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General debate

Review and appraisal of the Programme of Action of the International Conference on Population and Development and its contribution to the follow-up and review of the 2030 Agenda for Sustainable Development

Report of the Secretary-General

Summary

In decision 2017/101 (see E/2017/25), the Commission on Population and Development decided that the theme for its fifty-second session, in 2019, would be "Review and appraisal of the Programme of Action of the International Conference on Population and Development and its contribution to the follow-up and review of the 2030 Agenda for Sustainable Development". The present report has been prepared to inform the Commission's deliberations on the theme.

The present report reviews the latest trends in population growth, fertility, family planning and reproductive health, mortality, population ageing, urbanization and human mobility, including international migration, in relation to development trends and outcomes. Some general and specific contributions to the progress made towards the goals and objectives of the Programme of Action and, in turn, the Programme of Action's contribution to the implementation of the 2030 Agenda, are reviewed, and include the changing age distributions and their consequent enabling of the demographic dividend, the promotion of gender equality and the empowerment of women and the interrelationships among population, environment and climate change. The role of demographic data in planning and monitoring is also discussed. The evidence presented, including on national policies in relevant domains, permits identification of critical gaps and serves to inform the recommendations in the final chapter.

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** E/CN.9/2019/1.

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Contents

I. Introduction

1.   The Programme of Action of the International Conference on Population and Development, adopted in Cairo in 1994, reflected a remarkable consensus among countries which recognizes that people are at the centre of concerns for sustainable development and are entitled to a healthy and productive life in harmony with nature. The right of individuals to an adequate standard of living and the means of providing them with opportunities to make the most of their potential, in particular for women and girls, were also highlighted. Moreover, the Programme of Action acknowledged the interdependence among demographic processes, sustained economic growth and sustainable development, and affirmed the applicability of universally recognized human rights to all aspects of population programmes.

2.   Considerable progress has been made in many key areas of the Programme of Action since 1994, including greater access to sexual and reproductive health care, the reduction of child and maternal mortality, the extension of life expectancy, increased standards of living, improved access to education and advances in gender equality and the empowerment of women. However, progress has been uneven both within and among countries, and the benefits of social and economic progress have not been shared equitably.

3.   The 2030 Agenda for Sustainable Development integrated the global consensus on interlinkages between population and development, building on international frameworks that preceded it. Attaining the goals and objectives of the Programme of Action and the 2030 Agenda is a shared responsibility that includes ensuring universal access to sexual and reproductive health care, protecting reproductive rights, ending poverty, advancing education, ensuring decent work for all, reducing social and economic inequalities and ensuring sustainable patterns of consumption and production. Meeting the demand for resources from a growing and more prosperous population, while protecting the environment and combating climate change, remains a central challenge.

4.   Policies and programmes for sustainable development should be grounded in an understanding of population dynamics, including changes in population size or age structure and processes of migration or urbanization.

II. Demographic trends and implications for the 2030 Agenda for Sustainable Development

5.   The world's population is becoming larger, older, more mobile and more spatially concentrated than ever before. Those demographic "mega-trends" affect and are affected by the implementation of the Programme of Action and the 2030 Agenda for Sustainable Development. For example, while rapid population growth puts additional pressure on service delivery and resources in general, increased access to education and health care facilitates and promotes a decline in fertility. Similarly, persistently low levels of fertility, associated with ageing populations and in some cases population decline, pose a different set of challenges to achieving sustained economic growth and establishing support systems for older persons. Irrespective of the demographic situation, the Programme of Action has promoted the integration of population trends into policy design and development planning.

6.   The world's population, estimated at 7.7 billion in 2019, continues to grow, albeit at a decreasing rate (see figure I).[1] It is projected to continue growing, reaching

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[1] See also E/CN.9/2018/5.

around 9.7 billion in 2050 and rising further to roughly 11 billion by the end of the century. The continued increase in global population and an expected rise in prosperity will place additional pressure on natural resources and ecosystems.

Figure I
Population of the world by region, 1990–2050
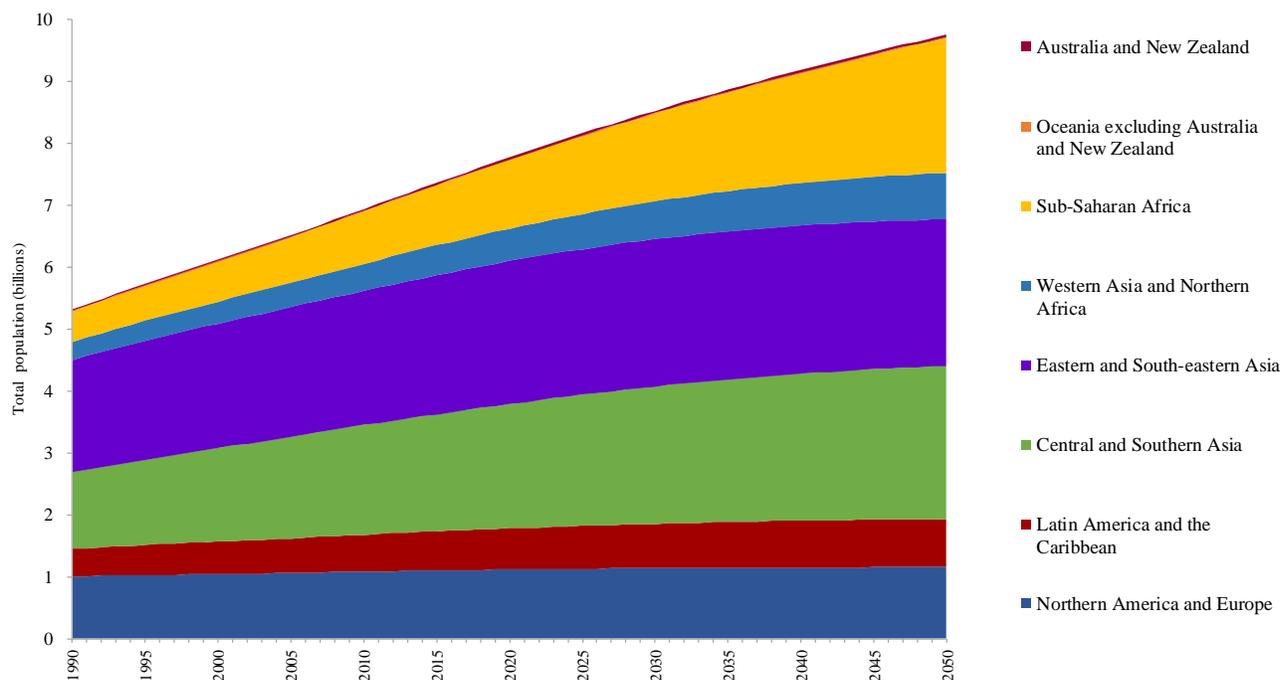
7.   Population growth results from the combined effects of continuing high fertility in some parts of the world, large numbers of women of childbearing age due to high fertility in recent years (creating population momentum for population growth) and declining mortality. Important differences in those trends exist between regions and countries (see figure II).[2]

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[2] United Nations, Department of Economic and Social Affairs, Population Division, *World Population Prospects: The 2017 Revision*, available from https://population.un.org/wpp/; Kirill Andreev, Vladimíra Kantorová and John Bongaarts, "Demographic components of future population growth", Population Division Technical Paper No. 2013/3 (New York, 2013).

Figure II
Average annual rate of population change (percentage), 2015–2020

Percentage
- ■ 3 per cent or higher
- ■ 2 to 3 per cent
- ■ 1 to 2 per cent
- □ 0 to 1 per cent
- □ Negative growth
- □ No data
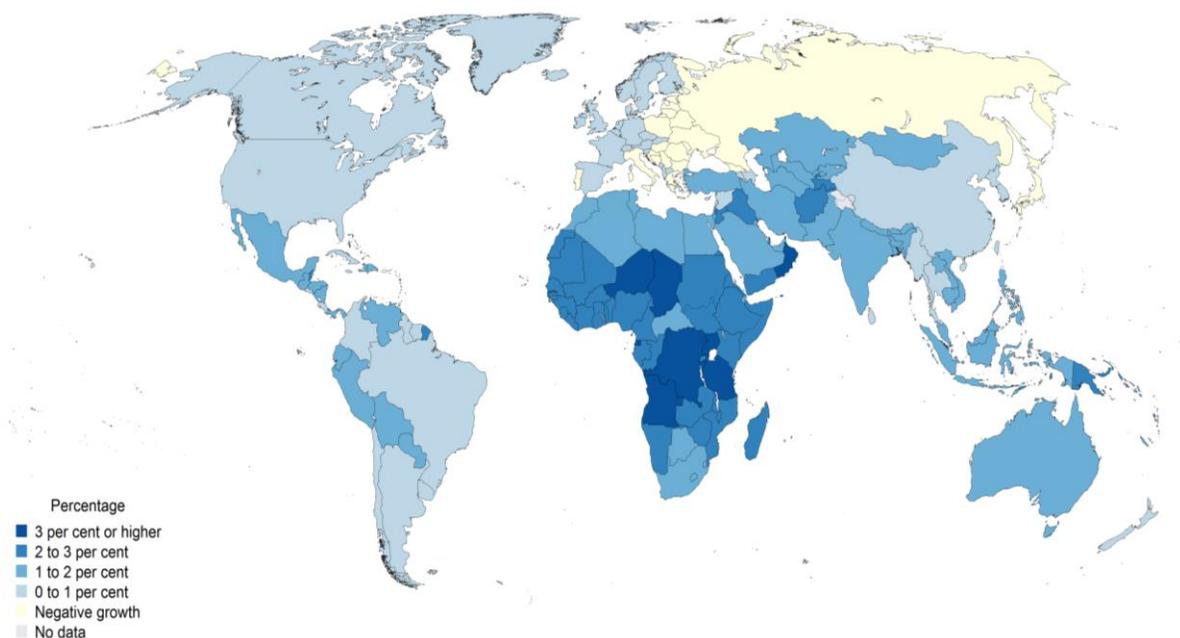
Data source: World Population Prospects: The 2017 Revision
The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. Final boundary between the Republic of Sudan the Republic of South Sudan has not yet been determined. A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).

8.   Decreased fertility and increased life expectancy at birth, if maintained over several decades, lead inevitably to the ageing of the population, characterized by a gradual shift in the age distribution towards older ages. Population ageing is changing relations between generations and has major economic and social implications for all regions.

9.   The share of the world's population residing in urban areas is projected to increase from 56 per cent in 2019 to around 68 per cent by 2050. The shift from rural to urban living brings many advantages for sustainable development but must be managed well to avoid social, economic and environmental problems resulting from unplanned urban growth. Poor and vulnerable populations, who tend to settle in areas prone to natural disasters and environmental hazards, will be the most affected.

10.   Between 2000 and 2017, the estimated number of international migrants [3] increased by almost 50 per cent, reaching 258 million in 2017. About 10 per cent of all international migrants are refugees, having fled persecution or armed conflict. As recognized by the Global Compact for Safe, Orderly and Regular Migration, adopted by the General Assembly in its resolution 73/195, when managed well, international migration contributes to sustainable development in countries of origin and destination and helps migrants and their families improve their standard of living.

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[3] Individuals living outside their country of birth. See *International Migration Report 2017: Highlights* (United Nations publication, Sales No. E.18.XIII.4).

III.   Fertility, reproductive health and family planning

A.   Fertility levels and trends

11.   Since 1994, the global transition towards lower fertility has continued. When the Programme of Action was adopted, the total fertility rate worldwide had already fallen to 2.9 births per woman, and it has continued falling since, to 2.5 in 2019. By 2030, global fertility is expected to be around 2.4 births per woman. By the 2060s, the world is expected to reach a total fertility rate of around 2.1, the "replacement" level required for a growth rate of zero in the long run in populations with low levels of mortality.

12.   In sub-Saharan Africa, the total fertility rate remains high at 4.8 births per woman, down from 6.2 births per woman during 1990-1995 (see figure III). Other regions that still have above-replacement total fertility are Central Asia and Southern Asia (2.4 births per woman); Oceania excluding Australia and New Zealand (3.4 births per woman); and Western Asia and Northern Africa (2.9 births per woman). Several countries in that last region experienced stalls in fertility declines during the early 2010s.

Figure III
Total fertility rates (births per woman) by region, 1990–2050
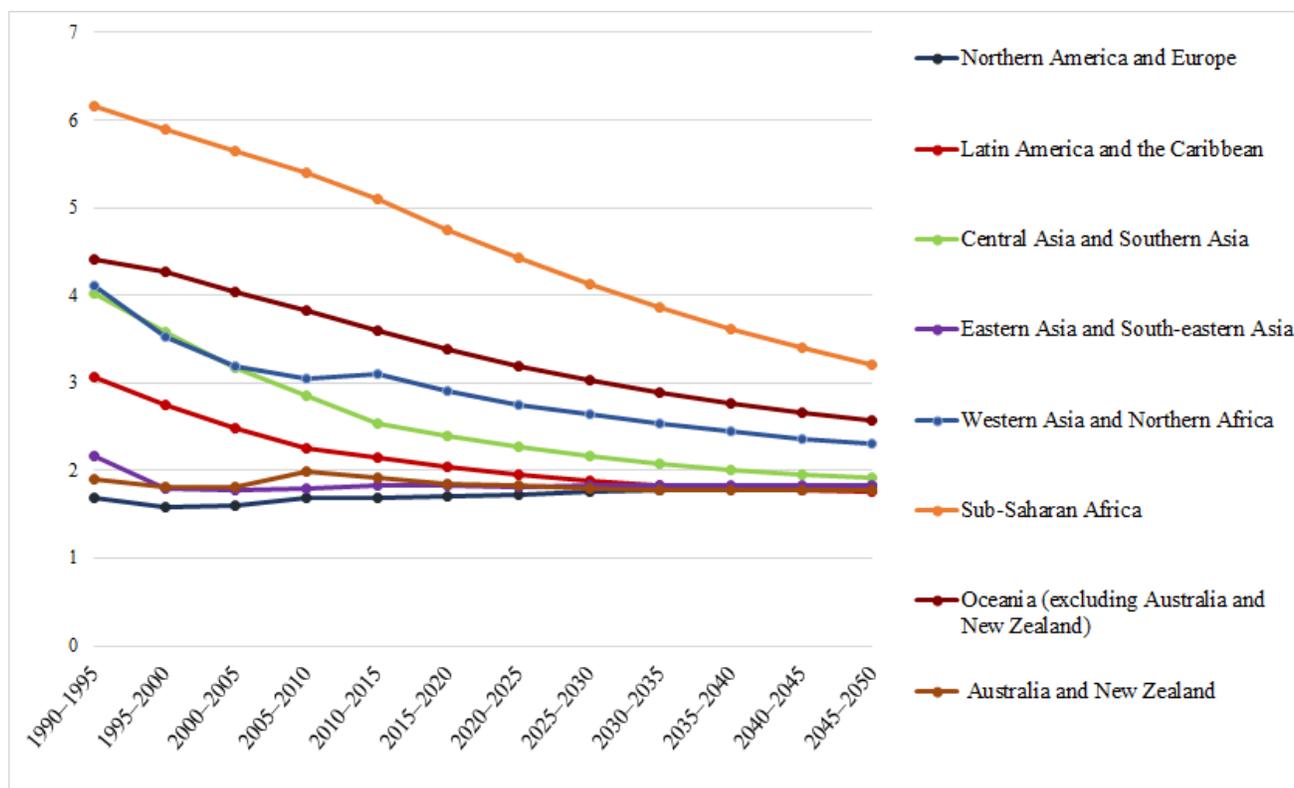
13.   Owing to the continued global fertility decline, an increasing number of people are living in countries with total fertility below 2.1 births per woman. In 2019, 97 countries or areas, representing more than half the world's population, had fertility in that range, up from 56 countries comprising 45 per cent of the world's population in 1994. In 2050, more than 70 per cent of the world's population is expected to live in countries that have total fertility rates below the replacement level. After reaching very low levels (below 1.5 births per woman), countries have typically experienced a

small rise in fertility. Since 1994, total fertility has increased in 36 countries where fertility had fallen below the replacement level.

14.   The adolescent birth rate for those aged 15 to 19 declined from 65 births per 1,000 women in that age range at the time of the International Conference on Population and Development in 1994 to 44 per 1,000 during the period from 2015 to 2020. The highest levels of adolescent childbearing are found in sub-Saharan Africa, with 101 births per 1,000 adolescent women between the ages of 15 and 19 in recent years. In Latin America and the Caribbean, even though total fertility has fallen below the replacement level, adolescent fertility remains high at around 61 per 1,000 during the period from 2015 to 2020. Among girls aged 10 to 14, information from recent Demographic and Health Surveys suggests that childbearing, while rare, remains a challenge in some countries, particularly in sub-Saharan Africa, where the fertility rate for that age range lies between 11 and 14 per 1,000.

15.   Elevated levels of adolescent birth rates are associated with high levels of unmet needs for family planning (see figure IV) and with high proportions of women or girls who are married or in a union between the ages of 15 and 19. Eliminating child, early and forced marriages is critical in order to achieve gender equality and empower women and girls by reducing unwanted pregnancies and adolescent childbearing.

Figure IV
Unmet need for family planning and birth rate for adolescents aged 15–19, 2015–2020
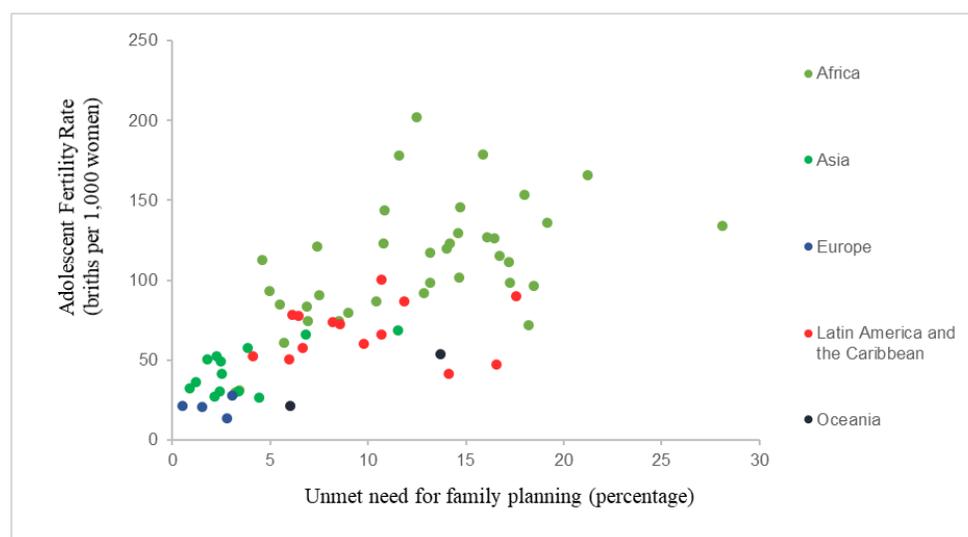
B.   Sexual and reproductive health and reproductive rights

16.   The global transition towards lower fertility and a later start to childbearing reflects the increasing realization of reproductive choice, whereby more women and couples are able to decide the number, spacing and timing of their children, as they have the information and means to do so, in accordance with the Programme of Action of the International Conference on Population and Development.

17.   The proportion of married or in-union women who have their need for family planning satisfied with modern methods increased from 68.8 per cent in 1994 to 77.5 per cent in 2019. Substantial progress in that regard has been observed in Eastern Africa, where the proportion of the demand for family planning that is satisfied with

modern methods increased from 23.8 per cent in 1994 to 63.8 per cent in 2019.[4] Countries such as Ethiopia, Kenya, Malawi and Rwanda, which saw an especially rapid increase in contraceptive use, serve as examples of the potential pace of change when Governments prioritize family planning programmes.

18.   Despite considerable progress at the global level, however, the demand for family planning satisfied with modern methods is only 52 per cent in sub-Saharan Africa and in Oceania excluding Australia and New Zealand. In 44 countries, less than half of the demand for family planning is met with modern contraceptive methods (see figure V).

Figure V
Proportion of women of reproductive age (aged 15–49) whose need for family planning is satisfied with modern methods, 2019

Demand for family planning
satisfied with modern methods
(percentage), in 2019

>90
76-90
51-75
<50
No data
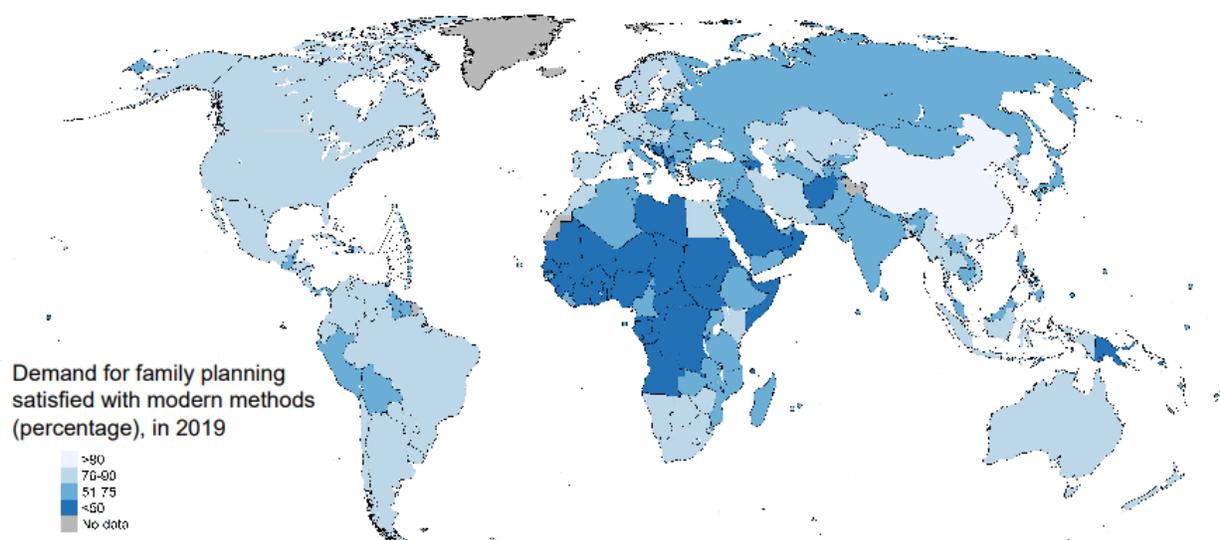
19.   Even in countries with a high proportion of women who have their demand for family planning met with modern methods, certain groups face challenges in accessing and using modern methods, including women who are young, unmarried, live in rural areas or in poor households or have low levels of education. Furthermore, many countries where the demand satisfied with modern methods is low are projected to experience rapid growth in the number of women aged 15 to 49. Those countries, mostly in Africa, will need to expand family planning services further.

20.   Consequently, achieving universal access to sexual and reproductive health care, including for family planning, and fulfilling the reproductive rights of individuals remain unmet aspirations of the Programme of Action. Persistent obstacles include the cost for such services, requirements regarding age and marital status that limit access, parental or spousal consent requirements and restrictions regarding access to emergency contraception or sterilization.[5] At the other end of the spectrum, in the low-fertility countries of Eastern Asia and Europe, many individuals and couples do

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[4] United Nations, Department of Economic and Social Affairs, Population Division, "Estimates and projections of family planning indicators 2018". Available from www.un.org/en/development /desa/population/theme/family-planning/cp_model.shtml.
[5] *World Population Policies 2015* (United Nations publication, Sales No. E.16.XIII.4).

not realize their childbearing aspirations and have fewer children than desired.[6] In those and other low-fertility areas, some Governments have been adopting policies to support parenting, including by promoting work-family balance, flexible and paid parental leave for both mothers and fathers, child benefits, tax credits for working families and publicly funded childcare.[7] The greatest impact on fertility levels has been achieved by measures that help parents balance work and family obligations over several years, such as the provision of free or subsidized childcare, as opposed to measures that offer benefits only around the time of birth, such as paternal leave or one-time financial bonuses.[8]

IV. Mortality, health and older persons
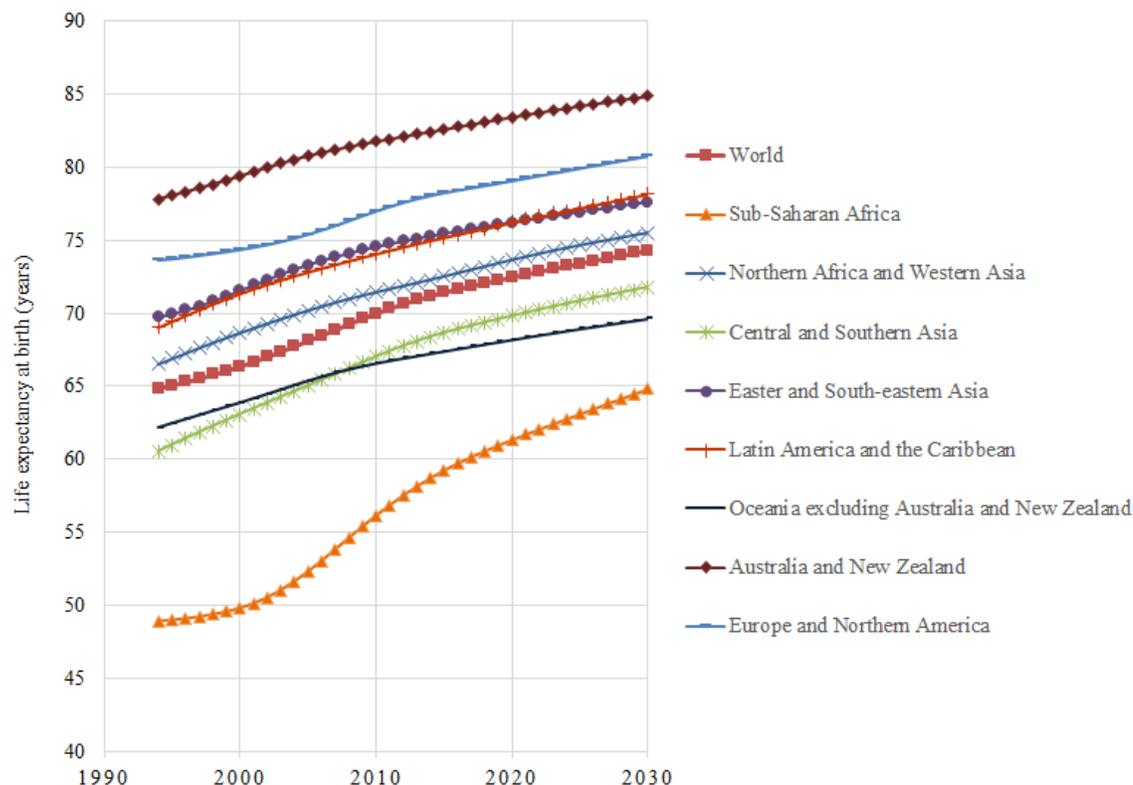
A. Life expectancy

21.   In the 25 years since the adoption of the Programme of Action, life expectancy has increased substantially, continuing the gains achieved in earlier decades. Globally, life expectancy at birth rose from 64.9 years in 1994 to 72.3 in 2019, and is expected to rise further to around 74.3 in 2030 (see figure VI). Early gains were due mostly to declines in child mortality, while an increasing share of future gains, especially in low-mortality countries, will come from declines in mortality at older ages.

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[6] Tomáš Sobotka and Éva Beaujouan, "Two is best? The persistence of a two-child family ideal in Europe", *Population and Development Review*, vol. 40, No. 3 (2014).

[7] Tomáš Sobotka, "Pathways to low fertility: European perspectives", Population Division Expert Paper No. 2013/8 (New York, 2013); M. J. Abbasi-Shavazi and B. Gubhaju, "Different pathways to low fertility in Asia: consequences and policy implications", Population Division Expert Paper No. 2014/1 (New York, 2014).

[8] United Nations, Department of Economic and Social Affairs, Population Division, "United Nations Expert Group Meeting on policy responses to low fertility: report of the meeting", New York, 2–3 November 2015. Available from www.un.org/en/development/desa/population/events /pdf/expert/24/2015-EGM_Report.pdf.

Figure VI
Life expectancy at birth, world and geographic regions, 1994–2030

22.   Regional gains in life expectancy since 1994 range from 5.2 years in Europe and Northern America to 12 years in sub-Saharan Africa. Least developed countries as a whole added around 13 years during the same period.[9] However, gains in life expectancy have fallen short of the goals of the Programme of Action: by 2019, about half of all countries had not yet achieved the specified target of 70 or 75 years (determined by a country's level of life expectancy in 1994).

23.   Furthermore, declines in mortality have slowed, been interrupted or even temporarily reversed because of armed conflicts or social and political turmoil in about one fifth of the world's countries in recent decades. The HIV/AIDS epidemic has also slowed gains in life expectancy in many countries of sub-Saharan Africa.

24.   One positive development has been a reduction of the gap in life expectancy at birth, from 22 to 14.5 years between 1994 and 2019, for countries in the more-developed regions versus least developed countries.

B.   Mortality by broad age groups

25.   Worldwide, the under-5 mortality rate (or "child mortality") fell by 54 per cent between 1994 and 2019, from 89 deaths under age 5 per 1,000 live births to 41 (see figure VII). The largest absolute reduction in child mortality took place in sub-Saharan Africa, falling from 180 deaths per 1,000 live births to 78. However, the

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[9] Ibid.

region still has under-5 mortality rates well above the target of 45 deaths per 1,000 live births articulated by the Programme of Action.[10] The regions with the next-

highest levels of child mortality in 2019 were Oceania excluding Australia and New Zealand (48 per 1,000) and Central and Southern Asia (45 per 1,000). In Australia and New Zealand and in Europe and Northern America, the under-5 mortality rate stood at 5 deaths or fewer per 1,000 live births in 2019. A child born in sub-Saharan Africa was more than 15 times as likely to die before the age of 5 compared with those born in the more developed regions.

Figure VII
Under-5 mortality rate, world and geographic regions, 1990–2030
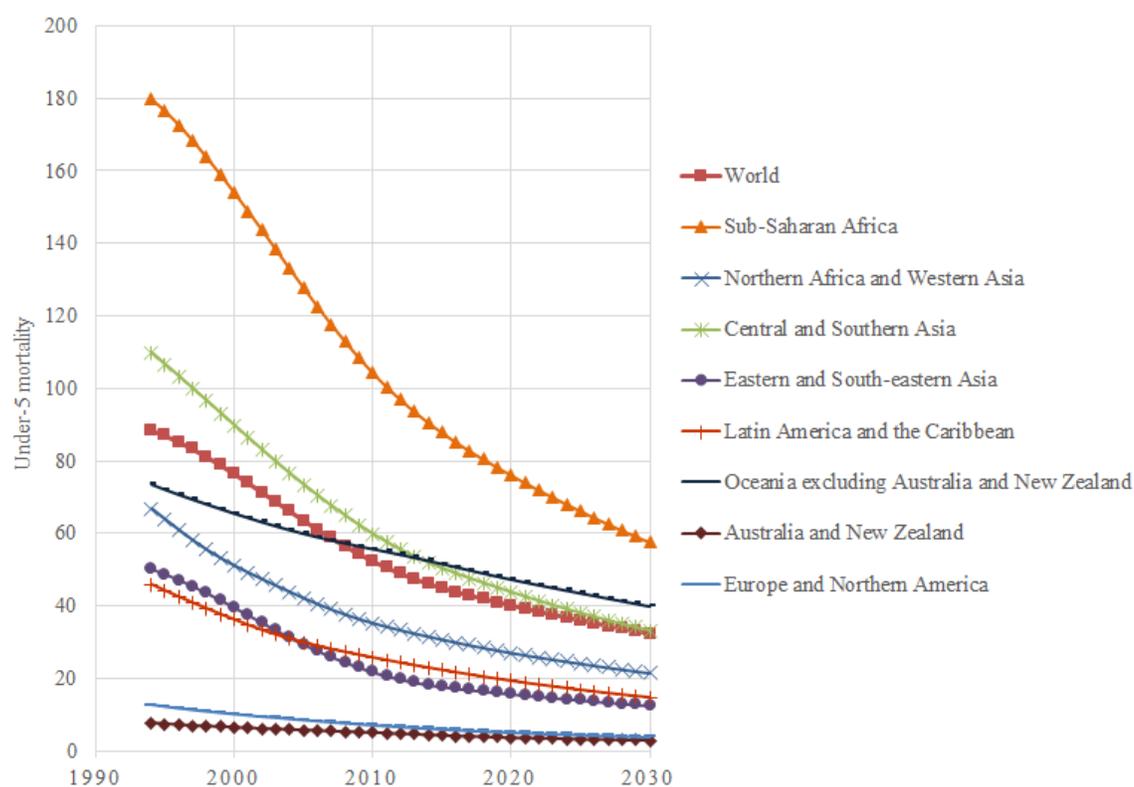
26.   Reducing mortality among infants, especially newborns, has proven more difficult than reducing under-5 mortality as a whole. The share of neonatal deaths (those occurring during the first month of life) in all deaths of children under the age of 5 increased from 40 per cent in 1990 to 47 per cent in 2017. Neonatal causes of death – such as preterm births, intrapartum complications and neonatal infections – must be addressed to achieve further reductions in infant and child mortality. That will require investing in health system infrastructure as well as ensuring women's access to nutrition and high-quality antenatal and delivery care.

27.   Adolescence and youth are considered to be among the healthiest stages of life. At the same time, young people face a unique set of risks to their health and survival; they tend to be particularly vulnerable to sexually transmitted infections, mental health disorders and injuries related to traffic accidents or violence.[11] Many risky

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[10] United Nations Children's Fund (UNICEF), *Levels and Trends in Child Mortality: Report 2018*. Available from www.unicef.org/publications/index_103264.html.

[11] World Health Organization (WHO), "Adolescent health". Available from www.who.int/topics/adolescent_health/en/.

behaviours, such as unprotected sexual activity, tobacco use, physical inactivity and excessive consumption of alcohol, start and sometimes become established in adolescence and young adulthood. Risky behaviours lead to a range of health issues while young, and to non-communicable diseases later in life.

28. Globally, adult mortality, measured by the probability of dying between the ages of 15 and 60, declined from 190 per 1,000 in 1994 to 137 per 1,000 in 2019. Adult mortality was lowest in Australia and New Zealand at 51 per 1,000, and was highest in sub-Saharan Africa at 273 per 1,000 in 2019.

29. Worldwide, the maternal mortality ratio fell from 385 maternal deaths per 100,000 live births in 1990 to 216 per 100,000 in 2015, higher than the global target contained in the Programme of Action.[12] Two thirds of all maternal deaths now occur in sub-Saharan Africa, where the maternal mortality ratio was 546 deaths per 100,000 live births in 2015. Major efforts are needed to bring the maternal mortality ratio under 70 deaths per 100,000 live births by 2030, as prescribed by the Sustainable Development Goals.

30. Recent decades have brought significant declines in old-age mortality as well. Given the mortality rates prevailing worldwide in 2019, a 60-year-old person could expect to live, on average, another 20.8 years, or about 2.6 years longer than in 1994. The increases in life expectancy at age 60 during the period from 1994 to 2019 were smallest in sub-Saharan Africa and Oceania at 1.9 years and largest in Latin America and the Caribbean and in Australia and New Zealand, at 3.6 years and 4.0 years, respectively.

C. Epidemiological transition

31. The shift in morbidity and cause-of-death patterns accompanying the demographic transition is often referred to as the "epidemiological transition" – a process whereby the primary causes of illness and death change from infectious and parasitic diseases to chronic and degenerative disorders. In 2016, about 71 per cent of the 57 million deaths globally were due to non-communicable diseases, including cardiovascular disease (17.9 million deaths), cancers (9.0 million), chronic respiratory disease (3.8 million) and diabetes (1.6 million).[13]

32. Some regions are still struggling to eradicate premature deaths from communicable diseases. In sub-Saharan Africa and parts of Asia and the Pacific, fighting infectious diseases such as HIV/AIDS, malaria and tuberculosis remains a public health priority, while the rise of chronic diseases places a double burden on health systems. In Latin America and the Caribbean, the complex and changing epidemiological profile reflects the combination of rapid population ageing and persistent socioeconomic inequality.[14] Europe is the region most affected by non-communicable diseases: in Eastern Europe and the Caucasus, in particular, 40 per cent of all deaths among men aged 30 to 70 were attributed to non-communicable diseases.[15]

33. Even where substantial progress has been made to reduce adult mortality, urgent action is needed to control risk factors such as smoking, alcohol consumption and

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[12] WHO, *Trends in Maternal Mortality: 1990 to 2015* (WHO/RHR/15.23, Geneva, 2015).

[13] WHO, "Fact sheet: Noncommunicable diseases, June 2018". Available from www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases.

[14] Economic Commission for Latin America and the Caribbean (ECLAC), "Draft first regional report on the implementation of the Montevideo Consensus on Population and Development", 2018. Available from https://repositorio.cepal.org/bitstream/handle/11362/43726/4/S1800377_en.pdf.

[15] WHO, *World Health Statistics 2018: Monitoring Health for the SDGs* (Geneva, 2018).

obesity,[16] as well as measures to improve the capacity of health systems to respond to complex epidemiological profiles, including those with the double burden of communicable and non-communicable diseases, the latter having become increasingly common in ageing populations.[17]

D. Longevity and population ageing

34. Declining fertility, together with increased longevity, continues to produce global population ageing: the increased proportion of older persons (defined as age 65 or over, in the present report) in the population. In 2019, that proportion was 19 per cent in Europe and 16 per cent in Northern America, and is projected to increase to 28 per cent and 23 per cent, respectively, by 2050.[18] In Asia and in Latin America and the Caribbean, the share of older persons is projected to more than double during that period, from around 8 per cent today to 18 per cent in Asia and 20 per cent in Latin America and the Caribbean in 2050. In Africa, the region with the youngest population age structure, the share of older persons is projected to approach 9 per cent (only 5 per cent in sub-Saharan Africa) by 2050.

35. The age structure of the population, in combination with household living arrangements, determines the size and composition of households, which have important consequences for development.[19]

36. The decline in average household size means that the number of households is growing faster than the total population in most regions of the world. Consequently, Governments and the private sector need to address the rapidly growing demand for housing and associated services, and the related environmental challenges, even as population growth slows.[20]

37. Many older adults, especially in developing countries, are unable to meet their basic expenses, including for housing and health-care services, and consequently have inadequate health and nutrition. Some groups of older persons are at higher risk of poverty, such as those aged 80 or over and those requiring long-term care. Two thirds of the world's older people live in developing countries, the majority of whom are, or have been, employed in the informal sector, and nearly half of older persons in the world do not receive a pension. The 2030 Agenda for Sustainable Development gives special attention to the need for social protection and calls for the implementation of nationally appropriate social protection systems and measures for all.

38. As the number of older persons continues to grow in all regions of the world, so does the need to address the increased incidence of age-related frailty and the provision of high-quality health care, including long-term care, in a sustainable and

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[16] Economic Commission for Europe and United Nations Population Fund, "Fulfilling the potential of present and future generations: report on ICPD Programme of Action implementation in the UNECE region", October 2018, available from https://eeca.unfpa.org/sites/default/files/pub-pdf/UNECE%20Regional%20report_1_Oct_final_2.pdf; WHO, "Monitoring noncommunicable disease commitments in Europe: theme in focus: progress monitor indicators", 2017, available from www.euro.who.int/__data/assets/pdf_file/0005/351518/Monitoring-NCD.pdf?ua=1.

[17] WHO, *Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2020* (Geneva, 2013); Barthélémy Kuate Defo, "Demographic, epidemiological, and health transitions: are they relevant to population health patterns in Africa?", *Global Health Action*, vol. 7, No. 22443 (May 2014).

[18] Profiles of Ageing 2017 database. Available from https://population.un.org/ProfilesOfAgeing 2017/index.html.

[19] See the supplementary materials to the present report, available from www.un.org/en/development/desa/population/commission/sessions/2019/index.shtml.

[20] Mason Bradbury, Nils Peterson and Jianguo Liu, "Long-term dynamics of household size and their environmental implications", *Population and Environment*, vol. 36, No. 1 (February 2014).

affordable manner, while promoting and investing in healthy ageing in order to enable individuals to live longer, healthier and more productive lives.

V. Urbanization and migration

A. Urbanization

39. An estimated 56 per cent of the world's population resided in urban areas in 2019. Urbanization, measured by the increase of that percentage over time, has produced a major shift in the spatial distribution of the world's population.[21] Almost all future growth of the human population will be accounted for by growing numbers of city dwellers, projected to comprise 60 per cent of the world's population in 2030 and around 68 per cent by 2050. Almost 90 per cent of that growth will take place in Asia and Africa (see figure VIII).

Figure VIII
Urban population of the world by region, 1990–2050
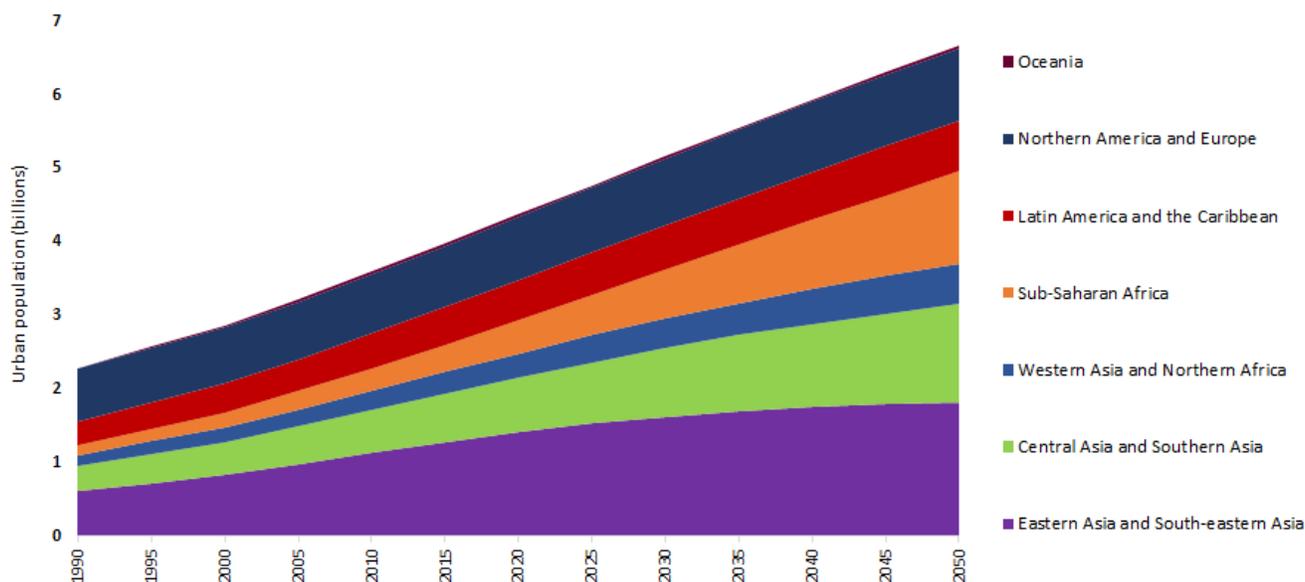
40. Continuing urbanization since the International Conference on Population and Development in 1994 has been accompanied by improvements in the living conditions of large segments of the population in developing countries. However, the Programme of Action's aspiration towards a balanced population distribution through the promotion of equitable and ecologically sustainable development remains unfulfilled in many countries in the world. Unplanned or inadequately managed urban expansion, together with unsustainable production and consumption patterns, are often accompanied by urban sprawl, increased pollution and environmental degradation. The rate of new home construction has lagged far behind the rate of urban population growth. Moreover, even though the proportion of the world's urban population living in slums declined by 20 per cent (from 28.4 to 22.8 per cent) between 2000 and 2014,

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[21] United Nations, Department of Economic and Social Affairs, Population Division, *World Urbanization Prospects: The 2018 Revision*. Available from https://population.un.org/wup/.

the number of people living in slums increased from 807 million to 883 million during that period.[22]

41.   Sustainable Development Goal 11 aims at making cities inclusive, safe, resilient and sustainable. Policies to manage urban growth need to ensure access to infrastructure and social services for all, focusing on the needs of the urban poor and other vulnerable groups for housing, education, health care, decent work and a safe environment (see General Assembly resolution 71/256). Policies should also consider the needs of women, including equal access to services, property rights and political participation; older persons, including policies to promote healthy ageing; and the urban poor and other vulnerable groups. Planning for the delivery of services to urban and rural dwellers should include the consideration of different scenarios for the future growth of urban centres and surrounding rural settlements.

42.   A growing concern related to the spatial distribution of the human population is the exposure to the risk of natural disasters. Nearly 60 per cent of cities with 300,000 or more inhabitants are at high risk of experiencing at least one of six types of natural disasters: cyclones, droughts, floods, earthquakes, landslides and volcanic eruptions (see General Assembly resolution 71/256) (see figure IX).

Figure IX
Distribution of cities by population size and risk of exposure to natural disasters
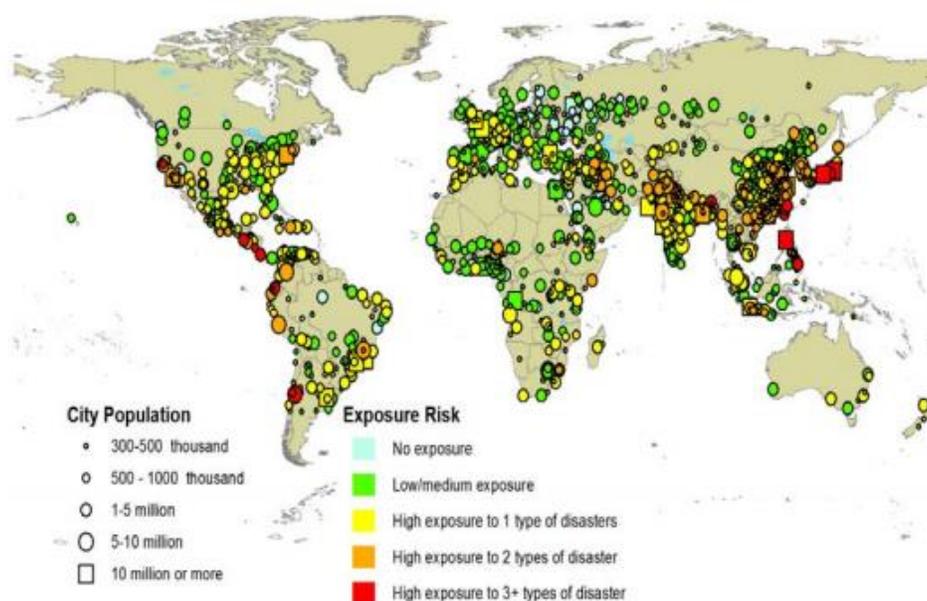
Disclaimer: The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

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[22] *The Sustainable Development Goals Report 2018* (United Nations publication, Sales No. E.18.I.6). Available from https://unstats.un.org/sdgs/files/report/2018 /TheSustainableDevelopmentGoalsReport2018-EN.pdf.

B. Internal migration

43. Internal migration, or the change of a person's place of residence within countries, is far more common than migration across national boundaries. Available estimates put the global number of internal migrants at around 750 million.[23] Internal migration is mostly driven by economic differentials, limited opportunities in areas of origin and the promise of better living conditions, including greater accessibility to public services such as health, education and social protection in areas of destination. In addition, millions of persons have been forcibly displaced from their homes as a result of armed conflict[24] or extreme weather events.

44. While in some rural areas the outmigration of men contributes to the "feminization of agriculture",[25] in much of Latin America and the Caribbean the opposite is true, since a majority of rural-to-urban migrants are women.[26] Rural communities of origin may benefit from remittances, as well as from knowledge and technology transfers by internal migrants. Internal and international migration are interlinked. In low-income countries, internal migrants are five times more likely to engage in cross-border migration than non-movers, indicating that migration is often a step-by-step process, in which migrants first move internally before migrating internationally.[27]

C. International migration

45. In 2017, there were an estimated 258 million international migrants (i.e., people living outside their country of birth). Most international migration occurs between countries located within the same geographic region (within Europe or within Asia, for example).

46. In some areas of the world, international migration has become a major component of population growth. In the developed regions, the contribution of net migration to population growth has exceeded that caused by natural increase, that is, the excess of births over deaths, since the 1990s. Moreover, migration may prevent the population in those regions from declining in future decades (see figure X). Conversely, the contribution of migration to the overall population change in developing regions is expected to remain modest for decades to come, with the notable exception of countries affected by large flows of refugees.

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[23] Martin Bell and Elin Charles-Edwards, "Cross-national comparisons of internal migration", Population Division Technical Paper No. 2013/1 (New York, 2013).

[24] Between 2000 and 2016, the global number of internally displaced persons as a result of armed conflict or generalized violence almost doubled, reaching around 40 million by the end of 2017. See Internal Displacement Monitoring Centre, "Global report on internal displacement, 2018". Available from http://www.internal-displacement.org/global-report/grid2018/downloads/2018-GRID.pdf.

[25] Food and Agriculture Organization of the United Nations (FAO), *The State of Food and Agriculture 2018: Migration, Agriculture and Rural Development* (Rome, 2018).

[26] Jorge Rodríguez, "Migración interna y asentamientos humanos en América Latina y el Caribe (1990–2010)", *Población y Desarrollo*, No. 121 (November 2017). Available from www.cepal.org/en/node/45024.

[27] Andrea Cattaneo and S. Robinson, "Economic development and evolution of internal migration", FAO Agricultural Development Economics Working Paper (Rome, FAO, 2018).

Figure X

Contributions of natural change and net migration to total population change by development group, from 1990–2000 to 2040–2050

(Millions of persons per decade)
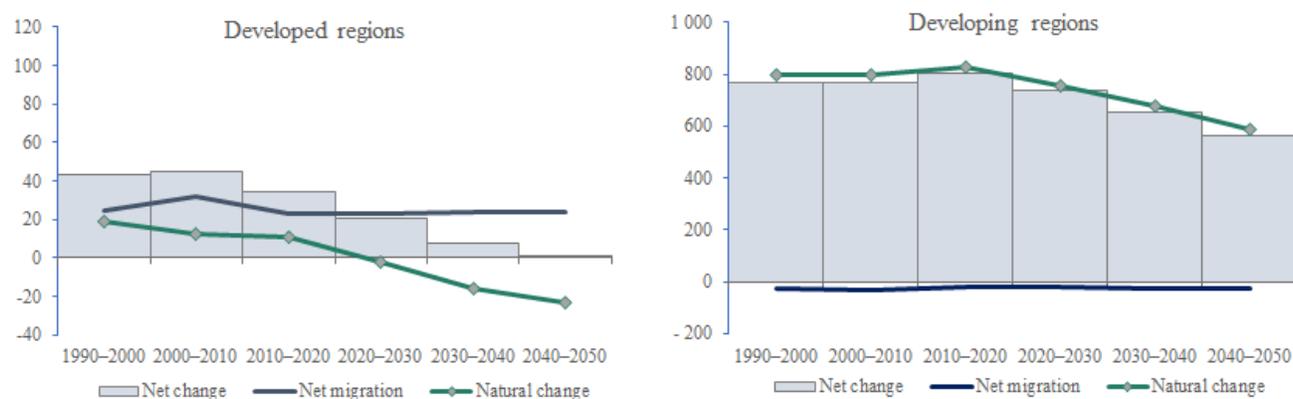
47. The Programme of Action of the International Conference on Population and Development, the 2030 Agenda for Sustainable Development, the New York Declaration for Refugees and Migrants and the Global Compact for Safe, Orderly and Regular Migration acknowledge the contributions of migrants and migration to development. At least 8 of the 169 targets of the Sustainable Development Goals are directly relevant to international migrants or migration. The 2030 Agenda also calls for increasing the availability of data disaggregated by migration status and other characteristics to help with the measurement of progress and to ensure that no one is left behind. By addressing the full migration cycle, from conditions in countries of origin to issues of return or integration in countries of destination, the Global Compact proposes actions that, when implemented, would achieve the goals of the Programme of Action.

48. Migrants tend to fill labour shortages at all skill levels, in both developed and developing countries. In many countries however, the skills of migrants are not used to their fullest potential ("brain waste"). The recognition of qualifications is crucial to realize the full economic benefits of immigration.[28] A common misconception is that migrants consistently take jobs away from local workers. However, in many instances, immigrants contribute to an expansion of the economy by filling or creating new jobs, leading to higher wages for the native-born population.[29]

49. In 2017, migrants remitted an estimated $466 billion to developing countries.[30] Remittances provide recipients not only with a steady income, but also constitute a first step towards financial inclusion.[31] Remittances also promote gender equality by allowing women to engage in paid work and to participate in financial decisions.[32]

50. In addition, international migration tends to stimulate foreign direct investment and promote trade between countries of origin and destination. Beyond the economic realm, migration also promotes the transfer of skills, ideas, attitudes and behaviours.

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[28] See https://refugeesmigrants.un.org/sites/default/files/ts4_issuebrief.pdf.

[29] See www.nber.org/papers/w21123, www.nber.org/papers/w12497 and https://academic.oup.com/ej/article/124/579/1106/5077783.

[30] See www.knomad.org/sites/default/files/2018-04/Migration%20and%20Development%20Brief%2029.pdf.

[31] See https://www.ifad.org/en/web/knowledge/publication/asset/40676541.

[32] See www.unwomen.org/en/digital-library/publications/2017/2/women-migrant-workers-remittances-and-development.

Those phenomena have been called "social remittances" and can have important effects on social norms in countries of origin.[33]

VI. Population and sustainable development: cross-cutting issues

A. Investing in human capital

51.   There is increasing acknowledgement that attaining sustained economic growth requires investment in human capital, and that those investments are in turn related to demographic change.[34] In the Programme of Action, education was recognized as a key dimension of well-being and as a driver of development: "The reduction of fertility, morbidity and mortality rates, the empowerment of women, the improvement in the quality of the working population and the promotion of genuine democracy are largely assisted by progress in education."[35] The 2030 Agenda for Sustainable Development also considers education to be central to the achievement not just of Sustainable Development Goal 4, on inclusive and equitable quality education, but also of other goals and targets.

52.   Education is, together with health, a main component of human capital. Recent evidence[36] confirms that improved health and increased levels of education contribute to reductions in desired and actual family size, which often lead to higher per capita levels of spending on health and education.

53.   Data from the National Transfer Accounts provide recent empirical confirmation of the association between lower fertility and increased spending on human capital, and educational attainment in particular. Other research[37] suggests that education can be at least as important a driver of the demographic dividend as changes in age distribution.

54.   Despite impressive gains in coverage of primary and secondary education at the global level, gaps remain in many developing countries with regard to the provision of pre-primary education and completion rates for secondary and tertiary education. In regions that have high primary and secondary coverage rates, the quality of education is still a matter of concern.[38] Attaining equal access to education at all levels for all remains a major challenge, especially in the least developed countries, where girls are at a particular disadvantage.

55.   Progress in educational attainment, if continued over the long term, could have a substantial impact on trends in fertility and population growth during the mid- and

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[33] Peggy Levitt, "Social remittances: migration driven local-level forms of cultural diffusion", *International Migration Review*, vol. 32, No. 4 (Winter 1998).

[34] Ronald Lee and others, "Is low fertility really a problem? Population aging, dependency and consumption", *Science*, vol. 346, No. 6206 (October 2014).

[35] Chap. XI, para. 11.2, of the Programme of Action of the International Conference on Population and Development.

[36] See E/CN.9/2017/2; see also Elina Pradhan, "Link between education and fertility in low and middle income countries", presentation at the United Nations Expert Group Meeting, New York, 13–14 October 2016.

[37] Elisenda Rentería and others, "The effect of education on the demographic dividend", *Population and Development Review*, vol. 42, No. 4 (December 2016); Jesús Crespo Cuaresma, Wolfgang Lutz and Warren Sanderson, "Is the demographic dividend an education dividend?", *Demography*, vol. 51, No. 1 (February 2014).

[38] ECLAC, "Draft first regional report on the implementation of the Montevideo Consensus on Population and Development"; *Inequality in Asia and the Pacific in the Era of the 2030 Agenda for Sustainable Development* (United Nations publication, Sales No. E.18.II.F.13).

late twenty-first century,[39] thereby supporting a virtuous development cycle. Policies to extend access to sexual and reproductive health-care services, including family planning, together with policies to improve the coverage and quality of education, would therefore complement and reinforce each other.

B. Promoting gender equality and empowering women

56.   The Programme of Action placed a strong emphasis on gender equality and women's empowerment, which is integral to all dimensions of inclusive sustainable development. Access to sexual and reproductive health-care services and the fulfilment of their reproductive rights give women and their partners the ability to control the number, timing and spacing of births. That affects, in turn, many other aspects of their lives, such as opportunities for employment, education, family life and social, economic and political participation. Therefore, the overall impact goes well beyond improving sexual and reproductive health as such.

57.   Today, in many countries at different levels of development, women face substantial challenges in balancing the demands of work and family, including caring for children and parents. Consequently, policies that support the participation of women in the labour force, parental leave for both fathers and mothers, affordable childcare and long-term care for older persons can also contribute to improving gender equality and the empowerment of women (see section III.B).

58.   The analysis of population dynamics through data disaggregated by age and sex provides important information needed to develop and implement gender-responsive policies. For example, an important characteristic of the older population is the female predominance in that age group: because women live, on average, longer than men, they significantly outnumber men at older ages. In addition, the percentage of women among international migrants varies across regions, which carries important policy implications. Finally, skewed sex ratios at birth in some regions give an indication of the prevalence of sex-selective abortions, which are often rooted in gender bias.

C. Population, environment and climate change

59.   The Programme of Action highlighted the importance of integrated social, economic and environmental sustainability in preserving and expanding opportunities and well-being for present and future generations. The Programme of Action also recommended the elimination of unsustainable consumption and production patterns that have caused or exacerbated problems of environmental degradation and resource depletion. Environmental sustainability is a central aspiration of the 2030 Agenda, and is essential for the full achievement of the Sustainable Development Goals and for ensuring the health of our planet.

60.   Despite the progress made in many areas of development already cited, higher consumption of energy and natural resources, agricultural intensification, urbanization and industrial production and continued population growth put pressure on natural resources, disproportionately affecting the most disadvantaged and marginalized population groups.[40]

61.   From 1999 to 2013, approximately one fifth of the Earth's land surface covered by vegetation showed declining trends in productivity. The planet's forest areas

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[39] Wolfgang Lutz, William P. Butz and Samir KC, eds., *World Population and Human Capital in the Twenty-First Century* (Oxford, Oxford University Press, 2014).

[40] *Human Development Report: Human Development for Everyone* (United Nations publication, Sales No. E.16.III.B.1).

continue to diminish, from 4.1 billion hectares in 2000 to about 4 billion hectares in 2015. For the first time in more than a decade, the number of people who are undernourished increased – from 777 million in 2015 to 815 million in 2016. Around 40 to 60 per cent of that malnutrition can be attributed to environmental conditions. [41] In 2017, 151 million children under the age of 5 suffered from stunting (low height for their age), 51 million suffered from wasting (low weight for height) and 38 million were overweight. [42]

62. Environmental degradation can also have a direct impact on human health. In 2016, about 7 million deaths were attributable to indoor and outdoor air pollution. [43] Between 2030 and 2050, climate change is expected to be a factor in or a cause of approximately 250,000 additional deaths per year, including 38,000 deaths due to heat exposure in elderly people, 48,000 due to diarrhoea, 60,000 to malaria and 95,000 to childhood undernutrition. The direct costs to health are estimated to amount to between $2 billion and $4 billion a year by 2030. [44]

63. Climate change could trigger greater population movements within and across borders. The number of storms, droughts and floods has increased threefold over the last 30 years, with devastating effects on vulnerable communities, particularly in the developing world. In 2008, nearly 20 million persons had been displaced by extreme weather events, compared to 4.6 million internally displaced by conflict and violence. [45]

64. Temperature rise to date has already resulted in profound changes to human and natural systems, bringing increases in some types of extreme weather, droughts, floods, sea level rise and biodiversity loss, with rising environmental risks for vulnerable persons and populations. [46] The most affected people live in low- and middle-income countries, some of which have already experienced a decline in food security, linked in turn to rising migration and poverty. [47] Small islands, megacities, coastal regions and high mountain ranges are likewise among the most affected by ongoing and future climate change. [48] Asia-Pacific is a particularly disaster-prone region; between 1970 and 2016, 2 million human lives and approximately $1.3 trillion in assets were lost due to natural disasters. [49]

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[41] A. Prüss-Üstün and C. Corvalán, *Preventing Disease through Healthy Environments: Towards an Estimate of the Environmental Burden of Disease* (Geneva, WHO, 2006).

[42] *The Sustainable Development Goals Report 2018*.

[43] Ibid.

[44] WHO, *Quantitative Risk Assessment of the Effects of Climate Change on Selected Causes of Death, 2030s and 2050s* (Geneva, 2014).

[45] International Organization for Migration, "Migration and climate change". Available from www.iom.int/migration-and-climate-change-0.

[46] Intergovernmental Panel on Climate Change, *Climate Change 2014: Impacts, Adaptation and Vulnerability. Part A: Global and Sectoral Aspects* (Cambridge, Cambridge University Press, 2014).

[47] Ibid.

[48] Simon Albert and others, "Heading for the hills: climate-driven community relocations in the Solomon Islands and Alaska provide insight for a 1.5 °C future", *Regional Environmental Change*, vol. 18, No. 8 (2017).

[49] *Asia-Pacific Disaster Report 2017: Leave No One Behind: Disaster Resilience for Sustainable Development* (United Nations publication, Sales No. E.17.II.F.16).

VII. The role of demographic data in the 2030 Agenda for Sustainable Development

65. Up-to-date information on the size and characteristics of a country's population is vital in order to formulate, implement and monitor development policies and programmes. The availability of population counts disaggregated by sex, age and geographic area, records of vital events such as birth and death and information on changes in place of residence is critical.[50]

66. The Programme of Action called for the collection, processing, analysis and timely dissemination and utilization of population and related development data, and for that data to be disaggregated, particularly by sex, age and income. The Programme of Action singled out the measurement of migration, at both the regional and international levels, as an area in need of better data to support policymaking. While the quality and availability of population data have significantly improved since 1994, many gaps persist.

A. Data sources and gaps

67. Population and housing censuses remain the primary source of population counts, providing data disaggregated by multiple characteristics, including age, sex, marital status, educational attainment, occupation, ethnicity, migration status, household composition, housing characteristics and other relevant sociodemographic characteristics. An increasing number of countries are exploring innovative strategies of data collection, including the use of modern technologies. Global Positioning System (GPS) technology, high-resolution imagery by remote sensing and machine-learning are facilitating the integration of geospatial information into census operations.

68. Nationally representative household surveys are the sole source of information for measuring contraceptive use and the unmet need for family planning. In countries lacking good vital statistics, surveys also provide the most reliable information available on fertility and mortality. Much of that information is obtained from multi-country survey programmes, including the Demographic and Health Surveys,[51] the Generations and Gender Surveys,[52] reproductive health surveys, multiple indicator cluster surveys and the Performance Monitoring and Accountability 2020 surveys. Depending on the country, national surveys may be part of, or complement, those international survey programmes.

69. Given the different coverage, content and frequency of household surveys, data availability varies across indicators. During the period 2010–2017, estimates of under-5 mortality were available from 189 countries, adolescent fertility (15–19 years) were available from 170 countries and demand for family planning satisfied by modern methods were available from 140 countries.[53] Model-based estimates, based on national data, are required to fill gaps and reconcile differences among data sources and to monitor regional and global levels and trends.[54]

70. Administrative data sources with sufficient national coverage can complement censuses and surveys. Such data are especially important in rapidly changing

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[50] For a more detailed discussion of those issues, see E/CN.9/2016/3.

[51] See https://dhsprogram.com.

[52] See www.ggp-i.org/.

[53] United Nations, Department of Economic and Social Affairs, Population Division, "Estimates and projections of family planning indicators 2018".

[54] See, for example, United Nations, Department of Economic and Social Affairs, Population Division, "Estimates and projections of family planning indicators 2018".

situations. Universal birth and death registration, for instance, provides data to monitor vital rates and causes of death that are useful for tracking the implementation of health programmes. Nevertheless, despite recent progress, births for nearly 30 per cent of children under the age of 5 remain unrecorded, and only about one third of all deaths globally are properly documented. In sub-Saharan Africa, 57 per cent of children under the age of 5 have not been registered.[55] Furthermore, large gaps remain in the coverage of administrative data systems. During the period 2010–2017, registration data to measure maternal mortality, under-5 mortality and adolescent fertility were available from only 94 countries, while survey data were used to measure those indicators in 83 countries.[56]

B. Disaggregated population data

71.   The 2030 Agenda for Sustainable Development, in the spirit of reducing inequalities and pledging that no one will be left behind, calls for the collection and analysis of data disaggregated by income, sex, age, race, ethnicity, migratory status, disability and geographic location and other characteristics relevant in national contexts. While population censuses, household surveys and administrative systems are important sources for data pertaining to the Sustainable Development Goal indicators, they often do not produce data with the frequency and level of granularity required for detailed monitoring of the Goals.

72.   With a view to strengthening global monitoring and comparative research and to enable more in-depth analysis of socioeconomic differentials, national and international efforts are under way to compile and disseminate public-use microdata, allowing users to analyse anonymized datasets. In addition to the nationally representative household surveys mentioned in the previous section, initiatives to harmonize census databases across space and time, such as the Integrated Public Use Microdata Series, International,[57] are particularly useful.

73.   Population censuses and administrative data with national coverage can generate subnational estimates disaggregated by various population characteristics. Moreover, they can serve as the basis to draw sampling frames for nationally representative household surveys and for special surveys focusing on specific population subgroups or characteristics. For example, during the period 2005–2018, the multiple indicator cluster surveys programme sponsored by the United Nations Children's Fund surveyed 43 subnational locations or subpopulations in 19 countries in addition to carrying out 152 national surveys in 81 countries.[58]

74.   The need for subnational estimates of many Sustainable Development Goal indicators can be met in part by leveraging existing data systems, ensuring that all new data collection includes geo-referencing, as appropriate, to provide information about spatial differentials in development outcomes. The increasing availability of geo-referenced microdata from censuses and surveys is fostering the development of new statistical methods to generate small area estimates from single or multiple data sources to obtain robust subnational time trends for key indicators.

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[55] See https://data.unicef.org/topic/child-protection/birth-registration/.

[56] United Nations, Department of Economic and Social Affairs, Population Division, "Estimates and projections of family planning indicators 2018".

[57] See https://international.ipums.org/international/.

[58] Calculated using data from the multiple indicator cluster survey database. Available from http://mics.unicef.org/surveys.

VIII. Regional review conferences on population and development

75.   In 2018, the United Nations regional commissions, in collaboration with the United Nations Population Fund regional offices and other regional partners, convened regional review conferences to follow up on the respective region-specific outcome documents from the 20-year review of the Programme of Action that took place in 2013 and 2014. The regional commissions prepared background papers, informed by reviews conducted by Member States, and overview papers on population trends and emerging issues. The regional conferences emphasized interlinkages between the Programme of Action and the 2030 Agenda for Sustainable Development, and the need to integrate the population dimension into the voluntary national reviews presented at the high-level political forum on sustainable development.

76.   During the review conferences, Member States identified several key topics, challenges and opportunities. Declines in fertility and mortality had led to youth bulges, population ageing and, in some countries, to age structures favouring potential demographic dividends. Improvements in health had occurred in many countries despite the increased prevalence of non-communicable diseases due mostly to population ageing. Universal access to health services, including for sexual and reproductive health, and the provision of quality education and training for all, including life-long learning, remained critical to achieving the objectives of the Programme of Action and the Sustainable Development Goals of the 2030 Agenda. Member States recognized the linkages among migration, urbanization and sustainable development, and recognized that some population movements were driven by human-caused disasters, conflicts and environmental degradation.

77.   Countries across the regions noted shortcomings in gender equality and the empowerment of women and called for gender-balanced work-life reconciliation. Poverty had declined in many countries, but remained a major challenge. Inequalities in wealth, income and opportunity persisted, and had sometimes increased. Those most likely to be left behind, such as youth, migrants, older persons, disabled persons and indigenous peoples, needed to be empowered. Collecting and utilizing timely, accurate and disaggregated data was considered critical, as was strengthening civil registration systems, surveys and censuses to improve the evidence base for policymaking. Capacity development in that area needed to be strengthened. Member States across the regions agreed on the need for regular follow-up and review of the region-specific outcome documents related to the Programme of Action in the context of the 2030 Agenda, and underlined the relevance of the monitoring frameworks for such regular reviews.

IX. Conclusions and recommendations

78.   **Governments should plan for the opportunities and challenges associated with trends in fertility, mortality and migration, which will affect the size and age structure of future populations in ways that may boost or hinder the achievement of inclusive sustainable development.**

79.   **Governments should consider adopting policies and implementing programmes to support universal access to sexual and reproductive health-care services, including family planning, in accordance with the goals and objectives of the Programme of Action and the 2030 Agenda for Sustainable Development.**

80.   **Governments should support the realization of reproductive desires by all couples, including those with fewer children than desired, by ensuring access to parental leave, child benefits, tax credits and childcare, emphasizing measures to help parents balance work and family obligations over several years.**

81. While improved access to education has significantly advanced the goals and objectives of the Programme of Action, further improvements in completion rates and education quality are needed.

82. Because reduced fertility is associated with increased spending per child on health and education, policies to expand access to sexual and reproductive health-care services, including family planning, and policies to improve education quality and coverage reinforce each other, amplifying the potential gains from the demographic dividend and supporting a virtuous cycle of development.

83. Improvements in health status, nutrition, sanitation and access to safe water must be sustained to attain the relevant goals and objectives of the Programme of Action and the relevant Sustainable Development Goals of the 2030 Agenda.

84. Improving health-care services and providing cost-effective interventions that address the needs of women and newborns across the continuum of care provided around the time of birth remain critical to safeguarding the lives of mothers and their children.

85. Improving the reliability, timeliness and accessibility of demographic data should remain a central focus of efforts to strengthen national statistical systems for monitoring progress on the Sustainable Development Goals.

86. Initiatives to compile, analyse, harmonize, consolidate and disseminate demographic data should include expanded access to anonymized public-use microdata from censuses and surveys.

87. National data systems should be strengthened to provide data disaggregated by key demographic characteristics, especially age, sex, marital status and migration status, in line with the 2030 Agenda.

88. Whenever possible, data should be collected and disseminated according to single years of age, allowing users to regroup the data into relevant age ranges for Sustainable Development Goal indicators, including those pertaining to educational enrolment, adolescent birth rates, working-age populations and older persons.

89. Efforts to geo-code population data, including data relevant to Sustainable Development Goal indicators, should be enhanced, and include data gathered through censuses, household surveys, population registers and other sources, including big data. Microdata, especially when geo-referenced, must be duly anonymized to maintain confidentiality and safeguard individual privacy.

90. Measures recommended to improve the collection, analysis and dissemination of migration data include leveraging the 2020 round of population censuses, making better use of migration data from administrative sources, gathering data on migration through sample surveys, supporting demand-driven training programmes, establishing regional training centres and promoting cooperation and partnerships.

91. To facilitate comparability, data producers should apply standardized statistical concepts and measures. Data disaggregated by migration status can facilitate the monitoring of migrants' access to work and basic services and their integration into host societies.

92. Considering the interlinkages of the Programme of Action and the 2030 Agenda, population trends should feature prominently in voluntary national reviews presented at the high-level political forum on sustainable development.

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