



ACHIEVING SDG 6: WATER AND POPULATION

“Within the next few decades, 129 countries will experience an increase in drought exposure mainly due to climate change alone – 23 primarily due to population growth and 38 mostly due to the interaction between climate change and population growth.” UN Convention to Combat Desertification, 2022ⁱ

The global human population has increased from 3.7 billion in 1970 to 8 billion today. The United Nations’ medium projection is for a population of 9.7 billion in 2050, and 10.4 billion in 2100, but in its low fertility scenario, there could be fewer than 7 billion people by 2100.ⁱⁱ

Population growth regionally and globally drives water demand across multiple sectors, in particular through the water-energy-food nexus; increases pollution, climate change and biodiversity loss; increases vulnerability to water-related hazards; and reduces capacity for adaptation and resilience in the face of those hazards.

In Low Income Countries (LICs), high population growth also sustains poverty, hinders public service provision and limits opportunities for economic development. The perfect storm of significant water stress and high population growth in LICs – and, in many cases, high vulnerability to climate threats - represents a critical threat to achievement not just of SDG 6 but to almost all of the SDGs.

Addressing population

While population is just one factor influencing demand, it is not a fixed variable, globally or regionally. Significant results from any actions slowing global population growth are not immediate but will have permanent and irreversible positive effects. In high fertility countries with low median ages for childbirth and narrow spacing between children, reduction in population pressure on resources can occur more quickly. The actions needed are positive, voluntary, in line with people’s aspirations, and consistent with global demographic trends.

High fertility and population growth is a marker for low Human Development, associated with poverty, gender inequality, low levels of education, high levels of maternal and infant mortality and morbidity, and a high unmet need for modern contraception.^{iii iv}(An estimated 270 million women of reproductive age worldwide still have an unmet need for modern contraception, 40 million more than in 1990, due to service provision failing to match population growth.^v) The key mechanisms to secure lower fertility and sustainable populations through voluntary means are, therefore, those which enhance progress towards the SDGs, and are already enshrined in their targets:

- End poverty and reduce inequality – **SDGs 1 and 10**
- Provide universal access to high quality education – **SDG 4**
- Gender equality – **SDG 5**
- Full sexual and reproductive rights and health (SRHR), including meeting the unmet need for contraception; and ending preventable child and maternal mortality – **SDGs 3 and 5**

Key facts and evidence

- 13 Least Developed Countries, which all have high population growth, are on UNCCD’s list of 23 countries experiencing drought emergencies between 2020 and 2022. Those include Afghanistan (UN-projected population growth of 80% by 2050), Niger (157% growth), Madagascar (75% growth) and Ethiopia (76%).^{vi vii}

- Over 85% of wetlands have been lost in the last 300 years, drivers including “*population growth, changes to land cover and land use, and climate change*”.^{viii}
- The IPCC identifies population growth as one of the two “*strongest drivers*”, alongside growth in GDP per capita, of emissions through fossil fuel consumption.^{ix} The combined effects of education and family planning in reducing population growth have been calculated to be among the top ten currently available policy mechanisms to achieve the 1.5° target.^x
- The burden of provision of water and the impacts of drought, climate and water-related disasters falls on women and girls.^{xi} Ensuring SRHR, including meeting the unmet need for modern contraception, increases resilience and adaptation, enables greater participation and leadership by women and reduces demand due to population pressure.^{xii}
- In 2022, the Institute for Economics and Peace concluded that the region with the highest risk of conflict arising from ecological threats is Sub-Saharan Africa where 206 million people are at risk of extreme water security and “*population growth will dramatically increase pressure on existing food and water supplies*”.^{xiii}
- Water stress is not limited to low-income, high-fertility areas. The UK’s population is set to increase by 4 million by 2045, with the fastest growth projected in the areas most water-stressed.^{xiv} Its water supply has been described as approaching “the jaws of death.”^{xv}
- According to the FAO, the total amount of food, fibre and biofuels produced by agriculture globally will need to increase by 50% relative to 2012 to meet demand. Food production in South Asia and sub-Saharan Africa (both facing high water stress) will need to more than double to meet estimated calorific requirements.^{xvi}
- The US Energy Information Authority projects expects global energy demand to increase 47% in the next 30 years, driven by population and economic growth, particularly in developing Asian countries.^{xvii}

Recommendations

- Where appropriate, water sustainability advocates and practitioners should work with local communities, agencies and service providers in the family planning, health and gender fields to identify shared goals and promote mutually beneficial outcomes.
- Advocates and practitioners should support increased investment and effort to accelerate progress towards SDGs 1, 3, 4, 5 and 10.
- National governments’ commitments under the Water Action Agenda should include, where relevant, ethical and positive policies which promote reduced population growth, especially through SDGs 3, 4 and 5.

Population Matters is a UK-based international charity which campaigns to achieve a sustainable human population, to protect the natural world and improve people’s lives. We promote positive, practical, ethical solutions and believe everyone should have the freedom, knowledge and ability to choose a smaller family and consume sustainably. We are committed to human rights, women’s empowerment and global justice.

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REFERENCES

- ⁱ United Nations Convention to End Desertification (2022) *Drought in numbers* https://www.unccd.int/sites/default/files/2022-05/Drought_in_Numbers_%28English%29.pdf
- ⁱⁱ United Nations (2022) *World Population Prospects 2022: summary of results* https://www.un.org/development/desa/pd/sites/www.un.org.development.desa.pd/files/wpp2022_summary_of_results.pdf
- ⁱⁱⁱ Population Education <https://populationeducation.org/what-factors-affect-the-total-fertility-rate-or-tfr/>;
- ^{iv} Bradshaw et al (2023) Lower infant mortality, higher household size, and more access to contraception reduce fertility in low- and middle-income nations *Plos ONE* <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0280260>
- ^v Kantarova et al (2020) Estimating progress towards meeting women's contraceptive needs in 185 countries: A Bayesian hierarchical modelling study, *PLOS Medicine* <https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1003026>
- ^{vi} United Nations Convention to End Desertification (2022) *Drought in numbers* https://www.unccd.int/sites/default/files/2022-05/Drought_in_Numbers_%28English%29.pdf; population growth figures, 2022 baseline
- ^{vii} United Nations Population Division (2022) <https://population.un.org/wpp/Graphs/> (population growth from 2022 baseline)
- ^{viii} Un Stats (2022) *SDGs Report 2022* <https://unstats.un.org/sdgs/report/2022/goal-06/>
- ^{ix} Intergovernmental Panel on Climate Change (2022) - <https://www.ipcc.ch/report/sixth-assessment-report-working-group-3/>
- ^x Project Drawdown (2022) <https://www.drawdown.org/solutions>
- ^{xi} UN Water, Water and gender <https://www.unwater.org/water-facts/water-and-gender> accessed 17 March 2023
- ^{xii} Women Deliver (2021) *The link between climate change and sexual and reproductive health and rights: an evidence review* <https://womendeliver.org/wp-content/uploads/2021/02/Climate-Change-Report.pdf>
- ^{xiii} Institute for Economics & Peace (2022) *Ecological Threat Report 2022: Analysing Ecological Threats, Resilience & Peace* <https://www.economicsandpeace.org/wp-content/uploads/2022/10/ETR-2022-Web.pdf>
- ^{xiv} Office for National Statistics (2022) *National population projections: 2020-based interim* <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/nationalpopulationprojections/2020basedinterim> ; <https://www.gov.uk/government/publications/water-stressed-areas-2021-classification>
- ^{xv} Sir James Bevan, Chief Executive of the Environment Agency Waterwise Conference, 19 March 2019 <https://www.gov.uk/government/speeches/escaping-the-jaws-of-death-ensuring-enough-water-in-2050>
- ^{xvi} Food and Agriculture Organization (2022) *The state of the world's land and water resources for food and agriculture* <https://www.fao.org/3/cb7654en/cb7654en.pdf>
- ^{xvii} US Energy Information Authority (2021) *International Energy Outlook 2021* <https://www.eia.gov/outlooks/ieo/>