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HEALTH, CLIMATE AND THE GLOBAL FUND

Friends of the Global Fund Europe

SYNTHESIS

From a public health perspective, climate change is already having profound multifaceted impacts, particularly in Africa and other vulnerable regions. It threatens to provoke a resurgence of major pandemics such as AIDS, tuberculosis, and malaria; facilitate the spread of resistant forms of pathogens; and increase the risk of a new pandemic emerging.

Conversely, health plays a pivotal role in the human impact of climate change. Countries and populations most affected to AIDS, TB, and malaria are also highly vulnerable to climate change. Health investments are especially relevant for relieving and stabilizing communities affected by climate-induced humanitarian crises—such as displaced populations—and for supporting health systems in becoming better prepared and more resilient to future climate shocks.

Innovation and sobriety in health procurement, supply chains, and service delivery models can contribute to climate mitigation efforts, while also enhancing the quality, efficiency, and continuity of care.

The landmark COP28 climate-health declaration, adopted by 140 countries, has paved the way for stronger integration of health into the climate action agenda. This is accompanied by the adoption of new climate-health strategies by major global health institutions, including the Global Fund.

In the face of accelerating climate change, the Global Fund is demonstrating both the adaptability of its model and the relevance of its mission.

It has responded flexibly to high-quality country demand for climate-health interventions within its core investments, as well as addressed urgent humanitarian needs following extreme weather events through its emergency fund–while maintaining its high standards of impact, value for money, and transparency.

The Global Fund has also taken new steps to contribute more intentionally to climate adaptation and mitigation. These include the creation of a climate-health catalytic fund, and the development of enhanced technical expertise and guidance to support countries in articulating their climate-health needs.

Between 2023 and 2025, 71% of Global Fund investments are directed to the 50 countries most vulnerable to climate change. These countries account for 87% of the global malaria burden, 48% of the global HIV burden, and 35% of the global TB burden. The Global Fund is also the first multilateral provider of grants aimed at strengthening health systems' resilience, sustainability, and preparedness for future pandemics, with investments totaling $2.9 billion over the same period.

1. HEALTH PERSPECTIVE ON CLIMATE CHANGE

The WHO identifies climate change as the single biggest health threat facing humanity and a major factor in the path towards achieving SDG3. Climate conditions and climate events can influence health through a wide range of direct and indirect pathways that affect the exposure to disease risks and the ability of communities and health systems to cope and adapt.

According to the IPCC, there is a strong level of confidence that climate change is already adversely affecting the burden of infectious diseases, heat, malnutrition, and population displacements in Africa. There is a constantly growing body of empirical evidence that documents the direct and indirect effects on morbidity and mortality of more frequent and more intense extreme weather events such as heat waves, wildfires, droughts, floods, and cyclones; the shifts occurring in malaria transmission geography and patterns; the emergence or re-emergence of disease-causing pathogens among humans and animals; and the impact of the climate on water supplies on sanitation, hydration, and food security.

The pandemics of HIV/AIDS, tuberculosis, and malaria are all expected to be affected by climate change, in different proportions, with the resurgence of malaria – while not single-factored – standing at the forefront of climate-driven damages on public health. The cases of increased frequency and intensity of extreme weather events, and of increased population displacements, illustrate how climate change is already having a major impact on the burden of existing pandemics. Pandemic risk is also expected to increase as zoonosis spillover, re-emergence of pathogens, and disruptions to epidemic prevention and response are likely to accelerate as climate change affects systems at the human/environment/animal interface that characterize the "One health" concept.

CLIMATE CHANGE AND MALARIA

Vector-borne diseases are particularly climate-sensitive. A recent analysis estimated that the expansion of mosquito vectors due to climate change was responsible for 45 million additional dengue infections in the region of Latin America and the Caribbean over the past ten years.[1] Malaria is the most climate-sensitive of the three leading infectious diseases. According to WHO, nearly half of the world's population is currently at some level of risk from malaria.

In 2023, there were 263 million malaria cases in 83 countries and 597 000 deaths, mainly among children under five in sub-Saharan Africa. 87% of the global malaria burden is concentrated in the 50 most climate-vulnerable countries. Two of the main effects of climate change have a direct impact on malaria transmission: first, the effects of changing temperature, rainfall, humidity and seasonal patterns – all critical factors for the lifecycle of the malaria parasite and its vector, the *Anopheles* mosquito; and second, the effects of the multiplication and intensification of extreme weather events. The combination of climate change with the constant threat of growing resistance to drugs and insecticide and the risks of underfunding to provoke a resurgence of the disease in the coming decades.

87% of the global malaria burden is concentrated in the 50 most climate-vulnerable countries

The Malaria Atlas Project estimates that climate change could cause more than 550,000 additional malaria deaths by 2050, with over 90% of these additional deaths predicted to arise from loss of protection following extreme weather.[2] Among the clearest empirical examples to date were the major floods in Pakistan in 2022, which saw a significant rise in malaria cases, with more cases occurring over a three-month period following the disaster than over the entire course of the prior year. The floods that covered 10% of Pakistani territory turned the affected areas into a breeding ground for mosquitoes, at the same time that it crippled access to preventive and treatment services. This led to a 5-fold increase in the number of malaria infections in 2022, exploding from an estimated 500.000 cases in 2021 to 2.6 million in 2022. This single climate-driven catastrophe was among the main drivers of a global increase of malaria cases compared with 2021, outweighing progress made in other parts of the world. In 2023, Malawi and Mozambique were hit hard and partly flooded by Cyclone Freddy, leading to a 3.1% increase in estimated cases in Malawi and a 3.9% increase in Mozambique.[3]

Malaria transmission thrives in climates with the right mix of temperature, precipitation, and humidity. There is strong evidence that climate change will push the geographic and seasonal patterns of malaria to undergo significant shifts over the coming decades. Between 1951-1960 and 2014–2023, the Lancet Countdown estimates

that an additional 17.1% of the global land area became suitable for the transmission of P. falciparum and an additional 21.8% for the transmission of P vivax[4]. One study projects that by 2100, an additional 2.3 billion people could be at risk for malaria and/or dengue fever if temperatures rise by 3.7°C rather than 1°C[5]. Another major study highlights how the expected impact on transmission levels is likely to vary by region. In Eastern and Southern Africa, 50-62 million people are expected to become newly at risk of endemic malaria transmission and 37-48 million people at risk for seasonal malaria transmission by 2050, including regions that were previously unsuitable for the parasite[6] ; sharp increases in malaria transmission levels in a given area are a particular worry as it can lead to a rise in morbidity and mortality in older populations because adolescents and adults may have relatively low immunity levels[7]. In the Central Africa region modeling predicts there will be a significant rise in malaria transmission in the medium term (i.e. 2030), followed by a decrease in the transmission beyond 2050. In the long run, West Africa and the Sahel—the regions that currently have the highest transmission levels—may see a dramatic decrease in malaria transmission. Additionally, research suggests that periodic weather events like El Niño exacerbate malaria risk in South America and South-East Asia[8]. Shifts in seasonal patterns also present a challenge for the planning of malaria prevention programs, such as mosquito net distribution campaigns[9], malaria vaccination campaigns, or seasonal chemoprevention, and require significant adaptation efforts.

550 000
additional malaria deaths by 2050

90%
from loss of protection following extreme weather

Malaria transmission is particularly sensitive to slow-onset climate change and climate shocks[10]. More granular meteorological data and continued epidemiological surveillance will be important to improving the tracking and projecting of the impact of longer-term climate change on global malaria disease incidence and morbidity[11].

CLIMATE CHANGE AND TUBERCULOSIS (TB)

Tuberculosis kills more people per year than any other infection—and by a wide margin. In 2023, there were an estimated 1.25 million TB deaths and 10.8 million people new cases of TB worldwide—including 6 million men, 3.6 million women and 1.3 million children[12]. 25% to 30% to the global population is estimated to carry the TB bacteria in dormant state, neither suffering active illness nor transmitting the pathogen. The progression from latent TB to active TB depends on exposure to leading TB-risk factors and access to services that seek to minimize those risk factors. Groups that are highly vulnerable to TB include: prisoners and incarcerated populations; people living with HIV; migrants, refugees and other displaced people; miners and other people who work in poorly ventilated conditions; indigenous populations; and urban populations living in slums.

Among the 53 studies included in a literature review on how climate change affects key tuberculosis (TB) risk factors – HIV infection[13], diabetes mellitus, undernutrition, overcrowding, poverty, and indoor air pollution — a positive association was found

between climate change and HIV in two of two studies, in nine out of twelve studies for diabetes, in eight out of seventeen studies for undernutrition, in four out of five studies for overcrowding, in twelve out of fifteen studies for poverty, and one out of three studies for indoor air pollution[14].

Air pollution is both a contributor to climate change and, according to the WHO, a contributor to 7 million premature deaths each year. There is also initial evidence on a correlation between climate-driven air pollution and tuberculosis outcomes. Some studies indicate a link between pulmonary TB incidence and certain air pollutants (particularly $PM_{2.5}$, PM_{10}, NO_2 and SO_2)[15]. A broader literature review emphasized the potential deterrent effect of $PM_{2.5}$ – an micro-particle massively generated by climate-induced wildfires – on important immune defence mechanisms involved in the development of active TB and TB-related mortality.

TB is the deadliest infectious disease in the world

Displaced persons can also face risks of heightened TB incidence and morbidity through pathways such as increases in malnutrition and overcrowding, as well as through disruptions in health system access that hinder diagnosis and treatment. In Afghanistan, where over 1.2 million people were internally displaced in 2019 due to climate disasters, the TB burden among internally displaced person was found to be two times higher compared to the general population. Bangladesh, a country with the sixth highest TB burden and the seventh most vulnerable country to extreme disaster, highlights one example of the potential clash of TB risks and climate risks. The International Organization for Migration estimates that nearly 70% of the people that migrate and settle in Dhaka's poorest areas were forced to leave their homes because of climate change effects. The Global Fund has highlighted that more than 1,060 people who tested positive for TB in Dhaka in the first half of 2024 were new arrivals who left home because of rain and floods[16].

CLIMATE CHANGE AND HIV/AIDS

The effects of climate change on HIV/AIDS are expected to take a more indirect form compared with vector-borne and air-borne diseases, by accentuating pre-existing vulnerabilities among communities most affected by the disease, and by expanding the number of people exposed to HIV/AIDS risk factors or the speed that those risks expand. Recent modeling projects that climate change alone will drive between 11.6 and 16 million additional cases of HIV by 2050 in sub-Saharan Africa[17], as climate change is expected to intensify factors of vulnerability to HIV. Conceptual frameworks by Frontline AIDS[18] and WHO[19] capture those complex linkages (see annex V).

Rainfall extremes provide examples that highlight the pathways and data supporting the effects of climate on HIV/AIDS and related inequities. On one side of the rainfall

spectrum, data from the Lancet Countdown highlights that the percentage of global land affected by drought has increased 3-fold over the past 70 years, with 48% of global land affected by at least one extreme drought month in 2023, while data highlights the risk that more frequent / intense droughts pose to gains in the fight against HIV[20].

A study in Malawi found a 15% increase in HIV in prevalence in both women and men following episodes of moderate drought and documented a doubling of engagement in transactional sex by women employed in agriculture, as well as a 50% rise in engagement in transactional sex among men not employed in agriculture. Exposure to a single additional drought shock was associated with to an 11% increase in overall HIV infection[21].

There is also evidence from cohort studies in southern Africa that rainfall below usual levels have been associated with a statistically significant increase in HIV mortality and decrease of viral load suppression, as well as lower visits in HIV centers[22]. Women in rural sub-Saharan Africa exposed to drought became twice as likely to acquire HIV. Drought has also been linked to a broader reduction of HIV treatment adherence in affected populations[23].

At the opposite end of the precipitation extreme, an analysis examining data from 2005-2017 found that each year of exposure to heavy rainfall was associated with a 14% rise in the risk of HIV infection; exposure to heavy rainfall was also associated with an increase in STIs and an increase in number of sexual partners[24].

The correlation between rainfall and HIV/AIDS may be partly explained by the link between rainfall, food insecurity, and sexual risk behaviors. Many studies highlight that food insecurity leads to increased HIV risks among women due to exacerbation of gender-based vulnerabilities, including less autonomy to practice safer sex and elevated exposure to violence.

16M
additional cases of HIV by 2050 in sub-Saharan Africa, because of climate change

14% rise
in the risk of HIV infection due to exposure to heavy rainfall

CLIMATE CHANGE AND PATHOGEN (RE)EMERGENCE

A comprehensive review found that 58% of existing pathogens have been aggravated by climate change, while only 16% have been diminished[25].

Increased interactions at the human/animal/environment interface—often accelerated by dynamics such deforestation, drought, and floods—can increase risk of emergency outbreaks from known pathogen and the emergence of new pathogens. Climate-related changes in ecosystems can create hotspots for cross-species spillover of pathogens as the result of an elevated frequency of exchanges and/or new combinations of interactions among previously separated species[26].

The potential effect of global warming on increased exposure to ancient pathogens constitutes another risk. Scientists have found many different types of bacteria and fungi that are still alive in ancient ice and frozen ground, indicating that permafrost could be a reservoir of harmful microbes that may pose risks to human health in a war-

ming world[27]. Scientists have also sounded the alert the potentially catastrophic risk to human health that would arise if global warming pushes fungi evolve to survive at warmer temperatures and thereby acquire a stronger pathogenic risk to human[28] [29].

Climate change can also increase strain on efforts to control pathogen outbreaks. The impact of natural disasters on Covid-19 responses showed how climate can interrupt public health efforts and health services in the face of a global health emergency[30]. Services disruptions also play an important role in the development of antimicrobial resistance; a surge in HIV or TB treatment interruptions due to weather-related disasters provide a clear example of the potential link between climate pressures and resistance risks.

EXTREME WEATHER EVENTS AND HEALTH SYSTEMS

Climate change presents a range of acute and chronic risks for health systems. In particular, extreme weather events introduce significant short-term risks to health system functioning and important challenges to long-term health system strengthening—arising from damaged infrastructure, a surge of health risks/burden, and pressure on household / government resources. All of these factors challenge the system's ability to deliver effective tools that can be used to prevent and treat HIV, TB, and malaria.

58%
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In addition to the malaria transmission risks created by the major flooding in Pakistan in 2022, 10% of Pakistan's health facilities were affected (more than 2,000 facilities); this weakened the health system at the very moment it faced a surge in cases. In 2023, Cyclone Freddy damaged more than 300 health facilities across Madagascar, Malawi and Mozambique. In 2024, a small sample of the health system impact of weather events included: 63 health facilities affected in Kenya floods ; 11 TB labs, as well as many community clinics and health facilities, damaged in Bangladesh ; 550 health facilities damaged by Super Typhoon Yagi in Vietnam ; 62 health facilities damaged by floods in Nepal.

In Nigeria, flooding is estimated to have caused nearly **$7 billion** economic loss

The toll of extreme events on health systems is not only limited to damaged facilities; a wider snapshot would capture how the displacement of healthcare workers can interrupt the provision of health services, how extreme heat can disrupt the production, transport, and efficacy of biomedical tools and technologies, and how efforts to rebuild health facilities and other public services can absorb resources that would otherwise be used for health. In Nigeria, a country that accounts for 27% of the global malaria burden, flooding is estimated to have caused nearly $7 billion in economic loss[31].

Extreme weather events can heighten a broad set of risk factors over an extended time horizon because disasters often cause lingering socioeconomic effects on communities and on health systems. Reporting on extreme weather events often highlights the immediate injuries and deaths; improved data collection and continued research is needed to fully capture the full toll of climate-related disasters over the longer term on those who remain, return, or migrate.

2.A CLIMATE PERSPECTIVE ON HEALTH

From a climate perspective, health risks can be envisaged as a leading vulnerability created by climate change, health systems as a resource for greater resilience to pressures from climate change and related weather events, and health outcomes as a goal of climate action.

HEALTH AT THE CENTER OF THE HUMAN EFFECTS OF CLIMATE CHANGE

Climate change highlights the interconnexion of human, animal and planetary health. According to the IPCC, the effects on human systems of different temperature change scenarios place infectious diseases, especially malaria, among the most significant human impacts of climate change.

In the Climate Vulnerability Index developed by the University of Notre Dame, health is one of six factors used to evaluate vulnerability to climate change, alongside food, ecosystems, habitat, water and infrastructure. In this model, the vulnerability of countries is captured through: their risk of being exposed to vector-borne diseases and experiencing higher climate-induced mortality; their sensitivity to those risks depending on their level of dependence on international aid and on the living conditions of their population; and their ability to adapt according to their human resources for health; and sanitation infrastructures.

Climate change aggravates pre-existing inequities in health and wellbeing, as vulnerable people in settings with higher development constraints have less ability to cope and are therefore disproportionately affected by its effects. WHO expects climate change to contribute to at least 250.000 additional deaths per year between 2030 and 2050[32], mainly due to increases in malaria and food insecurity --more precise modelling is challenged by the existing gaps in climate and health data. From these perspectives, climate mitigation yields important benefits for health, and investments in health and climate-health are particularly relevant to alleviate the human impact of climate change.

Conversely, reaching SDG3 is identified as a key lever for alleviating the human consequences of climate change. According to the World Bank, modeling indicates that climate-induced poverty could affect between 32 and 132 million people between 2020 and 2030, with health – including malaria – identified as one of the two leading contributors. That huge potential impact on poverty levels could be halved if the international community stays on course with the SDGs, with progress toward SDG3 playing an especially crucial role[33].

CLIMATE-HEALTH HUMANITARIAN CRISIS: THE CASE OF DISPLACED PEOPLE

Chronic and acute climate-related pressures can drive movements of people through permanent migration and temporary displacement. The IPPC projects that the pressures of slow-onset climate change and increasing climate shocks could lead 216 million people to migrate within their own countries by 2050—86 million in sub-Saharan Africa[34]. In 2023, floods and storms caused 19 million displacements—roughly the same volume of recorded displacements due to violence / conflict.[35],[36] Over the last six years, 43.1 million children were displaced by weather-related disasters – about 20,000 per day[37].

Flooding and storms—the most common cause of disaster-related displacement—increase exposure to environmental health risks such as injuries, water-borne diseases, vector-borne diseases, respiratory diseases, heightened mental health vulnerabilities, and food insecurity. If people are displaced locally, crippled systems face more pressure. If they are displaced over longer distances, a mass influx of people may strain health services for host communities. The short- and the long-term health effect of extreme climate events can go undetected if displaced persons blend into the health data of populations where they have settled—a point highlighted by the Dhaka example discussed earlier in the briefing.

One-third of weather-related disaster displacements are estimated to occur in sub-Saharan Africa[38]. Mozambique—a country still facing a high burden of the three diseases despite the country's massive progress—illustrates the challenges. In 2019, Cyclones Idai and Kenneth displaced over 400,000[39]. The areas hit by the cyclones had experienced a severe drought in 2016—the worst in three decades[40]—and terrorist violence that displaced 700,000 people between 2017 and 2021[41]. In the years to follow, Mozambique would be hit by the crisis of Covid-19, Cyclone Eloise in 2021, Cyclones Gombe and Ana in 2022, and Cyclone Freddy in 2023—the latter displacing 640,000 people.

Between 2020 and 2030 climate-induced poverty could affect **between 32 and 132 M people**

216 M people to migrate within their own countries by 2050—86 million in sub-Saharan Africa

MITIGATION AND ADAPTATION CO-BENEFITS FOR HEALTH AND CLIMATE

The relevance of health in the climate mitigation agenda is less clear because data on greenhouse gas (GHG) emissions from the health sector in low- and middle-income contexts is lacking. Studies focusing on high-income countries suggest that the contribution of the health sector to global GHG emissions falls in the range of 3-8%, with procurement and supply chains representing an estimated 50% to 70% of the total. The industrial-scale chemical processes used to develop medicines in bulk are extremely energy intensive. The case of Dolutegravir shows that innovation can benefit both climate and health. A study commissioned by Unitaid found that the introduction of dolutegravir-based formulations of HIV treatment —the current first-line treatment taken by over 24 million people living with HIV, better tolerated and more efficient— is

also reducing by more than 50% the volume of CO2e emissions that would have been generated by the prior first-line treatment. The reduction of annual emissions associated with HIV treatment by 3.4 million tons of CO2e by 2027 represents as much as 0.3-0.4% of the total health sector's total carbon emissions in LMICs. The difference is due to the mass of active ingredient needed per dose, i.e. 600 mg for efavirenz vs 30 mg for dolutegravir. The substitution of active ingredients is not the only path to reduced emissions. The carbon footprint of many medicines could be reduced through greener and more efficient production of the energy used in the manufacturing and shipping process. Other health investments can deliver co-benefits toward both climate mitigation and adaptation; these include access to low-carbon reliable energy sources, better waste management, increased use of digital health, and a strengthened role of primary and community health care systems.

Health interventions appear as a key pathway to provide immediate relief for people most hit by the consequences of climate change, as well as to prepare communities to be more resilient to climate-driven health shocks. Yet, health is currently estimated to represent only less than 5% of total climate adaptation finance and less than 0.5% of multilateral climate adaptation finance. In recent years, political momentum has developed to recognize the relevance of health in the climate action agenda. At the 2021 COP26 in Glasgow, countries agreed as part of UNFCCC negotiations to strengthen the climate resilience of health systems and to lower their emissions. Following this commitment, an Alliance for Transformative Action on Climate and Health (ATACH) hosted by WHO was launched in 2022 with the mission to support countries to develop climate change and health vulnerability and adaptation assessments (V&As) and health components of national adaptation plans (HNAPs). The first-ever COP28 climate and health declaration launched in 2023 encourages the scaling up of investments in climate and health from all parts, the incorporation of health in Paris Agreement and UNFCCC processes, and the integration of climate in global and national health initiatives.

Since 2023, several key health and climate multilateral actors have developed climate-health strategies, such as WHO, World Bank, Unitaid, Gavi, and the Global Fund. According to calculations reported by bilateral and multilateral funders, "climate-and-health" spending in 2023 by health multilateral funds ($1.56 billion) was higher than spending by multilateral development banks ($1.36 billion) and far above multilateral climate funds ($0.03 billion) and philanthropies ($0.11 billion)[42]. The lack of consistently uniform definitions of climate-health spending makes it difficult to track trends over time or compare across funders. Still, some patterns are clear. Unlike most funders, the Global Fund and Gavi support is exclusively as grants, while loans make up 25% of bilateral aid and most of the multilateral bank funding—90% in the case of ADB and IADB funding.

Shifting to innovative HIV treatment
dolutagravir will reduce the total health sector's carbon emissions by 0,3% by 2027

3. THE ROLE OF THE GLOBAL FUND

Thanks to its uniquely agile model, the Global Fund has been able to mobilize its pre-existing flexibilities to respond to country demands related to climate change for several years already. With the multiplication of extreme weather events and the acceleration of the impacts of climate change on its mission, the Global Fund has recently introduced new measures specifically designed to respond to the challenges posed by climate change. As climate change affects the Global Fund's mission, the Global Fund is uniquely positioned to provide immediate relief to people most vulnerable to climate disasters, as well as to build longer-term resilience of health and community systems and communities, in a transparent, cost-effective, and impactful manner.

LEVERAGING THE GLOBAL FUND'S MODEL TO TACKLE CLIMATE-HEALTH CHALLENGES

The relevance of the Global Fund's mission and mandate

The Global Fund reaches communities and people most exposed to the three diseases, including those suffering from multiple vulnerabilities, such as poverty, stigma, gender- and age-based inequalities and other economic and social determinants of those diseases; these groups often have less resources and/or face greater challenges to adapt to climate change compared to the general population.

In grant cycle 7, the Global Fund invested 71% of its resources in the 50 countries most affected by climate change for the period of 2023-2025, that account for:

48% OF THE HIV BURDEN WITHIN GLOBAL FUND ELIGIBLE COUNTRIES
or 15.6 million people living with HIV; 68% of Global Fund HIV allocations totaling $4.43 billion

35% OF TB BURDEN WITHIN GLOBAL FUND ELIGIBLE COUNTRIES;
or 3.4 million cases of TB per year; 55% of Global Fund TB allocations totaling $1.33 billion

87% OF THE MALARIA BURDEN WITHIN GLOBAL FUND ELIGIBLE COUNTRIES,
or 226 million cases of malaria per year; 87% of Global Fund malaria allocation totaling $3.61 billion

The Global Fund is also the first multilateral provider of grants for health systems, pandemic preparedness and response. In grant cycle 7, the Global Fund is investing $2.9 billion to make health systems more climate-resilient and better prepared for pandemic threats.

Climate-health investments driven by country quality demand

The Global Fund investments in climate-health interventions are driven by country demand. Interventions to improve the efficiency and sustainability of health services may also reinforce climate resilience. Over the past seven years, the Global Fund has partnered with UNDP on the Solar for Health Project, a collaboration that achieved the solarization of more than 1,000 health centers and storage facilities in 15 African countries. In grants covering 2024-2026, over 20 countries have included the installation of solar panels on health or storage facilities in their funding requests. Solarization represents an intervention that delivers co-benefits toward climate adaptation *and* mitigation: on the one hand it, contributes to decarbonation of the health sector, while on the other hand, it assures uninterrupted power supply for critical functions like pathogen surveillance, testing and cold chain management, in contexts where power supply disruptions are common. In Uganda, for example, solar panels provide 60% of the energy needed for daily warehousing operations.

Over the past 7 years, the Global Fund has partnered with UNDP on the Solar for Health Project, with the solarization of more than 1,000 health centers and storage facilities in 15 African countries

Adaptations to climate-driven, long-term shifts in epidemiologic patterns were increasingly prominent in funding requests for grant cycle 7 for the 2023-2025 investment period, as part of the Global Fund's strategic objective to support resilient and sustainable systems for health and to contribute to greater pandemic preparedness. This includes over US$295 million investments to strengthen disease surveillance and early warning systems, allowing improved integration of climate data and better detection and management of climate-sensitive disease outbreaks and health emergencies. In Malawi, for example, the Global Fund is investing in electronic medical record systems to protect health data in areas prone to climate disasters.

The Emergency Fund

The Global Fund's Emergency Fund was established in 2014. Over the past ten years, $48.8 million of the $131.2 million in disbursed emergency funds—37% of the total—were allocated to boost responses to natural disasters and extreme weather events. The Global Fund provided an emergency boost of $20 million to Pakistan in 2022. The Global Fund also reacted swiftly to the repeated cyclones that have hit southeastern coast of Africa. It supported the use of mobile clinics to adapt to service disruptions caused by damaged health infrastructure and population displacement. To address the spike in malaria, the Global Fund supported rapid mobilization to protect households through mass distribution of preventive medicines, mosquito nets and indoor spraying of damaged homes.

RECENT STEPS TAKEN TO FURTHER ADAPT TO CLIMATE CHANGE

New strategic approach to climate-health

Building on its constantly growing experience, on increased unfunded quality demand from countries for climate-health interventions, and on growing evidence that climate change will significantly alter health systems and the epidemiology of the three diseases, the Global Fund has started taking a more proactive approach to further integrating responses to climate change risks in recent years. At its 50th board meeting in 2023, the Global Fund articulated a strategic vision for its future role in climate-health adaptation and mitigation. The Global Fund also joined forces with the Rockefeller foundation to mobilize 39 partners, including major climate investors such as the Green Climate Fund and the World Bank, to define new common principles for financing climate and health solutions to protect health—via an initiative launched at COP28.

New climate-health catalytic fund

In January 2025 in Davos, the Global Fund launched a new climate-health catalytic fund—with the financial support of the Gates Foundation and Sanofi's Fondation S—to increase climate-health capacity and financing for a cohort of 10-15 of the most climate-vulnerable countries to protect and accelerate the gains in HIV, TB and malaria; these resources will complement the funding available through core country allocations. Interventions supported by the catalytic fund could include improving access to health care in disaster-prone areas; extending coverage to displaced populations; implementing targeted malaria prevention activities; and further strengthening disease surveillance systems.

Expanded expertise in climate-health

In preparation of its grant cycle 8—which will cover the 2026-2028 period, the Global Fund will add climate-health to the scope of competencies included in its Technical Review Panel – a group of independent experts in charge of reviewing the quality and relevance of country funding requests. The Global Fund is also developing stronger technical guidance to assist countries in their development of their funding requests for grant cycle 8 covering the 2026-2028 investment period.

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COVER: THE GLOBAL FUND/VINCENT BECKER
CHAMPA CROSSES A RICE FIELD IN KHULNA DISTRICT, BANGLADESH. CHAMPA TIKADAR IS A FARMER, MOTHER AND HEALTH CARE WORKER WHO PROVIDES ESSENTIAL TB CARE TO HER COMMUNITY IN FULBARI VILLAGE, BANGLADESH. CYCLONE REMAL TORE THROUGH THE VILLAGE IN 2024, FLOODING CHAMPA'S HOME AND WASHING AWAY MOST OF HER POSSESSIONS. SHE MANAGED TO SAVE HER SUPPLY OF TB MEDICINE, AND CONTINUED TREATING PATIENTS WHILE SHELTERING FROM THE STORM.

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