ISGlobal Barcelona Institute for Global Health

#ISGlobal_policy

Trump's Earthquake and its Aftershocks:

How the Implosion of the Global Health System Increases Inequality, Weakens Global Governance and Threatens Us All

An ISGlobal policy paper

Sydney Jennings, Claudia García-Vaz, Elizabeth Diago-Navarro, Gonzalo Fanjul

JULY 2025

INDEX

Sydney Jennings is an Associated Analyst at ISGlobal's Policy & Development department, **Claudia García-Vaz** is the Policy Coordinator at ISGlobal's Policy & Development department, **Elizabeth Diago-Navarro** is the Coordinator of the Preparedness, Response, Resilience and Recovery Hub at ISGlobal and **Gonzalo Fanjul** is the Policy & Development Director at ISGlobal.

EXECUTIVE SUMMARY

The return of Donald Trump to the U.S. presidency represents a major disruption for an already fragile system of international health cooperation. Even before his re-election, donor fatigue, a weakened 2030 Sustainable Development Agenda, and overlapping crises —from pandemics and climate disasters to conflicts and economic instability— were straining global health systems. Now, Trump's return threatens to further destabilize this delicate landscape.

Historically, the U.S. has been the largest contributor to global health, supporting multilateral organizations, research, and emergency response. The second Trump administration is withdrawing these critical resources, forcing global health institutions to reassess strategies, partnerships, and governance. Simultaneously, European donors are also reducing development aid, worsening the funding crisis.

The past decades have seen extraordinary global health achievements —from eradicating smallpox and reducing polio by over 99%, to expanding HIV treatment and rapidly deploying COVID-19 vaccines. These milestones show what coordinated global action can accomplish. However, such progress is now at risk. Trump's "America First" approach prioritizes domestic interests over international collaboration, undermining long-term investments in global health security while consistently attacking and jeopardizing science and research. This narrow vision ignores the reality that health threats transcend borders.

In this shifting geopolitical environment, this analysis explores the consequences a second Trump term —marked by repeated attacks on science and international cooperation— is having on an increasingly constrained global aid ecosystem, and outlines what can be done to mitigate the damage. Key recommendations aim for a strategic rethinking of global health financing, governance, research and innovation. As traditional leadership and funding models shift, new actors and alliances must emerge to ensure resilience and equality. The response must not be limited to a mere exercise in reconstruction, but rather a reconsideration of some of the foundations on which we have worked until now.

INTRODUCTION

The return of Donald Trump to the U.S. presidency represents a **political and financial earthquake** for an international health cooperation system that was already in the midst of transition. Even before Trump's re-election, donor fatigue was setting in, the 2030 Agenda for Sustainable Development was losing momentum, and polycrises spanning pandemics, climate disasters, armed conflicts, and economic instability fueled compounding challenges for our global health systems' capacity. Into this fragile landscape enters the second Trump administration, an 'elephant in the room' that threatens to upend what remains of an already wavering system.

What follows in the wake of this political storm will not resemble the global health landscape that we have known before. Historically, the **U.S. has been the single largest funder of global health initiatives**, contributing significantly to multilateral organizations, research, and emergency response capacities. A sudden withdrawal or redirection of resources is already heavily disrupting the system, forcing institutions to rethink their strategies, alliances, and governance mechanisms. Meanwhile, **European donors** who were once considered the safety net of global health financing are also **slashing their developmental aid budgets** and further straining an already fragile global health funding landscape. These shifts are not occurring in isolation, they reflect a broader **erosion of the international system of norms and protections**, including the humanitarian space, where long standing principles like neutrality, access to aid, and the protection of civilians are increasingly under pressure. As global cooperation frays across multiple domains, the multilateral foundations underpinning health, humanitarian response, and international law are being shaken, leaving the future of global health governance in an uncertain and volatile state.

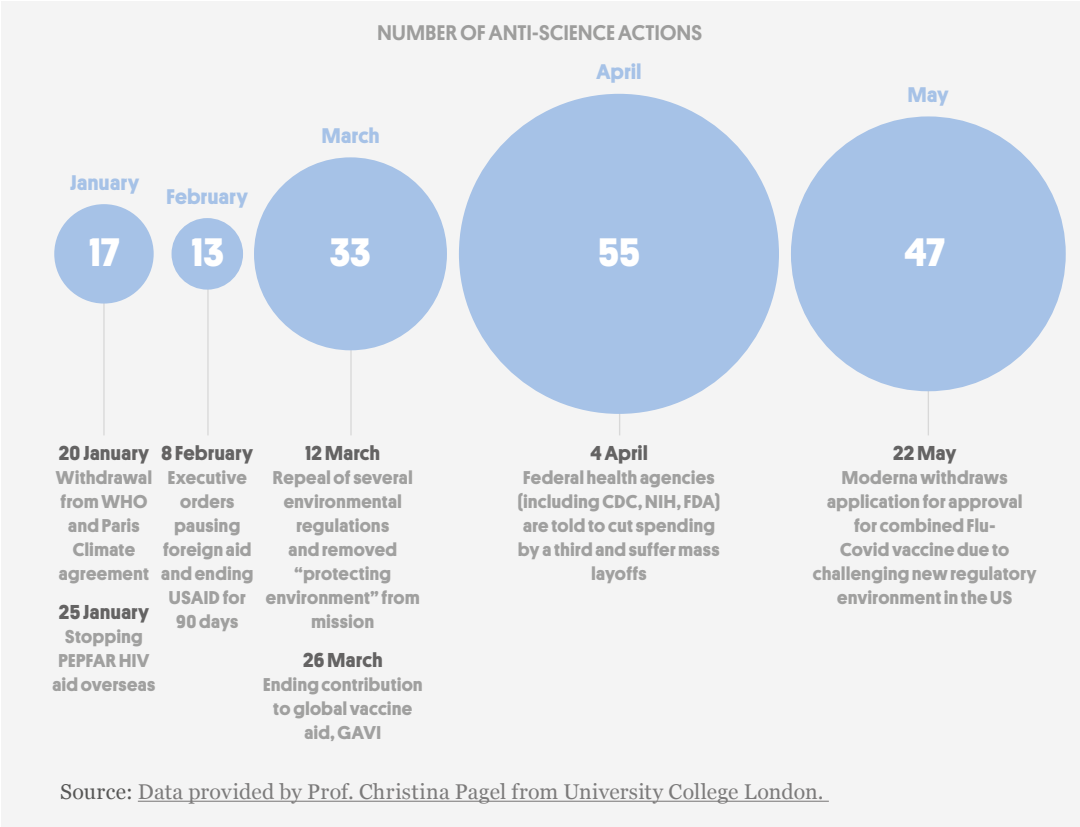
Evidenced by the COVID-19 pandemic and emphasized in the current context of polycrises is the necessity of **coordinated international health responses**. The past few decades have been an extraordinary era for global health, marked by historic achievements that would have once seemed unimaginable. The eradication of smallpox using widespread vaccination and surveillance efforts remains one of humanity's greatest public health triumphs, making it the first and only human disease to have ever been eradicated. Polio, once endemic to more than 125 countries, has been reduced by over 99% since 1988 and is nearing global elimination. The rapid development, testing, and rollout of COVID-19 vaccines in less than one year demonstrated the power of global scientific cooperation, while the expansion of HIV treatment through initiatives like the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) has enabled access to life-saving therapeutics for more than 20 million people worldwide. From **dramatic declines in child mortality, expanded access to essential medicines**, and the creation of **innovative financing mechanisms** like the Global Fund, we have witnessed firsthand what global health collaboration can achieve. These gains are not just milestones of progress, but crude reminders of how much we stand to lose. The global health architecture that has enabled these advances is now under threat, and without sustained political will and global cooperation, the next decades could be defined not by sustained progress, but by preventable setbacks.

To speak of global health is to speak of its deep entanglement with environmental, social, and institutional determinants. Health does not exist in a vacuum, it is shaped by climate change, economic inequality, governance structures, and international law. Yet this interconnected reality is being denied by the **resurgence of nationalist, isolationist policies**. Trump's 'America First' agenda is driving policy decisions that prioritize short-term ideological and

domestic interests over sustained global cooperation, undermining long-term investments in global health security. Justified under the banner of "putting America and its interests first", this approach has led to a wave of actions that weaken international health collaboration and **threaten global health equity**. What this vision fails to grasp is that the well-being of the American public is inseparable from the health of the world. Infectious diseases, climate disasters, and antimicrobial resistance do not respect borders, and no single country can mitigate these risks alone.

In tandem with the shifting geopolitical landscape, this policy analysis will examine the consequences of a second Trump administration and shrinking international aid budgets on the functions of global health —spanning finance, governance, research and innovation, humanitarian law, misinformation, and the cross-cutting consequences on global health equity. In doing so, it will provide insight into what lies ahead and acknowledge what must be done to mitigate the damages.

FIGURE 1. Number of actions by the Trump Administration attacking science, environment, health, arts and education, as reported on the media by May 31 2025.



Source: Data provided by Prof. Christina Pagel from University College London.

*The data is current as of May 31 2025

SECTION 1.

The Earthquake

The Collapse of Global Health Financing: The U.S. and Other Key Donors' Withdrawal Opens a Lethal Gap with No Alternative in Sight

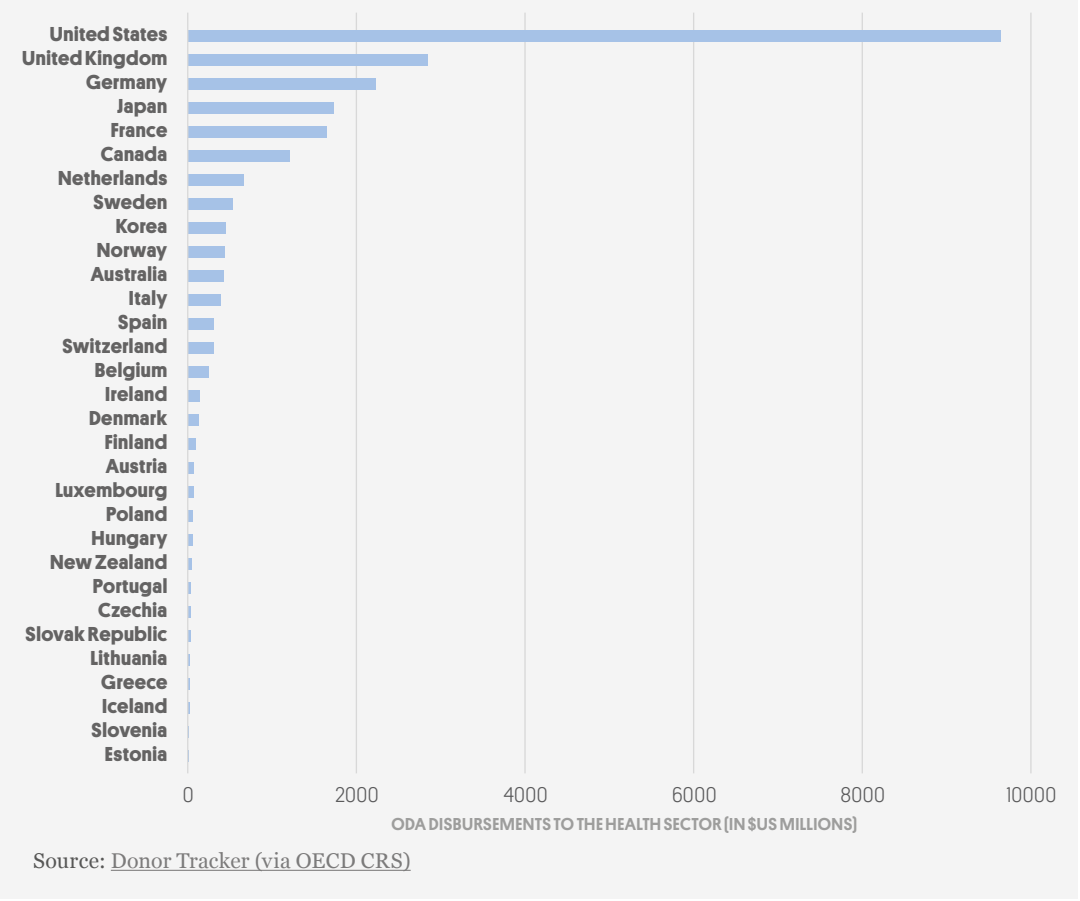
"Reduced international engagement, significant funding cuts, and nationalist and isolationist global health policies arising from the second Trump administration have disrupted the global health ecosystem — reshaping governance structures as we know it."

Abrupt cuts to global health budgets and institutions initiated by the Trump administration have gutted critical financial pipelines that support multilateral and bilateral health initiatives, health systems, research, and emergency preparedness. These changes, coupled with aid reductions from major European donors including France, Germany, and the United Kingdom (UK), will have devastating ripple effects, particularly for low- and lower-middle income countries (LICs and LMICs) that rely on external support for essential health services.

- **The U.S. is the largest contributor to global health financing**, contributing 40% of total Official Development Assistance (ODA)[1] in the health sector —more than any other country.[2] *(see Figure 2)*

  While the U.S. spends less of its federal budget on ODA for health than other donor nations (>0.2%), its funding has been a critical lifeline for millions worldwide.[3]

FIGURE 2. ODA spending per donor country, absolute values.



Source: Donor Tracker (via OECD CRS)

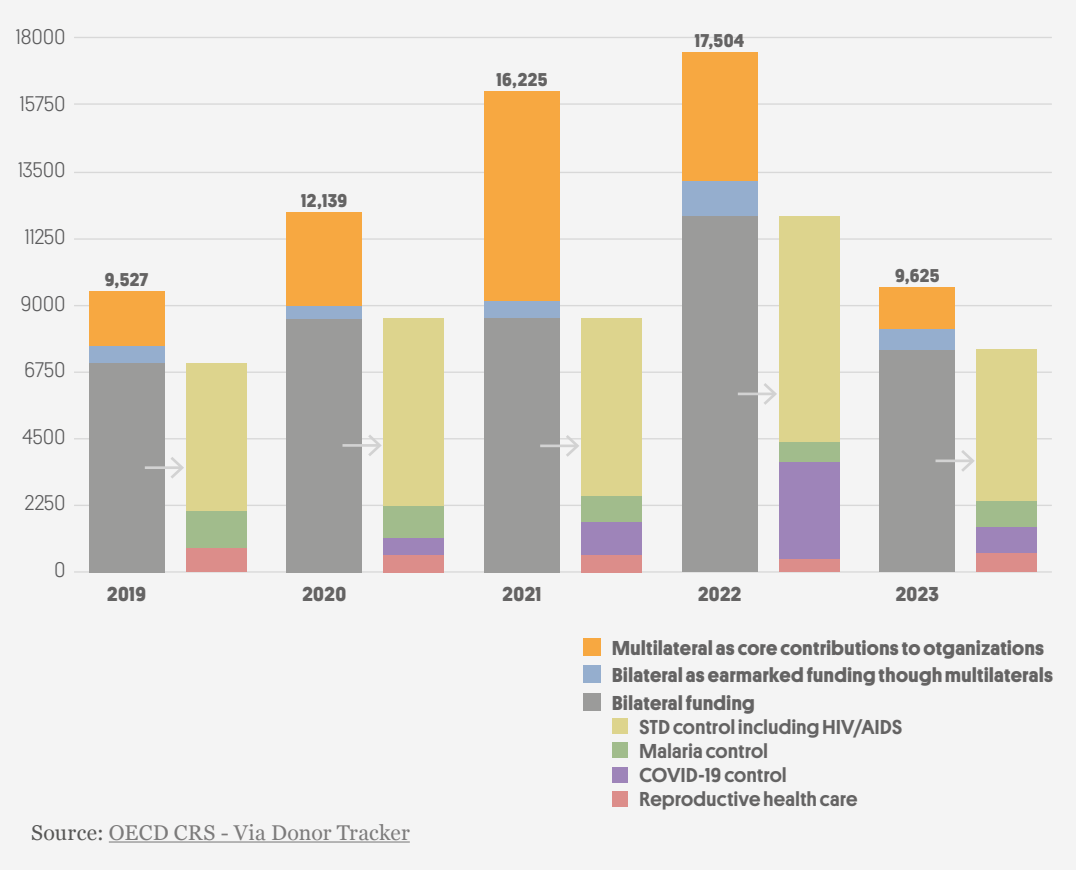
- **Critical multilateral and bilateral health efforts face losing their largest funder** as the Trump administration withdrew the U.S. from the World Health Organization (WHO), imposed a 90-day freeze on foreign development assistance (which was then further extended),[4] and purged 83% of United States Agency for International Development (USAID) programs.[5,6,7]

  - Most U.S. ODA for health (~US$8.5 billion in 2023) is delivered bilaterally through USAID (73%) as well as the Department of Health and Human Services (HHS) (22%), targeting HIV/AIDS, malaria, COVID-19, reproductive health, and other global health priorities.[2] *(see Figure 3)*

  - The remaining ODA funding for health is provided as core funding to multilateral organizations, where the U.S. is the top donor to the Pandemic Fund, the World Health Organization (WHO), the Global Fund, and the second-largest contributor to Gavi, only behind the United Kingdom. *(see Figure 4)*

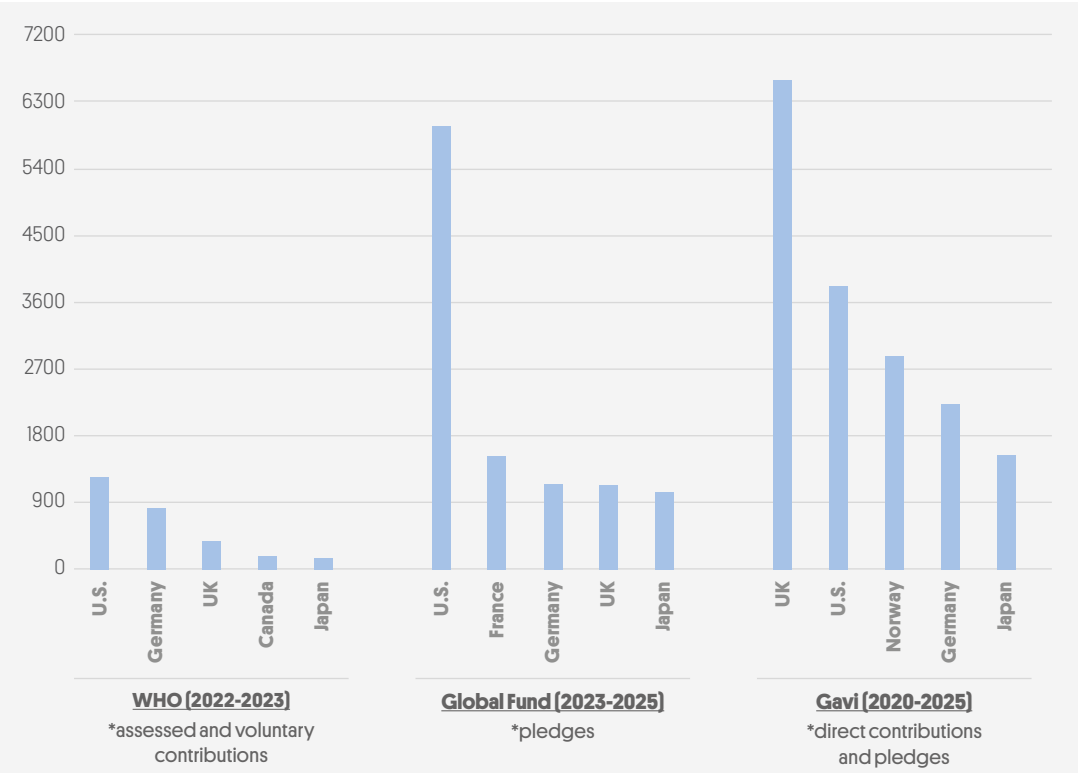
  - In the midst of many global health resource mobilization efforts taking place in 2024-2025, the extent to which multilateral funding mechanisms will be affected remains uncertain. Prior to Trump's return, the U.S. pledged up to US$667 million to the Pandemic Fund through 2026, and at least US$1.58 billion to Gavi from 2026-2030 —commitments that may falter in the wake of Trump 2.0.[8,9] We already know that Gavi will likely receive no funds from the current Administration.

FIGURE 3. Flow of US ODA funding to health, multilaterally vs. bilaterally, by sub-sector.



Source: OECD CRS - Via Donor Tracker

FIGURE 4. Multilateral organization (replenishment period and linked source) and Top 5 donor countries (commitments in $US million).



Source: KFF Tracker: U.S. Pledges to Upcoming Multilateral Health Replenishments.

- **Vulnerable populations in LICs/LMICs are disproportionately impacted by abrupt funding cuts**, as U.S. foreign aid is provided to many of the world's poorest and disease-endemic countries. *(see Figure 5)*

  - Funding from USAID alone accounts for over 20% of the total foreign assistance provided to LICs including South Sudan, Somalia, the Democratic Republic of Congo, and Afghanistan.[10]

  - Sub-Saharan Africa —a region that faces significant disease burdens from malaria, HIV/AIDS, tuberculosis (TB), Ebola virus disease, diarrheal diseases and more— has historically been the largest recipient of U.S. foreign aid for health. In 2024, the region received 73% of all foreign aid disbursements for health from the U.S., totalling over US$4 billion.[11]

BOX 1. Real World Impacts of the USAID Freeze

Without stable funding, fragile health systems face rising disease burdens, increased mortality rates, and reduced access to essential health services. A few examples of global health programs impacted by the U.S. foreign aid freeze and the dismantling of USAID at the time of writing include:

- Reduced funding and terminated contracts for the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) has led to the **closure of HIV services**, and **supply chain and treatment disruptions**, including for over 20 million people on antiretroviral therapy supported by the program.[12] According to UNAIDs, if PEPFAR is not re-authorized between 2025 and 2029, and other resources are not found for HIV response, "there would be a 400% increase in AIDS deaths", equating to 6.3 million AIDS-related deaths.[13]
- The cessation of U.S. funding for tuberculosis (TB) programs has forced 25% of organizations across 31 countries to **shut down TB program operations**, with an additional 46% stopping TB screening and outreach. This disruption not only **increases transmission risk** but also **fuels the rise of drug-resistant strains**.[14]
- Suspension of domestic contracts for the U.S. President's Malaria Initiative (PMI) has halted hundreds of millions of dollars annually to countries like Nigeria and Uganda, threatening an increase of nearly **15 million additional malaria cases** and **107,000 additional deaths** globally in just one year of a disrupted malaria-control supply chain.[15]
- The UN World Food Programme has closed its Southern Africa office, placing **27 million people at risk of hunger** amidst the country's worst drought in decades.[16]

A recent study by ISGlobal [17] estimated, through forecasting models, that continued USAID defunding through 2030 could result in:

- 14 million additional deaths, including
  - 4.5 million deaths among children under five years old
  - 700,000 excess child deaths per year
- In the first year alone, more than 1.7 million deaths, almost 700,000 of them children under five.

Historical milestones that are **expected to reverse under defunding** include:

- HIV/AIDS: 65–74% mortality reduction previously attributed to USAID. This loss of support could lead to millions of new infections and deaths.
- Malaria: Up to 53% mortality reduction at risk of reversal, with modeling showing over 100,000 potential additional deaths in one year alone.
- Neglected Tropical Diseases: 51% mortality reduction may reverse without continued investment.
- Tuberculosis: With significant program shutdowns, modeled projections suggest 2.2 million additional deaths by 2040.
- Maternal and child health, nutrition, and diarrheal disease interventions are also expected to see sharp backsliding, especially where program continuity has been lost.

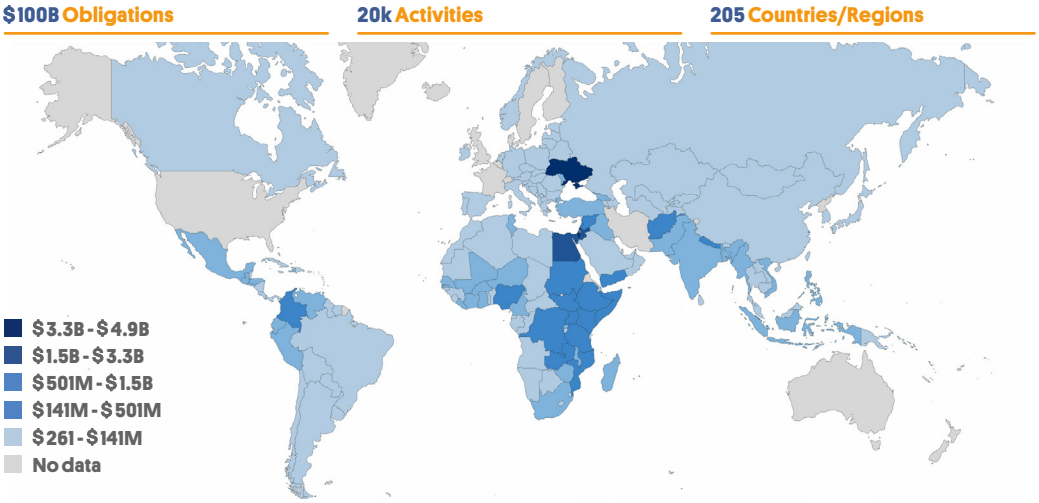
- **A global retreat of other European donor countries creates the perfect storm** as the UK, France, and Germany move to prioritize domestic and defense spending over international aid:

  Germany, historically the second-largest humanitarian donor —contributing over 0.7% of its Gross National Income (GNI) since 2019— is now facing significant cuts to ODA-relevant ministries through its draft 2025 federal budget. The Federal Ministry for Economic Cooperation and Development (BMZ) stands to lose US$1 billion, slashing humanitarian aid by 50%.[18] Additionally, the German government is proposing to further reduce spending on development aid and to integrate the BMZ into the Foreign Affairs Ministry.[19]

The UK recently announced cutting its ODA from 0.5% to 0.3% of its GNI by 2027 to prioritize spending on defense, potentially leading to a 57% cut in bilateral aid and leaving limited funds for critical areas like humanitarian assistance, health, and climate initiatives.[20]

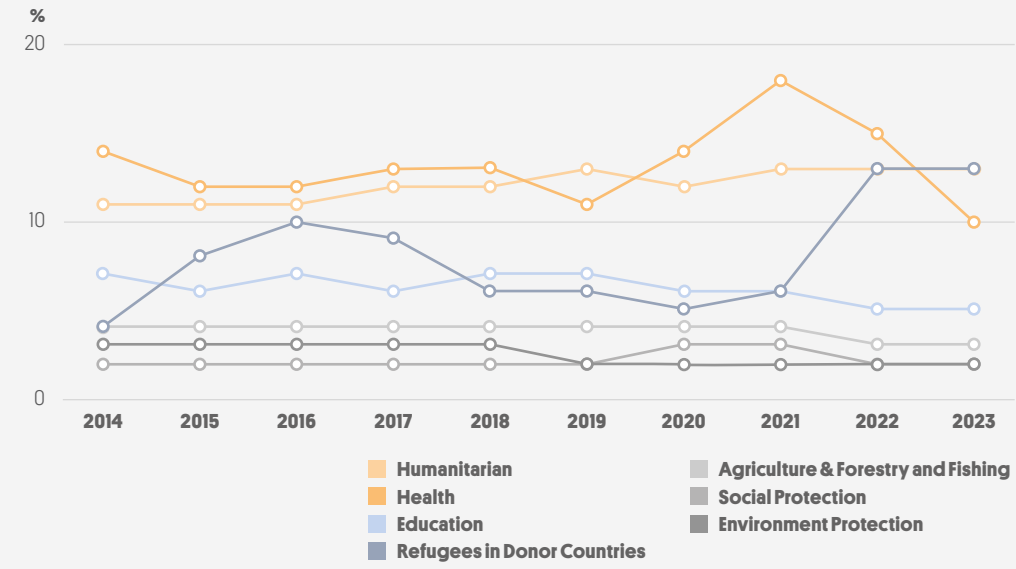
France's ODA has also experienced significant reductions, with a planned cut of more than US$2 billion from 2023-2025.[21] This represents a 35% decrease in its ODA budget for 2025, undermining France's previous commitments to international solidarity and posing risks to global health, poverty alleviation, and climate initiatives.

FIGURE 5. Map of US foreign aid for humanitarian assistance (commitments/spending for the last year).



Source: https://foreignassistance.gov/

FIGURE 6. Share of aid to various sub-sectors by all Development Assistance Committee (DAC) countries, 2014-2023.



Source: OECD CRS (via ONE)

Governance on Shaky Ground: Trump's 'America First' Places Global Health Last

Reduced international engagement, significant funding cuts, and nationalist and isolationist global health policies arising from the second Trump administration have disrupted the global health ecosystem —reshaping governance structures as we know it. These shifts may compromise the effectiveness of international initiatives and coordination, ultimately **challenging international health regulations** and **risking fragmented governance** resulting in a diminished capacity to tackle the world's most pressing health issues.

- **The U.S. abandons its global leadership by stepping away from critical multilateral health institutions and initiatives:**

  - **Withdrawing from the WHO**. Marking the first time in 80 years that the country will not be a member of the primary international health organization. Argentina's subsequent declaration of its intentions to leave the WHO have raised concerns of a domino effect, where other governments may follow suit.

  - **Retreat from other UN organizations**. Including exiting the UN Human Rights Council (UNHRC), ceasing funding to the UN Agency of Palestinian Refugees (UNRWA), and re-examining membership to the UN Educational, Scientific, and Cultural Organization (UNESCO).[22] Other UN agencies, like the UN Population Fund are also in danger due to the nature of their mandate.

  - **Denouncing the 2030 Sustainable Development Goals (SDGs)** – further signalling its departure from cooperative efforts to address health disparities worldwide.[23]

- **This power vacuum may create opportunities for non-democratic countries, such as China, to expand their soft power through investments in global health**. While China's engagement in development and global health is not inherently negative, it may introduce undemocratic practices into the international sphere.

Polycrises and Preparedness: Reassessing Global Response Capacity in a Fragmented Funding Landscape

The Trump administration's withdrawal from the WHO and cuts to bilateral health programs stand to weaken global emergency response capacities, leaving global health security in an even more vulnerable state. In addition, the world is facing a continuous state of **permacrisis** —a prolonged period of instability defined by multiple overlapping crises, or **polycrises**— marked by climate crises-driven emergencies, emerging infectious diseases, and antimicrobial resistance (AMR), added to the geopolitical issues and the looming prospects of armed conflicts.

- **The absence of U.S. leadership unravels preparedness for future global crises**, weakening critical functions needed to prepare, prevent, respond, and recover from emerging disease threats:

  - The **WHO plays a central role in emergency preparedness and response** that includes detecting, monitoring, and responding to emergency health threats and pandemics globally. In addition, the WHO Health Emergencies Program provides education and capacity-building activities to member states, equipping them to detect and respond effectively to public health crises, such as emerging infectious diseases.

  - By leaving the WHO, the U.S. has also ceased negotiations on the recently approved **WHO Pandemic Agreement** and the 2024 amendments to the **International Health Regulations (IHR)**, placing themselves on the sidelines of global health system reforms.

BOX 2. Legal tools to govern global health emergencies

The **IHR** provides a legal framework for global health security, outlining countries' rights and obligations in handling cross-border public health events and emergencies.[24] It mandates the development of core public health capacities, including trained personnel, robust policies, laboratory infrastructure, and timely data sharing, while encouraging nations to support one another through technical and financial assistance.

The **Pandemic Agreement**, initiated in 2021 and approved in May 2025 without the participation of the US, aims to strengthen pandemic prevention, preparedness and response, affirming a commitment to equity, integrity, and solidarity in responding to future pandemics.[25]

- **Bilateral health initiatives** also enhance health emergency preparedness by strengthening disease surveillance, laboratory capacity, and rapid response systems through direct country-to-country collaboration.

- **Trump's anti-climate agenda sabotages health protections and global climate goals**, leaving the world more vulnerable to the devastating impacts of climate change, including a rise in emerging disease threats and natural disasters:

  - The Trump administration has retreated from global climate commitments, including withdrawing the U.S. from the **Paris Agreement** —a legally binding international treaty adopted in 2015 which aims to combat climate change— and the **Climate Loss and Damage Fund** —a financial mechanism to support LICs in paying for the damage incurred by the impacts of climate change, including extreme weather events.[26]

- **Reduced engagement in global initiatives, diminished support for international collaborations, and funding cuts** could hinder effective disease surveillance, data sharing, and overall global capacity to detect and respond to health emergencies.

  - The exchange of critical disease surveillance data would be disrupted, creating delays in identifying, understanding, and responding to emerging health threats.

  - Researchers might also face increased limitations in accessing comprehensive data sets from global counterparts, and vice versa, ultimately slowing advancements in medical science and innovation.

Research and Innovation in Ruins: Politicization Fractures the Scientific Foundation of Global Health

Sustainable investments in science are the backbone of a resilient and effective global health system. However, as the U.S. cuts research funding, retreats from science-based global health organizations, and imposes regressive restrictions on scientific freedom, the science and research required to catalyze innovative solutions to address global health challenges are at risk.

- **Political interference is disrupting U.S. scientific institutions, censoring research topics, and threatening global collaboration**, placing the integrity and effectiveness of global health research at risk.

  - Executive orders and proposed budget cuts from the Trump administration have triggered grant terminations, program suspensions, and thousands of staff layoffs across U.S. federal science agencies including the National Institutes of Health (NIH), the Centers for Disease Control and Prevention (CDC), the National Science Foundation (NSF) and the National Oceanic and Atmospheric administration (NOAA).

"Censorship and political suppression of language, research topics, and methodologies — whether through funding restrictions, legislative control, or institutional interference— fundamentally compromise the integrity of scientific and scholarly endeavours not just in the U.S. but around the world due to the global nature of the research ecosystem."

(Source: ALLEA Statement on Threats to Academic Freedom and International Research Collaboration in the United States - ALLEA." Accessed March 15, 2025.) [31]

- A specific executive order titled "Ending Radical and Wasteful Government DEI Programs and Preferencing" has led to canceled grants involving diversity, equity, and inclusion (DEI), gender studies, and transgender health.[27] To comply with federal directives, agencies including the NIH and NSF have paused new awards, withdrawn funding calls, and removed access to certain databases.[28] NIH staff were directed to identify and potentially cancel grants focused on DEI in the scientific workforce, environmental justice, and gender identity. Funding reviews now target projects related to climate change and institutions in China, triggering accusations of political censorship.[29]

- The NOAA —an agency involved in weather forecasting, climate research, and fisheries management— has restricted staff from international collaboration while U.S. science policy undergoes review, disrupting global data sharing.

- In February 2025, the administration barred NASA's chief scientist from attending the IPCC meeting in China and canceled a contract for the next climate assessment report, raising concerns about weakened U.S. leadership in evidence-based policymaking.[30]

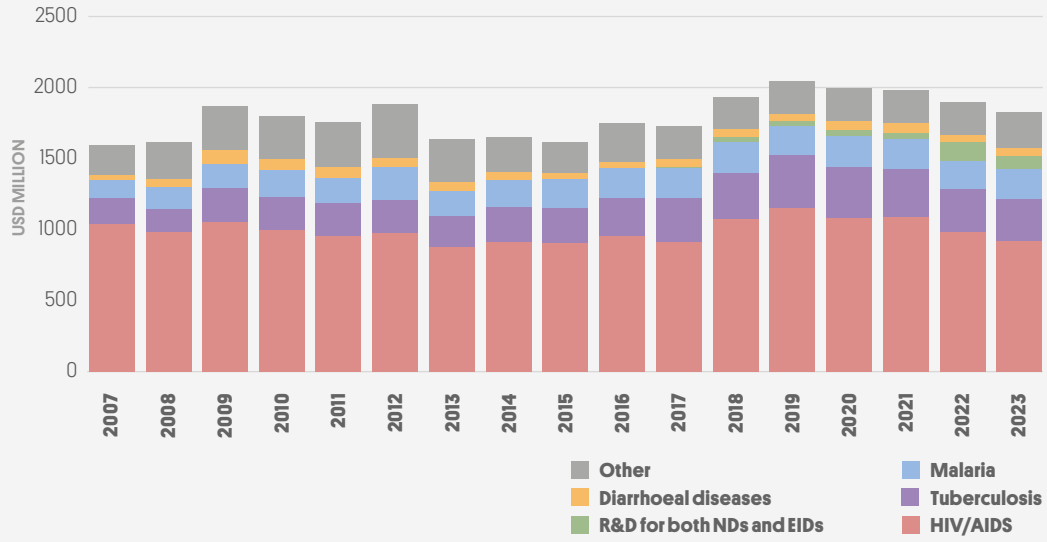
- **Research on global infectious diseases and critical biomedical breakthroughs are especially at risk**, potentially slowing progress in disease prevention, diagnostics, and treatment on a global scale.

  - The **NIH** is regarded as the most important global health research funder, playing a central role in driving biomedical breakthroughs. With a budget of US$47.5 billion in 2023, the NIH spent seven times more on research grants than the second-leading funder, the Wellcome Trust, with the majority of investments supporting research and development for emerging infectious diseases, COVID-19, HIV/AIDS, TB, and malaria.[32,33] Executive orders are restricting NIH grant reviews, hiring, travel, and communications. Proposed cuts to indirect cost allocations (from 40% to 15%) jeopardize core research infrastructure,[34] causing backlogs, project suspensions, and widespread disruption across U.S. and global research institutions.

  - The **CDC** is a leading science-based service organization that conducts critical research on infectious diseases, including tracking pathogens, developing diagnostics, and studying transmission and prevention to inform evidence-based public health responses and policies both in the U.S. and globally. Added layers of oversight, the purge of federal health data, and mass lay-offs hamper the accessibility and dissemination of critical scientific information and impairs the U.S. capacity to manage and study infectious diseases.

  - The dismantling of **USAID** has further halted important global health research projects across major global diseases, including HIV, malaria, and tuberculosis. For example, placing a USAID-funded HIV vaccine trial in South Africa on indefinite hold and leaving promising innovations at risk of abandonment.[35]

FIGURE 7. National Institutes of Health (NIH) funding flows.



Source: Impact Global Health, G-FINDER data portal.

The Erosion of Humanitarian Law and Interventions: U.S. Policies Disregard the Right to Health in Humanitarian Settings and Conflict Zones

IHL exists to protect civilians and humanitarian and medical workers during armed conflict, including ensuring access to healthcare and safeguarding medical infrastructure.[36]

In doing so, IHL operationalizes the fundamental right to health in humanitarian settings and conflict zones, affirming that even during war, access to healthcare is not a privilege, but a non-negotiable human right, and that states and parties to conflict have an obligation to uphold this standard.

Humanitarian aid and international law are vital to global health, protecting access to care for populations in crisis, whether due to conflict, displacement, or natural disasters, where health systems are often directly targeted or collapsing. The erosion of these protections not only deepens existing health inequities but also destabilizes global health security, amplifying the spread of disease and prolonging human suffering.

- **The Trump administration has diminished global accountability and the enforcement of the IHL** by withdrawing from critical institutions like the UNHRC —an intergovernmental body within the UN responsible for the promotion and protection of human rights around the world, especially focused on refugees— and the UNRWA —a UN agency that provides essential services like education, healthcare, and humanitarian aid to Palestinian refugees across the Middle East. It has also provided political support to regional partners such as Israel, which has been accused by numerous observers of consciously breaking the IHL in the health sector.[37]

- **Substantial funding cuts by the Trump administration are fueling a humanitarian disaster**, exacerbating the suffering of already vulnerable populations:

  - Nearly half of the top ten countries most exposed to USAID funding cuts are conflict zones, including Afghanistan, Somalia, and South Sudan.[38]

  - The Middle East and North Africa (MENA) region, wherein armed conflicts and many of the world's most challenging humanitarian crises have taken place, receives significant foreign aid for humanitarian assistance compared to other regions. In 2024, this totalled US$2.3 billion in obligations that were most heavily concentrated in Yemen (US$708 million, 30%), West Bank and Gaza (US$648 million, 28%), and Syria (US$457 million, 20%), and of which 86% were provided through USAID.[39]

  - According to the UN, ten percent of humanitarian non-governmental organization (NGO) workers were laid off due to funding gaps in February 2025, and UN agencies are forcibly scaling back or shutting down life-saving operations across countries.[40]

  - A survey on the impacts of the US funding freeze on global humanitarian operations conducted in February 2025 found that tens of millions of people are not receiving humanitarian assistance as a result of the U.S. stop work orders and respective funding freeze.[41]

- **Refugees and displaced populations are among the vulnerable populations severely impacted:**

  - In Myanmar, the USAID freeze forced the closure of hospitals in refugee camps, leaving over 100,000 displaced people without lifesaving medical care.[42]

  - Thousands of Afghan refugees approved for entry to the U.S. were left stranded without travel assistance following the Trump administrations' executive order suspending the U.S. Refugee Admissions Program.[43,44]

Cracks in the Narrative: Trump's Political Polarization Fuels Health Disinformation

In addition to the attempts to dismantle the foundations of the international health system, Donald Trump poses another significant challenge to the global scientific community, perhaps less visible but equally threatening: with his assumption of office, we are now witnessing a full-fledged **institutionalization and systematization of misinformation**, even exceeding the already worrying levels reached during his first term.[45]

Depriving the public debate arena of evidence-based claims constitutes a menace to civil society overall, but creates particularly challenging circumstances for the wellbeing of global health: not only does the spread of health misinformation and disinformation prevent the effectiveness of public health response during crises,[46] but it can further undermine societal trust towards the scientific community [47]—already under attack during COVID-19.[48]

- **Social media regulation is being dismantled**. Meta's decision to end third-party fact-checking as a response to the results of U.S. presidential elections has been one of the first steps towards the dismantling of an informed and fact-based public debate. This measure is particularly worrisome for the scientific community, as social media, especially if furtherly divested of such regulation, constitute a perfectly suitable vehicle for the misleading of public opinion on health-related matters.[49]

- **High-level appointments are complicit in mis- and disinformation**. Donald Trump has filled his cabinet with public figures whose professional and personal activity has played a major role in fueling the circulation of dangerously false claims.

  - **Elon Musk**'s appointment as head of the new "Department of Government Efficiency" (DOGE) has made clear Trump's profound disregard for informed public discourse. Musk's recent activity has, indeed, been repeatedly detrimental to the wellbeing of public debate. During the pandemic, he contributed to the spread of anti-vaccine fake news, as the belief that Covid vaccines would lead to a rise in heart problems;[50] he has actively fueled the circulation of election conspiracy theories throughout the last presidential campaign;[51] and, since his acquisition of X —formerly Twitter—, the platform has become a catalyst for a dramatic proliferation of fake accounts and false scientific claims.[52]

  - **Robert F. Kennedy Jr.**, a vaccine-sceptic environmental lawyer, as Secretary of the Health and Human Services (HHS) department sounds even more paradoxical, if we have a glance at the record of his recent public statements. In 2022, he compared the federal government's response to the pandemic to the Holocaust in Nazi Germany.[53] In 2023, he suggested the immunity of certain ethnic groups (Jews and Chinese people) to COVID-19, and in the same year he claimed chemical exposure was a cause of sexual dysphoria. He has repeatedly encouraged the discredited belief that childhood vaccines cause autism,[54] and the vaccine misinformation he promoted in Samoa in 2019 has been associated with the measles outbreak that briefly followed his visit to the island, infecting over 5,700 individuals and killing 83, mostly young children.[55] His position of

leadership within the HHS department could, in sum, produce catastrophic effects on public health.

- **Scientific data disappearing from public view**. As Trump's ongoing attack on science through misinformation operates at many levels, it has also taken the shape of a sudden erasure of scientific data and research documents.

  👉 Within less than 10 days from the beginning of his term, more than 8,000 pages in U.S. government websites have been taken down, hugely impacting the availability of federal medical and health-related information. The purge has in fact involved over 3,000 pages from the CDC website, almost 150 pages from the Substance Abuse and Mental Health Services Administration, 50 research papers from the Office of Scientific and Technical Information, and many others.[56]

  👉 Climate change mentions were another target of this truth-erosion operation: mentions and entire sections on climate crisis across the websites of several major U.S. departments have vanished, and a note reciting that the website is "going to look a little different in the coming months" suggests that the purge will involve NASA's climate change section itself.[57]

SECTION 2.

The Aftershocks

How the Implosion of the Global Health System Increases Inequality, Weakens Global Governance and Threatens Us All

"Resulting from the ripple effects of the second Trump administration, one thing has been made extremely clear: global health equity is in peril."

Resulting from the ripple effects of the second Trump administration, one thing has been made extremely clear: **global health equity is in peril**. Abrupt cuts to U.S. foreign aid, withdrawing from multilateral organizations and agreements, and the undermining of international institutions will exacerbate the divide between well-resourced and underserved health systems. The effects of these decisions will extend far beyond immediate health crises, threatening decades of progress in health equity, security, and resilience.

In brief, some key items at stake are:

- **Economic and health system destabilization:** Given the high proportion of LICs and LMICs reliant on U.S. foreign aid to fund their health systems and services, these countries —whose economies are disproportionately lower than their populations— face losing significant portions of their GNI and risk a potentially major economic shock that will test the viability of domestic capacities.
- **The collapse of life-saving health programs in LICs and LMICs:** With 84% of organizations —out of the 266 surveyed by the *Global Aid Freeze Tracker* up to May 2025— lacking the resources to survive beyond six months of the funding freeze, the collapse of local health services is imminent, eventually leading to millions of preventable deaths disproportionately affecting some of the world's most vulnerable populations.
- **Weakened multilateral response capacity:** The increased potential of fragmented global health governance will undermine coordinated response capacities to pandemics and climate-related health threats, leaving vulnerable populations without equitable access to essential supplies, services, and medical countermeasures.
- **Decreased health security worldwide:** The changes in global health governance and financing leave us all exposed to emerging health threats without a clear backup strategy.
- **Abandoned climate initiatives fueling emerging health threats:** By deserting climate initiatives like the Paris Agreement, global efforts to mitigate the health impacts of climate change are limited. The absence of sustained and coordinated action on climate change, the incidence of infectious diseases and natural disasters linked to environmental changes is likely to increase.
- **Geopolitical erosion of human rights and international law:** U.S. disengagement from UN organizations like UNRWA, UNFPA, and UN Women directly threatens health and human rights protections for marginalized populations.
- **Rising displacement and refugee health crises:** Forced displacement hit an all time high in 2024. Cuts to foreign aid not only worsen conditions and reduce access to life-saving healthcare in refugee camps, but they impact the capacity of other nations to provide safe asylum, ultimately risking increased mortality rates.

- **Threats to innovation and research:** Essential scientific fields are being depleted of necessary resources to continue advancing our knowledge and technology. We can expect a decrease of scientific output in the US and abroad.
- **The emergence of new actors in global health:** The western retreat in global health leaves space for new actors to step in. For instance, China has been increasing its investment in foreign aid in the last few years. The consequences of autocratic regimes gaining soft power through foreign aid can be disastrous in an already shifting geopolitical landscape.

Three Critical Takeaways for the Global Health Financing Debate

On the structural vulnerabilities of the system

The heavy reliance of LICs on development assistance underscores the need for a sustainable shift toward strengthening domestic health systems and reducing dependency on donor funding. While foreign aid has been instrumental in achieving major global health milestones, its volatility threatens to reverse decades of progress. Moving forward, investments in **health system resilience, local capacity-building, and innovative financing mechanisms** will be essential to ensure that LICs can preserve and enhance the developmental gains made while working toward long-term self-sufficiency.

It is clear through these shifts that the traditional global health financing model is eroding. As government contributions wane, there is growing pressure on private foundations and non-governmental organizations to fill the void. While philanthropic organizations strive to support global health, their contributions cannot fully compensate for the extensive funding gap left by reduced government aid. Philanthropic entities often lack the resources to sustain large-scale health programs independently, potentially leading to service gaps. Donor advocacy efforts moving forward will need to **reframe foreign aid as a strategic investment**, emphasizing the economic, security, and geopolitical benefits for both donor and recipient nations to sustain political will.

On the challenges for research and innovation

With the U.S. government reducing funding to foreign aid and federal research agencies, there is a growing reliance on alternative financing models to fund global health research. While sources like private, philanthropic, and corporate-driven research funding have the potential to inject substantial resources into global health, there remain **concerns about equity, transparency, and prioritization of global health investments**. For instance, large philanthropic organizations or corporations, predominantly based in high-income nations, may dictate even further research priorities based on profitability or brand alignment as opposed to local public health needs, potentially neglecting diseases and health issues predominantly affecting LICs and LMICs. A report by the Brookings Institution revealed that less than 4% of

private investment in health and development research actually targets the developing world, underscoring this imbalance.[58] To promote global health equity, it is crucial for private funders to align their investments with the actual health needs of LICs and LMICs, ensuring transparency in their funding mechanisms and collaborating closely with local stakeholders to effectively address pressing health concerns. Investments must also allow for projects tackling **sustainable, systemic solutions** versus solely focusing on high-impact, short-term projects.

On the options for LMICs

Burdened by the decline in U.S. foreign aid, weakened health systems in conflict-affected regions are unable to meet the surge in medical demands, placing the humanitarian programs and workers that remain in a position of choosing which lives to prioritize. To navigate the situation, the UN Inter-Agency Standing Committee (IASC) has put forward a 10-point plan focussing on two core actions: **regrouping and renewal**.[59] Regrouping will adjust the logistics and operations of programmes according to a restrained funding model, whereas renewal will focus on system reform, to improve efficiency, build partnerships, and find alternative funding sources. Funding sources will focus on local and national organizations, to ensure that resourcing is controlled by those closest to the crisis.

SECTION 3.

The Response

"The response must not be limited to a mere exercise in reconstruction, but rather a reconsideration of some of the foundations on which we have worked until now."

The shock of recent months in the global health system deserves an equivalent response. At stake is the possibility of throwing away three decades of unprecedented progress that humanity has experienced in fundamental indicators such as child survival. But this system had been showing signs of weakness and exhaustion long before Donald Trump came to power. That is why the response must not be limited to a mere exercise in reconstruction, but rather a reconsideration of some of the foundations on which we have worked until now. Although we intentionally avoid an estimation of the financial magnitudes involved, the following recommendations address the political and legal principles of a meaningful response to these challenges.

1. Global health financing

- **A shift in the perspective of foreign aid:** As government contributions wane, there is growing pressure on private foundations and non-governmental organizations to fill the void. While philanthropic organizations strive to support global health, their contributions cannot fully compensate for the extensive funding gap left by reduced government aid. Philanthropic entities often lack the resources to sustain large-scale health programs independently, potentially leading to service gaps. Donor advocacy efforts moving forward will need to reframe foreign aid as a strategic investment, emphasizing the economic, security, and geopolitical benefits for both donor and recipient nations to sustain political will.

- **Investing in cost-effective interventions that support the path towards funding independence in LMICs:** Shrinking global health funding calls for a focus on efficiency in investments. Programs that reinforce LMICs' capacity-building, resource-generation capability, local infrastructure and sustainable self-financing should be prioritized.

- **Reduce fragmentation to increase efficiency:** In this context of declining aid, better coordination among donors, agencies, and implementing partners is essential. Fragmented funding streams and parallel systems often lead to duplication, administrative burden, and inefficiencies. Aligning efforts through pooled funding mechanisms, harmonized reporting, and shared strategic priorities can help maximize impact, reduce transaction costs, and improve sustainability.

- **An opportunity for a more balanced aid landscape:** The shift in the geopolitical landscape represents not only a threat, but also an opportunity for a more balanced distribution of power in the aid community. The US retreat creates an opportunity for a more diverse group of investors and donors in global health, including other LMICs in South-South cooperation schemes. This can help LMICs gain power and independence that they can leverage in aid and investment negotiations. This should be encouraged by donors as a means to reduce LMICs' dependence on aid.

2. Global health governance

- **EU leadership for a democratic future of global health:** With the US retreat, the EU should step in as a leader in global health, establishing and reinforcing amicable and fair relationships with allied nations. This needs to be done through increased funding and a promotion of transparent, accountable aid that embodies the democratic values of the Union.

- **Funding of health security should be prioritized:** Global health surveillance systems and infectious diseases treatment programs, among others, contribute to the safety of every country in the world. The maintenance needs to be assured by a diversified pool of donors. The EU should advocate for a cost-effective prioritization of resources.

- **An opportunity for preparedness governance:** The global health landscape is in urgent need of improved governance for preparedness and response. Spain and the EU can help fill this gap by supporting the development of inclusive and transparent mechanisms for coordination, accountability, and resource allocation in pandemic preparedness. This includes advocating for stronger international agreements, funding mechanisms tied to preparedness benchmarks, and regional capacity-building strategies that empower LMICs to lead their own preparedness agendas.

3. Research and innovation

- **Attracting talent through funding:** With the US cutting funding for global health research, other HICs, especially the EU, should strive to attract researchers with increased funding for grants and research positions in public institutions. There should also be public-private partnerships that fund investment in new talent coming into the EU.
- **The dangers of diversifying funding sources:** Inevitably, with the U.S. government reducing funding to U.S. foreign aid and federal research agencies, there will be a growing reliance on alternative financing models to fund global health research. While sources like private, philanthropic, and corporate-driven research funding have the potential to inject substantial resources into global health, there remain concerns about equity, transparency, and prioritization of global health investments.[60] Global health institutions and scientific bodies should establish strict guidelines and accountability mechanisms to guide this process.

REFERENCES

1. Note: Donor government health assistance totals are based on ODA amounts as reported to the OECD and include bilateral disbursements for health as well as the health-adjusted share of core contributions to multilateral organizations. Overall assistance amounts are based on total bilateral disbursements and total core contributions to multilateral organizations. These calculations are made on the basis of US officials' announcements, but some executive orders and policy decisions have been challenged in court and the final outcome for this fiscal year is still uncertain.

2. OECD. "Official Development Assistance (ODA)." OECD, 2024. https://www.oecd.org/en/topics/official-development-assistance-oda.html

3. ForeignAssistance.Gov," 2025. https://foreignassistance.gov/

4. Devex. "Trump administration extends foreign aid review for another 30 days". April 17, 2025. https://www.devex.com/news/trump-administration-extends-foreign-aid-review-for-another-30-days-109889

5. The White House. "Withdrawing The United States From The World Health Organization," January 21, 2025. https://www.whitehouse.gov/presidential-actions/2025/01/withdrawing-the-united-states-from-the-worldhealth-organization/

6. The White House. "Reevaluating And Realigning United States Foreign Aid," January 21, 2025. https://www.whitehouse.gov/presidential-actions/2025/01/reevaluating-and-realigning-united-states-foreign-aid/

7. Center For Global Development. "The USAID Cuts: Little Sign of Mercy for 'Life-Saving' Health Programs." Accessed April 1, 2025. https://www.cgdev.org/blog/usaid-cuts-little-sign-mercy-life-saving-health-programs

8. U.S. Department of the Treasury. "Remarks by Secretary of the Treasury Janet L. Yellen at the Pandemic Fund Investment Case Launch Event." U.S. Department of the Treasury, February 8, 2025. https://home.treasury.gov/news/press-releases/jy2483

9. Donor Profiles: United States of America | Gavi, the Vaccine Alliance," 2025. https://www.gavi.org/investing-gavi/funding/donor-profiles/united-states-america

10. OECD. "Official Development Assistance (ODA)." OECD, 2024. https://www.oecd.org/en/topics/official-development-assistance-oda.html

11. ForeignAssistance.Gov," 2025. https://foreignassistance.gov/

12. "Impact of US Funding Cuts on the Global AIDS Response — Weekly Update 10 March 2025 | UNAIDS." https://www.unaids.org/en/resources/presscentre/featurestories/2025/march/20250312_sitrep

13. "US Aid Funding Cuts Put HIV Prevention at Risk, Warns UNAIDS | UN News," February 7, 2025. https://news.un.org/en/story/2025/02/1159901

14. TB Community Coordination Hub. "TB Specific Impact Survey Initial Summary Report." Google Docs. Accessed March 16, 2025. https://drive.google.com/file/d/1gqrTdToSyoJjCxWNfRGP9BlY_dmenDq8/view?usp=embed_facebook

15. Symons, Tasmin L., Jailos Lubinda, Michael McPhail, Adam Saddler, Mauricio van den Berg, Hunter Baggen, Yuval Berman, et al. "Estimating the Potential Malaria Morbidity and Mortality Avertable by the President's Malaria Initiative in 2025: A Geospatial Modelling Analysis." medRxiv, March 4, 2025. https://doi.org/10.1101/2025.02.28.25323072

16. "UN World Food Program Closes Southern Africa Office amid US Aid Cuts," March 5, 2025. https://www.jurist.org/news/2025/03/un-world-food-program-closes-southern-africa-office-amid-us-aid-cuts/

17. Cavalcanti DM, De Oliveira Ferreira de Sales L, Da Silva AF, Basterra EL, Pena D, Monti C, et al. Evaluating the impact of two decades of USAID interventions and projecting the effects of defunding on mortality up to 2030: a retrospective impact evaluation and forecasting analysis. The Lancet. June 2025. Available from: https://doi.org/10.1016/s0140-6736(25)01186-9

18. Donor Tracker. "German Government Agrees on Draft Budget for 2025; ODA Funding Envelopes Signficantly Cut," July 17, 2024. https://donortracker.org/policy_updates?policy=german-government-agrees-on-draft-budget-for-2025-oda-funding-envelopes-signficantly-cut-2024

19. DW. "Germany's development aid on the chopping block?". March 31, 2025. https://www.dw.com/en/germanys-development-aid-on-the-chopping-block/a-72098362

20. Brien, Philip, and Philip Loft. "UK to Reduce Aid to 0.3% of Gross National Income from 2027," February 28, 2025. https://commonslibrary.parliament.uk/uk-to-reduce-aid-to-0-3-of-gross-national-income-from-2027/

21. Focus2030. "France's Official Development Assistance in a world of uncertainty: a fading ambition? Review 2017-2024 and outlook." Focus 2030. Accessed March 14, 2025. https://focus2030.org/France-s-Official-Development-Assistance-in-a-world-of-uncertainty-a-fading

22. The White House. "Withdrawing the United States from and Ending Funding to Certain United Nations Organizations and Reviewing United States Support to All International Organizations," February 5, 2025. https://www.whitehouse.gov/presidential-actions/2025/02/withdrawing-the-united-states-from-and-ending-funding-to-certain-united-nations-organizations-and-reviewing-united-states-support-to-all-international-organizations/

23. Besheer, Margaret. "At UN, Trump's Domestic Policies Enter International Arena." Voice of America, March 4, 2025. https://www.voanews.com/a/at-un-trump-s-domestic-policies-enter-international-arena/7997792.html

24. "International Health Regulations." Accessed March 21, 2025. https://www.who.int/health-topics/international-health-regulations

25. "Pandemic Prevention, Preparedness and Response Accord." Accessed March 21, 2025. https://www.who.int/news-room/questions-and-answers/item/pandemic-prevention--preparedness-and-response-accord

26. The White House. "Putting America First In International Environmental Agreements," January 20, 2025. https://www.whitehouse.gov/presidential-actions/2025/01/putting-america-first-in-international-environmental-agreements/

27. The White House. “Ending Radical And Wasteful Government DEI Programs And Preferencing,” January 21, 2025. https://www.whitehouse.gov/presidential-actions/2025/01/ending-radical-and-wasteful-government-dei-programs-and-preferencing/

28. Science. “Trump Orders Cause Chaos at Science Agencies.” Accessed March 15, 2025. https://www.science.org/content/article/trump-orders-cause-chaos-science-agencies

29. Kozlov, Max, and Smriti Mallapaty. “Exclusive: NIH to Terminate Hundreds of Active Research Grants.” *Nature* 639, no. 8054 (March 6, 2025): 281–82. https://doi.org/10.1038/d41586-025-00703-1

30. Tollefson, Jeff. “US Pulls Back from Gold-Standard Scientific Climate Panel.” *Nature* 639, no. 8053 (February 26, 2025): 17–17. https://doi.org/10.1038/d41586-025-00596-0

31. “ALLEA Statement on Threats to Academic Freedom and International Research Collaboration in the United States - ALLEA.” Accessed March 15, 2025. https://allea.org/portfolio-item/allea-statement-on-threats-to-academic-freedom-and-international-research-collaboration-in-the-united-states/

32. “World RePORT: International Biomedical Research Organization Support.” Accessed March 15, 2025. https://worldreport.nih.gov/wrapp/#/

33. “Impact Global Health | Public Search.” Accessed March 15, 2025. https://gfinderdata.impactglobalhealth.org/

34. “NOT-OD-25-068: Supplemental Guidance to the 2024 NIH Grants Policy Statement: Indirect Cost Rates.” Accessed March 15, 2025. https://grants.nih.gov/grants/guide/notice-files/NOT-OD-25-068.html

35. Callaway, Ewen. “‘It Is Chaos’: US Funding Freezes Are Endangering Global Health.” *Nature* 638, no. 8050 (February 6, 2025): 299–300. https://doi.org/10.1038/d41586-025-00385-9

36. “International Humanitarian Law - European Commission.” Accessed March 22, 2025. https://civil-protection-humanitarian-aid.ec.europa.eu/what/humanitarian-aid/international-humanitarian-law_en

37. “UN Commission finds war crimes and crimes against humanity in Israeli attacks on Gaza health facilities and treatment of detainees, hostages”. October 10, 2024. https://www.ohchr.org/en/press-releases/2024/10/un-commission-finds-war-crimes-and-crimes-against-humanity-israeli-attacks

38. Center For Global Development. “26 Countries Are Most Vulnerable to US Global Health Aid Cuts. Can Other Funders Bridge the Gap?” Accessed March 22, 2025. https://www.cgdev.org/blog/26-countries-are-most-vulnerable-us-global-health-aid-cuts-can-other-funders-bridge-gap

39. “ForeignAssistance.Gov,” 2025. https://foreignassistance.gov/

40. “Humanitarian System at Breaking Point as Funding Cuts Force Life-or-Death Choices | UN News,” March 12, 2025. https://news.un.org/en/story/2025/03/1161066

41. “US Funding Freeze Global Survey: Preliminary Analysis | Humanitarian Action,” February 12, 2025. https://humanitarianaction.info/document/us-funding-freeze-global-survey/article/us-funding-freeze-global-survey-preliminary-analysis

42. Amnesty International. “Myanmar: Recklessly Abrupt US Aid Stoppage Poses Existential Threat to Human Rights,” February 13, 2025. https://www.amnesty.org/en/latest/news/2025/02/myanmar-recklessly-abrupt-us-aid-stoppage-poses-existential-threat-to-human-rights/

43. The White House. “Realigning the United States Refugee Admissions Program,” January 21, 2025. https://www.whitehouse.gov/presidential-actions/2025/01/realigning-the-united-states-refugee-admissions-program/

44. Madeleine May. "Thousands of Afghans Who Helped the U.S. Military Blocked from Reaching American Soil - CBS News," March 12, 2025. https://www.cbsnews.com/news/afghans-helped-the-u-s-military-blocked-from-america/

45. The New York Times. "In His Second Term, Trump Fuels a 'Machinery' of Misinformation". March 24, 2025. https://www.nytimes.com/2025/03/24/business/trump-misinformation-false-claims.html

46. Confronting Health Misinformation. The U.S. Surgeon General's Advisory on Building a Healthy Information Environment. 2021. https://www.hhs.gov/sites/default/files/surgeon-general-misinformation-advisory.pdf

47. Olan, F., Jayawickrama, U., Arakpogun, E.O. et al. Fake news on Social Media: the Impact on Society. Inf Syst Front 26, 443–458 (2024). https://doi.org/10.1007/s10796-022-10242-z

48. Pew Research Center. "Americans' Trust in Scientists, Other Groups Declines in 2021". February 15, 2022. https://www.pewresearch.org/science/2022/02/15/americans-trust-in-scientists-other-groups-declines/

49. Harvard T.H. Chan School of Public Health. Meta's fact-checking changes raise concerns about spread of science misinformation. January 10, 2025. https://hsph.harvard.edu/news/metas-fact-checking-changes-raise-concerns-about-spread-of-science-misinformation/

50. BBC News. Elon Musk tweet boosts vaccine conspiracies targeting LeBron James' son. July 26, 2023. https://www.bbc.com/news/health-66313916

51. Graham, Timothy & FitzGerald, Katherine M. (2023). Bots, Fake News and Election Conspiracies: Disinformation During the Republican Primary Debate and the Trump Interview. https://eprints.qut.edu.au/242533/

52. *'Verified': Elon Musk's Twitter is giving legitimacy to dozens of influential misinformers*.

53. The New York Times. Robert F. Kennedy Jr., Soon to Announce White House Run, Sows Doubts About Vaccines. April 17, 2023. https://www.nytimes.com/2023/04/17/us/politics/robert-f-kennedy-jr-vaccines.html

54. The New York Times. 7 Conspiracy Theories Robert F. Kennedy Jr. Has Promoted. https://www.nytimes.com/article/rfk-conspiracy-theories-fact-check.html

55. Yang, YT. The perils of RFK Junior's anti-vaccine leadership for public health. The Lancet, Volume 405, Issue 10473, 122. https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(24)02603-5/fulltext

56. The New York Times. *Thousands of U.S. Government Web Pages Have Been Taken Down Since Friday*. February 2, 2025.

57. The Guardian. Scientists brace 'for the worst' as Trump purges climate mentions from websites. February 4, 2025. https://www.theguardian.com/us-news/2025/feb/04/trump-climate-change-federal-websites

58. Brookings. "Less than Four Percent of Private Investment in Health R&D Targets the Developing World." Accessed March 16, 2025. https://www.brookings.edu/articles/less-than-four-percent-of-private-investment-in-health-rd-targets-the-developing-world/

59. "The Humanitarian Reset - ERC Letter to IASC Principals | IASC." Accessed March 22, 2025. https://interagencystandingcommittee.org/inter-agency-standing-committee/humanitarian-reset-erc-letter-iasc-principals

60. Charani, Esmita, Seye Abimbola, Madhukar Pai, Olusoji Adeyi, Marc Mendelson, Ramanan Laxminarayan, and Muneera A. Rasheed. "Funders: The Missing Link in Equitable Global Health Research?" *PLOS Global Public Health 2*, no. 6 (June 3, 2022): e0000583. https://doi.org/10.1371/journal.pgph.0000583

www.isglobal.org

@ISGLOBALorg
/isglobal
@ISGLOBALorg
/isglobalorg

ISGlobal Barcelona Institute for Global Health

A partnership of:

"la Caixa" Foundation

Clínic Barcelona

Universitat de Barcelona

Generalitat de Catalunya

Gobierno de España

Hospital del Mar Barcelona

upf. Universitat Pompeu Fabra Barcelona

Ajuntament de Barcelona

Excelencia Severo Ochoa

CERCA Centres de Recerca de Catalunya

HR Excellence in Research