## Safeguarding Maternal, Newborn, and Child Health in a Warming World

99% of maternal deaths and 98% of child deaths take place in low- and middle-income countries (LMICs), where 3.3-3.6 billion people live in areas vulnerable to climate change. Prolonged droughts, frequent floods, recurrent heatwaves, and other extreme weather events pose numerous risks to maternal, newborn, and child health (MNCH).



## How does climate change affect maternal, newborn and child health?



of heat-related <u>neonatal deaths</u> in 29 LMICs between 2001 and 2019 were caused by climate change, while the risk of <u>preeclampsia</u> or <u>eclampsia</u> among expectant mothers increases by more than 50% when they are exposed to extreme heat during the first half of pregnancy.

# 160/0 of low birth weight in newborns globally is linked to expectant mothers' exposure to fine particulate matter; exposure to excess particulate matter in the second trimester is also associated with a 25% higher risk of post-partum depression.

#### INCLEMENT WEATHER

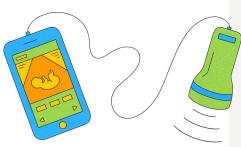
8% increase in risk of pregnancy loss is associated with exposure to catastrophic floods while, in some LMICs, tropical cyclones led to an 11% increase in infant mortality.



#### **FOOD INSECURITY**

Almost 50% of all deaths among children under five years of age are linked to undernutrition, while maternal undernutrition can lead to premature birth or stillbirth. Both are often linked to climaterelated crop failure.

What are some promising interventions to scale up?



**Self-care and point-of-care tools** enable pregnant women, midwives, and community health workers to detect pregnancy complications. A study in Norway found that mobile ultrasound technology could reduce fetal deaths by up to 30%. Mobile ultrasounds are especially important in rural and low-resource settings by increasing access to life-saving technology.



Multiple micronutrient supplementation (MMS) can help pregnant women meet nutritional needs as climate change worsens food insecurity. Scaling up MMS to 90% coverage is projected to add five million additional school years and USD 18 billion in cumulative lifetime income for all babies born annually across 132 LMICs.

Heat-stable treatments, such as carbetocin to treat post-partum hemorrhage, remain effective without refrigeration, making them easy to transport to remote areas and store in warm temperatures.

Green spaces are associated with healthier birth outcomes, including higher birth weight and fewer small-forgestational-age babies reported across Europe.



# How can key stakeholders protect maternal, newborn, and child health from climate change?

The impacts of climate change are wide-ranging and require a range of interventions in key areas such as:

#### **FINANCING**

Governments need to prioritize climaterelated threats to maternal, newborn, and child health within climate adaptation and health resilience plans and budgets. Multilateral institutions can leverage blended finance and cross-sector partnerships to mobilize funding, while the private sector scales up investments in climate-resilient health technologies and infrastructure.

#### **POLICY AND GOVERNANCE**

Governments can create supportive policies that integrate MNCH into national climate frameworks. Civil society can advocate for aligning global and national health and climate policies.

#### **HEALTH INFRASTRUCTURE**

Reducing emissions is a shared responsibility. Health systems need to shift to renewable energy (e.g., solar electrification), adopt sustainable practices, and raise awareness among health care workers on heat exposure and early warning signs of pregnancy and birth complications.

## DATA, EVIDENCE, AND COMMUNITY ENGAGEMENT

■ Governments, multilateral institutions, academia, and the private sector need to build robust national datasets, develop tools such as <u>AI-enabled</u> early warning systems, and share knowledge. Civil society can support awareness-raising and empower communities to respond to climate-related health risks.

#### **CROSS-SECTOR PARTNERSHIPS**

Collaboration across governments, the private sector, multilaterals, academia, and civil society can align investments, share expertise, and accelerate innovations protecting women and children.