

PROTECTING WOMEN'S AND CHILDREN'S HEALTH FROM A CHANGING CLIMATE

Climate change increases challenges to women's and children's health. There is more likelihood of women and children suffering and dying from problems such as diarrhoea, undernutrition, malaria, and from the harmful effects of extreme weather events, including floods or drought. While women and children in developing countries have made comparatively small contributions to historical carbon emissions, they bear the brunt of the health effects of climate change, both now and in the future. Efforts to prevent, mitigate and address the effects of climate change should include integrated action across sectors to address these health inequities now and for future generations.



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The challenge

The International Panel on Climate Change (IPCC) Fifth Assessment Report notes that up to 2050, the main impact of climate change on health will be an increase in illness and deaths related to the environment.¹ This means people who are already vulnerable to diarrhoea, malaria and undernutrition will be at increased risk from the harmful effects of climate change on water, food and transmission of diseases by insects. There is also an increased risk of illness and death from many types of extreme weather events, emergencies and disasters. Those who are most at risk include marginalized populations due to geography, age, gender,

ethnicity, displacement, disability and socioeconomic status.^{1,2} Among these groups, pregnant and lactating women and children will be particularly vulnerable.³ For women whose livelihoods depend on the environment, including those in rural and tribal populations, climate change will intensify loss of land and unemployment. As many as three million neonatal deaths and stillbirths are attributable to poor maternal health, particularly from poor nutrition and infectious diseases.³ The World Health Organization (WHO) estimates 99% of deaths related to climate change occur in low- and middle-income countries and of these deaths, 80% occur among children.⁴

What we know



Reduced access to a safe and secure water supply and sanitation

The United Nations Children's Fund (UNICEF) estimates that over 1 800 children die everyday from illnesses linked to contaminated water, lack of sanitation, or inadequate hygiene.⁵ Similarly, maternal mortality is significantly higher with poor hygiene practices during and after birth.³ In low income countries throughout Africa, Asia and South America, over 50% of all urban residents already suffer from diseases associated with poor water quality and sanitation facilities.⁶ In times of water scarcity, women often have to collect and carry water from long distances; this increases their vulnerability to water-related disease from contaminated ponds and streams. This also causes exhaustion and damage to bones from long journeys and carrying heavy pots of water.²

Climate change will increase morbidity and mortality related to poor water quality and access. More seasonable variability in rainfall and temperatures increases breeding opportunities for insects, bacteria and other germs. More frequent droughts lead to water shortages, particularly for human use, thereby reducing opportunity for appropriate hygiene practices. Where flooding has become more frequent, sanitation systems are often overwhelmed. This increases the chance of drinking contaminated water and incidence of water-related illnesses such as cholera, typhoid and diarrhoea.⁷



Increased food insecurity and undernutrition

Climate change impacts on the key determinants of maternal and child undernutrition, namely: household food access, maternal and child feeding practices, and access to health services.⁸ Reduced access to quality food and related undernutrition leads to micronutrient deficiencies. This is a significant problem for women during pregnancy and when breastfeeding due to increased nutritional needs. Twice as many women suffer from malnutrition as men, and girls are twice as likely to die from malnutrition as boys.⁹ The Food and Agriculture Organization of the United Nations (FAO) estimates that as many as three million children under five die every year from undernutrition.⁹ The International Food Policy Research Institute (IFPRI) projects that as a result of climate change, 25 million more children will be malnourished in 2050.¹⁰ Malnourishment has devastating impacts on cognitive development and learning opportunities. Every day, 66 million primary school children attend class hungry. This could get worse over the coming decades as food crops are expected to decline as a consequence of climate change.¹¹

The rise in global temperatures, changes in rainfall patterns and increased frequency of extreme events can increase or decrease crop productivity. For populations already suffering from hunger and food insecurity, the projected decline in crop productivity can reduce essential food crops and lead to higher prices.¹² This leads to greater food insecurity, undernutrition and ill health.¹ Food safety may also decline due to an increase in existing infections, such as those transmitted by domestic animals, or the emergence of new ones.¹³



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Increase in infectious diseases

Women and children are more vulnerable to disease if they are poor and have less access to health clinics and affordable health care. Malaria and dengue are among the infectious diseases of greatest concern for public health.¹⁴ Children, pregnant women and people living with HIV/AIDS are at considerably higher risk of contracting malaria and becoming severely ill.¹⁵ In 2012, there were an estimated 627 000 malaria deaths globally, of which 77% were children under the age of five.¹⁶ Malaria in pregnancy can lead to anaemia, spontaneous abortion, stillbirth, prematurity and low birth weight.¹⁶ Dengue, like malaria, is transmitted by mosquitos. It is the fastest growing of such infectious diseases, particularly in urban tropical areas. There has been a 30-fold increase in dengue over the last 50 years. This is due in part to higher temperatures, longer summers, and changing rain patterns.¹⁷ This allows mosquitos carrying and transmitting dengue to live longer and travel further, increasing the risk of infection. Dengue fever has become a leading cause of hospitalization and death among children in Latin America and Asia.¹⁸

Fluctuations in global temperatures and rainfall patterns reduce the transmission of some disease-causing organisms, and create new opportunities for others. Changes in rainfall can affect their transport and dispersal; fluctuations in temperatures affect their reproduction, growth and survival.



Increased vulnerability from warmer and more extreme weather

Extreme weather events such as floods, landslides, hurricanes and heat waves can cause health emergencies and disasters. They also increase the likelihood children will die from drowning, exposure to disease and trauma, become separated from their families and interrupt their education.^{19, 20} Extreme weather events can also discourage new mothers from breastfeeding their babies and lead to poor maternal and infant nutrition.³ In low income countries, more women die in extreme weather events than men: 90% of those killed in the 1991 cyclone in Bangladesh and 80% in the 2004 Indian Ocean tsunami were women and girls.²¹ Women who are socially and economically marginalized are less likely to know how to swim, or have access to warning systems and rescue mechanisms.²¹ For survivors, indirect health effects include vulnerability to sexual violence, exploitation, disruptions in health services, anxiety and mood disorders.² This increases the likelihood of dropping out of school, entering into early and forced marriage and unintended pregnancy, as well as increased exposure to civil conflict,²² and reduced mental health.²³ Women and children will bear the burden of increased violence, whether civil or interpersonal, thus increasing their likelihood of mental illness.

What works

Engaging with the health sector to strengthen services and reduce emissions

Better and sustained funding of women's and children's health is essential to protecting them from the negative effects of climate change. This includes building health systems that are capable of dealing with gradual and sudden changes and maintaining quality of care during disaster and emergency conditions.³ The health sector can also play a key role in reducing emissions. Improving access to reproductive health services and technologies will help to reduce population pressures. Improving environmental conditions and responding to health challenges related to climate change will not be possible in a context of continuing rapid population growth.²⁴ Focusing on green energy sources will reduce energy gaps faced by the health sector. This includes expanding the use of solar power for rural health facilities. Clinics with access to safe, clean and reliable electricity can contribute directly to safer childbirth, reduced maternal mortality and infection.

Addressing environmental determinants of health across the RMNCH continuum of care

The integration of reproductive, maternal, newborn and child health (RMNCH) and nutrition services are essential to promoting health and reducing hunger and undernutrition among women and children. Across the continuum of care for women's and children's health, direct nutrition interventions are needed that ensure food security, provide nutritional education, and promote good nutrition and feeding practices. Investment in drought and water resistant crops and water-conserving systems can increase the availability and diversity of food. Subsistence agricultural production for households, agriculture extension, and microfinance targeted at women producers can enhance both production and nutrition. In rain-fed agricultural areas, teaching women water harvesting and purification techniques can also help reduce risks. Agricultural systems that rely on locally supplied and produced energy also improve nutrition and economic security. Similarly, investing in water and sanitation, better waste management, secure sources of clean fuel, all help to reduce vulnerability of women, particularly in urban settings and during disaster and emergency situations.²⁵

References

Gender mainstreaming in climate change policy and implementation

Gender needs and perspectives should be taken into account when developing climate change policies. This includes conducting gender analysis and the use of health vulnerability and adaptation assessments to identify health needs and adaptation capacities, particularly for women and children.²⁵ Following natural disasters, women are key to protecting, managing and recovering household resources, and can be powerful contributors to development and change. Women must be able to participate in climate change mitigation and adaptation strategies at the national and local level.

Environmental policies that produce co-benefits for health

Climate change threatens environmental stability and predictability. A more sustainable use of resources both protects the environment and improves health. There are a number of ways this can be achieved. Improved management of water resources and safe disposal of waste can be done through more sustainable use of water resources, such as rainwater harvesting and investing in better sanitation and recycling facilities. Nutrition can be improved through the adoption of better agricultural practices that reduce the impact on soil and deforestation, and improve irrigation methods to protect water resources. The production of wild and cultivated foods also improves nutrition and biodiversity. Planting trees can improve degraded lands and help to reduce land-slides and soil degradation. This can increase land productivity, food production and in turn, food security.¹⁴

Conclusion

Climate change will have a substantial impact on the health and survival of future generations.³ Policies that act now to improve health can also reduce climate change. Such co-benefits can be achieved when coordinated action is taken across the health, transport, energy, education and agriculture sectors. Policies that address broader health and climate protection can also work to reduce the significant economic losses from damages to health²⁷ and the environment. The upcoming UN Climate Change Summit and on-going Post-2015 development discussions provide a unique opportunity to prioritize policies in response to climate change that protect vulnerable populations, particularly women and children, both now and in the future.

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