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Demography’s Lessons for Addressing the Climate Emergency in The World of 8 Billion

ELIZABETH FUSSELL

In the absence of forceful societal interventions, planetary warming will accelerate. Today’s climate emergency is reminiscent of the population explosion predicted by new awareness of population doubling times in the 1960s and 70s. The world’s population doubled between 1804 and 1927 to reach 2 billion. In 1960, thirty-three years later, it reached 3 billion. In 1974, only fourteen years later, it reached 4 billion. By 1987, it was 5 billion; then in 1998, it was 6 billion; then, 7 billion in 2010, and now, 12 years later, it is 8 billion. Effective and accessible family planning has slowed population growth to less than 1% per year, so that future doubling times will lengthen. Demographers’ experiences with slowing population growth hold lessons for how they can also contribute to addressing the climate emergency.

The first lesson: data is vital. After WWII, the United Nations supported national statistical offices to produce reliable, methodologically comparable population measures. However, additional data was needed to understand women’s reproductive behavior in countries with high rates of fertility. In 1972, the World Fertility Survey began collecting population representative data in 42 low- and middle-income and 20 high-income countries about women’s family planning knowledge, attitudes, and practices in the middle- and low-income countries. The Demographic and Health Surveys continue this mission today.

To address the climate emergency, demographers are combining population data with modeled spatial data on temperature, precipitation, and climate events as spatially granular levels to identify climate effects on human fertility, mortality, migration, and other health-related outcomes. However, population data at smaller spatial scales, with a fuller range of salient measures, and across more geographies is needed to understand the full range of environment-population relationships.
The second lesson: systemic change affects human behavior. To varying degrees in any given context, universal primary education, economic development, and greater rights for women created opportunities that motivated people to delay childbearing, thus slowing population momentum.\textsuperscript{11,12,13} Health care systems that included reproductive health care gave people the opportunity to plan their families and expect that they and their children would live healthy lives.\textsuperscript{14} In short, people changed their fertility behavior because societal systems changed.

Systemic changes will also change people’s behavior in mitigating and adapting to climate changes. Mitigation efforts focus on reducing greenhouse gas emissions and transitioning to clean and renewable energy sources. In contrast, adaptation will be necessary in many societal systems. Demographers’ challenge is to develop empirically testable theories and frameworks for investigating how social, economic, political, and cultural systems mediate climate effects on fertility, mortality, and migration, and other forms of human health and well-being.\textsuperscript{15}

The third lesson: there is no global policy approach. Analyses of the aforementioned data demonstrated the potential of family planning to limit births and reduce maternal and infant mortality. In a series of World Population Conferences between 1954 and 1994, governmental delegations from United Nations member states, representatives of non-governmental organizations, and other stakeholders debated how best to slow population growth. Action plans included universal education, economic development, training and support for reproductive health care professionals and clinics, and promoting women’s rights in general but especially reproductive rights. Across the world, countries developed programs and policies that met their specific cultural, political, and health needs.\textsuperscript{16}

Since 1994 the United Nations Framework Convention on Climate Change has met regularly to set national goals limiting greenhouse gas emissions, the cause of global warming. Each nation developed action plans appropriate to their political, economic, cultural, and environmental conditions, but they still struggle to achieve their goals.\textsuperscript{17} By bringing data and theory together in a lively global debate, demographers produced knowledge and informed policies that slowed population growth and improved human lives. Demographers have an opportunity to make a similar contribution in the climate emergency, in particular informing how demographic trends and population dynamics are relevant for upscaling climate change mitigation, adaptation, and vulnerability reduction.

References


