



Photo by Mickael Franci

Climate change is impacting health in numerous ways, including illness and death from extreme weather events, such as heat waves, storms and floods, which are increasingly frequent. Besides such catastrophic events, climate change also leads to severe changes in the spread of infectious diseases, mental health issues and the disruption of food systems.

Climate change also undermines many social determinants for good health, such as livelihoods, equality and access to health care and social support structures. These climate-sensitive health risks are disproportionately felt by women, children, the elderly, ethnic minorities, poor communities, migrants or displaced persons and those with underlying health conditions.

Climate hazards also undermine the performance of health systems, due to interruptions in energy and water supply, structural damage to infrastructure and disruptions in the drug supply chain. Meanwhile, health systems themselves also contribute to climate change and environmental degradation: globally, the health sector contributed approximately 5% to greenhouse gas emissions in 2019. This contribution is mainly due to energy-intensive production and transportation of drugs, commodities and equipment, as well as to waste treatment and energy consumption within health facilities (1).

Climate-resilient health systems

Cordaid strives to create climate-resilient health systems. We do so by working with health service providers, communities, local and national authorities in an accountable, transparent and holistic manner. All actors are supported to play their respective roles in the health system and to hold each other accountable.

This is done through various checks and balances, such as supportive supervision of health service providers by the authorities; awareness raising and outreach by health workers to communities; and feedback mechanisms from communities to service providers and authorities.

1.Oranje, M., & Mathauer, I. (2024). A health financing policy agenda for climate mitigation and adaptation. Bulletin of the World Health Organization, 102(5), 363-365. <https://doi.org/10.2471/BLT.23.291253>

Ultimately, Cordaid endeavours to adopt a climate justice approach in all its activities. We focus on addressing both the impact of climate change and environmental degradation on health and vice versa, the impact of health systems on climate change and environmental degradation. We do so through a combination of climate mitigation and adaptation activities.

Performance-based financing

Performance-based financing (PBF) is a system-based approach that provides financial incentives to health facilities based on their performance, to increase the utilisation and quality of essential health services, to enhance accountability and transparency and to improve data reliability for more evidence-based decision-making. In 2001, Cordaid was among the first agencies to pilot PBF in Rwanda. We have since been involved in more than 15 countries, mostly in Sub Saharan Africa.

Cordaid is now leveraging this health system strengthening approach to also address climate change-induced challenges in the health system, for instance droughts and epidemics, and to sustain access to essential quality health services during protracted climate crises. Through a 'Green PBF' approach, we aim to render health systems more sustainable, by incentivising activities related to waste management, water usage and supply as well as to the use of renewable energy.



Green PBF Burundi (2024-2026)

With initial funding from Cordaid's Knowledge and Innovation Fund, Cordaid Burundi has started a 3-year project that aims to make the health centres in two districts (Gitega and Mutaho) more sustainable.

Strengthening the sustainability of the health centres is done via the "Green PBF approach": the health staff is first trained and then encouraged to develop an action plan to manage their health centres in a greener and more sustainable manner. Climate and environment-related indicators – i.a. linked to medical waste management, water, hygiene and sanitation (WASH), management of pharmaceuticals and the use of renewable energies – are then used to verify their performance. This pilot project is being designed in close collaboration with the Ministry of Health in Burundi.

MITIGATION

Mitigation activities help limit climate change and environmental degradation, most importantly by lowering greenhouse gas emissions. Cordaid aims to minimise the negative footprint of health systems on climate and the environment. We do so by supporting the use of renewable energy sources (such as solar power), by encouraging proper waste management and by reducing inefficiencies in the drug supply chain. In all of this, creating awareness and building health worker capacity is key.

Climate-friendly health system strengthening in Zimbabwe

Cordaid has been active in Zimbabwe for over 30 years, providing humanitarian assistance and health care. From 2011 to 2024, under the Health Sector Development Support Project, Cordaid supported the government of Zimbabwe in the implementation of results-based financing (RBF) in 18 rural and 2 urban districts. This project improved health care for mothers, newborns, children and adolescents. Over the years, the ownership and responsibility for the implementation of RBF was gradually and successfully handed over to the Ministry of Health and Child Care.

Cordaid remains closely involved in the strengthening of the Zimbabwean health system, through the Zimbabwe COVID-19 Emergency Response and the Essential Health Services (EHS) project. Funded by the World Bank, these projects are critical components of the government's concerted efforts to mitigate the devastating impact of the pandemic. A crucial component is climate-friendly health system strengthening. Besides supporting vaccine deployment, the activities include capacity building, the purchase and use of cold chain equipment, including cold boxes, 250 solar direct drive refrigerators and solar-powered tricycles for outreach services, as well as the installation and maintenance of solar energy in 29 health facilities.

Waste management innovation Uganda

In the rural districts of Uganda, inadequate waste management by health facilities constitutes a heavy burden on the environment. The purpose of Cordaid's research activity is to understand how health systems can be instrumental in climate change mitigation and to identify the barriers that currently prevent action.

Key challenges that were identified are: poor waste segregation, delayed waste disposal, a lack of awareness about the health hazards related to healthcare waste, inadequate training in waste management, absence of waste management and disposal systems (such as incinerators), insufficient financial and human resources and the low priority given to the sector. The national government and many local authorities do not have appropriate regulations in place or do not enforce them.

Building on the research outcomes, we aim to: 1) strengthen health workers' knowledge, attitudes and skills on climate-friendly waste disposal and management; 2) develop 'green & smart' environmental policies/applications for staff and clients and 3) install and sustain smart waste management equipment.

ADAPTATION

Adaptation refers to the ability of a health system to address and respond appropriately to the changing health needs as a result of climate change. The goal is to reduce health risks, such as malnutrition, heat stress and an increased chance of catching water-borne or vector-borne diseases such as cholera, malaria and dengue fever.

As part of adaptation, Cordaid focuses on integrating nutrition into its health programming. Floods, droughts, hurricanes, heatwaves and wildfires can drive down crop yields, destroy livestock, and interfere with the transport of food. We support nutrition screening and the provision of highly nutritious foods to vulnerable population groups.

Climate change also threatens to reverse progress in access to water, sanitation and hygiene (WASH) and pushes more people into poverty. People in the poorest countries and most affected by the climate crisis are least able to prepare and protect themselves and their surroundings. Cordaid therefore integrates activities that support the water supply availability at all service points in health facilities, including the installation and renovation of water tanks, pipelines and hand washing stations.

Drought Response Project in Borana, Ethiopia (2023)

Since 2015, Cordaid has implemented PBF in the Ethiopian health sector. Currently, the approach is used in six zones in five regions (Oromia, Amhara, Addis Ababa, Somali and Central Ethiopia), together improving the quality of primary and secondary health care for more than 6 million people.

Between 2021 and 2023, Borana zone in Oromia Region suffered from a prolonged drought, which adversely impacted the population and the health care facilities. Complementing its existing PBF approach, Cordaid started an emergency drought response, additionally incentivising activities related to water supply, availability of essential medicines and medical supplies, availability of highly nutritious food and community-based nutrition screening. Twelve health centres and one hospital successfully managed to install and renovate water systems while other health facilities utilized their subsidies for water rationing from other sources. Highly nutritious food was provided to more than 1,800 pregnant and lactating women, children with severe or moderate malnutrition, elderly people, tuberculosis patients and people living with HIV/AIDS. As of January 2024, all health facilities under PBF in Oromia and Amhara are screened quarterly on selected indicators related to climate and environment.



Photo by Carmen Schakel

This fresh water tank was purchased by Dida Yabello Health Center from the PBF subsidies it earned based on performance (Borena, Ethiopia).

Where climate change mitigation and adaptation come together: South Sudan

Climate change is impacting health in South Sudan in numerous ways. Heavy rainfall and rising water levels along the White Nile result in massive floodings. This has damaged farmlands and infrastructure (including homes and health facilities), leading to displacement, loss of life, food insecurity and outbreaks of water-borne diseases. The impact has been most severe in Jonglie, Upper Nile and Unity States.

Cordaid has responded to these crises by 1) flood mitigation measures, including new referral systems (such as the use of canoes), uninterrupted access to local health care and pre-positioning of supplies; 2) informing health teams about climate change to timely prepare themselves; 3) nutrition-related activities: connecting patients from vulnerable households to food security and livelihood activities, which support the production of nutritious food and favour drought-resistant food crops.

In addition, Cordaid supported mitigation activities, to address the use of fossil fuel and power shortages. Together with UNDP and with funding from the Global Fund, Cordaid has renovated and installed solar power in 21 laboratories and health facilities across the country. In addition, UNDP has installed new solar (photovoltaic) systems at 15 Cordaid-supported health facilities.

The health facilities now have improved energy access and support the country's renewable energy transition, reducing CO₂ emissions. Medical operations and laboratory tests can now be undertaken day and night, while the safety and storage of medical supplies and reagents has improved.



With solar energy, medical operations and laboratory tests in this South Sudanese health centre can now be performed day and night.

CLIMATE AND HEALTH ADVOCACY

Through the Global Health Global Access program, Cordaid advocates for One Health and Planetary Health, targeting the global health community, Dutch policy makers and the general public. We highlight the urgency of climate change and its effects on human and animal health, for instance through a webinar series (organised together with Clingendael Institute) and through a special editorial on Devex, under the title Planet Health (2023).

We urge donor countries and development organizations to invest more in making health systems climate resilient. As chairs of the Dutch Global Health Alliance, we also led the development of a position paper ahead of the 2024 World Health Assembly's (WHA) resolution on climate and health. Through these multifaceted efforts, we enhance Cordaid's expertise in climate and health policy and remain at the forefront of this critical global discourse.

Cordaid's donors and partners on Climate and Health projects



ABOUT CORDAID

Cordaid is a value-based international development and emergency relief organisation, based in the Netherlands with offices in 14 countries. We work in and on fragility and support communities in their efforts to improve health care, education, food security, and justice. Where disaster strikes, we offer humanitarian assistance.

Cordaid is deeply rooted in the Dutch society with more than 250.000 private donors. The Christian values of human dignity, justice, compassion and care for the planet guide us in our work. Cordaid is a founding member of Caritas, CIDSE and ACT Alliance.

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