PROJECT DRAWDOWN Policy Brief

GIRLS' EDUCATION AND FAMILY PLANNING:
ESSENTIAL COMPONENTS OF CLIMATE ADAPTATION AND RESILIENCE

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Climate adaptation is essential for all people and is especially urgent for women and girls in low- and middle-income countries (LMICs). Of many viable climate adaptation strategies, two well-proven, directly beneficial climate adaptation strategies are girls' education and family planning.[i] Use of modern contraceptive methods and educational attainment—particularly at the secondary level—both affect women's fertility and health.[1] Girls' education and family planning address underlying drivers of gender inequality exacerbated by climate change and are critical for climate adaptation and boosting resilience.[ii, 2, 3, 4, 5, 6, 7] Low levels of girls' education mean women continue to face economic marginalization and social inequality, putting them at heightened risk of gender-based violence, labor exploitation, and suffering under conditions of climate-related shocks and extreme weather events. Higher levels of bodily autonomy and reproductive choice through family planning usage mean women have more control over their own lives, making space for personal decisions aligned with their specific needs.

This brief highlights the evidence around incorporating girls' education and family planning in climate adaptation and resilience. Decisionmakers must recognize these pillars of development as effective long-term climate adaptation strategies in National Adaptation Plans (NAPs), and key components of climate policies and forums through UNFCCC processes, such as the Gender Action Plan. Including and funding girls' education and family planning in country-level holistic climate adaptation approaches will boost the ability of vulnerable populations to adapt to climate change.

i We recognize that comprehensive reproductive health for all—adolescents and adults—is essential and a human right. In this brief we focus on one important component of reproductive health, modern voluntary family planning [contraception] for women and girls.

ii Resilience is used here as the ability of an individual, household, community, and system to cope with, recover from, and expand their capacity to adapt to shocks and stressors, which can be environmental or human-driven.

Girls' education and family planning: complementary strategies that address women and girls' distinct vulnerabilities

Compared with men, women and girls in LMICs experience higher social, economic, and health impacts of climate change.[5, 8, 9, 10] Women's mortality rates are higher during climate-related hazards, and climate events exacerbate existing gender disparities around reproductive health and rights, education, early marriage, gender-based violence, and socioeconomic status.[2, 11, 12, 13] Climate-exacerbated natural disasters could push an additional 100 million people into poverty by 2030;[14] 200 million adolescent girls from LMICs face heightened risks to climate impacts.[7] These realities increase the risk of early marriage as households try to manage financial burdens with limited resources.[15] These circumstances can lead to early pregnancy and girls terminating school-based education, leading to a vicious cycle of intergenerational poverty and vulnerability.[16]

Access to contraception can reduce these risks and lead to higher educational attainment for girls and women as they are able to delay and plan pregnancy, which is recognized as vital to building climate adaptation capacity at the household and community level.[2] Contraception enables adolescents to remain in school and education enables sustained lifelong benefits—research has shown that mothers' schooling (versus that of fathers) has a deeper positive impact on children.[1, 17, 18, 19] Secondary education is associated with reduced adolescent fertility in low-income countries, with concomitant reductions in mortality and HIV prevalence.[20]

Nineteen out of the top 20 countries with the highest total fertility rate are in sub-Saharan Africa, a region highly vulnerable to climate change.[21, 22, 23] Several of the same countries also have very low female literacy rates[24] and low demand satisfied[iii, 25] (*See figure 1 below*). Girls' education and women-centered, rights-based access to family planning could play an important role in climate adaptation and boosting resilience across the region.

Investing in girls' education and family planning generates myriad immediate and sustained benefits for girls, women, their families, and communities, and makes a significant contribution to achieving nearly all the UN Sustainable Development Goals (SDGs).[4, 20, 26, 27, 28, 29, 30] Incorporating girls' education and family planning in an interconnected system of complementary climate solutions[iv] can foster a strong foundation of climate adaptation and resilience.[31, 32]

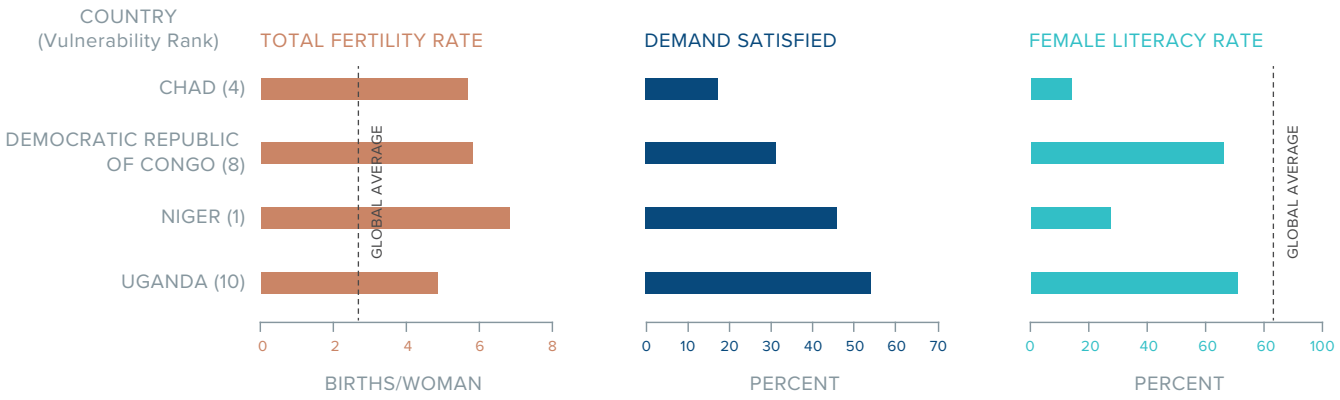

Figure 1 – Fertility, demand satisfied, and female literacy rate for select countries in sub-Saharan Africa. The vulnerability rank of each country is included in parentheses (1 being the most vulnerable).

Source: total fertility rate, World Bank, 2019; demand satisfied, Population Reference Bureau, 2021; female literacy rate, World Bank (Niger and Uganda, 2018; Chad and Democratic Republic of Congo, 2016).

iii Demand satisfied is the percentage of women of reproductive age (15–49 years) who desire to have either no (additional) children or to postpone the next child—and are currently using a modern method of contraception. The indicator is also referred to as the demand for family planning satisfied with modern methods.

iv Project Drawdown has identified 80+ solutions to climate change, most of which focus on Reducing Sources (bringing emissions to zero) and Supporting Sinks (uplifting nature's carbon cycle). One solution, Health and Education, focuses on fostering health and education equity for all. Every solution demands urgent action to address the climate crisis.

Girls' education contributes to climate adaptation and boosts women's resilience

Education, particularly for girls, provides benefits that reverberate throughout one's lifespan. While the relationship between education and fertility outcomes is complex,[33] the relation between length of mothers' schooling and child survival is linear, with no threshold.[17, 20, 26] The longer girls stay in school, on average, the longer they delay transitions to adulthood, including childbearing.[2] Multiple factors—like quality, empowerment, and decision-making autonomy—influence the relationship between an education intervention and fertility decisions made at the individual level.

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Three-quarters of children who never enter primary school are girls, and in at least 20 countries, very few poor, rural adolescent girls finish secondary school.[16] Gendered responsibilities—which often increase during climate shocks and stressors—including household chores (e.g., fetching water and fuel, cooking, and sibling care) impact girls' ability to remain in school; the increasing frequency of such events elevates the fact that keeping girls in school is both a short- and long-term adaptation strategy.[7] In rural Zimbabwe, a climate-induced drought in 2016 led to gaps in schooling, with exacerbated impacts on girls who were expected to assist with household needs.[34]

BOX 1

GIRLS' EDUCATION AND INCREASING WOMEN'S FARMING PARTICIPATION IMPROVES AGRICULTURAL PRODUCTIVITY

Paired with girls' education, increasing women farmers' participation in capacity-building programs (and access to finance and resources) can improve agriculture productivity while enhancing resilience in the face of climate change.[35] Women farmers make up around 40% of agricultural labor in LMICs.[36, 37] However, due to unequal access to resources, technical knowledge, opportunities to explore new techniques, and agency in household decisions, women's agriculture yield is consistently lower than men's.[38, 39, 40] An analysis in five sub-Saharan African countries reveals that closing the gender gap around access to education and land tenure could increase crop production by 19%, boost gross domestic product, and lift thousands out of poverty,[41] thereby empowering communities and countries to better manage climate-related natural hazards. As climate shocks grow more frequent and intense, women's strong Indigenous knowledge base needs to be augmented with more modern information.[42]

- In Ghana, where men were found to be more responsive to using a climate information system (CIS), increased access to information and communication technology education for women could increase the uptake of CIS by women.[43]
- In Ethiopia, for each year of additional education, the probability of adopting more than two sustainable agriculture practices increased by 12 percent.[44]
- In Niger, better educated and empowered households are more likely to implement soil and water-retention techniques that lead to improved agricultural yields.[45]

Moreover, climate-smart agriculture and other regenerative agricultural practices are improving the productivity of women-led farms and building the adaptive capacities of women farmers.[46, 47] This evidence makes a compelling case for greater financial support towards girls' education for creating more resilient farming systems.

Climate-informed education is one way to learn green life and low-carbon economy job skills—an avenue to addressing social inequities, gender imbalances, and climate change at once.[48, 49] Educated women are better equipped to protect themselves and their families from environmental shocks and stressors like floods and droughts, and participate in decision-making at local, national, and global levels.[5, 7, 30, 50] Better educated families and communities show reduced vulnerability, taking disaster preparedness steps like stockpiling emergency supplies; after a disaster, they tend to be better equipped to cope and bounce back from physiological and economic impacts of natural hazards.[2]

Lack of education diminishes women and girls' resilience to climate change hazards, and increases mortality risks.[8, 51, 52] In semi-arid parts of India, women's heightened vulnerability is primarily due to less access to education and information, compounded by insecure land rights, poverty, and gender inequality.[53] In Nepal, communities with higher proportions of women with education suffered lower mortality from floods and landslides.[50] Analysis of 125 countries shows that education (particularly female education) is the single most important socioeconomic factor associated with a reduction in vulnerability to natural disasters.[51]

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Family planning supports climate adaptation and contributes to resilient households

Rights-based reproductive health, including modern voluntary family planning for adolescents and women, generates co-benefits for maternal and child health, nutrition, economic development, climate adaptation, gender equality, resilience, and planetary health.[3, 28, 54, 55, 56] The ability to plan and space births yields numerous benefits for mothers and children, notably decreased morbidity and mortality.[28, 57, 58] The improved health that results from the ability to plan and space births, along with access to quality health care, contributes to long-term adaptive capacity by better equipping people to withstand and survive environmental shocks and stressors.[59, 60, 61]

Compared with those born after an interval of four years, children born after a two-year interval (or less) are 23% more likely to be underweight and 27% more likely to be stunted, which affects educational capacity and lifelong productivity;[57] healthy children grow to be healthy adults who are more capable of dealing with climate change.

With better health and the ability to avoid unplanned pregnancies and lower their childcare burden, women have more time and energy for other opportunities—taking part in the labor force or building businesses—as well as learning about and implementing ways to reduce their risks from environmental and climate-driven shocks and stressors.[3, 55, 62, 63] Women who use or have better access to modern voluntary family planning are also more likely to participate in household decision-making, particularly around nutrition and food security.[4, 64] Improved reproductive health due to contraceptive uptake and girls' educational attainment, particularly at the secondary level, are closely linked.[1, 19] An educated woman is better able to translate her fertility preferences

into practice with the use of contraception.[1] Similarly, a healthy woman who can plan and attain her desired family size can better take care of her children and ensure they get the proper nutrition they need.[65] At a national level, meeting demand for family planning with voluntary, rights-based programming means women are able to realize their desired family size, better enabling governments to keep pace with social sector needs—like the vital building and staffing of health clinics and schools as well as staffing extension agents for agriculture, fisheries, and forests to meet the needs of rural populations.

Several examples show how family planning boosts resilience. In Madagascar, community resilience after a cyclone demonstrates that holistic community-based reproductive health, livelihoods, and natural resource management programs can strengthen communities' abilities to respond to natural disasters.[66] Family planning and use of maternal and child health facilities is positively associated with enhancing household and community-level resilience in Tanzania.[55] In Bangladesh, women with access to contraception have fewer children and higher household incomes than those without;[67] ensuing decreased vulnerability allows them to rebound more quickly from climate impacts.[62]

Recognize, include, and fund girls' education and family planning in climate adaptation national strategies and UNFCCC processes

Despite the foundational role girls' education and family planning play in society and for long-term climate adaptation, attention to these sectors in national climate plans is negligible. Analysis of new, revised, or updated Nationally Determined Contributions (NDCs) from 95 countries found that only 15 mention girls in the context of education, and none reference the contribution that investment in girls' education could play toward meeting a country's adaptation goals.[68] Only six Paris Agreement signatory countries out of 50 in Africa, the Middle East, Asia Pacific, and the Caribbean mention reproductive health as a climate adaptation strategy in their NDCs.[69] Likewise, existing multisectoral climate programs and country-level projects have not typically included education or reproductive health initiatives to improve adaptation and resilience despite compelling evidence for both.[3, 6, 7, 52, 63, 70] Girls' education and family planning align well with NAPs' focus on medium and long-term priorities for adapting to climate change in ways that make people, ecosystems, and economies more resilient.

Family planning is a sound investment: A recent Copenhagen Consensus analysis showed that family planning has a significant impact on averting maternal deaths, providing $26.80 US in health benefits for every $1 US dollar spent. Saving mothers' lives yields intergenerational economic, educational, and health benefits, which boosts resilience.[71] In 53 LMICs in Africa, 58 million women do not want to become pregnant but are not using contraception; meeting all reproductive health needs would only cost $22.50 per capita annually.[58] Enhancing climate adaptation and resilience is costly, so it is wise to invest in human rights–focused adaptation strategies that also yield a high return on investment and contribute to long-term resilience. Unfortunately,

Photo by Paula Bronstein/Getty Images/ Images of Empowerment

The ability to plan and space births yields numerous benefits for mothers and children.

family planning is often considered a private women's issue and therefore receives less policy attention than other development sectors; family planning currently receives less than 1% of international aid.[72]

Education also needs additional funding; in 2019, before the pandemic, education was 67% underfunded at the global level.[73] Globally, countries aim to contribute 20% (or 4-6% of GDP) of domestic expenditure on financing their own public education systems, but historically this has been challenging for many LMICs. As a result, numerous countries depend on multilateral and bilateral funding to help support education financing through multilaterals like the Global Partnership for Education.

Some of the $100B US[74] annual commitments—which, shamefully, remain unfulfilled—from high-income countries to LMICs for climate adaptation could go toward long-term climate adaptation strategies such as girls' education and family planning, if they are included in NAPs. Other adaptation interventions such as increasing food security; improving water, sanitation, and hygiene (WASH); boosting livelihoods; and enhancing infrastructure contribute to girls' education and to climate adaptation as well.

The NAP process gives countries an opportunity to apply bilateral and multilateral adaptation funds to multisectoral climate adaptation projects, bringing about transformative long-term change through investment in girls' education, reproductive health, and more. Others have recently begun to include family planning and girls' education in their work; the UN Environment Programme's 2021 report *Making peace with nature*[75] highlights the value of investing in community-based family planning, improved women's access to financing and education, and girls' education as part of holistic conservation programs. The International Union for Conservation of Nature (IUCN) has also recently made the case for removing barriers to rights-based family planning,[76] and health organizations are increasingly recognizing that education is closely linked to health.

Women and girls around the world are demanding that their rights to education and contraceptive choice be met. Investing in such initiatives as part of long-term climate adaptation strategies will not only fulfill those rights, but also ensure that girls, women, communities, and countries are well-positioned to overcome climate shocks and stressors.

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RECOMMENDED ACTIONS

RECOGNIZE THAT GIRLS' EDUCATION AND FAMILY PLANNING ARE EFFECTIVE LONG-TERM CLIMATE ADAPTATION STRATEGIES IN NAPS AND NDCS.

Countries need to balance short- and medium-term solutions, such as providing food during climate-induced droughts, with long-term solutions, such as boosting girls' education and family planning. Ensuring that NAPs are gender-responsive means not only including women in the NAP process but also making sure NAPs include strategies such as girls' education and family planning as part of broader reproductive health and gender equality goals.[77] Incorporating these sectors also ensures NAPs are multisectoral and include vulnerable populations. Furthermore, NDCs that include voluntary actions on adaptation could also highlight girls' education and family planning.

HIGHLIGHT GIRLS' EDUCATION AND FAMILY PLANNING IN CLIMATE POLICIES AND FORUMS.

Due in part to systemic exclusion from decision-making, women and girls are particularly vulnerable to climate change, especially in the worst affected regions in sub-Saharan Africa. A comprehensive gender-responsive action plan that removes barriers to girls' education and family planning would not only lead to greater resilience for the most vulnerable members of society, but also lead to more equitable and just societies and contribute to fulfillment of the SDGs. Education systems, schools, and teaching should be climate resilient. The Lima Work Programme on gender and its accompanying Gender Action Plan should be expanded beyond a focus on women's inclusion and leadership to include detailed strategies to boost girls' education and remove barriers to family planning. Commitments in July 2021 to gender equality, sexual and reproductive health and rights, and climate justice during the Generation Equality Forum are a helpful guide, as is the recent call to boost the Doha Work Programme on Action for Climate Empowerment to recognize the vital role gender-transformative education can play in driving climate justice.[78, 79]

INCLUDE GIRLS' EDUCATION AND FAMILY PLANNING IN CLIMATE ADAPTATION FINANCE.

When countries include girls' education and family planning as part of multisectoral adaptation projects, donors should support those requests. In addition, the Development Assistance Committee of the Organisation for Economic Co-operation and Development could add gender equality markers for climate finance to track whether climate adaptation funds are going to girls' education and family planning. Ensuring all people, particularly those most vulnerable to climate change and its impacts, have full rights and access to education and modern voluntary contraception contributes to long-term climate adaptation. It also offers enormous co-benefits for adaptation strategies related to food security, WASH, livelihoods, and infrastructure.

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