



Ending the Silence
on Population and
Reproductive Health
and Rights

Céline Delacroix
Karen Hardee
J. Joseph Speidel

Authors



Céline Delacroix

Senior Fellow, The Population Institute, USA.

Adjunct Professor, The University of Ottawa, Canada.

Dr. Céline Delacroix is a part-time professor at the University of Ottawa's School of Health Sciences. She is the Director of the FP/Earth project with the Population Institute. Her interdisciplinary research focuses on analyzing how family planning, population size, and environmental sustainability intersect and are perceived. She is looking for ways to harness these linkages to benefit reproductive rights and improve environmental sustainability. She earned a PhD from the University of Ottawa, a Master's in Science from the Free University of Brussels (Belgium) and an LLB in Law from Cardiff University (Wales, UK). Dr. Delacroix also served as Executive Director of several human rights and environmental civil-society organizations, including the Conservation Council of New Brunswick and Ethiopiaid Canada.



Karen Hardee

President, Hardee Associates.

A social demographer for over 30 years, Dr. Hardee, president of Hardee Associates, has extensive technical and leadership experience working with a range of bilateral and multilateral development organizations, nongovernmental organizations and as a consultant on family planning and reproductive health; rights-based programming; gender; global development and climate change; policy and program development; research; and evaluation. She was previously director, Center for Research and Evaluation at the Futures Group (now Palladium), visiting senior fellow at Population Reference Bureau, vice president for Research at PAI, senior advisor at John Snow, Inc., principal research scientist at Family Health International (now FHI 360), and presidential management fellow at USAID and the U.S. Bureau of the Census. Dr. Hardee has worked globally, most intensively in Asia, Africa, and the Caribbean. Dr. Hardee holds a Ph.D. from Cornell University's Population and Development Program and has published extensively and spoken widely.



J. Joseph Speidel

Senior Fellow, The Population Institute, USA. Professor emeritus, Bixby Center for Global Reproductive Health, University of California San Francisco.

J. Joseph Speidel MD, MPH, is a board-certified public health physician and Professor Emeritus at the University of California, San Francisco School of Medicine. He is a graduate of Harvard College Harvard Medical School, and the Harvard School of Public Health. He is the author of more than 300 scientific publications on health and population including the book *The Building Blocks of Health—How to Optimize Wellness with a Lifestyle Checklist*. He previously directed the U.S. Agency for International Development (USAID) Office of Population, was president of Population Action International, directed the population grants program at the Hewlett Foundation, and was co-director of the UCSF Bixby Center for Global Reproductive Health. Dr. Speidel was responsible for the management of development assistance and philanthropic awards totaling more than \$1 billion. Dr. Speidel has made more than 250 radio, TV, and personal appearances including on ABC, NBC, CBS, CNN, BBC, Voice of America, Good Morning America, The Charlie Rose Show, and Larry King Live.

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Executive Summary

Our demographic landscape has changed dramatically, as there are over three times as many persons in the world today as in 1950, 8 billion compared to 2.5 billion. This rapid growth, although slowing and uneven in regions around the world, is expected to continue for decades to come, coinciding with the need to support improved living standards for billions of people still living in poverty. The world's population is projected to continue growing by an additional 2.4 billion people, reaching 10.4 billion by 2086. This growth is projected to disproportionately take place in lower income countries, and to exacerbate current challenges to sustainable development, including in relation to universal access to healthcare and education, and vulnerability to climate change.

Humanity's demands on Nature now exceed what Earth is able to provide on a sustainable basis, endangering the wellbeing and quality

of life of current and future generations, and harming the most vulnerable disproportionately. This report documents that with increasing per capita consumption and still growing population numbers, human demands are depleting the natural resources essential to support human life, and driving climate change.

While acknowledging the urgent need to address consumption patterns, this report describes the potential of fully voluntary family planning programs to enhance reproductive rights and health, reduce unintended pregnancies, slow population growth, and safeguard the environment. This needed response to the challenge of reversing environmental degradation and supporting improved living standards for billions of people currently living in poverty is hampered both by opposition and by inadequate priority and resources afforded to family planning and reproductive health programs.



The International Conference on Population and Development meets in Cairo to produce a Programme of Action that will become a blueprint for global population policy for the next twenty years. Prime Minister of Norway Gro Harlem Brundtland (extreme left) addresses the conference.

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Since the International Conference on Population and Development in 1994, discussions of population and family planning have become increasingly divorced. This report highlights that dissociating population dynamics from reproductive health and rights discussions constitutes a missed opportunity to advance reproductive rights, and downplays their relevance for broader societal goals, including their positive impact on environmental sustainability. Ignoring the interconnected nature of population dynamics and reproductive rights leads to policy incoherence as attention to demographic dynamics is fundamental to the goals of reproductive justice, including improving the economic status of women and the attainment and preservation of a healthy and productive environment.

Population trajectories are not immutable, and the United Nations' 'lower variant' population projection of global population peaking at 8.9 billion in 2054, instead of the medium projection at 10.4 billion in 2086 is possible by advancing reproductive health and rights, education, and

gender equity. As such, slowing population growth will contribute to achieving the transformative change that is required to address climate change and environmental degradation and is an opportunity to create a more just and equitable future for all.

For these reasons, population considerations can constructively be added into the sexual, reproductive health and rights (SRHR) and other health and environment frameworks. This process represents unique funding and programmatic opportunities for the SRHR movement, a movement that is chronically under-funded and under acknowledged. Fulfilling individual reproductive rights has implications for broader collective development, sustainability, and demographic considerations.

Chapter 1. Population and environment

1.1 Projections of population

From a population of 1.6 billion in 1900 the world reached 8 billion in 2022. According to the UN's World Population Prospects 2022, the global population is projected to grow to 9.7 billion in 2050, and to peak at around 10.4 billion in 2086, assuming the UN's medium variant projection (UNDESA, 2022) (see Box 1). We are thus on a pathway to potentially adding 2.45 billion more persons by the year 2086, a number comparable to the whole human population in the 1950s. While global population size is still growing, the rate of population growth is declining, standing at a level of 0.88% in 2023 (Figure 1).

In the 1950s, on average around the world, women gave birth to around five children. Thanks to factors such as the increasing empowerment of women worldwide and declining child mortality, better access to the means to control one's fertility, and because of the increasing cost of raising children, this number dropped to 2.3 births per women by 2021. Worldwide, total fertility rates (TFR) are projected to continue to decline to 2.1 births per women by 2050.

Today, two-thirds of the global population lives in a country or area where fertility rates are below 2.1 births per woman, roughly the level required for zero growth in the long run for a population with low mortality (UNDESA, 2022). However, "population momentum," or the effect of a youthful age structure with a large base of women of reproductive age having children, is propelling

population to still increase in many, but not all, countries with a TFR lower than 2.1. For example, although India's TFR is now below 2.1, it is still increasing by more than 10 million people a year due to the large number of women in childbearing ages. China, whose draconian One-Child Policy forced a rapid decline in fertility that reached a TFR of 1.09 in 2022, showed population decline starting in that year, its first population decline in 60 years.

Growth will also be driven by high levels of fertility in some parts of the world, notably in sub-Saharan Africa (which stood at 4.6 births per women in 2021). Sub-Saharan Africa is projected to become the most populous world region in the late 2060s, with a population that could grow from 1.15 billion in 2022 to 3.44 billion by the end of the century.* In contrast, the combined populations of Europe and North America are projected to grow from 1.12 billion in 2022 to 1.13 billion around 2038, and then decline to about 1.0 billion in 2100. Thus, while the global population is still growing, the world is becoming increasingly demographically polarized, as parts of the world undergo stable or declining populations, while others encounter rapid growth.

Global population dynamics and prospects are, and will continue to be, experienced differently by different population groups (Figure 2). Based on the demographic dynamics described above, in the last decades, the populations of low- and middle-income countries have increased more rapidly than high income countries. Rapid and continued growth is projected to disproportionately take place in lower income countries, with the 46 countries designated as "Least developed countries"*** by the World Population Prospects report among the fastest-growing (UNDESA, 2022).

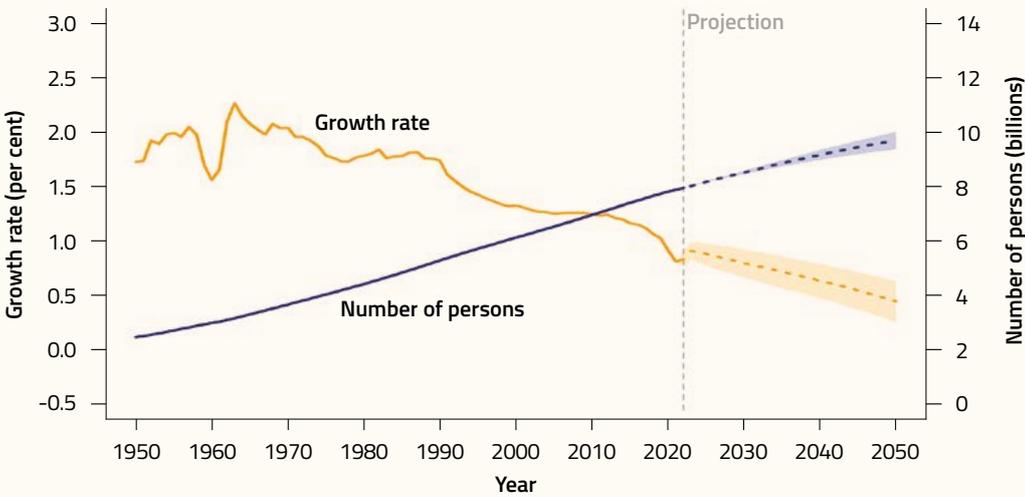
Population projections

The UN's medium variant projection is often misconstrued as an inevitability, with the common belief that it will materialize automatically. This perception is misleading, as these projections rely on past experience and on assumptions about future trends. Although they have demonstrated a degree of accuracy at the global level, projections can contain substantial errors when examined at national and regional scales, and their reliability diminishes over extended timeframes.

* The population of Africa has increased six-fold from 1950 until 2022, from 229 million persons to 1.4 billion (Speidel & O'Sullivan, 2023).

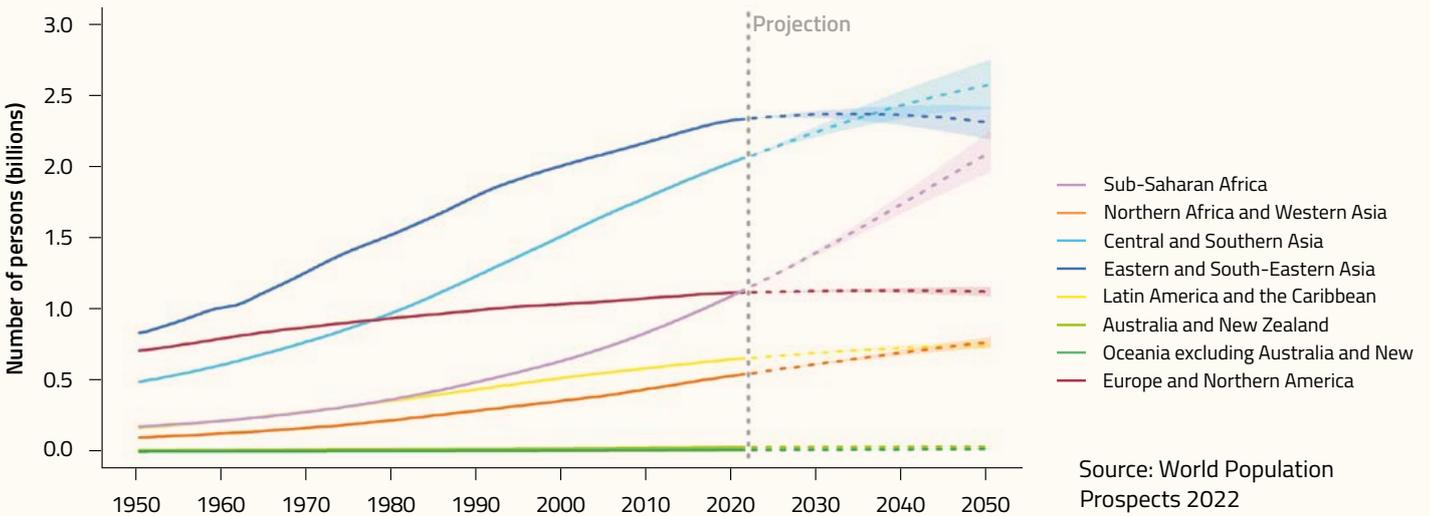
** The UN report stresses that this designation is intended for statistical purposes and does not express a judgment about the stage in the development process reached by a particular country or area.

Figure 1
Global population size and annual growth rate: estimates, 1950-2022, and medium scenario with 95 per cent prediction intervals, 2022-2050



Source: World Population Prospects 2022

Figure 2
Population estimates, 1950-2022, and projections with 95 per cent prediction intervals, 2022-2050, by region



Source: World Population Prospects 2022

1.2 Global population and environmental sustainability

Population is a driver of environmental degradation, but this relationship is not strictly proportional. It is in large part because of vast global inequities in income, wealth, access to resources, opportunities and living standards that population size is a distal measure of environmental impact, as some population groups — notably those in high income countries — have and drive disproportionately high consumption patterns, while others — notably those in low-income countries — are

more likely to live in poverty. These inequities, which must be addressed, unnecessarily distract us from understanding the significance of population growth as a driver of unsustainability. Researchers have projected that if all persons of the world could afford a reasonable standard of living measured on the average income in today's high middle-income countries (US\$20,000), the sustainable population would be of only approximately 3.3 billion (Dasgupta et al., 2021).

There is ample evidence that global population size influences environmental sustainability and drives climate change, and environmental degradation (Speidel et al., 2009). The Sixth Assessment Report (AR6) of the IPCC identified population growth and gross domestic product (GDP) per capita as the strongest drivers of CO₂ emissions through fossil fuel use (Shukla et al., 2022). In 2010, O'Neill and colleagues calculated that slowing population growth to the level of the UN low variant projection could provide 16%–29% of the emissions reductions suggested to be necessary by 2050 to avoid dangerous climate change (2010). Wynes and Nicholas argued that having one fewer child was the most impactful long term action that could be undertaken at the individual level by persons in high income countries to limit greenhouse gas emissions (2017). In the *World warning of a climate emergency*,

11,000 scientists from around the world endorsed an article that put forward six critical and interrelated steps to lessen the worst effects of climate change. Stabilizing and reducing the world population within a framework that ensures social integrity, by upholding human rights, removing the barriers to family planning, achieving gender equity and universal access to education, was one of the six steps (Ripple et al., 2019).

Population size also has an impact on the biodiversity and ecosystem services* on which we rely. For example, food production is the largest cause of global environmental change, with agriculture occupying 40% of global land, causing up to 30% of greenhouse-gas emission, utilizing 70% of freshwater use, burdening marine systems, and being the largest factor causing species to be threatened with extinction (Willett et al., 2019).



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* Ecosystem services are the direct and indirect contributions ecosystems provide for human wellbeing. There are four types of ecosystem services: provisioning services, such as food and water; regulating services, such as climate regulation; cultural services, such as the recreation and aesthetic values we obtain from ecosystems; supporting services, such as photosynthesis.



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Food systems can be transformed to reduce their impact on the environment, by prioritizing healthy plant-based diets, and avoiding the consumption of meat. Reducing meat consumption and food waste together with efficient use of water, energy, and fertilizers are needed. However, even highly ambitious targets for food system efficiency gains will be insufficient if the global population exceeds 10 billion (Gerten, 2020). Growing human numbers contribute to exacerbating the challenge of transforming the systems of food production to become sustainable.

Slowing population growth in the long run will contribute to achieving the transformative change that is required to address climate change and environmental degradation. Bongaarts and O'Neill (2018) explain:

Although slowed population growth would contribute only modestly in the short term, its cumulative effect over the 21st century would be substantial. Slowed population growth would reduce emissions and the demand for energy that would have to be satisfied with low or zero-carbon sources. (p. 652)

Embarking on such transformative change is also a social justice pursuit, as the environmental and climate crises will disproportionately affect more vulnerable population groups, such as women, refugees, or sub-Saharan Africans, for example. Countries with fast growing populations also tend to have a high vulnerability and exposure to the negative impacts of climate change (Population Institute, 2023).

Chapter 2. Population growth: A contentious issue

2.1 Policy and demography

Demographic trends, despite their profound influence on various sectors, are often perceived as unchangeable. Consequently, population projections are frequently overlooked as actionable policy components. It is important to remember that future population projections encompass a wide spectrum of possibilities, reflected by the United Nations low, medium, and high variants. The 2050 global population projections range from 9.4 billion under the low-fertility scenario, 9.7 under the medium fertility scenario, and 10.0 under the high-fertility scenario. Looking ahead to 2100, the estimates range from 8.9 billion in the low-fertility scenario, 10.3 billion in the medium scenario, to 12.4 billion in the high-fertility scenario. These projections are constructed on particular assumptions, with the “medium” variant interpreted as the most likely outcome, although it is not immutable.

The global development community should consider the “low” variant as a feasible alternative, attainable through increased investment in gender equity, education, and family planning. As Dasgupta (2022) stated: “Ironically, neither the authors of the UN’s Sustainable Development Goals, nor COP26, nor COP15, nor even the celebrations that were Stockholm50+ ...considered what increases in human numbers to 10 billion or more might imply for the biosphere” (p. 1028). This creates policy in-coherence, a situation where goals, objectives and policies contradict and undermine each other. This omission also represents a missed opportunity to capitalize on, and fully assess the importance of critical interventions with wide ranging cross-cutting benefits, such as the advancement of education, reproductive justice, and gender equity.

Despite the fact that demographic trajectories can, and should, be influenced in a manner that centers

human rights and social justice, population discussions are marginalized and excluded from sustainability discussions (Delacroix & Engelman, 2023; Kopnina & Washington, 2016; Speidel & O’Sullivan, 2023). The fact that some parts of the world experience high, and others, low fertility makes finding an international consensus on population policies even more difficult (Gailey *et al.*, 2023). As we detail below, policies that highlight the positive impact of family planning on environmental sustainability have largely been branded as off limits by many in the reproductive health and rights movement, in particular. We shall explore the reasons for and consequences of this taboo in depth in Chapter Three.

The contentious nature of the population conversation arises in many forms: Some accept that population reduction would be a benefit in and of itself, but suggest avoiding a contentious message that touches on sexuality, patriarchy, global cultural differences, and religion (Delacroix & Engelman, 2023). Others claim that exploring the role that population size plays for environmental sustainability is a “dangerous distraction” from the “real” drivers of climate change, such as capitalism, consumption, and global inequities (UNFPA, 2023). And, again, others associate the population size, family planning and environmental sustainability linkage as one inexorably leading to racism and coercive practices to limit fertility (Coole, 2021; UNFPA, 2023).

The history of human rights abuses perpetrated by past population programs prioritizing demographic objectives over individual reproductive autonomy, most notably China’s deeply coercive One-Child Policy (Feng *et al.*, 2016), understandably contributes to these negative associations. Some scientists, along with many advocates, and policy makers thus avoid, or advocate to avoid, this issue altogether, and, in the



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ensuing silence, global citizens are deprived of an opportunity to reflect and act on the long-term sustainability consequences of their reproductive choices. Countering this silence, groups such as the Stable Planet Alliance, Population Matters and Population Balance are speaking about the need to talk about our numbers (population) and our appetites (consumption), and articulating solutions grounded in justice, equity and human rights.

2.2 Pronatalism

The sensitivity of the topic of population growth also arises from the different values and valuations associated with human population size. Proponents of pronatalism value growing population sizes as an inherent good, and encourage and promote fertility (Bajaj, 2022). So called ‘Cornucopians’, for example, are optimistic that the social and economic progress of humankind is inevitable, and advocate for the merits of larger populations, which they associate with increased opportunity, creativity

and innovation (Simon, 1983). Many leaders in commerce, industry, media, and finance adhere to a conventional economic theory that a growing population is needed to sustain prosperity and economic growth (Chamie, 2020). This pro-growth demographic orthodoxy expounds the benefits of robust population growth and ever larger, youthful populations and warns of financial hardship and a dismal future from population decline and aging. Presumably more people, plentiful low-cost workers, larger markets, and more customers will bring greater profits (Chamie, 2020).

This position ignores the economic research on the contribution of demographic change to global poverty reduction (Wietzke, 2020). Research also shows that small families in developing countries accrue multiple benefits including better health, and higher social and economic status (Sinding, 2009; Bloom *et al.*, 2000). They can direct more resources toward the health and education of each child. Slowing population growth, which

results from empowering women and giving individuals the means to act on their reproductive preferences, improves the economic well-being of individuals, communities, and entire countries.

2.3 Population growth and economic prosperity

The rate of the growth of a population influences the economic outlook of a society. Rapid declines in family size reduce the dependency ratio—the number of workers in the labor force compared to children, youth, and elderly who are not as economically productive. Providing the right conditions are in place, this phenomenon can lead to a *demographic dividend*, a temporary window of opportunity where economic productivity can be boosted (Bloom *et al.*, 2000). Slowing population growth is almost always an essential precursor for nations to emerge from poverty (O’Sullivan, 2012). The role that fertility rates play in these processes is largely debated. The position that rapid population growth is a symptom, not a cause of underdevelopment was put forward in the 1970s*, under the summary catch phrase “Development is the best contraceptive.” This reflected the Global South’s position in 1974 at the United Nations–sponsored World Population Conference that they needed massive development assistance, rather than family planning assistance. Economists associate TFR declines with economic growth on the grounds that rising incomes lead to a desire for smaller families and greater investment in human capital (Götmark & Andersson, 2023). Yet, recent studies indicate that fertility decline in many developing countries followed modern contraception, contesting the role of economic growth as a primary driver in this process (O’Sullivan, 2012; Götmark & Andersson, 2023).

A robust debate about the role of fertility preferences vs. access to contraception in shaping fertility has ensued over several decades. An

analysis of over 200 surveys in 77 countries with data over four decades suggests that fertility desires and family planning programming have both played a role in lowering fertility (Günther, & Harttgen, 2016). While this debate may continue, it is increasingly clear that the drivers of fertility desire are multiple, and include education, gender equity, women empowerment, economic development – and access to contraception. There is clear evidence that family planning programs centering reproductive autonomy contribute to reductions of fertility levels (Bongaarts & Hodgson, 2022). Reproductive autonomy – a person’s ability to choose the number, spacing and timing of their children – is a key factor influencing population trends. Discussions of sexual and reproductive health and rights are thus closely associated with issues of economic development. Many countries have achieved low fertility despite high levels of poverty and illiteracy, but none have done so without a strong family planning program (Jain & Ross, 2012).

Population growth is both a cause and a symptom of slow progress in social and economic development (Wilmoth *et al.*, 2022). Rapid population growth presents multiple challenges for sustainable development, magnifying investments needed to ensure quality of life and wellbeing for all. These include investments to ensure universal access to health care**, education, housing and other essential services, end hunger and malnutrition, advance gender equity, and eradicate poverty (UNDESA, 2021). Globally diverging demographic trajectories highlight deep and persistent global inequities. Our current lifestyle is not sustainable, yet it is imperative that we improve the welfare of half of the world’s population now living in poverty with an income of less than \$5.50 a day (World Bank, 2022) – and living without adequate health care, education, housing, or employment or the benefits of good governance, personal freedom, and security.

* This position was endorsed at the first World Population conference in Bucharest in 1974. World Population Conferences are convened by the United Nations, and address topics related to demography, development and reproductive health and rights. Three official world population conferences took place: in Bucharest (the World Population Conference in 1974), in Mexico City (The International Population Conference in 1984) and in Cairo (the International Conference on Population and Development in 1994).

** Universal health coverage includes financial risk protection, access to quality essential health care services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all.



In more than 80 countries, home to two-thirds of the world's population, fertility levels have reached or fallen below replacement rates. Proponents of a pro-growth economic theory emphasize the necessity of a growing population to sustain prosperity and economic growth, particularly through the presence of large youthful populations, while warning of potential financial hardships associated with demographic shifts. Of particular concern is that as societies age, the proportion of economically dependent individuals will exceed that of the productive workforce. Population decline is presented in an increasingly alarmist manner, even as an existential threat for humanity as low fertility is perceived as an irreversible, self-reinforcing phenomenon* (Lutz, 2008). Elon Musk's tweet "population collapse due to low birth rates is a much bigger risk to civilization than global warming" showcases a recent and well-publicized example of this position (Musk, 2022).

Aging societies pose economic and social challenges that demand thoughtful planning and consideration, but these challenges appear more manageable than the pressing issues of climate change and environmental degradation, which threaten the very physical conditions of our life support system. The current levels of population decline we experience in some parts of the world must not be understood as the decline of humanity as whole. On the contrary, declining population levels represent opportunities to minimize humanity's collective footprint, as well as create a more just and equitable future for all. Researchers have, for example, documented that lower fertility can simultaneously increase income per capita and lower carbon emissions (Casey and Galor, 2017). The current experience of many countries with low fertility rates which have performed relatively well in terms of per capita GDP and employment, and where citizens enjoy a high income per capita that is still increasing, illustrates that population decline can be contended with successfully.

* The 'low fertility trap hypothesis posits that low fertility is a self-reinforcing mechanism whereby demographic, economic and sociological mechanisms contribute to make the future increase of birth rate harder to achieve

Chapter 3. Sexual reproductive health and rights (SRHR), and population

3.1 The Cairo Consensus

The 1994 International Conference on Population and Development (ICPD), held in Cairo, is widely known for moving away from demographic targets and focusing global attention on sexual reproductive health and rights (SRHR), yet the Programme of Action (PoA) from ICPD covered a broad range of issues related to population and sustainable development, including, for example population growth and structure; health; urbanization; migration; as well as gender, equality, equity and empowerment of women (UNDESA, 1995).

The PoA emerged through hard-fought deliberations among the 179 countries at the conference and among groups ranging from feminist advocates to demographers (Hodgson and

Watkins, 1997). Feminist and human rights groups attention to reproductive health and population issues increased in the late 1980s, partly in response to the human rights abuses performed to slow population growth in India (1976–77) and more notably in China (after 1980). These non-profit groups emerged as a powerful force at the ICPD. Their calls for a more complete range of health services for women, especially those to meet women’s reproductive needs succeeded and reproductive health became the philosophical rationale of the ICPD Programme of Action.

The coercive programs that prioritized reducing fertility over the fulfillment of individual reproductive rights were inexcusable. But these programs did not represent the vast majority of programming that emphasized voluntary family



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planning* (Bongaarts & Sinding, 2009; UNDESA, 2021). Despite the fact that the population policies that took place between the 1960s and the ICPD in 1994 played a significant role in making family planning more accessible on a global scale, focusing on demographic objectives became perceived as tantamount to population control, and as antithetical to rights-based approaches (Gillespie, 2004). Past examples of coercion created a backlash against efforts to link family planning and environmental sustainability, as well suspicion towards efforts to promote voluntary family planning. The fulfillment of individual reproductive health and rights became broadly regarded as a separate pursuit from broader development, sustainability and demographic considerations.

The ICPD PoA emphasized that “demographic goals, while legitimately the subject of government development strategies, should not be imposed on family planning providers in the form of targets or quotas for the recruitment of clients” (Para. 7.12; Singh, 2009, p. 73). At the same time, the ICPD PoA reinforced that facilitating the demographic transition is important – and is linked with the paradigm shift in programming to provide voluntary family planning in the context of reproductive health care; improve maternal and child health outcomes; promote gender equity, equality and empowerment of women; and protect individual human rights; with broad participation of stakeholders in policy deliberations and programming.

Reproductive rights, reproductive autonomy and reproductive justice are all rooted in the universal declaration of human rights (UN, 1948). The ICPD PoA noted that reproductive rights were based on existing human rights recognized in international human rights documents and consensus statements that predated ICPD by nearly 50 years (Cook *et al.*, 2003). Backed by international human rights, the ICPD reinforced the right of individuals and couples to decide freely and

responsibly the number and spacing of their children, with information and services to do so, and without discrimination or coercion. Thus, the ICPD linked reproductive rights to the obligations of States to provide the services that will yield positive reproductive health outcomes (Ngwena & Durojaye, 2014). With reproductive autonomy individuals have the power to decide and control contraceptive use, pregnancy, and childbearing.

Incorporating human rights, social justice and reproductive rights principles, the reproductive justice (RJ) initiative was established around the time of ICPD by African American women based on the core belief that all women have the right to have children or not and the right to nurture children in a safe and healthy environment (Ross & Solinger, 2017). Further, the human right to control sexuality, gender, work, and reproduction, “That right can only be achieved when all women and girls have the complete economic, social, and political power and resources to make healthy decisions about our bodies, our families, and our communities in all areas of our lives” (In Our Own Voice, n.d.) The reproductive justice framework has been highlighted in the 2022 report of the High-Level Commission on the Nairobi Summit on ICPD at 25 Follow Up, to widen the lens of human rights articulated at ICPD, to reinforce the need to shift the frame of reference from programs to people and from global to local, and to consider communities and sustainable environments as an integral part of reproductive justice.

Given that the ICDP PoA included language justifying the focus of governments on the impact of demographic factors and trends on economic, social well-being and environmental issues (UNDESA, 1995), a narrow focus on sexual reproductive health and rights (SRHR), is a misrepresentation of ICPD and the range of important population and development issues it covers. In fact, leading up to ICPD, women’s health advocates promoted what they termed ‘feminist population policy’ that acknowledged population stabilization as a positive outcome, to be achieved by focusing on better ensuring

* Some feminists question the notion of voluntary family planning (Nandagiri, 2021).

reproductive health and rights, and on ensuring women's empowerment (Dixon–Mueller, 1993; Hodgson and Watkins, 1997; CRR, 2003). The ICPD Programme of Action included a 20-year plan with:

important population and development objectives, as well as qualitative and quantitative goals that are mutually supportive and of critical importance to these objectives. Among these objectives and goals are: economic growth in the context of sustainable development; education, especially for girls; gender equity and equality; infant, child and maternal mortality reduction; and the provision of universal access to reproductive health services, including family planning and sexual health (Para. 1.12)

The agreement canonized in the ICPD PoA was forged with the “belief that enhancing individual health and rights would ultimately lower fertility and slow population growth” (Ashford, 2004, p. 1). The ICPD reinforced that governments have a role to play in addressing population issues but in ways that respect human rights for people of all ages and address social and gender inequities (Barroso, 2015; Sen *et al.*, 2019).

This important link gets dropped in prevailing common narrative that ICPD was exclusively about SRHR and empowering women and had expunged anything about population. The power of this erroneous – and misguided – narrative has resulted in discussions of population being de-legitimized after Cairo, leading many to observe that “the challenge will be to reconcile the macro-demographic approach with human rights considerations.” (May, 2012, p. 66). In the words of a female Kenyan leader of a foundation population program at a meeting with civil society on ICPD at 15 in 2009:

No one doubts the value of empowering women through education, but when population grows this fast, countries are simply not able to sustain their development. And when education and health systems are overwhelmed or fail all together, I can assure you that it is women and girls who suffer first and most (Kanyoro, 2009).

3.2 The new climate context

The emergence of climate change and environmental degradation as policy issues needing the world's attention has reinforced the importance of SRHR and population – and has come with renewed calls to silence talk about population (Khan, 2023; SRHR and CJ Coalition, 2023). Not all agree; indeed the Center for Biological Diversity contends that, “although the connection between population growth and the climate crisis can be controversial, we need to talk about it” (Center for Biological Diversity, n.d.).

Bajaj and Stade agree. In 2023 they said:

While the population taboo arises from a worthy concern for women's reproductive rights that have so frequently been subjugated to other concerns deemed more pressing, we do women no favours by refusing critical examination of population growth and its root causes. On the contrary, frank discussions of the role of population size and growth in causing environmental destruction along with healthy policy discourse on how best to neutralise the pronatalist forces that undermine reproductive autonomy – are essential to full realisation of reproductive rights as well as environmental sustainability across the globe. (p. 57)

In 2021, Project Drawdown, an initiative that advances effective, science-based climate solutions and strategies, analyzed 93 policy options for reducing carbon emissions. They identified family planning and education as among the top 10 solutions to combat climate change, noting that while it is not a mitigation strategy, a benefit of meeting reproductive health needs which tends to result in smaller family size would ultimately include lowered carbon emissions. They note, “Family planning and education are not in themselves climate mitigation strategies. Rather, it is the outcome of Fostering Equality through education and health, slower population growth, that is a climate solution” (Project Drawdown, 2022). Project Drawdown has been criticized by the Women & Gender Constituency and the SRHR and Climate Justice Coalition, among a range of other groups, for this science-based solution (WGC and SRH & CJ Coalition, n.d.)



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The poorest countries will suffer most from the effects of climate change. With high fertility rates and rapid population growth rates that outpace the ability of countries to provide services including schooling, employment opportunities, and infrastructure, poor people are becoming even more vulnerable to changes in climate (Population Institute, 2023). Future global warming will intensify their vulnerability. Rather than deny the link, we should celebrate the cascading benefits of universal access to SRHR, including contraception, for women, families, communities, nations and the planet, now and in the future. As expressed by a group of members of the Population, Health and Environment Policy and Practice Group,

When people everywhere can exercise bodily autonomy about whether and with whom to have sex, exert control over their fertility through the realization of universal access to SRHR, and ensure all births are planned, the end result of slower population growth can contribute to a long-term reduction in global emissions through global demographic shifts. Disparaging contraception and family planning run counter to achieving universal access to SRHR (Members of PHE Policy and Practice Group, 2023).

There is some movement on this recognition. A recent statement from the SRHR and Climate Justice messaging guide acknowledges:

Whilst programs that have population control as an objective or outcome are problematic in instrumentalizing the bodies of some of the most marginalised women, we recognise that population dynamics and demography cannot be divorced from consideration of the impacts of access to comprehensive SRHR such as improved gender equity and women's participation in education and in the workforce, all of which are important for demographers and policymakers to consider in service planning and provision (2023).

Chapter 4. Strengthening SRHR through acknowledging and embracing population: harnessing opportunities

As illustrated above, the SRHR movement has mostly chosen to ignore the positive role that family planning plays related to sustainability, stemming from its influence on fertility levels. As such, an important dimension is missing from the conceptual framework of the SRHR movement: attention to population dynamics. Reintegrating population in this frame presents opportunities to strengthen SRHR in several ways. These include widening its support base by appealing to new audiences concerned with environmental degradation, increasing the legitimacy of SRHR, and expanding funding options by accessing new funding sources. We review these opportunities in the following sections.

4.1 Embrace population to contribute to increasing and widening endorsement for SRHR

Changing the framing of a social issue can reinforce its moral appeal and diversify its support base. The current dominant contemporary framing of reproductive rights considers them as purely individual and as incompatible with wider collective, and environmental goals. But recognizing that fulfilling SRHR influences population dynamics by lowering fertility levels means acknowledging the positive impact of family planning on broader development sectors, including health and education systems, food security, peace and security, climate change adaptation and mitigation, and environmental sustainability. These represent additional, wider framing for SRHR, with the potential to appeal to citizens, policy makers, researchers and activists concerned with such sectors. Re-integrating population dynamics within the SRHR framework thus carries the potential to generate new champions to endorse SRHR (Speidel and O’Sullivan, 2023).

Research indicates broad support among SRHR advocates, environmental advocates, and sub-Saharan African actors for framing SRHR in a manner that reflects its positive impact on environmental sustainability, including to accelerate progress for reproductive health and rights (Delacroix 2022, 2023). Within the SRHR movement, as explained by Newman, *et al.* (2014), tensions between reproductive health and rights and sustainable development advocates are long-standing and remain to this day, but it is appropriate to both care about population dynamics and care about SRHR.

Broad concern among the general public around the world (Bell *et al.*, 2021; Fagan & Huang, 2019) for environmental degradation and climate change also suggests that recognizing the synergistic nature of SRHR and environmental sustainability carries potential to catalyse support for SRHR far and wide. This universal concern about the state of the planet has grown to such a scale that it has given birth to a psychological condition known as “Eco-anxiety” (Hogg *et al.*, 2021). Eco-anxiety, which is mostly manifest in high income countries, is associated with a multitude of outcomes, including a reluctance to have children. Studies show that a desire for fewer or no children was associated with a positive individual choice for the environment (Boluda-Verdu *et al.*, 2022).

The environmental community also has been wary of addressing population and contraception, let alone abortion, because of fears that it would unnecessarily enmesh their programs in controversial topics. As such, they have failed to sufficiently recognize and advocate for full access to reproductive health care as essential to reproductive justice, and carrying environmental co-benefits (Speidel *et al.*, 2009). There have been exceptions to this however, as illustrated

by the inter-sectoral Population, Health and Environment approach, spearheaded by conservation minded organizations (detailed in section 4 below). Another initiative showcasing the willingness of the environmental community to recognize the cross-sectoral importance of family planning is the creation of the International Union for the Conservation of Nature's Task Force on Biodiversity & Family Planning Task Force, focusing on the importance for the conservation of nature of removing barriers to rights-based voluntary family planning.

Women's rights advocates seldom recognize that in many settings, attention to demographic dynamics is fundamental to the goals of reproductive justice, including improving the economic status of women and the attainment and preservation of a healthy and productive environment. For example, in addition to opportunities for women, education, jobs, housing and safety, how can reproductive justice be served if there is pressure on water and food security from prevailing demographic dynamics?

Acknowledging that meeting needs for SRHR, including access to contraception in voluntary and rights-based ways, slows or lowers population growth carries important implications for numerous sectors beyond environmental concerns (Starrs *et al.*, 2018). Those international organizations, government agencies, NGOs, think tanks and advocacy organizations concerned with national security and peace, education, food security, poverty, rule of law, gender equity, and many other issues would find it easier to reach their goals if the development community adopted and acted on a common agenda supporting SRHR and reproductive justice without ignoring the important role population dynamics play. In this regard, Coole (2021), who identified a "toxification of the population discourse", suggests reconsidering the position that the goal of universal access to SRHR and the recognition that achieving that goal will result in reduced fertility benefitting the environment are incompatible.

4.2 Increase SRHR funding through multi-sectoral integration reflecting population dynamics

Population policies devised prior to the ICPD had mobilized funds, under a global crisis model that focused on overpopulation, famine and environmental degradation. While the 1994 ICPD was the first UN conference that went beyond calling for action and presented a budget for carrying out the agreed-on program, it did not succeed in bolstering sufficient investments in SRHR, including family planning. Although the ICPD called for providing substantial new funding for safe maternity and other reproductive health services, in subsequent years funds were diverted from family planning for use for a variety of other reproductive health purposes. Since the ICPD conference, there has been a substantial increase in the scope of activities considered essential for full SRHR. Furthermore, funding has not kept up with growing needs, including related to population growth.

A chronic shortfall of needed funds has hampered efforts to implement family planning and SRHR programs. In 2019, the Guttmacher Institute estimated that increasing expenditures from the then-current \$7.1 billion a year from all sources to \$12.6 billion could satisfy the unmet need for modern contraception in developing countries (United Nations Population Fund, 2019. Sully *et al.*, 2020). Guttmacher estimated that full funding would decrease unintended pregnancies from the then current 111 million to 35 million per year, unplanned births from 30 million to nine million per year, decrease induced abortions from 68 million to 23 million per year and would result in an estimated 70,000 fewer maternal deaths each year and a decline in maternal deaths due to unsafe abortion, from 23,000 to 5,000. The declines in unintended pregnancies and unsafe abortions would reduce the annual cost of abortion-related care for all women needing abortion services from \$2.8 billion to \$1.5 billion, and if all abortions were provided safely, the cost of abortions and post-abortion care would decline to \$600 million.

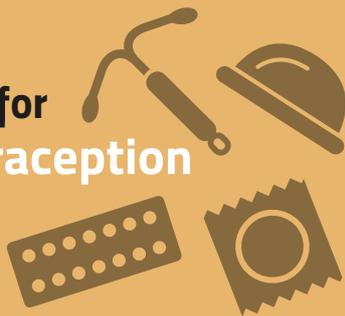
\$12.6bn global SRHR funding could:

Decrease unplanned births from **30 million to 9 million** per year

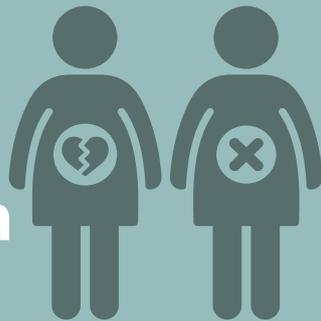


Decrease unintended pregnancies from **111 million to 35 million** per year

Satisfy the unmet need for modern contraception in developing countries



Decrease induced abortions from **68 million to 23 million** per year



Result in an estimated **70,000 fewer maternal deaths** each year and a decline in maternal deaths due to unsafe abortion, from **23,000 to 5,000**



By jointly investing in contraceptive and pregnancy-related care, 186,000 maternal deaths would be averted. This represents a decline of 62% (from 299,000 to 113,000 per year), compared with smaller declines expected from an investment in contraceptive or pregnancy-related care alone. Most of this benefit would accrue in low-income and lower-middle-income countries, where reductions in maternal deaths would total 76,000 and 102,000, respectively.

Fair shares

A further consideration is determining each donor's equitable share of all donor funds. A recommendation espoused by PAI and other advocacy organizations is that each donor's share of total funds should be based on the wealth of the donor country as measured by their gross national income (GNI) – the internationally accepted indicator for measuring national wealth (PAI, 2020). According to this formula, using data from 2018, the U.S. should provide 41.3% of development assistance since the U.S. GNI made up 41.3% of the GNI of all Development Assistance Committee nations (PAI, 2020).

The Kaiser Family Foundation (KFF) tracks and analyzes bilateral and UNFPA donor government funding to address family planning in LMICs. The KFF report on 2021, found that family planning funding from donor governments totaled US\$1.39 billion, essentially flat compared to the 2020 level (US\$1.41 billion) (Wexler *et al.*, 2022). Among the ten donor governments profiled by KFF, the U.S. continues to be the largest donor to bilateral family planning with provision of \$576.7 million or 42% of total bilateral funding from governments in 2021. The Netherlands was the second largest donor (\$190.5 million, 14%), followed by Sweden (\$180.4 million, 13%), the U.K. (\$157.8 million, 11%), and Canada (\$98.9 million).

The ICPD called on donors to provide one-third of the funds needed for family planning services in LMICs. Of the needed total of \$12.6 billion, a one-third share from donor countries would equal \$4.2 billion. The U.S.'s fair share calculation of 41 percent of the donor countries' support for

FP/RH programming totals \$1.736 billion annually. This can be compared to the annual \$575–\$600 million U.S. funding for family planning that has remained essentially unchanged for the past 12 years (Kaufman & Pincombe, 2023).

Adjusting for inflation, the purchasing power of FP/RH funds from the U.S. has decreased by \$139.6 million in constant FY 2011 dollars. Over the same period, the number of women of reproductive age in USAID–assisted countries has increased by 24 percent. The combination of these two trends means that purchasing power per woman has declined from 88¢ to 54¢. Thus, an FY22 funding level of \$942.4 million would have been needed to maintain the purchasing power/woman of the 2011 \$575 million (Kaufman & Pincombe, 2023).

Overall, investing in SRHR, including family planning, remains a volatile and politicized topic. Looking forward, the future of donor investments in SRHR beyond 2023 does not look bright and will compete with other emerging donor priorities. Yet providing the needed funds to adequately support the full range of SRHR activities in LIMCs would foster reproductive justice, improve health, diminish poverty, and protect the environment and climate. Supporting family planning and eliminating unintended pregnancies would make each of the elements of SRHR easier to address and less costly. This suggests that among the components of SRHR, family planning deserves high priority.

Yet, the disparity in the investment needed to address climate and support family planning is striking. The International Renewable Energy Agency has called for outlays of \$120 trillion between 2015 and 2050 to combat climate change (IRENA, 2018). The worldwide costs of climate adaptation are likely to be between \$280 billion and \$500 billion per year by 2050 (UNEP, 2016). In contrast only an additional \$6 billion per year over current expenditures is needed to meet unmet needs for contraception services in LMICs (Sully *et al.* 2020). This relatively small investment would increase the effectiveness of all other efforts for economic development, climate change mitigation

and adaptation, poverty reduction, food security, and ecosystem protection.

But family planning programs alone are not enough to eliminate unintended pregnancies. As Bongaarts states,

Among the reasons for unwanted and unplanned pregnancies are low levels of female education, a lack of knowledge about and access to contraception, insufficient supplies and services, cost, and fear of side effects. Just as problematic is opposition from spouses and other family members and traditional gender roles that support a desire for large families. To reduce unintended pregnancies, family-planning programs must go beyond simply providing supplies and services; they must also reduce or eliminate these other obstacles. (2016, p. 410)

Integrating reproductive autonomy and gender equity considerations in climate and environmental sustainability and other sectoral funds reflects the foundational role of fertility and population dynamics in achieving sustainable and just outcomes. Acknowledging the positive role of family planning, through its impact on fertility, on broader sectoral outcomes thus represents a strategic opportunity to widen and increase funding for the under-resourced SRHR sector. In 2021, an alliance of more than 60 NGOs urged for UK climate funding eligibility to include reproductive healthcare and girls' education (Davies, 2021). Others such as PRB have highlighted strategies for promoting inclusion of family planning and reproductive health in adaptation finance (PRB, 2022; Mogelgaard and Patterson, 2018).

Chapter 5. Widening frames for linking population and SRHR

Development and sustainability discourses and policies must be reframed to achieve the necessary transformative change required to set humans on a more sustainable, and equitable, pathway. This will involve adopting more holistic and less siloed approaches towards development and environmental sustainability goals that reflect its cross-cutting and cross-sectoral drivers. The success of this pursuit hinges on acknowledging the significance of population dynamics, and the crucial role that reproductive autonomy, women's empowerment and access to family planning and reproductive health services play in the trajectory of demographic change. This transformative process is already underway, as the framing of sustainability and development goals increasingly adopts cross-sectoral approaches. These approaches signal the existence of an ongoing discursive and normative shift which will impact the language, assumptions and values associated with the ways in which population and reproductive autonomy are framed. We provide a few examples below:

The Sustainable Development Goals (SDGs)

The introduction of the SDGs signalled a shift from a global development poverty reduction to a broader concept of social sustainability (Hill *et al.*, 2014). Despite their regrettable omission of population dynamics, the SDGs do highlight the integrated nature of the three dimensions of sustainable development: economic, social and environmental. Reproductive rights have an important place in this Agenda, with sexual and reproductive health targets included in goals three, “Good Health and Well Being”, and five, “Achieve gender equality and empower all women and girls” (United Nations, 2015). Target 3.7 states: “By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes”. Target 5.6 states: “Ensure universal access to sexual

and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences”. The SDG's increased emphasis on sexual and reproductive rights in Goals 3 and 5 indicate a shift from previous normative contexts, where family planning was regarded as too sensitive to be included (Crossette, 2005; Potts, 2014).

Planetary Health

The Planetary Health movement aims to contextualize health within an overarching sustainability frame. Essentially, planetary health is based on the idea that human health and the health of the planet are intrinsically related: “sustainability” is the ability of a society to make choices that are beneficial to its long-term survival. It views population numbers as one of the drivers of human induced environmental change and identifies the reduction of population growth through rights-based programming as one of the policies for planetary health, bringing co-benefits to health and the environment (Whitmee *et al.*, 2015).

One Health

The One Health approach is centered on the recognition of the interconnectedness of human health, animal health, and the environment. It emerged from observations of the growing role of human activities, resulting in part from growing human population numbers, in spreading zoonotic infectious diseases, and of the need to create a multi-disciplinary approach to address it. The One Health approach is premised, in particular, on the inclusion of wildlife health (the health of animals) as an essential component of public health (the health of human beings) (Mackenzie & Jeggo, 2019). The One Health Institute of the University of California at Davis states: “The One Health approach recognizes the growing connection

between the health of animals, people, plants, and the environment. It understands that humans do not exist in isolation, but are part of the larger, total living ecosystem.” (n.d.)

Transformative Change

The Intergovernmental Science–Policy Platform on Biodiversity and Ecosystem Services (IPBES) is an independent intergovernmental body comprising over 130 member Governments. In its global assessment report on biodiversity and ecosystem services, it stated that only a transformative change across economic, social political and technological factors could achieve sustainability while meeting human needs (2019). This transformative change frame integrates the role of equity at its core, and incorporates the need for change across multiple levels, from the individual to the societal. As such, it includes changes in values and behaviours, as well as in systems, consumption and production. The transformative change frame is also put forward by the Intergovernmental Panel on Climate Change, the sister body of IPBES in charge of climate change. This frame reflects the need for a radical overhaul of human global systems and functionings, largely grounded in inequities, that contribute to environmental degradation. In doing so, it aims to include the underlying and cross-sectoral indirect drivers of the deterioration of nature. Silencing talk of population in relation to biodiversity and ecosystem services and to climate change is a detriment to this approach.

Population, Health and Environment

The interdisciplinary Population, Health and Environment (PHE) programmatic approach, which emerged from environmental conservation organizations, illustrates the effectiveness of integrating reproductive rights and environmental objectives to achieve long term sustainability benefits. Aiming to improve environmental and social outcomes to achieve long-term and wide-ranging development and conservation results and adopting an integrated, community based, and multi-sectoral approach, it simultaneously prioritizes family planning and reproductive health services with environmental objectives

(Yavinsky *et al.*, 2015). In 2017, the European Parliament Committee on Development urged the adoption of this approach to provide integrated solutions to health, gender and environmental challenges.

Reproductive Justice

Reproductive justice places an emphasis on redressing the structural inequities associated with the population groups that tend to have worse reproductive health outcomes, and who have been disproportionately affected by coercive practices and human rights violations. Grounded in the interconnectedness of reproductive rights, social justice and human rights, it draws attention to the intersectionality of the drivers of inequity and addresses broad societal issues including the right to a safe and healthy environment (Ross & Solinger, 2017).

Ecocentrism

Ecocentrism is a system of values that centers nature, as opposed to humans (anthropocentrism). It finds inherent, moral value in all of nature, and not only in those aspects of nature that can be of service to humans. Many indigenous cultures had, and continue to have, an ecocentric view of the world. Ecocentrists argue that in order to shift to more sustainable and equitable pathways the adoption of ecocentric values is essential (Taylor *et al.*, 2020).

Population dynamics, SRHR, and gender equity are influential drivers of these inter-sectoral approaches. Population and SRHR can be framed within, and by each one of them, along a holistic and integrated approach to sustainability. Such framing would align with Coole’s proposition to reconsider demographic targets as a legitimate interest of sustainable development (Coole, 2021), and with the ICPD PoA, which stressed the benefits of slower population growth.

Conclusion

Ample evidence exists that it is possible to help protect natural systems and improve human welfare through two major avenues that are now neglected compared to the attention that they deserve. First, preservation of the environment and stabilization of climate through major changes in production technologies and consumption patterns and, second, expansion of SRHR, family planning and reproductive justice, along with education; these will improve human wellbeing and attenuate population growth. Attaining a global population trajectory similar to the UN's low variant projection, peaking around nine billion, is achievable through extension of the benefits of reproductive justice to all communities in all countries. Slower population growth will be beneficial for a multitude of reasons, foremost because population growth is a major driver of climate change and environmental degradation. Population trends are not immutable, and just ways to influence them exist.

Addressing the problems described in this report will require recognition of their urgency. The science supporting the need for comprehensive and transformative action is strong, and the emergence of new health, development and

environmental sustainability frames signal a shift towards less siloed, and more holistic approaches. The discussion of population dynamics must go beyond the study of the changes in the size and composition of populations over time, and of the drivers of these changes, and be recognized as closely linked to equity and environmental justice, having both short- and long-term impacts. Similarly, discussions of SRHR must evolve to embrace their broader implications.

Divorcing discussions of SRHR from their demographic influences hinders the significance of this sector for broader wellbeing, equity and sustainability pursuits. Improved SRHR that includes family planning will have positive environmental effects and making the link between population and SRHR represents an opportunity to strengthen the SRHR movement through better policies appealing to broader audiences, and increased funding. Harnessing such opportunities is important as a chronic shortfall of needed funds has hampered efforts to implement family planning and SRHR programs, despite their high returns in terms of health outcomes, lives saved, and cost savings.



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Population and SRHR: Strategic Recommendations

1. Acknowledge that reproductive health and rights and environmental sustainability have a mutually reinforcing relationship. A healthy environment contributes to reproductive health and rights, and reproductive health and rights, including through their influence on fertility levels, benefit environmental sustainability.
2. Provide funding streams for family planning across all relevant sustainable development sectors, including climate, the environment and health.
3. Educate policy makers and the public to ensure widespread knowledge about population dynamics, and SRHR and their importance to the environment and other aspects of human and planetary welfare.
4. Communities of interest - including those concerned with women's health, equality, rights and welfare; those focused on preservation of the environment and climate stabilization; and those addressing poverty and economic welfare - should become strong advocates of universal implementation of sexual and reproductive health (SDG Target 3.7) and reproductive justice, and achievement of the UN's low variant projection of world population peaking around nine billion in 2050.
5. Adopt needed laws and policies and provide adequate funds to implement programs that advance reproductive rights and justice, including voluntary family planning, gender equity, and education.
6. International development assistance donors should close the \$5 billion funding gap to ensure universal access to family planning in low- and middle-income countries.

References

- Ashford, L. (2004). *What was Cairo? The promise and reality of ICPD*. Washington, DC: PRB. <https://www.prb.org/resources/what-was-cairo-the-promise-and-reality-of-icpd/>
- Bajaj, N., & Stade, K. (2023). Challenging pronatalism is key to advancing reproductive rights and a sustainable population. *The Journal of Population and Sustainability*, 7(1), 39-70.
- Barroso, C. (2015). Family Planning Programs: Feminist Perspectives. In Wright, J.D. Ed. *International Encyclopedia for the Social & Behavioral Sciences* (pp. 794-798). 2nd Edit. Amsterdam, NL: Elsevier.
- Bell, J., Poushter, J., Fagan, M., & Huang, C. (2021). In response to climate change, citizens in advanced economies are willing to alter how they live and work. *Pew Research Center*, 2850.
- Bloom, D. E., Canning, D., & Malaney, P. N. (2000). Population dynamics and economic growth in Asia. *Population and development review*, 26, 257-290.
- Bongaarts, J. (2016). Development: Slow down population growth. *Nature*, 530(7591), 409-412.
- Bongaarts, J., & Hodgson, D. (2022). *Fertility transition in the developing world* (p. 144). Springer Nature.
- Bongaarts, J., & O'Neill, B. C. (2018). Global warming policy: Is population left out in the cold? *Science*, 361(6403), 650-652.
- Bongaarts, J., & Sinding, S. W. (2009). A response to critics of family planning programs. *International perspectives on sexual and reproductive health*, 35(1), 39-44.
- Boluda-Verdu, I., Senent-Valero, M., Casas-Escolano, M., Matijasevich, A., & Pastor-Valero, M. (2022). Fear for the future: Eco-anxiety and health implications, a systematic review. *Journal of Environmental Psychology*, 101904.
- Casey, G., & Galor, O. (2017). Is faster economic growth compatible with reductions in carbon emissions? The role of diminished population growth. *Environmental research letters*, 12(1), 10-1088.
- Center for Biological Diversity. (n.d.) *Population Pressure and the Climate Crisis*. www.biologicaldiversity.org
- Center for Reproductive Rights (CRR). (2003). *Rethinking Population Policies: A Reproductive Rights Framework*. New York: CRR.
- Chamie, J. (2020, Jan. 20). *Pro-Growth Demographic Dogma*. Inter Press Service. <http://www.ipsnews.net/2020/01/pro-growth-demographic-dogma/>
- Cook, R. J., Dickens, B. M., & Fathalla, M. F. (2003). *Reproductive health and human rights: integrating medicine, ethics, and law*. Clarendon Press.
- Coole, D. (2021). The toxification of population discourse. A genealogical study. *The Journal of Development Studies*, 57(9), 1454-1469. <https://doi.org/10.1080/00222038.2021.1915479>
- Crossette, B. (2005). Reproductive health and the millennium development goals: the missing link. *Studies in Family Planning*, 36(1), 71-79.
- Dasgupta, P. (2022). The economics of biodiversity: afterword. *Environmental and Resource Economics*, 83(4), 1017-1039.
- Dasgupta, P., Dasgupta, A., & Barrett, S. (2021). Population, ecological footprint and the sustainable development goals. *Environmental and Resource Economics*, 1-17. <https://doi.org/10.1007/s10640-021-00595-5>
- Davies, L. (2021, August 26). Use your £11bn climate fund to pay for family planning", UK told. *The Guardian*. <http://www.theguardian.com/global-development/2021/aug/26/use-your-11bn-climate-fund-to-pay-for-family-planning-uk-told>
- Delacroix, C. (2022). Stakeholders' Perceptions of the Linkage Between Reproductive Rights and Environmental Sustainability. *The Journal of Population and Sustainability*, 6(1), 43-74.
- Delacroix, C., & Engelman, R. (2023). Empowered, smaller families are better for the planet: How to talk about family planning and environmental sustainability. *Global Change*, 53(3), 364-382.
- Dixon-Mueller, R. (1993). *Population Policy & Women's Rights*. Westport, CT: Praeger.
- European Parliament Committee on Development. (2017). European Parliament Committee on Development (Opinion of the Committee on Development (21.11.2017) for the Committee on Women's Rights and Gender Equality on Women, Gender Equality and Climate Justice. (2017/2086(INI)). European Parliament Committee on Development. http://www.europarl.europa.eu/doceo/document/A-8-2017-0403_EN.html?redirect#title3
- Fagan, M., & Huang, C. (2019). A look at how people around the world view climate change. *Pew Research Center*.
- Feng, W, Bu, B, and Cai, Y. 2016. The End of China's One-Child Policy. *Studies in Family Planning*, 47(1): 83-86.
- Gailey, N., Goujon, A., Natale, F. & Ueffing, P. (2023). *Global Demography Expert Survey on the Drivers and Consequences of Demographic Change*, Icardi, R. editor(s), Publications Office of the European Union, Luxembourg. doi:10.2760/34608, JRC135012.
- The World Bank (n.d.). *GDP per capita (constant 2010 US\$)*. <https://genderdata.worldbank.org/indicators/ny-gdp-pcap-kd/>
- Gerten, D., Heck, V., Jägermeyr, J., Bodirsky, B. L., Fetzer, I., Jalava, M., ... & Schellnhuber, H. J. (2020). Feeding ten billion people is possible within four terrestrial planetary boundaries. *Nature Sustainability*, 3(3), 200-208.
- Gillespie, D. G. (2004). Whatever happened to family planning and, for that matter, reproductive health?. *International family planning perspectives*, 30(1), 34-38.
- Götmark, F., & Andersson, M. (2023). Achieving sustainable population: Fertility decline in many developing countries follows modern contraception, not economic growth. *Sustainable Development*, 31(3), 1606-1617.
- Günther, I., & Harttgen, K. (2016). Desired fertility and number of children born across time and space. *Demography*, 53(1), 55-83.
- Hill, P. S., Buse, K., Brolan, C. E., & Ooms, G. (2014). How can health remain central post-2015 in a sustainable development paradigm? *Globalization and Health*, 10(1), 18.
- Hodgson, D., & Watkins, S. C. (1997). Feminists and neo-Malthusians: Past and present alliances. *Population and development review*, 23(3): 469-523.
- Hogg, T. L., Stanley, S. K., O'Brien, L. V., Wilson, M. S., & Watsford, C. R. (2021). The Hogg Eco-Anxiety Scale: Development and validation of a multidimensional scale. *Global Environmental Change*, 71, 102391.
- In Our Own Voice. (n.d.). *Reproductive Justice*. <https://blackjrj.org/our-causes/reproductive-justice/>
- IPBES (2019). Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. S. Díaz, J. Settele, E. S. Brondízio E.S., H. T. Ngo, M. Guèze, J. Agard, A. Arneh, P. Balvanera, K. A. Brauman, S. H. M. Butchart, K. M. A. Chan, L. A. Garibaldi, K. Ichii, J. Liu, S. M. Subramanian, G. F. Midgley, P. Miloslavich, Z. Molnár, D. Obura, A. Pfaff, S. Polasky, A. Purvis, J. Razaque, B. Reyers, R. Roy Chowdhury, Y. J. Shin, I. J. Visseren-Hamakers, K. J. Willis, and C. N. Zayas (eds.). IPBES secretariat, Bonn, Germany.
- IRENA. (2018). *Global energy transformation: A roadmap to 2050*. International Renewable Energy Agency, Abu Dhabi, United Arab Emirates. https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2018/Apr/IRENA_Report_GET_2018.pdf
- Jain, A. K., & Ross, J. A. (2012). Fertility differences among developing countries: are they still related to family planning program efforts and social settings?. *International Perspectives on Sexual and Reproductive Health*, 15-22.
- United Nations Population Fund (2019). *Costing the Three Transformative Results*. New York, New York.
- Kaiser Family Foundation. (2021, May 14). *UNFPA Funding & Kemp-Kasten: An Explainer*. <https://www.kff.org/global-health-policy/fact-sheet/unfpa-funding-kemp-kasten-an-explainer/#footnote-510462-22>
- Kanyoro, M. (2009). *Where is the P in the ICPD?* Remarks at the NGO Forum on ICPD+15, Berlin. September 2-4, 2009. <https://www.populationmedia.org/2009/09/15/where-is-the-p-in-the-icpd/>
- Kaufman J., Pincombe M. (2023, February 17). *USAID's Family Planning and Reproductive Health Program: A Look Back and Ahead*. Center for Global Development Notes. <https://www.cgdev.org/publication/usaid-family-planning-and-reproductive-health-program-look-back-and-ahead>
- Khan, M. (2023, March 8). Opinion: Moving past colonial legacies is critical for gender equality. *Devex*. Opinion: Moving past colonial legacies is critical for gender equality. *Devex*. <https://www.devex.com/news/opinion-moving-past-colonial-legacies-is-critical-for-gender-equality-105087>
- Kopinna, H., & Washington, H. (2016). Discussing why population growth is still ignored or denied. *Chinese Journal of Population Resources and Environment*, 14(2), 133-143. <https://doi.org/10.1080/10042857.2016.1149296>
- Lutz, W. (2008). Has Korea's fertility reached the bottom? The hypothesis of a 'low fertility trap' in parts of Europe and East Asia. *Asian Population Studies*, 4(1), 1-4.
- Mackenzie, J. S., & Jeggo, M. (2019). The One Health Approach—Why Is It So Important? *Tropical Medicine and Infectious Disease*, 4(2), 88. <https://doi.org/10.3390/tropicalmed4020088>
- May, J. F. (2012). *World Population Policies: Their Origin, Evolution, and Impact*. Dordrecht, NL: Springer.
- Mogelgaard, K., & Patterson, K. P. (2018). Building Resilience through Family Planning and Adaptation Finance. *Policy Brief: Washington, DC: Population Reference Bureau*.

- Musk E. (@elonmusk). (2022, August 26). *Population collapse due to low birth rates is a much bigger risk to civilization than global warming* [Tweet]. Twitter. <https://twitter.com/elonmusk/status/1563020169160851456?lang=en>
- Nandagiri, R. (2021). What's so troubling about 'voluntary' family planning anyway? A feminist perspective. *Population studies*, 75(sup1), 221-234.
- Newman, K., S. Fisher, S. Mayhew & J. Stephenson. (2014). "Population, Sexual and Reproductive Health, Rights and Sustainable Development: Forging a Common Agenda." *Reproductive Health Matters*. 22(43): 53-64.
- Ngwena, C, and Durojaye, E, Eds. (2014). *Strengthening the protection of sexual and reproductive health and rights in the African region through human rights*. Pretoria University Law Press.
- O'Neill, B. C., Dalton, M., Fuchs, R., Jiang, L., Pachauri, S., & Zigova, K. (2010). Global demographic trends and future carbon emissions. *Proceedings of the National Academy of Sciences of the United States of America*, 107(41), 17521-17526. <https://doi.org/10.1073/pnas.1004581107>
- O'Sullivan, J. N. (2012). The burden of durable asset acquisition in growing populations. *Economic Affairs*, 32(1), 31-37.
- PAI. (2023, July 11). *Just the Math: methodology for calculating the U.S. share of the cost of addressing the unmet need for contraception in developing countries*. Policy Brief. <https://pai.org/resources/just-the-math/>
- PHE Policy and Practice Group. (2023). Recognizing and communicating relationships among population dynamics, sexual and reproductive health and rights, climate change, and the environment. Unpublished.
- Population Institute. 2023. *Population and Climate Change Vulnerability: Understanding Current Trends to Enhance Rights and Resilience*. Washington, DC: The Population Institute. <https://www.populationinstitute.org/wp-content/uploads/2023/07/Population-and-Climate-Change-Vulnerability.pdf>
- Potts, M. (2014). Getting family planning and population back on track. *Global Health, Science and Practice*, 2(2), 145-151.
- PRB. (2022). Building Resilience through Family Planning and Adaptation Finance. <https://www.prb.org/resources/building-resilience-through-family-planning-and-adaptation-finance/>
- Project Drawdown. (2022). *Climate-Poverty Connections: Opportunities for synergistic solutions at the intersection of planetary and human well-being*. Project Lift Factsheet. https://drawdown.org/sites/default/files/pdfs/Drawdown%20Lift_Climate%20Poverty%20Connections%20FactSheet_March%202022.1.pdf
- Ripple, W. J., Wolf, C., Newsome, T. M., Barnard, P., & Moomaw, W. R. (2019). World Scientists' Warning of a Climate Emergency, *BioScience*. <https://doi.org/10.1093/biosci/biz088>
- Ross, L., & Solinger, R. (2017). *Reproductive justice: An introduction*. Univ of California Press.
- Sen, G., Kismödi, E., & Knutsson, A. (2019). Moving the ICPD agenda forward: challenging the backlash. *Sexual and Reproductive Health Matters*, 27(1), 319-322. DOI: 10.1080/26410397.2019.1676534
- Shukla, P. R., Skea, J., Slade, R., Al Khourdajie, R., van Diemen, R., McCollum, D., Pathak, M., Some, S., Vyas, P., Fradera, R., Belkacemi, M., Hasija, A., Lisboa, G., Luz, S., & Malley, J. (2022). *IPCC, 2022: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_SummaryForPolicymakers.pdf
- Simon J. (1983). *The Ultimate Resource*. Princeton University Press. 1983 ISBN-10, 0691003696
- Sinding, S. W. (2009). Population, poverty and economic development. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 364(1532), 3023-3030.
- Singh, J. S. (2009). *Creating a New Consensus on Population. The Politics of Reproductive Health, Reproductive Rights and Women's Empowerment*. 2nd Edit. London, GB: Earthscan.
- Speidel, J. J., Weiss, D. C., Ethelston, S. A., & Gilbert, S. M. (2009). Population policies, programmes and the environment. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 364(1532), 3049-3065.
- Speidel, J. J., & O'Sullivan, J. N. (2023). Advancing the Welfare of People and the Planet with a Common Agenda for Reproductive Justice, Population, and the Environment. *World*, 4(2), 259-287. <https://doi.org/10.3390/world4020018>
- SRHR and CJ Coalition. (2023). *Sexual and Reproductive Health and Rights and Climate Justice Messaging Guide*. <https://srhrclimatecoalition.org/the-coalition-resources/>
- Starrs, A.M.; Ezeh, A.C.; Barker, G.; Basu, A.; Bertrand, J.T.; Blum, R.; Coll-Seck, A.M.; Grover, A.; Laski, L.; Roa, M.; et al. Accelerate Progress—Sexual and Reproductive Health and Rights for All: Report of the Guttmacher—Lancet Commission. *Lancet* 2018, 391, 2642-2692.
- Sully, E. A., Biddlecom, A., Darroch, J. E., Riley, T., Ashford, L. S., Lince-Deroche, N., ... & Murro, R. (2020). *Adding it up: investing in sexual and reproductive health 2019*.
- Taylor, B., Chapron, G., Kopnina, H., Orlikowska, E., Gray, J., & Piccolo, J. J. (2020). The need for ecocentrism in biodiversity conservation. *Conservation Biology*, 34(5), 1089-1096. <https://doi.org/10.1111/cobi.13541>
- UC DAVIS, One Health Institute. (n.d.). *What is one health?* <https://ohi.vetmed.ucdavis.edu/about/one-health>
- UNFPA. (2023). *8 Billion Lives, Infinite Possibilities*. <https://www.unfpa.org/sites/default/files/swop23/SWOP2023-ENGLISH-230329-web.pdf>
- UNDESA (United Nations Department of Economic and Social Affairs), Population Division. (2021). *Global population growth and sustainable development*. UN DESA/POP/2021/TR/NO. 2.
- UNDESA, Population Division (2022). *World Population Prospects 2022: Summary of Results*. UN DESA/POP/2022/TR/NO. 3.
- UNDESA, Population Division (2021) *World population policies 2021*. https://www.un.org/development/desa/pd/sites/www.un.org.development.desa.pd/files/undesa_pd_2021_wpp-fertility_policies.pdf
- UNDESA. (1995). Programme of Action Adopted at the International Conference on Population and Development, Cairo, 5-13 September 1994. ST/ESA/SER.A/149 https://www.un.org/development/desa/pd/sites/www.un.org.development.desa.pd/files/files/documents/2020/Jan/un_1995_programme_of_action_adopted_at_the_international_conference_on_population_and_development_cairo_5-13_sept_1994.pdf
- UNEP (United Nations Environmental Program). (2016, May 10). *UNEP report: Cost of adapting to climate change could hit \$500B per year by 2050*. <https://www.un.org/sustainabledevelopment/blog/2016/05/unep-report-cost-of-adapting-to-climate-change-could-hit-500b-per-year-by-2050/>
- United Nations. (2015). Transforming our world: The 2030 Agenda for Sustainable Development United Nations General Assembly resolution 70/1. 2015, (A/RES/70/1). <https://sustainabledevelopment.un.org/post2015/transformingourworld>
- United Nations. (1948). *Universal Declaration of Human Rights*. <https://www.un.org/sites/un2.un.org/files/2021/03/udhr.pdf>
- Wexler, A., Kates, J., & Lief, E. (2022). Donor Government Funding for Family Planning in 2021.
- Whitmee, S., Haines, A., Beyrer, C., Boltz, F., Capon, A. G., de Souza Dias, B. F., ... & Yach, D. (2015). Safeguarding human health in the Anthropocene epoch: report of The Rockefeller Foundation—Lancet Commission on planetary health. *The Lancet*, 386(10007), 1973-2028.
- Wietzke, F. B. (2020). Poverty, inequality, and fertility: the contribution of demographic change to global poverty reduction. *Population and Development Review*, 46(1), 65-99.
- Willett, W., Rockström, J., Loken, B., Springmann, M., Lang, T., Vermeulen, S., Garnett, T., Tilman, D., DeClerck, F., Wood, A., Jonell, M., Clark, M., Gordon, L. J., Fanzo, J., Hawkes, C., Zurayk, R., Rivera, J. A., Vries, W. D., Sibanda, L. M., ... Murray, C. J. L. (2019). Food in the Anthropocene: The EAT—Lancet Commission on healthy diets from sustainable food systems. *The Lancet*, 393(10170), 447-492. [https://doi.org/10.1016/S0140-6736\(18\)31788-4](https://doi.org/10.1016/S0140-6736(18)31788-4)
- Wilmouth, J., Menozzi, C., & Bassarsky, L. (2022). *Why population growth matters for sustainable development*. UNDESA. Policy Brief 130. Future of the World. https://www.un.org/development/desa/pd/sites/www.un.org.development.desa.pd/files/undesa_pd_2022_policy_brief_population_growth.pdf
- Women & Gender Constituency and SRH and Climate Justice Coalition. (n.d.) *Climate Justice and Sexual and Reproductive Health and Rights*. https://womensgenderclimate.org/wp-content/uploads/2022/01/WGC_IssueBrief_SRHR_EN_corrected.pdf
- World Bank. (2022). *Poverty and Shared Prosperity 2022: Correcting Course*. Washington, DC: World Bank. doi:10.1596/978-1-4648-1893-6. License: Creative Commons Attribution CC BY 3.0 IGO
- Wynes, S., & Nicholas, K. A. (2017). The climate mitigation gap: Education and government recommendations miss the most effective individual actions. *Environmental Research Letters*, 12(7), 074024. <https://doi.org/10.1088/1748-9326/aa7541>
- Yavinsky, R. W., Lamere, C., Patterson, K. P., & Bremner, J. (2015). *The impact of population health and environment projects: A synthesis of the evidence*. Population Council.

“*Divorcing discussions of sexual and reproductive health and rights (SRHR) from their demographic influences hinders the significance of this sector for broader wellbeing, equity and sustainability pursuits. Improved SRHR that includes family planning will have positive environmental effects and making the link between population and SRHR represents an opportunity to strengthen the SRHR movement through better policies appealing to broader audiences, and increased funding.*

Harnessing such opportunities is important, as a chronic shortfall of needed funds has hampered efforts to implement family planning and SRHR programs, despite their high returns in terms of health outcomes, lives saved, and cost savings.

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Contact: Céline Delacroix: cdela017@uottawa.ca