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Climate change and sexual and reproductive health

Population Council

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PERCC
Population, Environmental Risks, and the Climate Crisis

Climate Change and Sexual and Reproductive Health

We pursue justice in the face of climate and environmental change.

PERCC Insights Brief, #3

The most obvious, immediate impacts of climate change are the big natural disasters. But the slow-onset processes, like prolonged drought, sea level rise, and increasing temperatures, can be just as damaging—or worse. The slow-onset processes contribute to poor health outcomes and increase the pressure on healthcare systems already pushed to the brink by COVID-19. Many clinics in under-resourced settings, for example, lack appropriate cooling systems.

Sexual and reproductive health services are among the first to be interrupted. Sexual health risks increase as well, exacerbating the need for better services. Pregnancy also creates a biological vulnerability to climate change. Additionally, economic effects of climate change make girls more vulnerable to early and forced marriage. As climate change exacerbates existing inequalities and injustices, our research points to areas of investment in solutions to promote sexual and reproductive health and rights.

Our Population, Environmental Risks, and the Climate Crisis (PERCC) Initiative tracks direct and indirect links between climate hazards to sexual and reproductive health outcomes, with a focus on extreme heat and salinity. In this brief, we highlight evidence and solutions on sexual and reproductive health and rights (SRHR) in disaster settings; SRHR linkages with arsenic and highly saline drinking water, fertility and drought; and demographic shifts following disasters.

Climate and SRHR Intersections

Population Council conducted a broad review of disaster research[1] —from tropical cyclones to earthquakes, even the Ebola epidemic—and examined how the response affected SRHR in Bangladesh, Democratic Republic of Congo, Guinea, Haiti, Indonesia, Liberia, and Sierra Leone. While only some of these events—like the earthquakes—damaged or destroyed infrastructure, all of them interrupted healthcare services and sexual and reproductive healthcare in particular. Another review of research[2] on SRHR in urban settings found that studies largely neglect how features of the urban environment influence SRHR outcomes, pointing to another area of evidence gaps in SRHR research.

Sexual and reproductive healthcare service disruption disproportionately impacted women. The review showed that following disasters, there was a lack of access to family planning services and a subsequent increase in unwanted pregnancies, shorter inter-pregnancy intervals, and an increase in low birthweight babies. The contraceptive services affected most were those that require the assistance of healthcare workers, such as implants, injectables, and intrauterine devices. The use of condoms and contraceptive pills was not as severely affected in most studies.

Additional research shows the stresses that climate change events can place on women in low- and middle-income countries, reinforcing the case for providing sexual and reproductive healthcare services in disaster recovery. In Zambia,[3] a qualitative study found that extended drought in rural regions increased food insecurity and economic instability. Women-led households were particularly vulnerable, as droughts increased the stress of both earning income and caregiving. This increased stress led to intensified threats to women that included early marriage and transactional sex. As educational expenses could not be met, younger children would enter the workforce and young girls were married amid the financial hardships.

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Women who were interviewed discussed preferences for smaller families and family planning needs, as continued drought threatened their ability to provide for larger families. Recommendations include policy interventions for households in drought-affected regions that need sexual and reproductive healthcare services, such as providing long-term contraceptive methods.

Heatwaves and drought are not the only climate change impacts. For example, in Bangladesh[4] our research has uncovered impacts of increasing groundwater salinity, another way in which climate change and rising sea levels affect everyday life.

In communities that rely on groundwater with higher salt content, we found increased levels of high blood pressure and hypertensive disorders. In pregnancy, hypertensive disorders can cause significant problems, even maternal mortality—a key issue as progress on maternal mortality stalls globally.

Our research found that in the dry season, when communities rely more heavily on groundwater, the proportion of pregnancies reported with pre-eclampsia or eclampsia was 2.50 (SD = 2.96); in the rainy season the proportion dropped 20 percent, to 2.06 (SD = 2.50).

Complicating matters, rainwater collection—the alternative to groundwater—leads to health issues like mosquito-borne diseases and bacterial contamination. In response, community healthcare workers can be equipped and trained to measure drinking water salinity and managed aquifer recharge programs can help lessen salinity.

In India,[5] similarly, we found that arsenic-contaminated groundwater also contributes to maternal health, infertility, and pregnancy problems. For each percentage point increase in predicted arsenic levels exceeding the base threshold, the rates of stillbirth increased 4.5 percent, recurrent pregnancy loss increased 4.2 percent, and infertility rates increased 4.4 percent. Much of the contamination is traced to industrial waste, a byproduct of the same sectors whose emissions contribute to climate change. As in Bangladesh, communities in India must rely on groundwater, as rainwater collection is unreliable and brings its own health problems.

In both Bangladesh and India, these health problems underscore the need for stronger provision of health services and inclusion of gender and maternal, sexual, and reproductive health in National Adaptation Plans and National Health Adaptation Plans—especially in regions that rely on groundwater. These places are on the front lines of climate change. When adaptation programming reaches these communities, sexual and reproductive healthcare services should be an essential component of what is offered.

In Pakistan,[6] we conducted a case study on the aftermath of massive flooding in 2010, which left one-fifth of the country under water. The flooding accelerated several demographic shifts, including migration from rural areas to cities. Melting glaciers and some of the country's heaviest rains ever recorded exacerbated the flood.

Researchers found that in the provision of disaster relief, sexual and reproductive healthcare services were included in the medical services available to affected communities. As a result, at least 40 percent more pregnant women sought care and, in four out of the five regions studied, contraceptive use by women increased more than 50 percent. The population's embrace of contraceptive choices—and their benefits—extended well past the recovery period, reinforcing the argument for including sexual and reproductive healthcare services as a basic part of disaster relief and centering the needs of women and girls in adaptation programs.

Policy Recommendations

As climate change worsens in the next several decades, the Population Council's PERCC The initiative is working alongside governments and health service delivery organizations to develop evidence-led policies that ensure essential sexual and reproductive health services remain accessible to affected populations, while also addressing the vital linkages between climate change and SRHR. Women in these communities are at higher risk of health problems and, as seen in Pakistan, it is their right to enjoy long-term benefits from sexual and reproductive healthcare services.

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