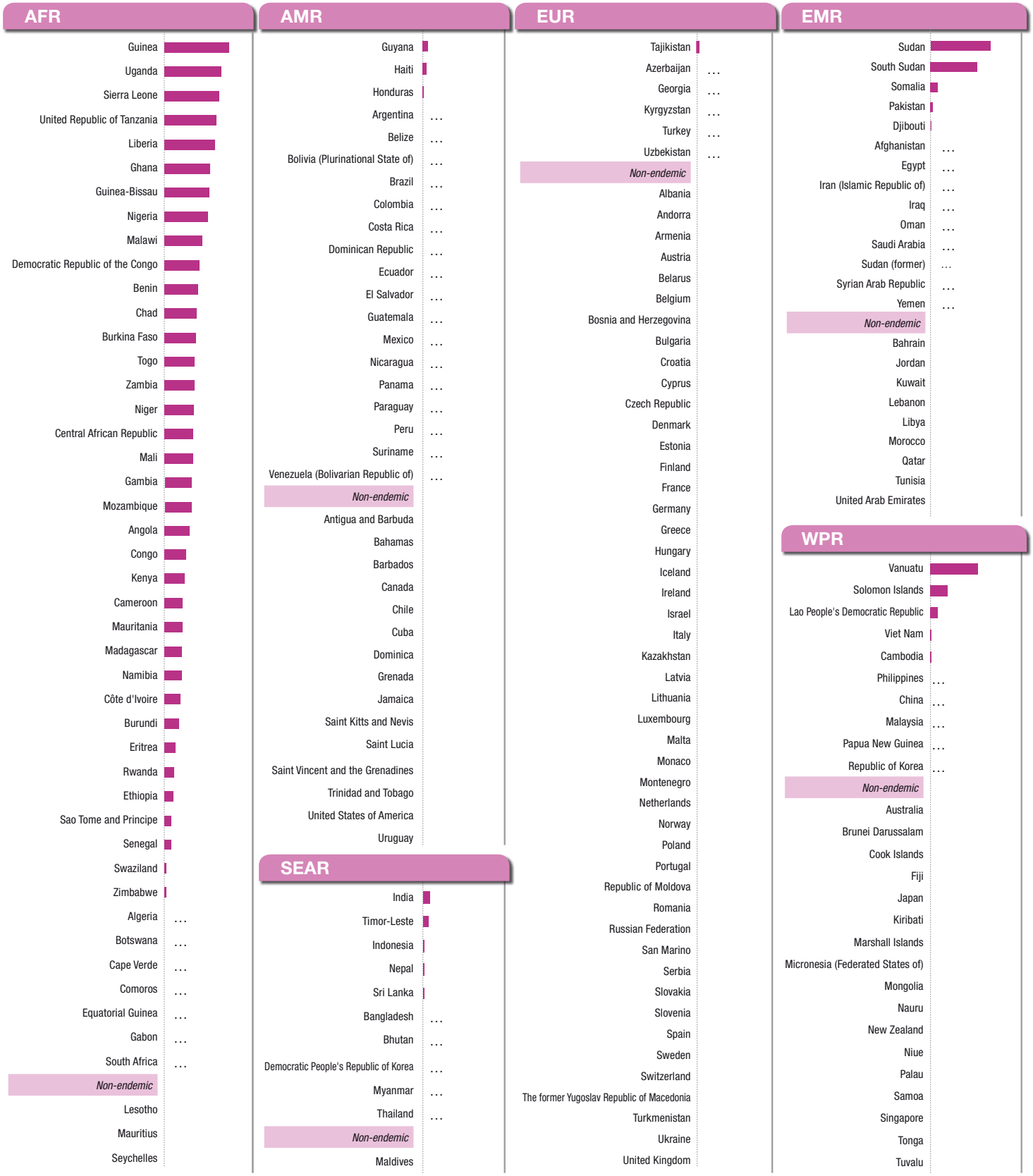


This chart shows the percentage of children under 5 years old that slept under an insecticide-treated net the night prior to the survey. Within each WHO region, countries are sorted by the latest available data since 2005.

The vertical line denotes the target of 80% coverage set by WHO and the Roll Back Malaria Partnership.

Further details may be found in **Part III**, **Table 4**.

10 Children aged <5 years with fever who received treatment with any antimalarial (%)

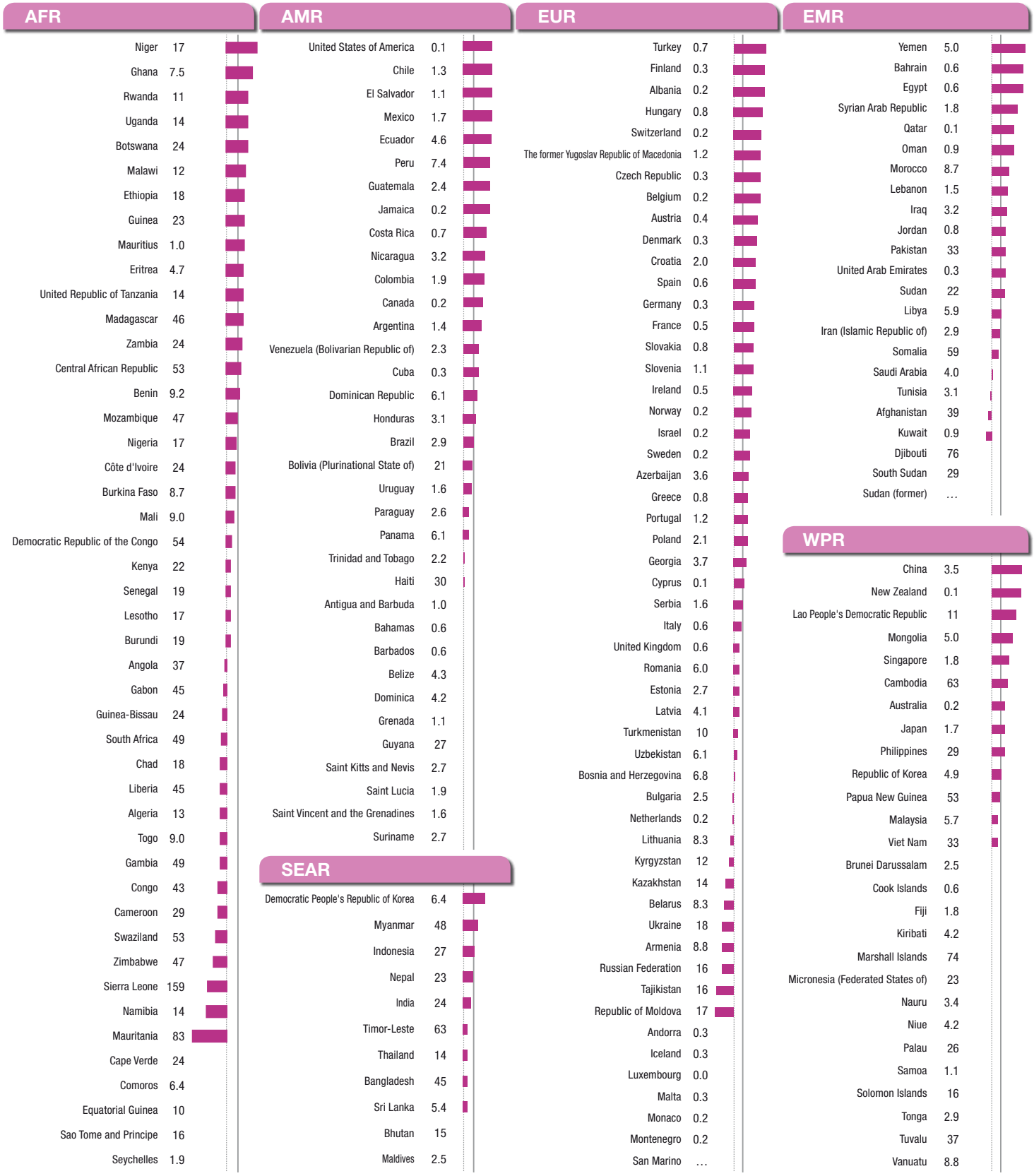


This chart shows the percentage of children under 5 years old with fever in the two weeks prior to the survey who received any antimalarial medicine. Within each WHO region, countries are sorted by the latest available data since 2005.

The vertical line denotes the target of 100% coverage set by WHO and the Roll Back Malaria Partnership.

Further details may be found in **Part III**, **Table 4**.

11 AARD (%) in tuberculosis mortality rate, 1990–2011

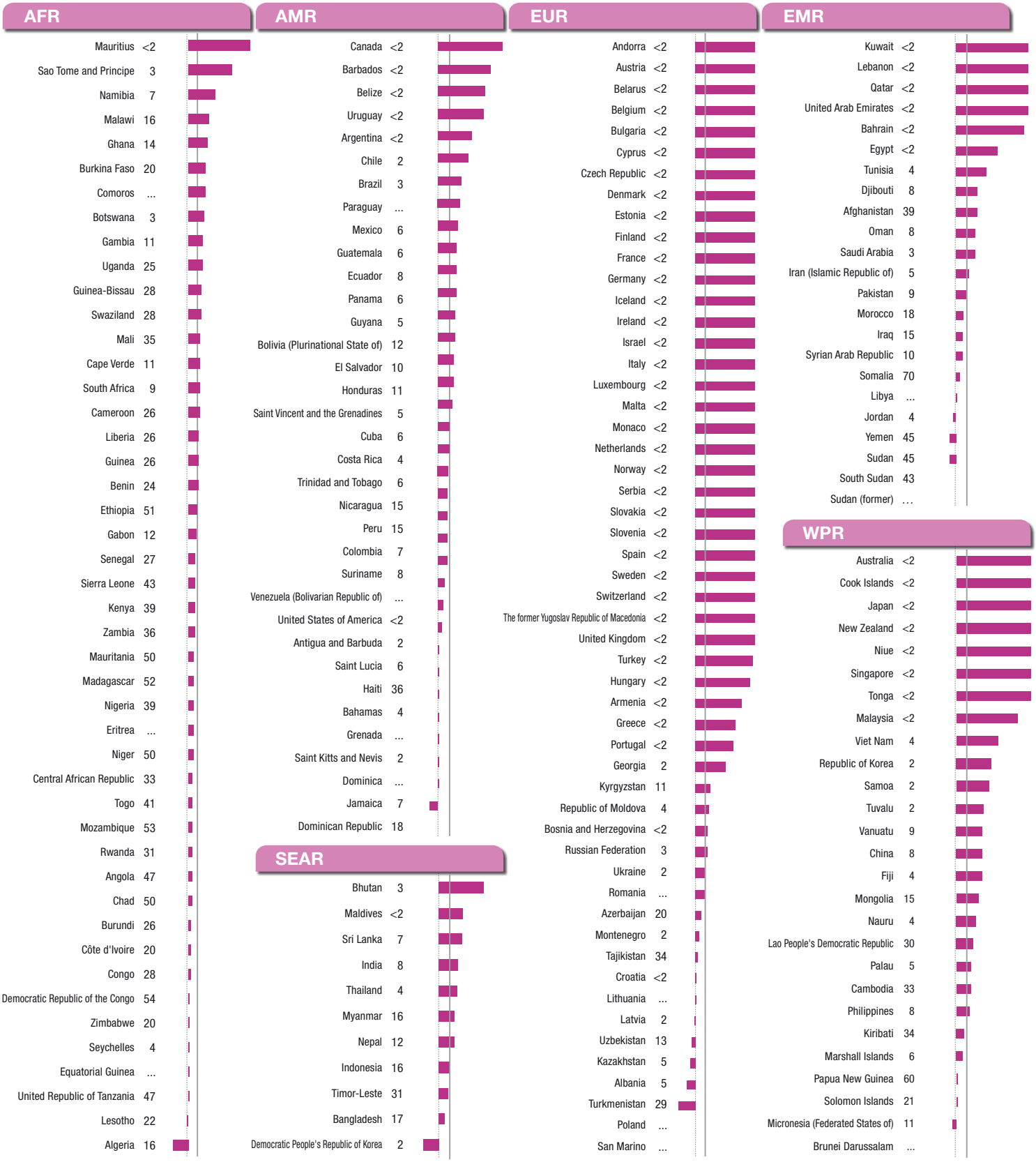


This chart shows the AARD in the estimated tuberculosis mortality rate per 100 000 population (excluding deaths among HIV-positive people) for the period 1990–2011. Within each WHO region, countries are sorted in descending order based on the AARD in estimated tuberculosis mortality rates.

In order to reach the target of a 50% reduction between 1990 and 2015 set by the Stop TB Partnership, an AARD of 2.7% is needed and this is denoted by the vertical line. The numerical values shown are estimated tuberculosis mortality rates per 100 000 population in 2011. For countries with small populations, the AARD may not be applicable and only the 2011 estimated mortality rate is shown.

Further details may be found in **Part III**, **Table 2**.

12 AARD (%) in proportion of population without access to improved drinking-water sources

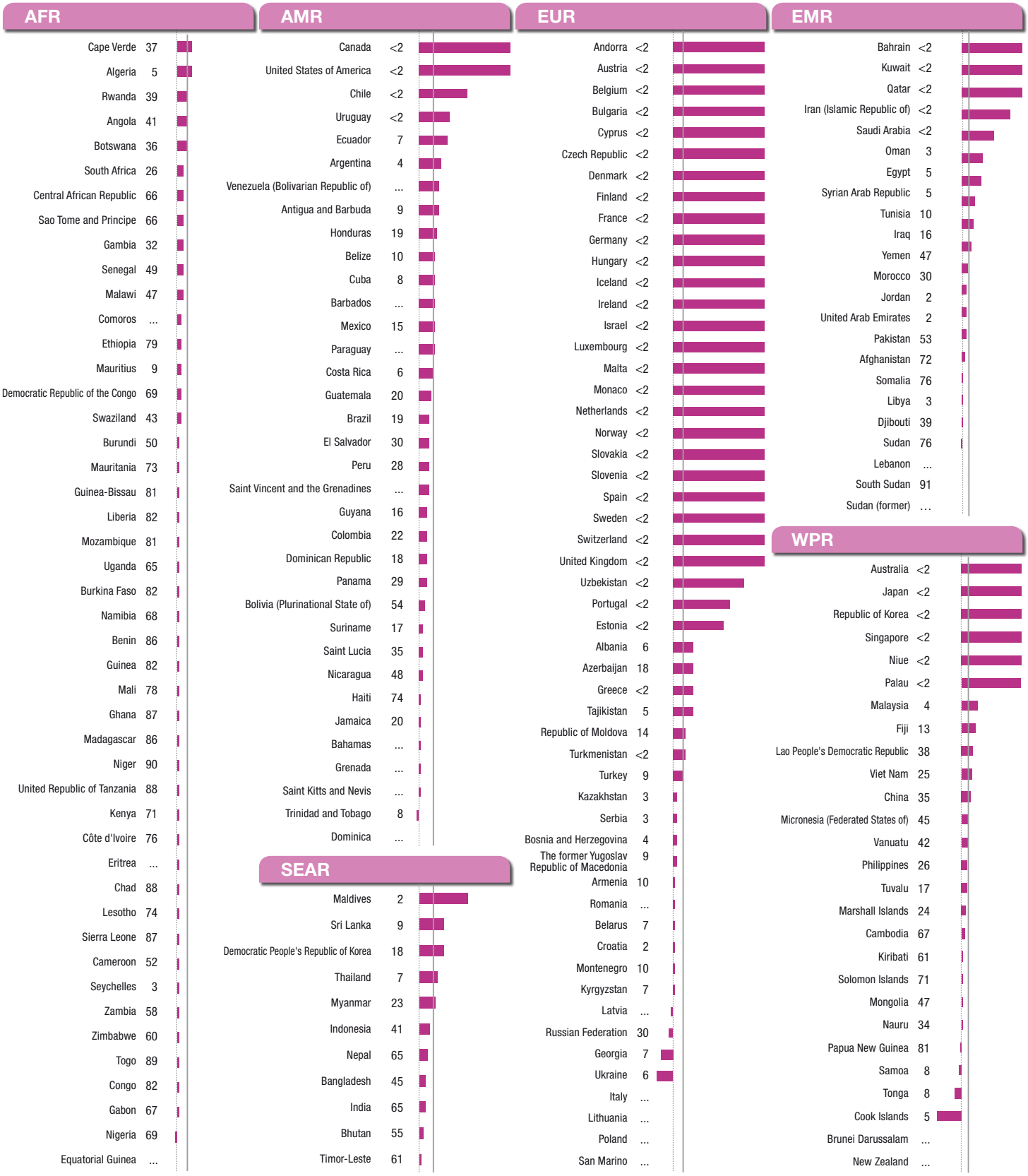


The AARD in the proportion of the population without access to improved drinking-water sources was calculated using the complement of the estimated proportion using an improved drinking-water source, for the period 1990–2011 (or any minimum period of five years since 1990). Within each WHO region, countries are sorted in descending order based on this rate of decline.

In order to reach the MDG target of halving, by 2015, the proportion of people without sustainable access to safe drinking-water, an AARD of 2.7% will be required and is denoted by the vertical line. Countries with sustained low levels of proportion of population without improved drinking-water sources (< 2%) can be considered to have met the target and are shown with the maximum AARD at the beginning of their respective regional listing. The numerical values show the estimated percentage of the population not using improved drinking-water sources in 2011.

Further details may be found in **Part III**, **Table 5**.

13 AARD (%) in proportion of population without access to improved sanitation



The AARD in the proportion of the population without access to improved sanitation was calculated using the complement of the estimated proportion using improved sanitation, for the period 1990–2011 (or any minimum period of five years since 1990). Within each WHO region, countries are sorted in descending order based on this rate of decline.

In order to reach the MDG target of halving, by 2015, the proportion of people without sustainable access to basic sanitation, an AARD of 2.7% will be required and is denoted by the vertical line. Countries with sustained low levels of proportion of population without improved sanitation (< 2%) can be considered to have met the target and are shown with the maximum AARD at the beginning of their respective regional listing. The numerical values show the estimated percentage of the population not using improved sanitation in 2011.

Further details may be found in **Part III**, **Table 5**.