



OCCASIONAL PAPERS  
No. 1, NOVEMBER 2012

Division of Policy and Strategy

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# Generation 2025 and beyond

The critical importance of understanding demographic trends for children of the 21st century

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#### **Acknowledgements**

Special thanks to Patrick Gerland, Vladimira Kantorova and Francois Pelletier from the UN Population Division for their assistance in providing the disaggregated and projected data that forms the basis of the report's analysis. Thanks also to UNICEF colleagues: Robert Jenkins and Tessa Wardlaw for their guidance and support; Mengjia Liang for her assistance in preparing the data analysis; Upasana Young for designing the layout; and Nicholas Rees, Jingqing Chai and Jin Rou New for providing comments.

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## Key points emerging from this report

1. The world's under-18 population will only modestly increase between 2010 and 2025, but its composition and concentration will change markedly.
2. The share and numbers of children living in the world's poorest regions and countries will continue to grow rapidly.
3. The child population in sub-Saharan Africa is burgeoning: By mid-century, 1 in every 3 births – and almost 1 in every 3 children under 18 – will be African.
4. Among countries, there will continue to be an increasing concentration of under-5 deaths in sub-Saharan Africa, in pockets of poverty and marginalization in populous lower-middle-income countries and in the least developed nations.
5. Within countries, there is likely to be an increasing concentration of under-5 deaths in poor and marginalized provinces, households and social groups.
6. Life expectancy at birth will increase steadily throughout the century, and gaps in life expectancy between regions will continue to narrow.
7. In the developing world, children born since 2000 are the first generation whose average life expectancy at birth will be 65 – the current international age for retirement in many high-income economies.
8. Overall dependency ratios, currently at their lowest level since the 1970s, will begin to rise, with falling child dependency ratios across the world offset by sharply increasing old age dependency – notably in China.
9. With a growing old-age dependency ratio, one of the biggest risks to children is a transfer of essential resources away from them, as increasingly total dependency ratios stretch government and family resources ever thinner in coming years.
10. Given these shifts, it is vital that government services take into account projected demographic shifts when planning essential social services for children.

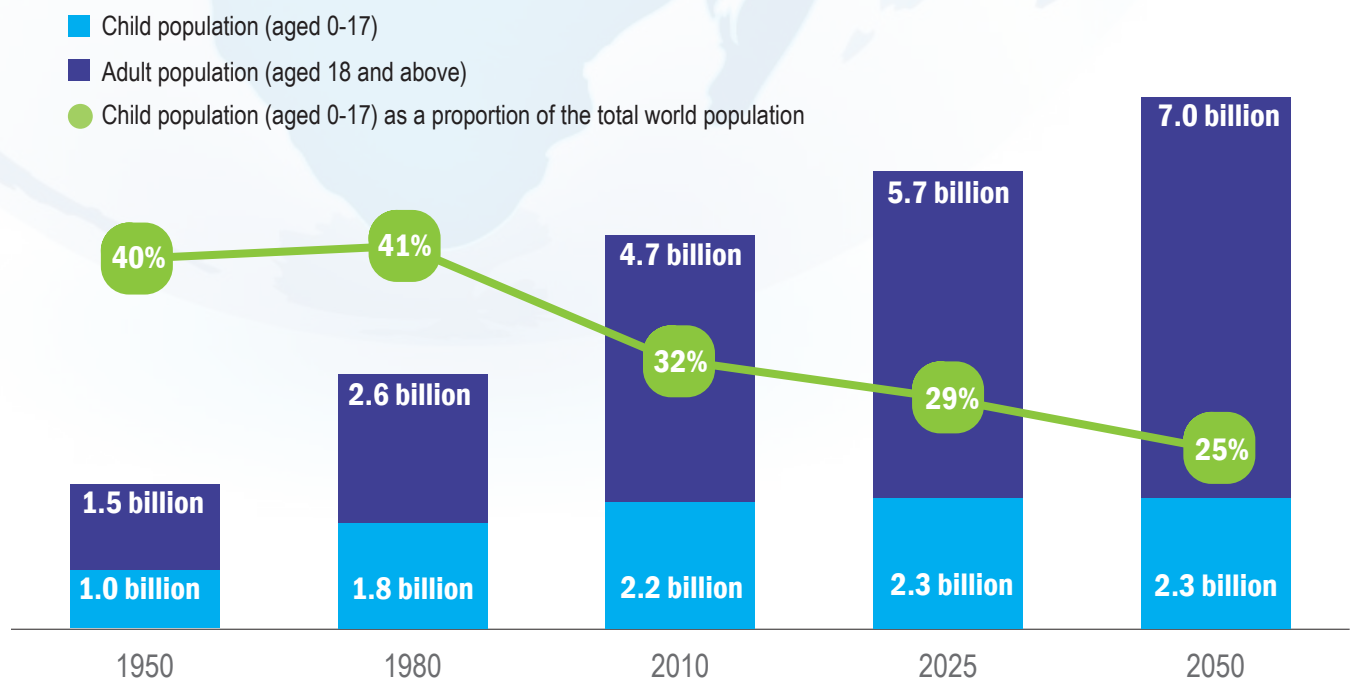
## Overview

In October 2011, the world's population reached an estimated 7 billion. On current projections, by 2025 it will hit 8 billion (Figure 1). Much remains uncertain about the world of that time, particularly given hesitant recovery and fiscal turmoil in the advanced economies; the steady shift in the global balance of economic power towards middle-income countries; the sluggish progress achieved by world leaders on addressing climate change and food security; and humanitarian crises of increasing frequency, number and intensity. But we do know that the next billion of global inhabitants will all still be children by 2025, and that 90% of them will have been born in the less developed regions.

The total population of children under 18 will only increase slightly, by 4%, from 2.2 billion in 2010 to 2.3 billion by 2025, and will remain at that level by 2050. But children's share of the world population will decline, from 32% in 2010 to 29% in 2025 and down to 25% by 2050 (Figure 1), as fertility rates

continue to fall in many regions and people live longer. In addition, the composition and concentration of the global child population will change markedly, with significantly more children living in the poorest countries and regions than ever before (Figure 2).

**Figure 1**  
Trends in child and adult world population, 1950-2050



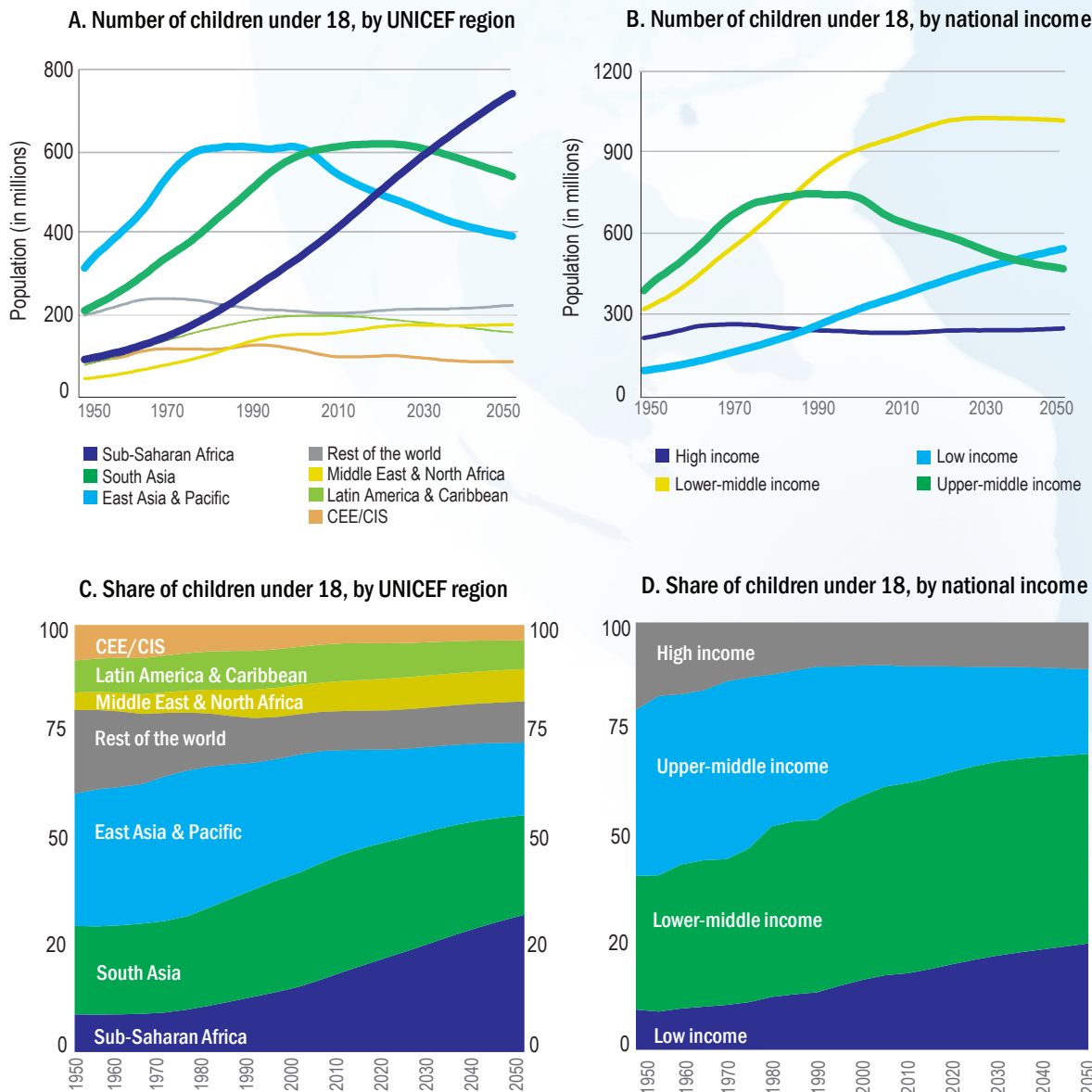


The highest levels of fertility will be seen in those countries with the lowest per capita incomes. For example, by 2025 the total fertility in Niger, the world's second poorest country in terms of per capita GNI at purchasing power parity, is still projected to average over 6 births per woman. The 49 countries currently classified as the world's least developed nations will account for around 455 mil-

lion of the projected 2 billion global births between 2010 and 2025.

Populous middle-income countries will also account for a considerable proportion of the growth in world population. Just five of these nations – China, India, Indonesia, Pakistan and Nigeria – will account for about 859 million births between 2010 and 2025.

**Figure 2**  
**Population of children under age 18 by UNICEF region and national income, 1950-2050**

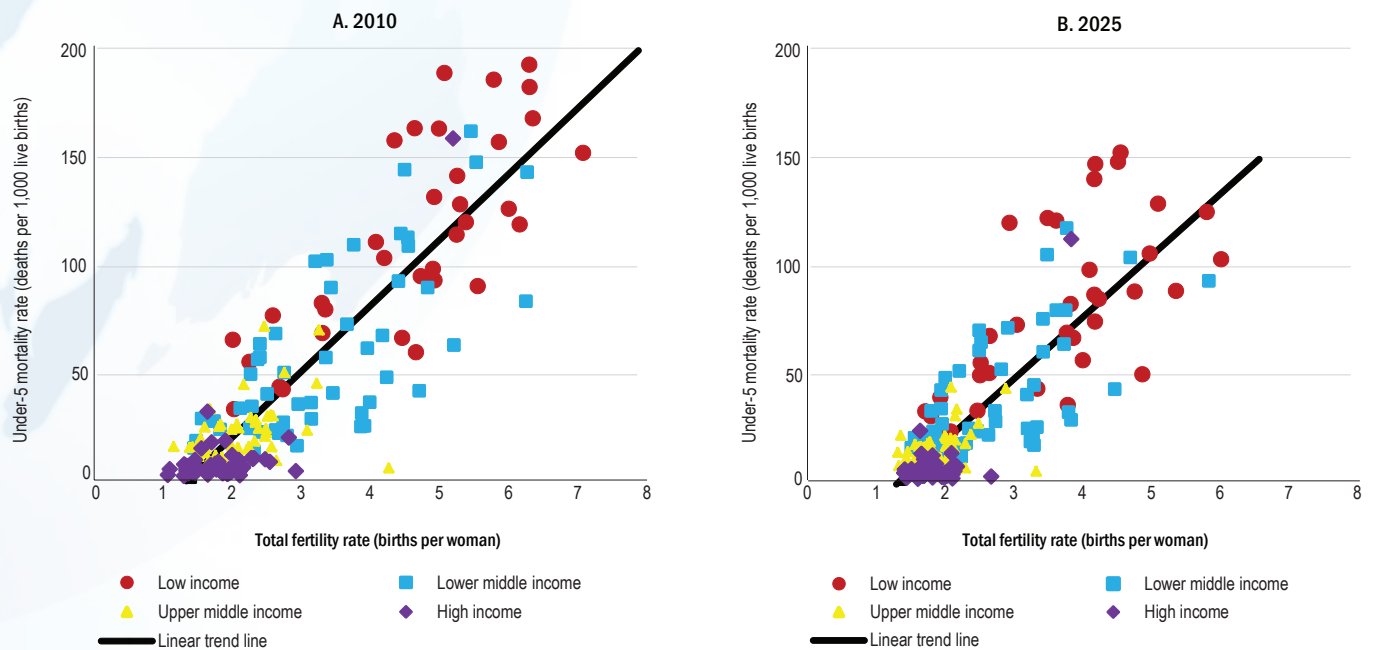


It is fairly clear now that the majority of the next billion is destined to be born in low- and middle-income countries if the current demographic trends continue. As *Figure 3* shows, at the national level there is a clear correlation between high levels of poverty, fertility and under-5 mortality.

At the subnational level, it is the poorest that are likely to experience the most births. Evidence from household surveys shows massive disparities in fertility levels within developing nations: in India, for example, the fertility rate in 2006 was around 4 births per woman in the poorest quintile, compared with 1.8 in the richest.<sup>1</sup> ■

<sup>1</sup>World Bank, 'The World Bank Reproductive Health Action Plan 2010-2015', April 2010, p. 7.

**Figure 3**  
Total fertility rate and under-5 mortality rate by country, 2010 and 2025



## Global and Regional Trends

### **The proportion of children living in the world's poorest countries will continue to rise.**

In 1990, roughly half of children lived in low- or lower-middle-income countries (*Figure 2*). By 2025, however, nearly two-thirds of children will live in the low- and lower-middle-income countries, and by mid-century, almost 70% will live in these countries. By mid-century, one quarter of the world's children will live in low-income countries, compared with less than 10% in 1950 and roughly 17% in 2010.

### **Under current assumptions, 2 billion children will be born between 2010 and 2025.**

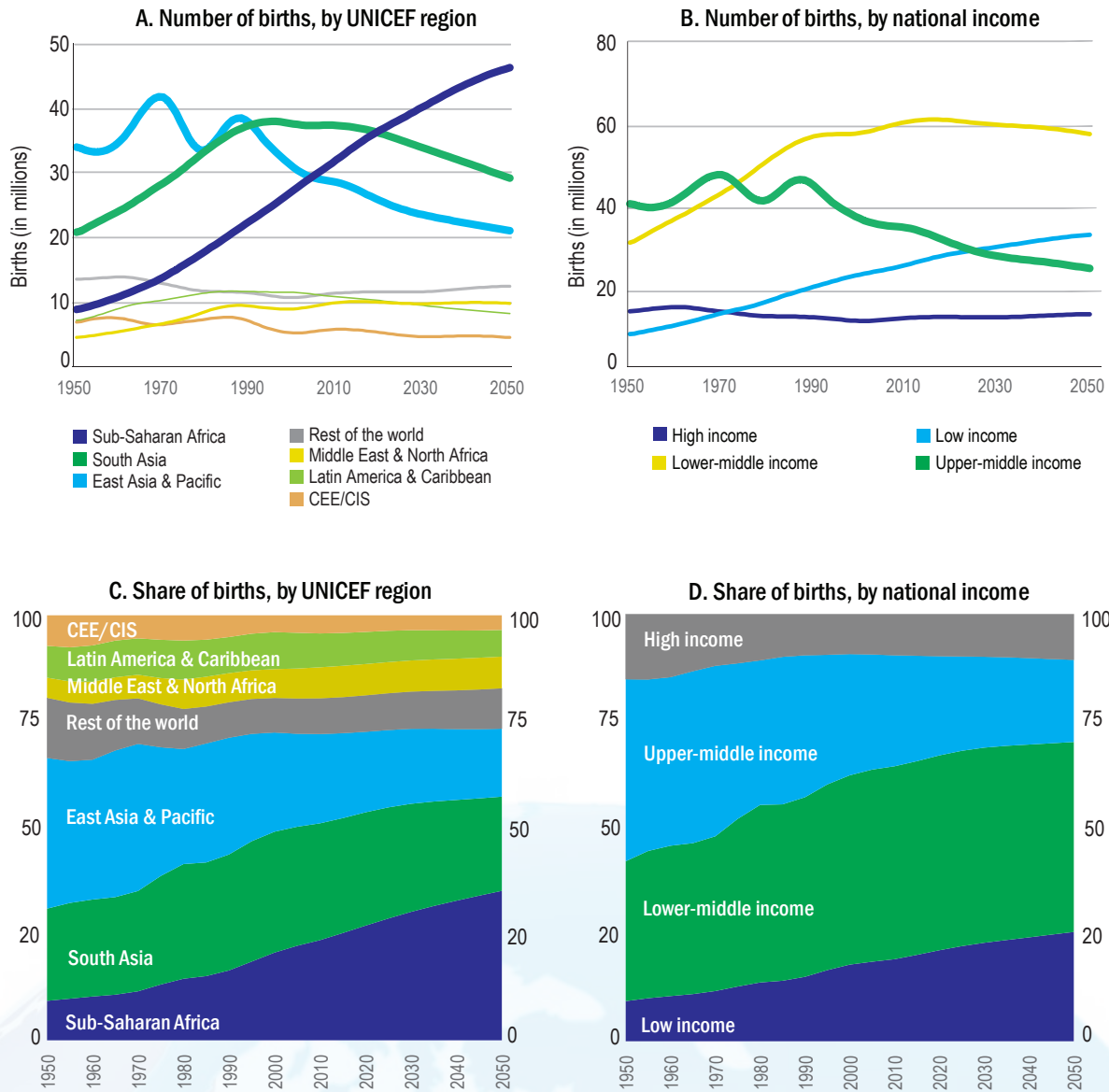
Despite expected decline in the average number of children per woman assumed in most countries, an increasing number of births will occur in sub-Saharan Africa, due to the large numbers of adults in reproductive age groups, up from about 24% of the global total in 2010 to 29% in 2025, when it will surpass South Asia as the region with the highest annual number of births (*Figure 4*). By mid-century, sub-Saharan Africa will account for 1 in every 3 children born. Around 20% of the world's births will occur in low-income countries. Low and lower-middle-income countries will account for 65% of global births.

The annual number of births in Asia will experience a sharp fall in the next few decades, falling from 37

million in 2010 to around 29 million for South Asia, and from 29 million in 2010 to 21 million for East Asia and Pacific by mid-century (*Figure 4*).

**1 out of 3 children will be African.** Between 2010 and 2025, the child population of sub-Saharan Africa will rise by 130 million. By mid-century, almost 1 in every 3 children will live in sub-Saharan Africa; in 1950, a century earlier, this ratio was less than 1 in 10. From around 2030, sub-Saharan Africa will be the single region with the greatest number of children under 18 (*Figure 4*). ■

**Figure 4**  
**Births by UNICEF region and national income, 1950-2050**



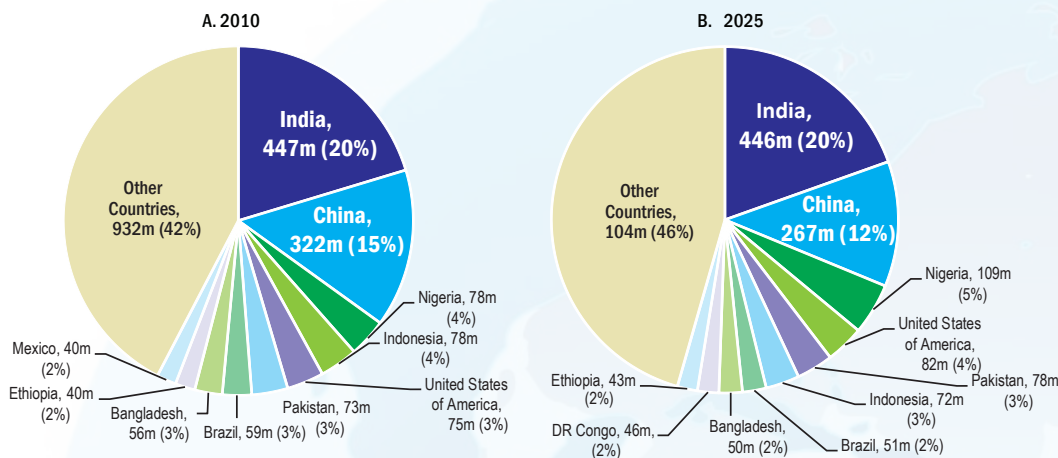


## Country-Specific Trends

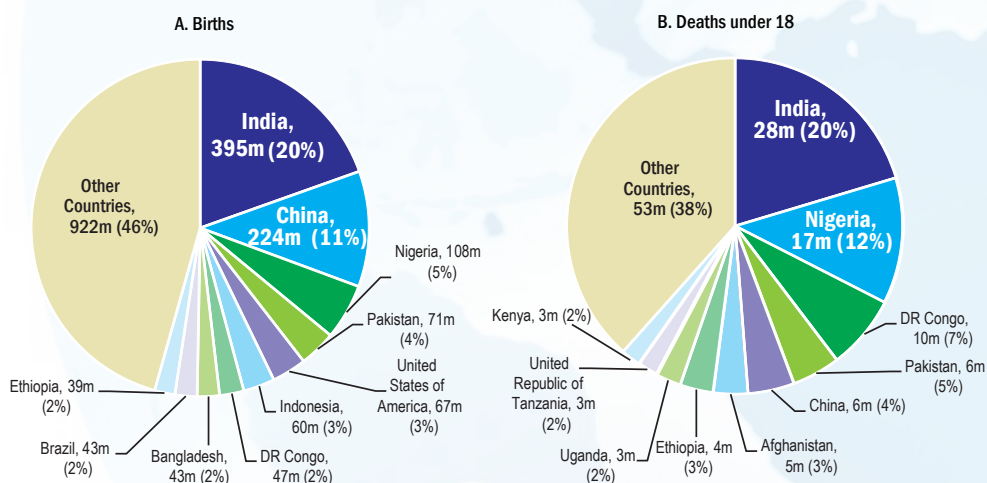
India will retain the largest national child population (around 450 million), but it will experience hardly any net change between 2010 and 2025 (Figure 5). Thereafter, however, its child population will begin to decline sharply, falling by 13% on its 2010 figure by mid-century. During 2010–2025, India will still have the largest cumulative number of births of any nation – about 395 million – and the greatest number of child deaths under age 18: approximately 1 in every 5 global under-18 deaths will still take place in this country (Figure 6).

**Figure 5**  
**Top 10 countries with the greatest number of children under age 18, 2010 and 2025**

Note: The first number cited for each country refers to the child population in millions; the second to its share of the world child population.



**Figure 6**  
**Top 10 countries with the greatest cumulative number of births and deaths under age 18, 2010-2025**



**China will continue to have a dwindling number of children.** From having 322 million children in 2010, China will see its child population decline to 267 million in 2025 and 211 million by mid-century. Despite retaining the second-largest national population of children, the country will account for only 4% of global under-18 deaths in 2010–2025.

**The United States is the only high-income country that will have an increasing proportion of the world's children by 2025.** The United States is among the top five countries for births in the next 15 years, with 67 million expected between 2010 and 2025. Its share of the global under-18 population will rise from 3% in 2010 to 4% in 2025 and it will overtake Indonesia as the country with the fourth largest national population of children, with 82 million in 2025.

**In absolute terms, Nigeria will see the highest increase in its under-18 population of any country.** With India's child population stabilizing, and China's declining, Nigeria will see the highest absolute rise in its child population, adding a further 31 million (41% increase) children between 2010 and 2025, and more than doubling its 2010 population by mid-century. Under current projections by the UN Population Division, Nigeria will account for 1 in every 8 deaths among under-18s in 2010–2025.

**Besides India and China, Nigeria, Democratic Republic of the Congo and Pakistan** face a great challenge for children's survival in the coming decade: under current assumptions, 1 in every 4 global under-18 deaths will take place in these last three countries alone.

**The biggest absolute increases in national child populations in 2010–2025 will mostly take place in sub-Saharan Africa:** Nigeria (31.6 million), United Republic of Tanzania (13.1 million), Democratic Republic of Congo (10.4 million), Uganda (8.6 million), Kenya (7.5 million), United States (6.6 million), Iraq (6.0 million), Afghanistan (6.0 million), Niger (5.5 million) and Malawi (5.0 million).

**In percentage terms, the top ten countries to see increases in child populations are all in sub-Saharan Africa:** Zambia (66%), Niger (64%), Malawi (63%), United Republic of Tanzania (57%), Somalia (50%), Burkina Faso (48%), Uganda (47%), Mali (46%), Rwanda (45%) and Nigeria (41%).

**The largest declines in child population in absolute terms will mostly be recorded in Asia and Latin America:** China (55.5 million), Brazil (8.9 million), Bangladesh (6.4 million), Indonesia (6.2 million), Mexico (3.2 million), Thailand (3.1 million), Vietnam (2.4 million), Japan (1.8 million), Iran (1.7 million) and Myanmar and Turkey (both 1.5 million).

**In percentage terms, most, but not all, of the biggest declines will occur in countries with smaller populations, particularly small island developing states:** Guyana (29%); Cuba (25%), Bosnia and Herzegovina (24%), Albania (23%), Saint Vincent and the Grenadines (19%), Mauritius, TFYR Macedonia, Portugal and Thailand (all 18%), and China (17%). ■

## Mortality Trends

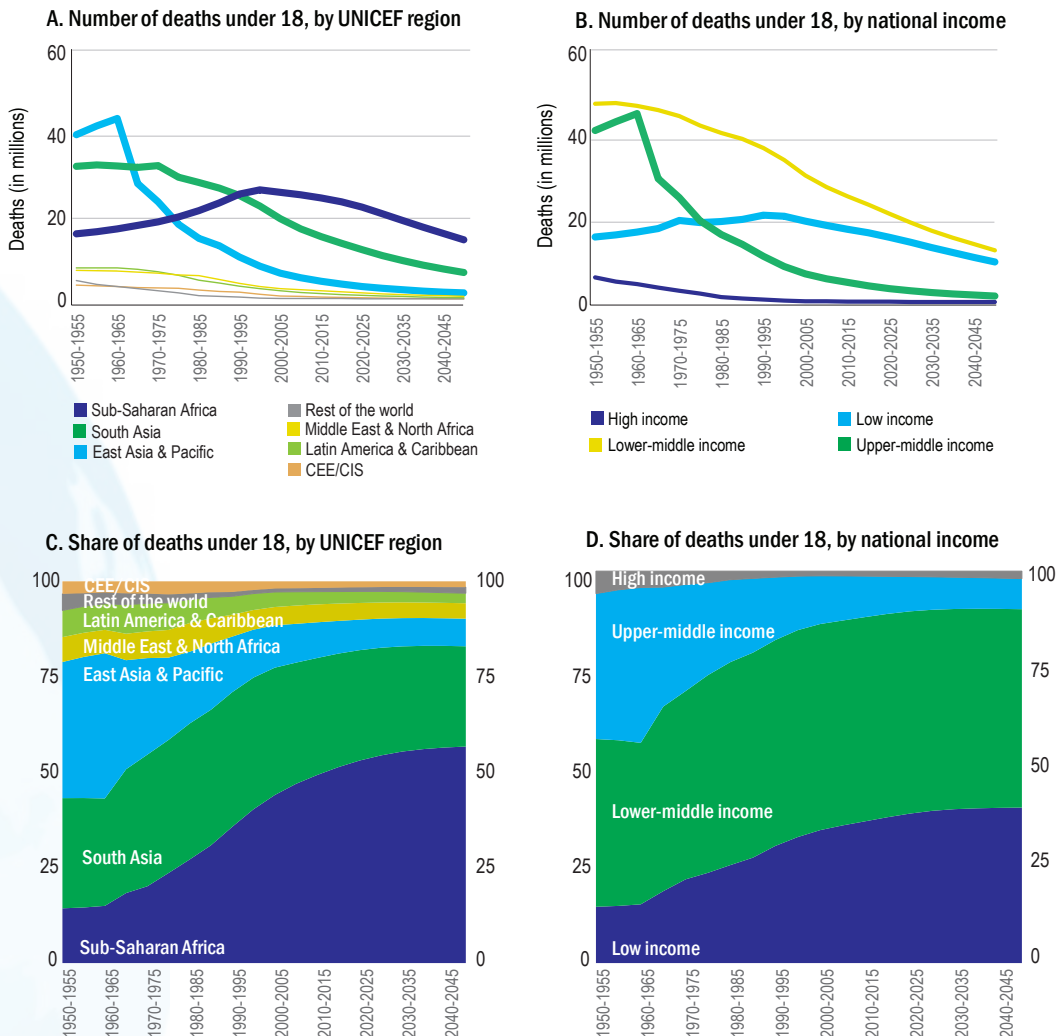
Observable trends show that although the global number of child deaths has fallen markedly since 1990, under-5 deaths are increasingly concentrated in the poorer regions, countries and communities in the developing world.

The future story of childhood deaths will increasingly be African. By 2025, about 55% of under-18 deaths will take place in sub-Saharan Africa, rising to almost 60% by mid-century. All other regions will see a declining proportion of global under-18 deaths (Figure 7). More than 80% of deaths under age 18 will be among children under five.

Sub-Saharan Africa in particular, and, to a lesser extent, South Asia, already have fallen behind other regions in reducing under-5 mortality. A look at how the burden (number) of under-5 deaths is distributed among regions reveals an increasing concentration of global under-5 deaths in sub-Saharan Africa and South Asia; combined, these two regions accounted for 82% of the global total in 2011. In contrast, the rest of the world's regions have seen their share fall from 32% in 1990 to just 18% in 2011.

Figure 7

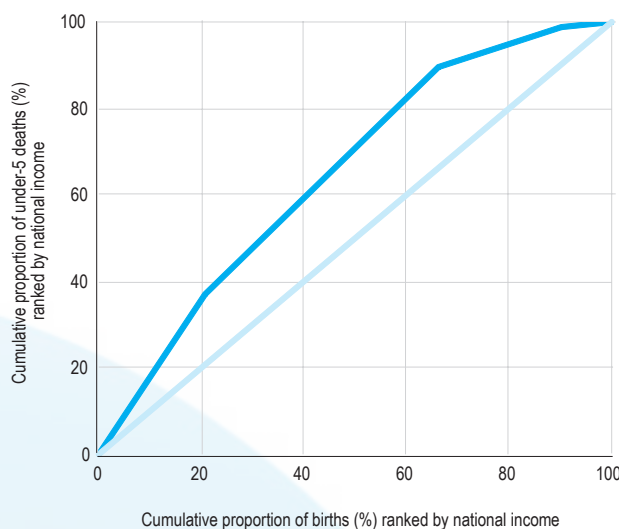
### Deaths of children under 18 by UNICEF region and national income, 1950-2050



**The poorest countries will be home to the greatest number of under-18 and under-5 deaths.** In 2010-2025, low and lower-middle-income countries will account for around 90% of under-18 deaths and more than 80% of under-5 deaths. Based on projections made by the UN Population Divi-

sion, around 20% of the world's births occur in low-income countries; however, these countries account for almost 40% of global under-5 deaths. Together, low- and lower-middle-income countries account for 66% of global births, but more than 90% of under-5 deaths (*Figure 8*).

**Figure 8**  
The global concentration curve of under-5 mortality, 2010-2025



Note: The concentration curve shows the cumulative proportion of deaths (on the y-axis) against the cumulative proportion of births (on the x-axis), ranked by national income, and beginning with the poorest child. If the concentration curve coincides with the diagonal, all children have the same mortality rates. If the curve lies above the diagonal, inequalities in mortality favour the better-off-children. If the curve lies below the diagonal, inequalities in mortality favour the poorer children.

**National burdens of under-5 deaths are heavily concentrated in poor and isolated provinces, households and social groups.** Statistical evidence shows that national burdens of under-5 mortality are not equally distributed within countries but largely concentrated in pockets of income poverty and geographic marginalization. A UNICEF analysis of data from Demographic and Health Surveys disaggregated by wealth quintiles for 37 countries with available data since 2005 shows marked differentials in the distribution of under-5 deaths. In 22 of 37 developing countries with

available data, more than 50% of under-5 deaths occur in the least two poorest quintiles; and in 12 countries, the proportion of under-5 deaths was at least 30% higher in the poorest two quintiles compared with the richest two quintiles. Such disparities in the distribution of under-5 deaths are most marked in lower middle-income countries such as India and Indonesia that have often made strong progress towards MDGs at the national aggregate level, but they also exist in low-income countries such as Bangladesh, Cambodia and Haiti. ■



## Life Expectancy and Dependency Trends

**A generation living longer lives.** A child born in 2010 could, on average, have expected to live a further 68 years assuming that the current mortality situation prevails. By 2025, that figure will rise to 71 years, further to 76 by mid-century and to over 80 by 2100. Children born in the more developed regions could expect to live an average of 77 years in 2010 – 24 years longer than the average sub-Saharan African child. By mid-century, this gap is projected to narrow, to 16 years, and will fall further, to 11 years by the turn of the century. These gains are conditional on the continuous progress in child and adult survival, as well as improvements in old-age mortality, and do not factor any new unforeseen threats to mortality.

For the less developed regions, children born since the 2000 Millennium Declaration and the MDGs are the first generation whose average life expectancy at birth will be 65 – the current international age for retirement in many high-income economies. For this generation, most can expect to become old-age dependents.

**A generation with greater numbers of dependents.** With increasing life expectancy and declining total fertility rate, the world as a whole will have more elders and fewer children relatively (*Figure 9*). In the past 40 years (1970-2010), total dependency ratios – the ratio of the sum of the population aged 0-14 and that aged 65 and above to the population aged 15-64 – have fallen sharply globally, driven down by falling child dependency ratios (the ratio of the population aged 0-14 compared to the population aged 15-64) from high levels. In fact, by 2010, the global total dependency ratio had reached its lowest level on record. The global child dependency ratio in 1970 was 65%; by 2010, this had fallen to 41%. In contrast, the global old-age dependency ratio (the ratio of the population aged 65 years or over to the population aged 15-64) has risen very slowly, from 9% in 1970 to 12% in 2010 (*Figure 10*).

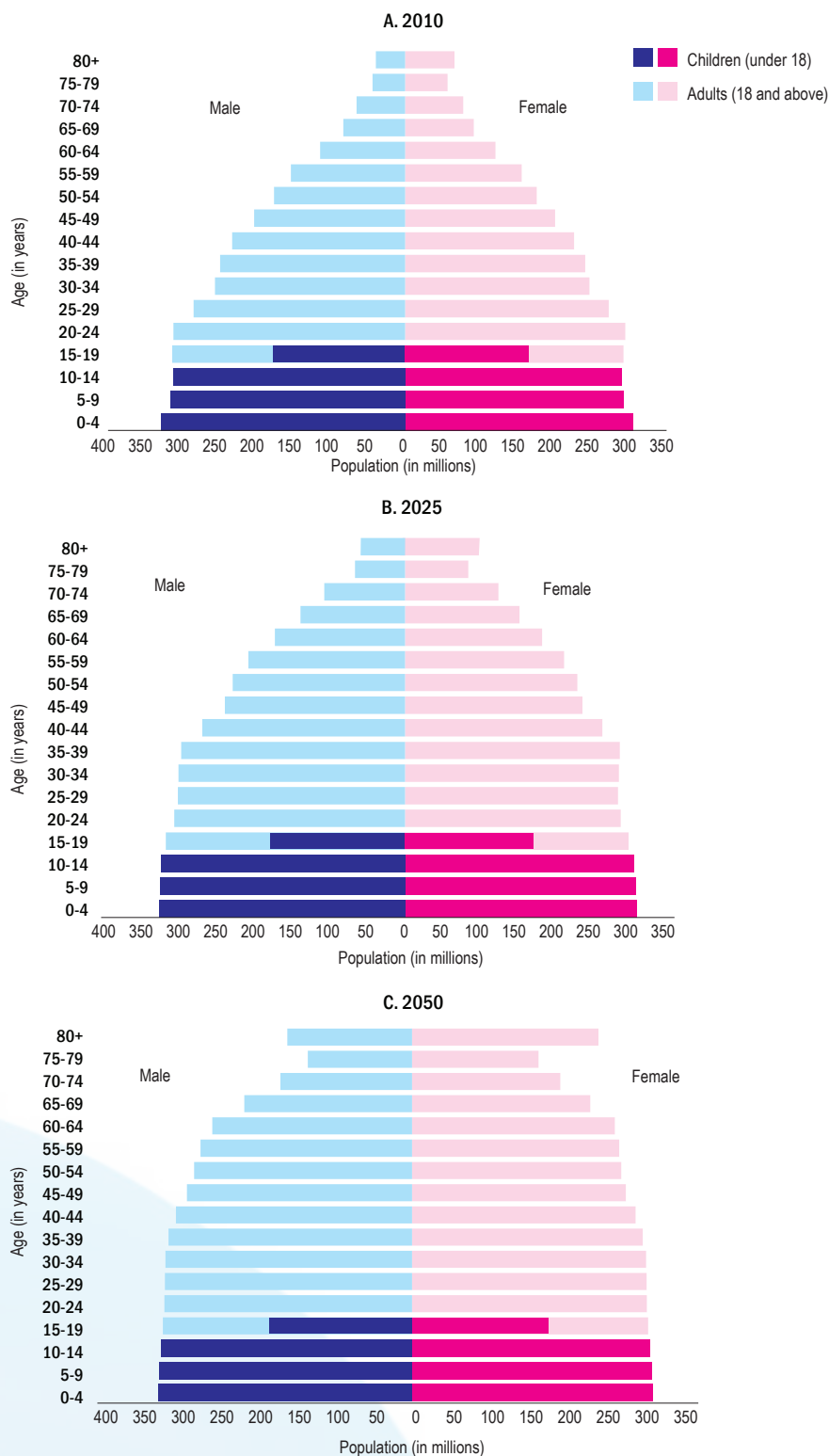
The outlook for the next 60 years (2010-2070) shows a reversal of these trends. After remaining steady at 52 between 2010 and 2025, the overall global dependency ratio will climb steadily thereafter, reaching its 1990 level by 2070. In every region, including sub-Saharan Africa, child dependency ratios are on the decline in for the remainder of the century, but old-age dependency is on the rise, often sharply in some regions. The fall in the child dependency ratio will continue but at a much slower pace, and it will settle at around 31% in 2070. Meanwhile, the global old-age dependency rate will accelerate markedly, almost tripling from 12% in 2010 to around 32% in 2070.

The overall dependency ratios is set to rise fastest and farthest in the more developed regions, owing to a sharp rise in old-age dependency in the remainder of the century. By contrast, child dependency ratios in these regions will remain fairly stable. The least developed countries will continue to experience a sharp decline in overall dependency ratios until around 2070.

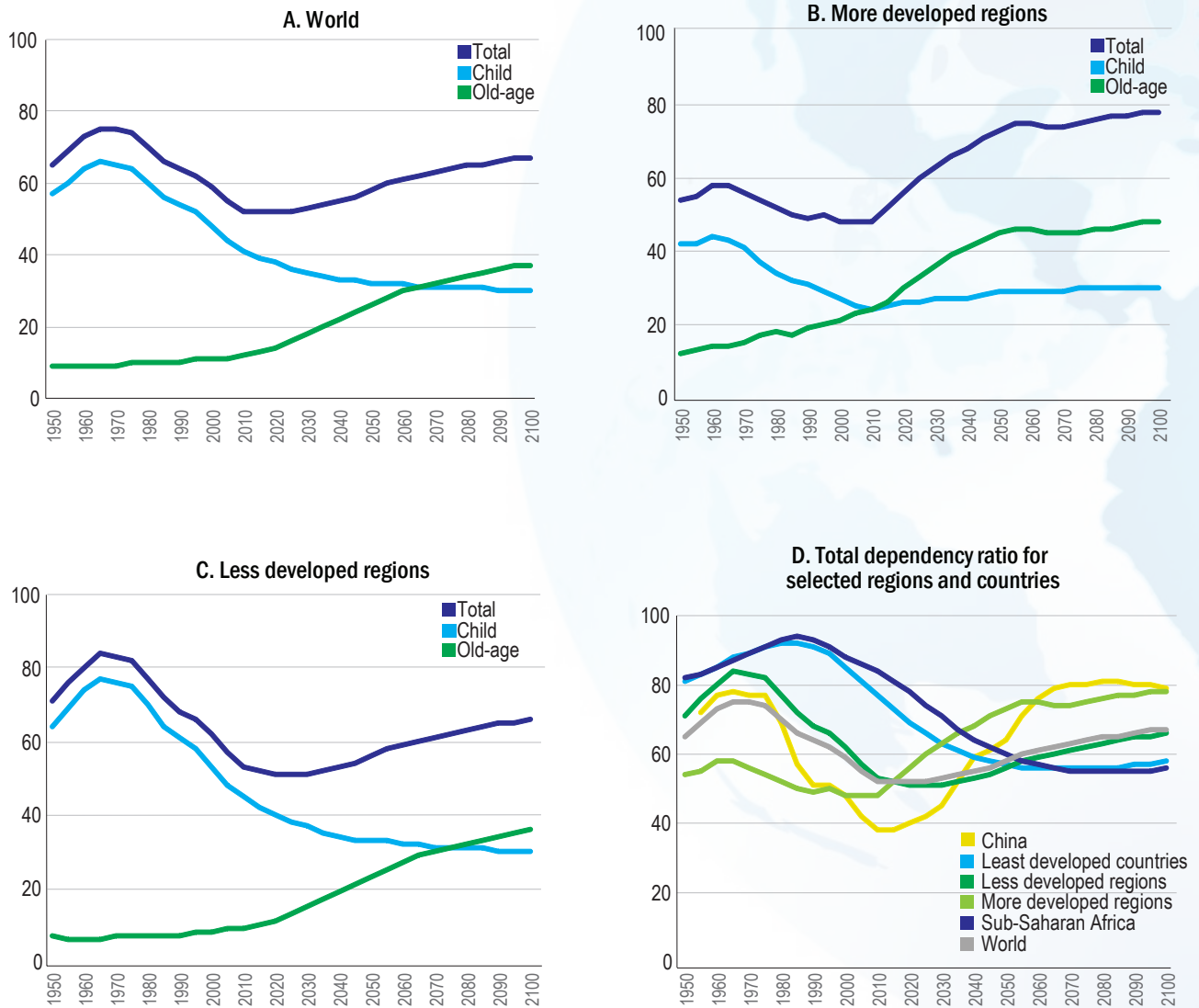
Much of the increase in the dependency ratio of the less developed regions and the world will partly be due to China's rapidly ageing population. Between 1950 and 2010, China's child dependency ratio halved from 56% to 27% – the latter figure is among the lowest rates in the world. Over the same period, its old-age dependency ratio increased from 7% to 11%. Consider the contrast with the next 60-year period: whereas the child dependency ratio broadly stabilizes, standing at a projected 25% in 2070, the old-age dependency increases massively, to 54%. This leaves the overall dependency ratio at 80% – meaning that there is almost one dependent person for each working-age person. ■



**Figure 9**  
**Global population by age and sex, 2010, 2025 and 2050**



**Figure 10**  
**Total, child and old-age dependency ratios, 1950-2100**



## Implications, Risks and Opportunities

This study is derived from projections from the UN Population Division based on *World Population Prospects: The 2010 Revision*<sup>2</sup> (medium fertility assumption). The authors acknowledge that the actual outcomes for children may differ from the projections due to policy interventions and changes in underlying assumptions. For example, we are aware that different rates of economic growth among nations may alter the composition of countries currently classified as low-income, middle-income or high-income. Nonetheless, we consider that the key points highlighted in this review of demographic trends for children in the 21st century have several important implications for global efforts to foster equitable development for children in the 21st century.

**First, governments and donors must recognize that changing demographic trends will require adapting policies and programming and investments in children.** Understanding where the next billion citizens will be born, survive and live will be critical to formulating solutions that drive forward equitable human progress, and ensuring that they are adequately resourced. This will be of vital importance for sub-Saharan Africa, whose under-18 population is set to increase by 130 million – roughly the same number of people as the population of Japan, the world's 10th most populous country – with several countries there set to experience large and sometimes unprecedented rises in child and overall populations.

**Second, child survival efforts must become even more firmly focused on sub-Saharan Africa and South Asia, fragile states and the least developed countries,** which are dominated by countries from these two regions. As these regions and country groups also hold the largest burdens of childhood diseases, targeting health and nutrition resources to them has the potential to yield substantial returns. We have already seen this effect in action in the area of measles immunization, which has produced the stunning result of lowering global measles deaths by 74% between 2000 and 2010.<sup>3</sup>

<sup>2</sup>United Nations Department of Economic and Social Affairs, "World Population Prospects: The 2010 Revision", New York 2011.

<sup>3</sup>Emily Simons, Matthew Ferrari, John Fricks, Kathleen Wannemuehler, Abhijeet Anand, Anthony Burton, Peter Strebel, "Assessment of the 2010 global measles mortality reduction goal: results from a model of surveillance data", *The Lancet*, published online April 24, 2012, DOI:10.1016/S0140-6736(12)60552-4.

**Third, the discourse and debate on reaching the unreached in child survival must be intensified in populous middle-income countries with large numbers of under-5 deaths.** In several of these countries, including India and Nigeria, rapid economic growth and strong external inflows of trade and investment in recent years have failed to bring about a corresponding reduction narrowing of inequities in under-5 mortality. Disaggregated data on child survival and health and development in these countries shows clearly the wide differentials in health status, access to and use of essential services, and health risks among socioeconomic groups and geographic areas.

**Fourth, greater attention must be devoted to reaching the poorest and most geographically isolated households with essential services throughout the developing world.** The statistical evidence clearly shows that these groups have the highest burden of under-5 deaths – and therefore the greatest potential for child survival gains. Evidence from selected developing countries shows that in the poorest and most marginalized groups many are still dying of diseases and or suffering the conditions that are easily preventable among wealthier and more mainstream groups that have access to quality services.

**Fifth, planning for education, nutrition and health services must take full account of the projected demographic shifts.** To achieve universal primary education and other goals is more demanding in countries with fast growing child populations. In some sub-Saharan African countries, the population of school-aged children will double between 2010 and 2025; this has major implications for provision of education and other essential services. On the opposite side are countries with declining or stable numbers of school-aged children, which will not have this demographic pressure of growing numbers and can more easily achieve goals set for primary and secondary education.

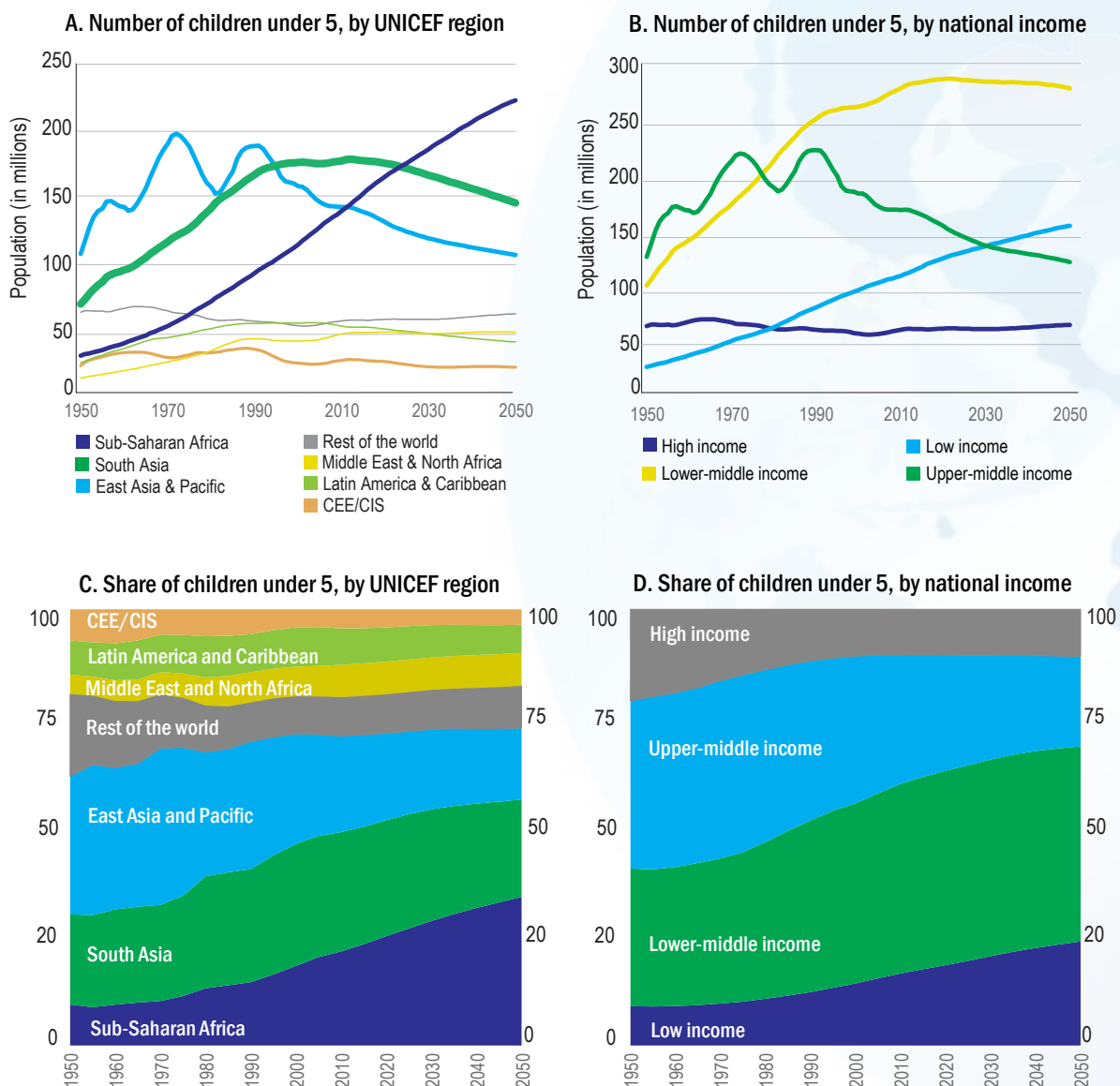
Finally, more analysis and policy consideration is urgently needed on the issue of dependence. The golden age of falling overall global dependency ratios since the 1970s is set to end over the next decade and a half, with ratios set to rise steadily in the remainder of the century. Given that many gains in child survival and development in the past 60 years have taken place within the context of

falling overall dependency ratios, their forthcoming rise will pose a challenge to governments, many of which are struggling already to cover the rising cost of social welfare systems. With children largely unable to vote in most countries, it is critical that advocates and policymakers ensure that they do not lose out in a rapidly changing, more populous and ageing world. ■

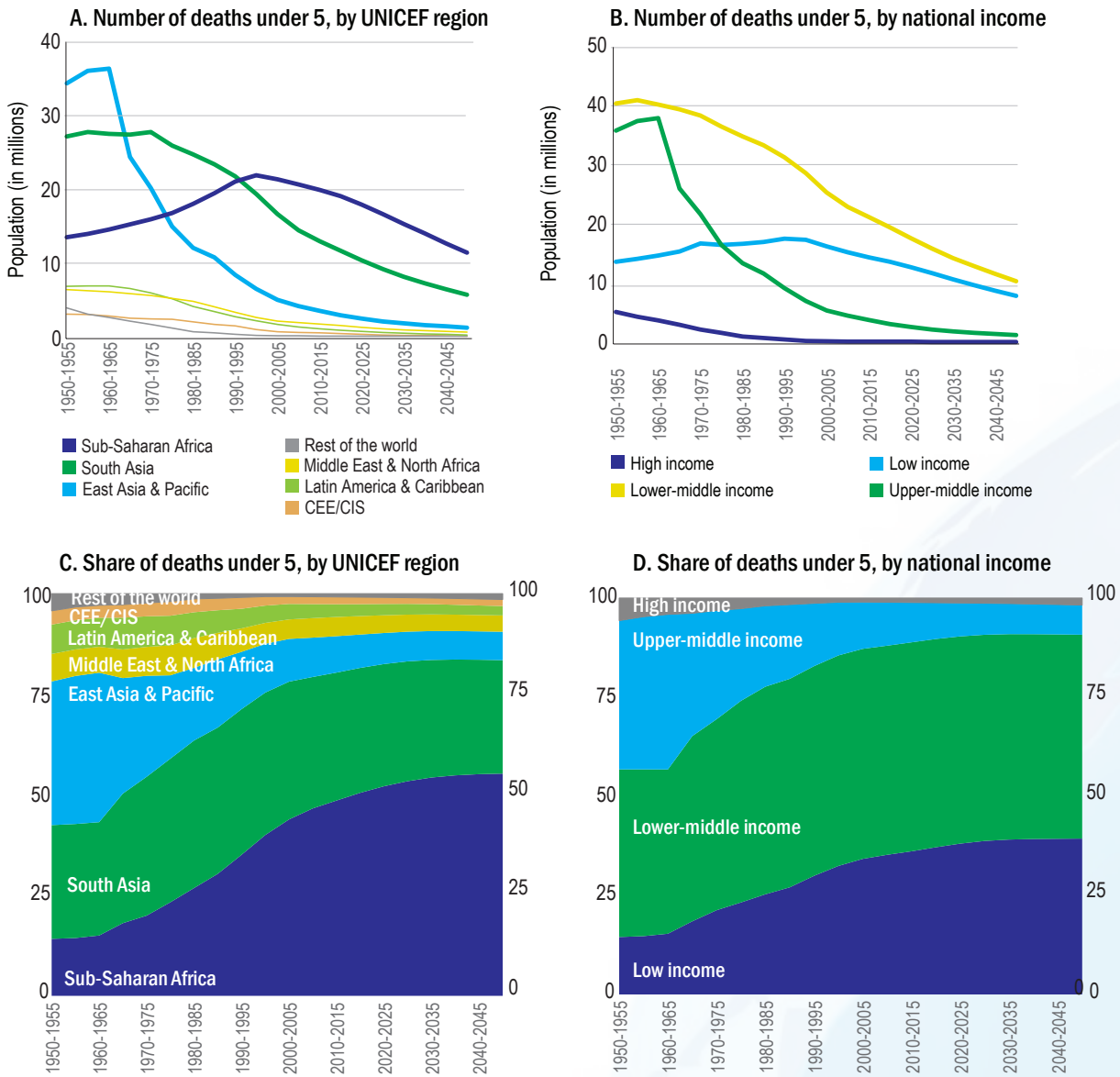
## Appendix

Figure A1

Population of children under age 5 by UNICEF region and national income, 1950-2050



**Figure A2**  
**Deaths under age 5 by UNICEF region and national income, 1950-2050**









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November 2012