



Population Dynamics and Sustainable Development

1. Introduction

The recent report by the United Nations Secretary-General's High Level Panel on Global Sustainability reaffirms that "unsustainable lifestyles, production and consumption patterns and the impact of population growth" are key drivers of the planet's sustainable development challenge.¹ The report highlights the need to understand demographic change, particularly in developing countries where there are large youth populations, and makes clear the importance of integrating population dynamics into effective government policies. As discussions leading up to Rio+20 progress, issues related to population growth, reproductive rights, family planning, and population composition and distribution are gaining increased attention. This issues brief serves as a contribution to the discussions: It provides an overview of population dynamics and reproductive health rights in the context of sustainable development, and reviews related global commitments and their achievements since the 1992 United Nations Conference on Environment and Development.

2. Population Growth: The Wellbeing of 7+ Billion People

This past year the world's population crossed over the 7 billion mark, and the United Nations Population Division projects that, with "medium variant" fertility rates, this figure could reach 9.3 billion by 2050 and more than 10 billion by the end of the century.² With only a small increase in fertility, especially in the more populous countries, the global population could reach as high as 10.6 billion people by 2050 and more than 15 billion in 2100.³ Meeting the needs of this growing population, while ensuring the sustainable use of natural resources, is the paramount challenge confronting humankind today. Combined with current consumption and production patterns, population growth will place increased pressure on land, ocean, fresh water, and other natural resources that sustain human life. At the same time, it will heighten the urgency of -- and make more difficult -- efforts to eradicate poverty and inequality; combat hunger, malnutrition and overall food insecurity; increase access to energy; develop sustainable cities; and mitigate the impacts of natural and human-made disasters.⁴

Much of the increase in population is expected to occur in developing countries with high fertility rates -- 39 in Africa, nine in Asia, six in Oceania and four in Latin America.⁵ The latest projections from the United Nations Population Division forecast that while the number of people living in developed countries will increase only from 1.24 billion in 2010 to 1.30 billion in 2030 and 1.31 billion in 2050, the number of people living in what are now least developed countries⁶ will rise from 832 million in 2010 to 1.26 billion in 2030 -- an increase of 51 per cent in just two decades -- and 1.73 billion in 2050.⁷ This growth will pose particularly significant challenges for countries and communities

that are already among the most vulnerable, where poverty and malnutrition rates are high, levels of education are low, job creation is weak, and people are least prepared to cope with the effects of environmental change, including climate change.⁸ Ensuring their well-being will require government policies that especially focus on large youth populations, and improve access to family planning, reproductive rights and health services: these not only reduce maternal and child mortality, but also slow population growth, help end the intergenerational transmission of poverty, and ultimately lighten the burden on families as well as on countries with poor natural resource endowments.⁹

3. Rights-based Population Policies: Broadening Choices

The May 2010 Report of the Secretary-General to the Preparatory Committee for Rio+20 recognizes that it is "useful to think of sustainable development as three intertwined transitions", the first being "demographic", in which "the ultimate goal is to stabilize the world population", the second being equitable development for all, and the third being "decoupling", or ensuring that consumption and production is within the "regenerative and absorptive capacities of the planet."¹⁰ Because each of these transitions is dependent on the other, achieving population stabilization will make the development and decoupling goals more readily achievable. By systematically using population data and projections, countries can assess existing and potential future scenarios for population size, composition and distribution, and plan for these factors in relation to employment, health care, education, food, water, energy and other resource needs.¹¹ In addition, if countries pursue appropriate human rights-based population policies that expand individual choices and opportunities now, they can gradually shape population trends to achieve population levels necessary for sustainable resource use and sound social and economic development.

Evidence shows that ensuring universal access to reproductive health and family planning services, ensuring enrolment in primary education, especially among girls, and achieving gender equality -- in secondary and higher education, the labour force, and in political processes -- not only reduces the average number of children born per woman, but it also improves human well-being and helps build human capital.¹² Research following the same families over time shows that families with small numbers of children are less likely to fall into poverty, and that they take less time to rise out of it when they do. This is, in part, because families with fewer children have a higher proportion of members that are potentially economically active, and that can be mobilized at times of need. Families with fewer children can also invest more in human capital formation per child, particularly in education and health care.¹³ In least developed countries, where in 2010 the average fertility rate was 4.4 -- significantly above the

fertility replacement level of 2.1 and compared to 2.5 in other developing countries -- having fewer children may mean the difference between living in poverty or rising above it.¹⁴

On a macro-demographic level, declining fertility, in addition to reducing population growth, eventually produces fewer children relative to the working-age population, thereby reducing the number of dependants and increasing the share of the potential labour force. If a country has a “youth bulge” – a large youth population with few dependents -- it may reap the benefits of a demographic dividend: large populations of working-age individuals, if fully employed in productive activities, can lead to increased average wages and significant growth in GDP. When accompanied by development-oriented social and economic policies, this demographic bonus gives rise to a unique opportunity for increasing investments in health, education, infrastructure and environmental protection, and has been shown to help propel countries out of poverty. The eventual slower growth in the number of young people also eases demand for jobs, education and health care services for the next generation, and allows for necessary investments in a future that is projected to have a higher proportion of older persons, as the large youth population ages.^{15 16}

4. Future Generations: Harnessing the Potential of Youth

While the world’s population has never been older than it is today – 12 per cent of the global population was over 60 years of age in 2010, and this percentage is projected to increase to 33 and 38 per cent by 2030 and 2050 respectively¹⁷ – it is the world’s large youth population that is capturing the attention of participants in the Rio+20 process. Today, close to 40 per cent of the global population is under the age of 25. While notable, this global average masks marked differences between regions. In developed countries, for instance, the youth population currently comprises 28 per cent, or 362 million people, of the total population. In least developed countries, 60 per cent of the total population, or 503 million people, are under the age of 25. The United Nations Population Division projects that, in coming decades, the share of young people in developed countries will remain relatively stable, while it will decrease in the least developed countries to 53 per cent and 46 per cent of total populations in 2030 and 2050 respectively.¹⁸

Whether a country has a predominantly old or youthful population has important implications for all the pillars of sustainable development – for example, for labour markets, natural resource use, and social security programmes. Societies with aging populations may make effective use of a growing number of old but active and productive persons.¹⁹ At the same time, however, these societies face increased policy challenges and costs in relation to health care, senior citizen housing, and financial support. Youthful societies have tremendous opportunities for harnessing the potential of their large young populations as they enter the labour market. Capturing their potential for innovation, including the ability to adopt new

technologies, can accelerate economic progress and speed up the transition to sustainable development pathways.²⁰ The rate of this progress, however, will depend on the provision of essential supports, including education and health care.

The recent report by the United Nations Secretary-General’s High Level Panel on Global Sustainability states that many developing countries, with their large youthful populations, “are primed for major increases in prosperity.”²¹ Over the next forty years, the working-age population of the least developed countries will increase by approximately 15 million persons per year, and the labour force will expand by approximately 33,000 persons per day.²² This demographic bonus holds tremendous potential, but in countries where half of the population and 60 per cent of those who are working already live in extreme poverty, maintaining or increasing per-capita spending on education and health care will be a formidable and multi-faceted challenge.²³ Sustained economic growth can create employment and allow for necessary social investments, but if it is not based on sound environmental policies, it can also lead to resource degradation and depletion, and ultimately negate potential achievements.²⁴

5. Urbanization: A Majority in Cities

An additional component of population dynamics being addressed in Rio+20 discussions is the changing spatial distribution of populations, namely through urbanization and rural-urban migration. While the world’s urban population has grown by more than 60 per cent over the 20th century and more than 50 per cent of people now live in cities, the next few decades will see an unprecedented scale of urban growth in developing countries.²⁵ This will be particularly notable in Africa, where the urban population is projected to increase from 401 million in 2010 to 744 million by 2030 and 1.2 billion by 2050, and in Asia, where the urban population is projected to increase from 1.8 billion in 2010 to 2.7 billion by 2030 and 3.3 billion by 2050.²⁶ While approximately 60 per cent of urban growth is due to natural increase (more births than deaths),²⁷ rural-urban migration that is driven primarily by economic and social causes, with increasingly influential environmental changes, will continue to be a significant driver of growth. Most growth will take place in medium-sized cities (those with populations between 500,000 and 1 million people), and the majority of the new urban population will be comprised of poor people, among whom women, children and young people are the most vulnerable.²⁸

The sustainability of cities is a topic widely recognized for its centrality to Rio+20, and is explored in Issues Brief #5.²⁹ Achieving sustainable cities requires consideration of the dynamic nature of cities over time. Pollution and resource degradation often attributed to urbanization are, in fact, more associated with income growth; controlling for income, urban areas allow more resource efficiency relative to rural areas. Because of this, forward-looking urban policies would help countries make use of economies of scale in the provision of vital infrastructure, including land, housing, water, sanitation and transport.

Urbanizing areas can plan for the retention of essential green spaces and ecosystems within their boundaries. In addition, dynamic urban areas can be hubs of productive job creation, particularly for large youth populations, which should improve the tax base necessary for future development and the provision of essential social services, including health care and education.

An increasingly urban population provides many opportunities for achieving sustainable development. At the same time, though, without sufficient planning, troubling existing trends in many urban areas, including rapid slum growth, urban sprawl and heightened vulnerability to environmental impacts, could be significantly exacerbated.³⁰ Today, over one billion people already live in urban slums, and without appropriate interventions, this number can only be expected to grow.³¹ Preparing for urbanization is therefore critical to ensuring sustainable cities and the prospects of sustainable development more broadly.

6. Existing Commitments

Linkages between population dynamics and sustainable development are recognized in several global agreements. The 1992 Rio Declaration and Agenda 21 from the United Nations Conference on Environment and Development lay out principles that put human beings at the centre of development, and emphasize the need both to increase knowledge regarding the links between demographic trends and sustainable development, and to incorporate this knowledge into national and local policies and programmes. Two years later, the 1994 International Conference on Population and Development (ICPD) emphasized and built upon these declarations and statements, laying out time-bound and cost-specific goals which marked a breakthrough for the population and development action components within sustainable development.³² The ICPD also had at its centre human rights approaches to reproductive health and family planning, and the promotion of education and gender equality as intrinsic components of sustainable development.

In 2000, the United Nations General Assembly adopted the Millennium Declaration. The Declaration did not include any references to population dynamics per se, but did reflect the goals set out in the ICPD Programme of Action and outlined time-bound commitments for addressing health, the education of children, and gender equality as fundamental components of development and poverty eradication efforts. The Declaration formed the basis of the Millennium Development Goals, which were updated in 2008 to reflect new targets on attaining universal access to reproductive health and gender equality. The ICPD Programme of Action was also reflected in the 2002 Johannesburg Plan of Implementation, formulated 10 years after the initial Rio Earth Summit. Additional global agreements from the 1995 Fourth World Conference on Women in Beijing, the 1995 World Summit for Social Development, and Habitat II in 1996, also include statements on links between population

dynamics and sustainable development. Due to space limitations, however, these agreements have not been reviewed here.

Table 1 below provides examples of universal statements on population and sustainable development found in the reviewed agreements, while Table 2 lists specific time-bound targets related to the achievement of population stabilization, focusing on the key determinants of population dynamics discussed in this brief – reproductive health and family planning, education, and gender equality. Success for achieving population goals can, in part, be measured through the achievement of these time-bound targets.

Table 1. Universal Statements on Population and Sustainable Development³³

Source	Statement/Recommendation
Rio Declaration	Principle 1. Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature.
	Principle 8. To achieve sustainable development and a higher quality of life for all people, States should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies.
Agenda 21, Chapter 5	5.3 The growth of world population and production combined with unsustainable consumption patterns places increasingly severe stress on the life-supporting capacities of our planet.
	5.16 Policies should be designed to address the consequences of population growth ... combine environmental concerns and population issues within a holistic view of development whose primary goals include the alleviation of poverty ...
	5.17 Full integration of population concerns into national planning, policy and decision-making processes should continue. Population policies and programmes should be considered, with full recognition of women's rights.
ICPD, Chapter 2	Principle 6. Sustainable development as a means to ensure human well-being, equitably shared by all people today and in the future, requires that the interrelationships between population, resources, the environment and development should be fully recognized, appropriately managed and brought into harmonious, dynamic balance. To achieve sustainable development and a higher quality of life for all people, States should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate policies, including population-related policies, in order to meet the needs of current generations without compromising the ability of future generations to meet their own needs.
ICPD, Chapter 3	3.3 Explicitly integrating population into economic and development strategies will both speed up the pace of sustainable development and poverty alleviation and contribute to the achievement of population objectives and an improved quality of life of the population.

Source	Statement/Recommendation
	3.24 Meeting the basic needs of growing populations is dependent on a healthy environment. These human dimensions need to be given attention in developing comprehensive policies for sustainable development in the context of population growth.
	3.29 Governments ... are recommended to help achieve population and environment integration: (a) Integrate demographic factors into environment impact assessments and other planning and decision-making processes aimed at achieving sustainable development ... (c) Utilize demographic data to promote sustainable resource management, especially of ecologically fragile ecosystems ... (d) Modify unsustainable consumption and production patterns through economic, legislative and administrative measures ... aimed at fostering sustainable resource use and preventing environmental degradation; (e) Implement policies to address the ecological implications of inevitable future increases in population numbers and changes in concentration and distribution, particularly in ecologically vulnerable areas and urban agglomerations.
Millennium Declaration	21. We must spare no effort to free all of humanity, and above all our children and grandchildren from the threat of living on a planet irredeemably spoilt by human activities, and whose resources would no longer be sufficient for their needs.

Table 2. Time-bound commitments regarding reproductive health and family planning, education, and gender equality

Source	Goal and Target	Delivery
ICPD, Chapter 7	7.6 All countries should strive to make accessible through the primary health-care system, reproductive health to all individuals of appropriate ages as soon as possible and no later than the year 2015.	2015
	7.16 All countries should take steps to meet the family-planning needs of their populations as soon as possible and should, in all cases by year 2015, seek to provide universal access to a full range of safe and reliable family-planning methods and to related reproductive health services which are not against the law.	2015
ICPD, Chapter 11	11.6. All countries should ... strive to ensure the complete access to primary school or an equivalent level of education by both girls and boys as quickly as possible, and in any case before the year 2015.	2015
MDGs	2A. Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling.	2015

Source	Goal and Target	Delivery
	3A. Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015.	2005; 2015
	5B. Achieve universal access to reproductive health	2015
IPOI	116 (a) Meet the Millennium development goal of achieving primary education, ensuring that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling	2015
	120. Eliminate gender disparity in primary and secondary education by 2005 ... and at all levels of education no later than 2015, to meet the development goals contained in the Millennium Declaration, with action to ensure, inter alia, equal access to all levels and forms of education, training and capacity building by gender mainstreaming, and by creating a gender-sensitive educational system	2005; 2015
	54 (j) Address effectively, for all individuals of appropriate age, the promotion of healthy living, including their reproductive and sexual health, consistent with commitments and outcomes of recent United Nations conferences and summits, including ... the International Conference on Population and Development	(2015 – in support of ICPD)

7. Delivery on Commitments

Although most countries have developed national strategies on the environment and sustainable development since the 1992 United Nations Conference on Environment and Development, many have not yet fully integrated population dynamics into national policies or programmes, or analyzed population dynamics in the context of national needs or priorities.³⁴ A 2003 Global Survey (the most recent survey located) conducted by the United Nations Population Fund (UNFPA) revealed that, while 79 per cent of countries reported adopting multiple measures in integrating population issues into development, only 57 per cent had integrated population concerns into poverty reduction strategies and approximately 50 per cent had taken strong steps on population-environment interactions.³⁵ A more recent 2011 UNFPA report indicates that population dynamics have been largely neglected by policymakers in the last 15 years due, in part, to the perception that population growth rates are decreasing and that the population “problem” has been solved, and due to the sensitivity of issues related to family planning and reproductive health rights.³⁶

The lack of effective integration of population dynamics into national and local policies and programmes is reflected in the

partial, rather than full, achievement of the time-bound goals for reproductive health, education and gender equality of the ICPD Programme of Action, the Millennium Development Goals, and the Johannesburg Programme of Implementation. As Table 3 and the discussion below indicate, notable progress has been made in reaching these goals; however, significant gaps remain in many developing regions and in addressing specific segments of society, namely the poor, adolescent girls, those without education, and those living in countries affected by conflict. Many factors, such as peace and economic growth, are central to achieving the time-bound targets, but so too are comprehensive population policies that target vulnerable groups and address their specific health, educational, employment and political needs.

Table 3. Delivery on time-bound commitments regarding reproductive health, education, and gender equality

Issue	Global Commitments	Delivery
Make reproductive health, including family planning, available to all individuals of appropriate ages as soon as possible and no later than the year 2015	ICPD (7.6, 7.16), MDG 5B JPOI 54 (j)	Partial
Provide complete access to primary school or an equivalent level of education, for both girls and boys, as quickly as possible and before the year 2015	ICPD (11.6); MDG 2A JPOI 116 (a)	Partial
Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015	MDG 3A JPOI 116 (a)	Partial

Status of Achieving Universal Access to Reproductive Health and Family Planning by 2015

UNFPA's 2003 Global Survey indicates that 90 per cent of countries were adjusting policies, laws or institutions to promote reproductive rights.³⁷ Today, however, at least 215 million women still have an unmet need for family planning information and services, and the target of achieving universal access to reproductive health care is unlikely to be met by 2015.³⁸ While use of contraceptives increased among women in almost every region during the 1990s, there has been a considerable slowdown in progress since 2000, and a widening gap in access among regions. Eighty-four per cent of women in Eastern Asia and 74 per cent of women in Latin America were using contraception in 2008, but only 22 per cent and 37 per cent were doing so in sub-Saharan Africa and Oceania respectively. In all regions, the use of contraception continues to be lowest among the poorest women and those with no education. In addition, adolescents continue to face obstacles in accessing reproductive health services, and progress in the decline of adolescent birth rates has stalled since 2000. The highest birth rate among adolescents is found in sub-Saharan Africa, where there were 122 births/1,000 adolescent

girls in 2008, only slightly lower than 124 births/1,000 girls in 1990.³⁹

Status of Achieving Complete Access to Primary Education by 2015

While enrolment in primary education has continued to rise, reaching 89 per cent in the developing world in 2009, the current pace of progress is not sufficient to achieve universal primary education by 2015. In order to meet the goal, all children at the official entry age for primary school would have had to be attending classes by 2009. However, approximately 67 million school-age children are not in school, with almost half of them (32 million) in sub-Saharan Africa, and more than a quarter (16 million) in Southern Asia. Girls, the poor, and children who live in countries affected by conflict face the greatest barriers to enrolling and staying in school. Of the total number of primary school-age children in the world who are not enrolled in school, 42 per cent, or 28 million, live in poor countries affected by conflict.⁴⁰

Status of Achieving Gender Equality (Eliminating Gender Disparity) by 2015

The Millennium Development Goals measure the achievement of gender equality through three indicators: the ratio of girls to boys in primary, secondary and tertiary education, the share of women in wage employment in the non-agricultural sector, and the proportion of seats held by women in national parliament. The Millennium Development Goals Report for 2011 indicates that the developing regions are approaching gender parity in education attainment, with 96 girls enrolled for every 100 boys in both primary and secondary school in 2009. However, the targets of achieving between 97 and 103 girls for every 100 boys in primary, secondary and tertiary education still fall short in a number of regions, including Oceania, sub-Saharan Africa, and Western Asia. Targets also fall short for secondary and tertiary education in Southern Asia.⁴¹

Globally, the share of women in paid employment outside the agricultural sector has continued to increase, reaching almost 40 per cent in 2009. In some regions, though, women remain largely relegated to more vulnerable forms of employment, as subsistence farmers, unpaid family workers or "own-account" workers, with limited financial security or social benefits. In Southern Asia, Western Asia and Northern Africa, less than 20 per cent of those employed outside of agriculture are women.⁴²

Finally, while noticeable progress has been made in recent years towards women's empowerment, including major advances in terms of women's participation in decision-making bodies, the translation of these gender policies into women's securing management and leadership positions remains a challenge.⁴³ Globally, only one in four senior officials or managers are women, and women account for only 30 per cent of high-level workers in three out of 10 regions. In Western Asia, Southern Asia, and

Northern Africa, less than 10 per cent of top-level positions are held by women.⁴⁴ Finally, while the global share of women in parliament continues to rise slowly – reaching 19 per cent in 2011 – this figure falls far short of gender parity.⁴⁵

8. Proposals for Rio+20

Almost all submissions to the zero draft document for Rio+20 recognize that education, gender equality, and improving the rights and opportunities of women in both social and economic spheres are essential to achieving sustainable development.⁴⁶ There is widespread agreement in member state submissions on achieving the Millennium Development Goals, and United Nations Agencies (e.g., UNFPA, UN-Women), several Major Groups, and the consensus submissions from Women and Youth and Children all note their support of universal access to reproductive health and family services.

For education, proposals focus on investing in children's (especially girls'), youth and women's education at all levels, including technical and vocational education and training. Examples of proposals for gender equality include using an Integrated Strategic Environmental Assessment to incorporate critical themes such as gender equality, using gender-responsive budgeting tools in policy and planning, ensuring women have greater access to credit, training and benefit sharing, and investing in women's employment in various sectors, including agriculture, forestry, mining, information communications technology, etc.

Note: many other proposals have been proposed by think tanks, NGOs and other actors, but cannot be listed here due to space limitations.

The purpose of the Rio 2012 Issues Briefs is to provide a channel for policymakers and other interested stakeholders to discuss and review issues relevant to the objective and themes of the conference, including a green economy in the context of sustainable development and poverty eradication, as well as the institutional framework for sustainable development.

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¹ United Nations Secretary-General's High-level Panel on Global Sustainability (2012). Resilient People, Resilient Planet: A future worth choosing. New York: United Nations. http://www.un.org/gsp/sites/default/files/attachments/GSP_Report_web_final.pdf

² Based on the medium variant of the United Nations Population Prospects, 2010 Revision (updated June 28, 2011) <http://esa.un.org/wpp/Excel-Data/population.htm>. The medium variant of the population projections assumes that fertility will reach replacement level by 2035-2040, and remain below replacement level for the rest of the century.

9. How to Structure a Discussion on Population Dynamics

The discussion on population dynamics can be approached through two frameworks. First, discussion could focus on how governments can plan for population change, including growth, spatial distribution, and composition, through forward-looking policies based on the collection and analysis of population data and projections, and the consideration of future population scenarios. This will be particularly relevant in determining needs for employment, food, water, energy, housing, sanitation, education, and health sectors at different levels. The UN Food and Agriculture Organization has estimated, for instance, that world agricultural output will need to increase by 70 per cent to feed a population of 9 billion expected by 2050 with rising levels of consumption.⁴⁷ Incorporating population projection scenarios into similar such assessments at required scales will allow for identifying pressures on natural resources, and setting of developmental targets, such as those discussed for the Sustainable Development Goals.

The second framework would need to focus on supporting human-rights based population policies that expand individual choices and opportunities in both private and public life. Because the time-bound targets of the ICPD Programme of Action and the MDGs regarding universal access to reproductive health and family planning, education, and gender equality are not likely to be met, future discussions could focus on accelerating progress towards these goals. Discussion should also focus on how these goals – along with other MDGs, such as reducing infant and child mortality and combating HIV/AIDs -- can be integrated into the Sustainable Development Goals and the post-2015 framework.

³ Based on the high variant of the United Nations Population Prospects, 2010 Revision (updated June 28, 2011) <http://esa.un.org/wpp/Excel-Data/population.htm>.

⁴ The submission of the United Nations Population Fund (UNFPA) and the Population Division of the Department of Economic and Social Affairs to the compilation document for the zero draft, <http://www.uncsd2012.org/rio20/index.php?page=view&type=510&nr=335&menu=20>

⁵ United Nations Population Fund. State of World Population 2011: People and possibilities in a world of 7 billion (2011). New York.

<http://foweb.unfpa.org/SWP2011/reports/EN-SWOP2011-FINAL.pdf>

⁶ The Least Developed Countries are: Angola, Madagascar, Benin, Malawi, Burkina Faso, Mali, Burundi, Mauritania, Central African Republic, Mozambique, Chad, Niger, Comoros, Rwanda, Democratic Republic of the Congo, São Tomé and Príncipe, Djibouti, Senegal, Equatorial Guinea, Sierra Leone, Eritrea, Somalia, Ethiopia, Sudan, Gambia, Togo, Guinea, Uganda, Guinea-Bissau, United Republic of Tanzania, Lesotho, Zambia, Liberia, Afghanistan, Nepal, Bangladesh, Samoa, Bhutan, Solomon Islands, Cambodia, Timor-Leste, Kiribati, Tuvalu, Lao People's Democratic Republic, Vanuatu, Myanmar, Yemen, and Haiti

⁷ United Nations Population Prospects, 2010 Revision (updated June 28, 2011) <http://esa.un.org/wpp/Excel-Data/population.htm>

⁸ The submission of the United Nations Population Fund (UNFPA) and the Population Division of the Department of Economic and Social Affairs to the compilation document for the zero draft, <http://www.uncsd2012.org/rio20/index.php?page=view&type=510&nr=335&menu=20>

⁹ United Nations Secretary-General's High-level Panel on Global Sustainability (2012). Resilient People, Resilient Planet: A future worth choosing. New York: United Nations. http://www.un.org/gsp/sites/default/files/attachments/GSP_Report_web_final.pdf

¹⁰ Report of the Secretary-General, Preparatory Committee for the United Nations Conference on Sustainable Development, First session, 17-19 May 2010. Item 3 of the provisional agenda. http://www.un.org/gsp/sites/default/files/attachments/GSPReport_unformatted_30Jan.pdf

¹¹ United Nations Population Fund (2011). Population Matters for Sustainable Development. Concept paper prepared by UNFPA, Interagency Consultation on Population and Sustainable Development Convened by UNFPA. New York. <http://www.uncsd2012.org/rio20/content/documents/Rio+20%20Concept%20No%20Population%20Dynamics%20and%20Sustainable%20Development.pdf>

¹² The submission of the United Nations Population Fund (UNFPA) and the Population Division of the Department of Economic and Social Affairs to the compilation document for the zero draft, <http://www.uncsd2012.org/rio20/index.php?page=view&type=510&nr=335&menu=20>

¹³ United Nations Population Fund (2011). Population dynamics in the least developed countries: challenges and opportunities for development and poverty reduction. New York. http://unfpa.org/webdav/site/global/shared/documents/publications/2011/CP51_265.pdf

¹⁴ United Nations Population Fund (2011). Population Dynamics in the Least Developed Countries: Challenges and Opportunities for Development and Poverty Reduction. New York. http://unfpa.org/webdav/site/global/shared/documents/publications/2011/CP51_265.pdf

¹⁵ The submission of the United Nations Population Fund (UNFPA) and the Population Division of the Department of Economic and Social Affairs to the compilation document for the zero draft, <http://www.uncsd2012.org/rio20/index.php?page=view&type=510&nr=335&menu=20>

¹⁶ Yefu Lin, Justin. 2012. Youth Bulge: A Demographic Dividend or a Demographic Bomb in Developing Countries? Retrieved from website on April 9, 2012: Let's talk development: a blog hosted by the World Bank's Chief Economist. Let's talk development. <http://blogs.worldbank.org/developmenttalk/youth-bulge-a-demographic-dividend-or-a-demographic-bomb-in-developing-countries>

¹⁷ Based on the medium variant of the United Nations Population Prospects, 2010 Revision (updated June 28, 2011) <http://esa.un.org/wpp/Excel-Data/population.htm>

¹⁸ Ibid.

¹⁹ Ibid.

²⁰ The Laxenburg Declaration on Population and Sustainable Development, Statement of a Global Expert Panel (2011). <http://www.iiasa.ac.at/Research/POP/Laxenburg%20Declaration%20on%20Population%20and%20Development.html>

²¹ United Nations Secretary-General's High-level Panel on Global Sustainability (2012). Resilient People, Resilient Planet: A future worth choosing. New York: United Nations. http://www.un.org/gsp/sites/default/files/attachments/GSPReport_unformatted_30Jan.pdf

²² United Nations Population Fund (2011). Population Matters for Sustainable Development. Concept paper prepared by UNFPA, Interagency Consultation on Population and Sustainable Development Convened by UNFPA. New York. <http://www.uncsd2012.org/rio20/content/documents/Rio+20%20Concept%20No%20Population%20Dynamics%20and%20Sustainable%20Development.pdf>

²³ International Labour Organization (2011). Report of the ILO for the Fourth UN Conference on the Least Developed Countries, 9-13 May 2011, Turkey: Growth, Employment and Decent Work in the Least Developed Countries. Geneva. http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_153868.pdf

²⁴ United Nations Population Fund (2011). Population Matters for Sustainable Development. Concept paper prepared by UNFPA, Interagency Consultation on

Population and Sustainable Development Convened by UNFPA. New York. <http://www.uncsd2012.org/rio20/content/documents/Rio+20%20Concept%20No%20Population%20Dynamics%20and%20Sustainable%20Development.pdf>

²⁵ United Nations Population Fund (2007). State of the World Population 2007. New York. <http://www.unfpa.org/swp/2007/english/introduction.html>

²⁶ United Nations World Urbanization Prospects, 2011 Revision. <http://esa.un.org/unpd/wup/CD-ROM/Urban-Rural-Population.htm>

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³⁹ The Millennium Development Goals Report. United Nations. New York, 2011. http://www.un.org/millenniumgoals/11_MDG%20Report_EN.pdf

⁴⁰ Ibid.

⁴¹ Ibid. The number of girls for every 100 boys is as follows (listed in parenthesis): for primary education: Oceania (89), sub-Saharan Africa (92), Western Asia (92); secondary education: sub-Saharan Africa (79), Western Asia (86), Southern Asia (89) and Oceania (88); tertiary education: sub-Saharan Africa (63), Southern Asia (74), Oceania (86), Western Asia (87).

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