Partner Perspectives: The Importance of Climate Action for NTD Elimination and Health Systems

WORKING PAPER

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An Emerging Urgency to Integrate NTD Elimination and Climate Action

Perspectives on the Challenge Ahead

Following COP28 in December 2023, where global donors pledged over $777 million to eliminate neglected tropical diseases (NTDs), the END Fund has collaborated with partners to better understand integrating NTD elimination with the broader climate and health agenda. This effort spurred discussions among a growing and diverse coalition of stakeholders across sectors and areas of expertise. This paper presents the perspectives and deeper understanding of the intertwined challenges and opportunities that are emerging from these partner contributions.

As the impact of climate change on health becomes increasingly apparent, those working to eliminate NTDs and advance universal health coverage (UHC) face the challenge of navigating the realities of climate-driven uncertainty. The World Health Organization's (WHO) recently published "Climate change, malaria and neglected tropical diseases: a scoping review" underlines the challenge, noting, "Climate change will perturb human health in profound and long-lasting ways, both directly and indirectly … there is already empirical evidence of climate change having amplified more than one-half of all known human infectious diseases."[i] This paper calls for robust cross-sector collaboration and strategic resource allocation to adapt to these evolving challenges, ensuring sustained progress toward global health outcomes including NTD elimination and the Sustainable Development Goals (SDGs), amid rising climate volatility. The following are key components of a proactive strategy recommended by partners:

Build Evidence to Drive Investments: Strategic resource allocation and resilient health system design requires a comprehensive research agenda to inform partner prioritization and coordination. Increased investment in generating evidence linking climate and specific NTDs is needed and should be advanced by integrating the research agenda into core initiatives of climate action and NTD elimination. Policymakers need additional evidence to inform national action planning approaches to climate adaptation or mitigation strategies that impact health systems development and outcomes.

Integrate NTD Elimination and Climate Action: Using WHO's approach in the 2030 roadmap, health systems must integrate climate resilience through programmatic actions, cross-cutting approaches, and shifts in operating models. In line with WHO's crosscutting recommendations, Universal Health Coverage including large-scale disease elimination should be integrated into key climate action initiatives within the United Nations Framework Convention on Climate Change (UNFCCC) focused on health, including health indicators in the global stocktake. These initiatives should support the adoption of essential health service packages that include NTD interventions in endemic countries that are also affected by climate change.

Foster Greater Cross-Sectoral Learning and Collaboration: Integrating climate resilience strategies into health systems is critical, and requires investing in health infrastructure and fostering cross-sector collabo-ration. There are growing opportunities to engage new stakeholders to integrate NTD elimination and climate action at the local, national, and global levels. An interdisciplinary approach should be fostered to collaborate across sectors to maximize the co-benefits of climate action, NTD elimination, and UHC. By leveraging existing networks, partners can collaborate to co-invest in priority areas needed to advance research, capacity building, health systems development, and policy advocacy.

Navigating Uncertainty to Build Resilient Health Systems

The Need for Cross-Sectoral Collaboration

Partners recognize the importance of learning and collaboration across multiple disciplines to advance disease elimination and build climate-resilient health systems amidst an evolving climate and health agenda. The 2023 report of the Lancet Countdown on health and climate change recognized that "the multiple and simultaneous risks of climate change are amplifying global health inequities and threatening the very foundations of human health."[ii]

> "What it does is potentially subvert the current road map. There is going to be less stability in transmission patterns, which means that current paradigms for elimination and eradication for most NTDs are no longer fit for purpose. There is a lot more uncertainty."
>
> –Dr. Mark Booth
> Climate and NTDs researcher,
> Newcastle University

As climate change impacts the communities we serve, the incidence and prevalence of NTDs are being altered by shifts in urbanization and migration patterns, conflict and political instability, and deforestation and other changes in the environment.[iii] The immense uncertainty these shifts are creating across sectors poses a significant challenge for donors and policymakers when shaping resource allocation strategies.

Preventing setbacks to the progress made in reaching SDGs requires effectively navigating this uncertainty. In turn, collaboration across sectors will undoubtedly be a critical factor in the future financing, policy, programming, and research initiatives required to mitigate the risks posed by climate change and adapt and build the resilient health systems we need.

Vulnerability and Inequity Across Systems

Over 3 billion people across multiple regions are highly vulnerable to climatic hazards, and there is an alarming overlap in where the impacts of climate change are likely to be most severe and those regions already disproportionately affected by NTDs. The disparate impacts are borne by populations living in low-income countries and those in disadvantaged communities of middle-income countries, especially in Africa and the Western Pacific region (Figure 1).[iv]

Acknowledging the vulnerabilities across systems created by climate change is essential to maintaining progress toward eliminating NTDs and achieving the Sustainable Development Goals (SDGs). People living with NTDs already often endure long-term physical disabilities, stigmatization, and diminished productivity, collectively impacting multiple dimensions of their well-being. In addition to the health impacts of NTDs, the financial strain on patients and families in low-income countries is considerable. For example, costs of human African trypanosomiasis were over 40% of annual household income for families in a typical rural community in the Democratic Republic of Congo, and over 75% of households affected by leishmaniasis in Bangladesh, India, Nepal, and Sudan experience financial hardship when obtaining care.[v]

As extreme weather events become more common, we must learn from the historical record showing that these "events create the sorts of environmental and social conditions in which many infectious diseases of humans and, often, of other animals thrive."[vi] Rising temperatures and population displacement are leading to new migration patterns, influencing how the geographic range of disease vectors can expand, exposing new populations to infections previously contained in specific regions.[vii]

Projections of severe impacts of climate change caused by warming of 4°C highlight the potential for multiple severe impacts to occur at the same time, such as wildfires, flooding, drought, extreme heat, and food insecurity (Figure 2).[viii] While Africa and the Western Pacific regions bear much of the burden of climate change impacts, their contributions to global emissions are much lower than countries less severely impacted by climate change. Additionally, limited adaptive capacity makes many countries in those regions particularly vulnerable, as limited healthcare infrastructure and resources will make implementing effective interventions increasingly challenging.

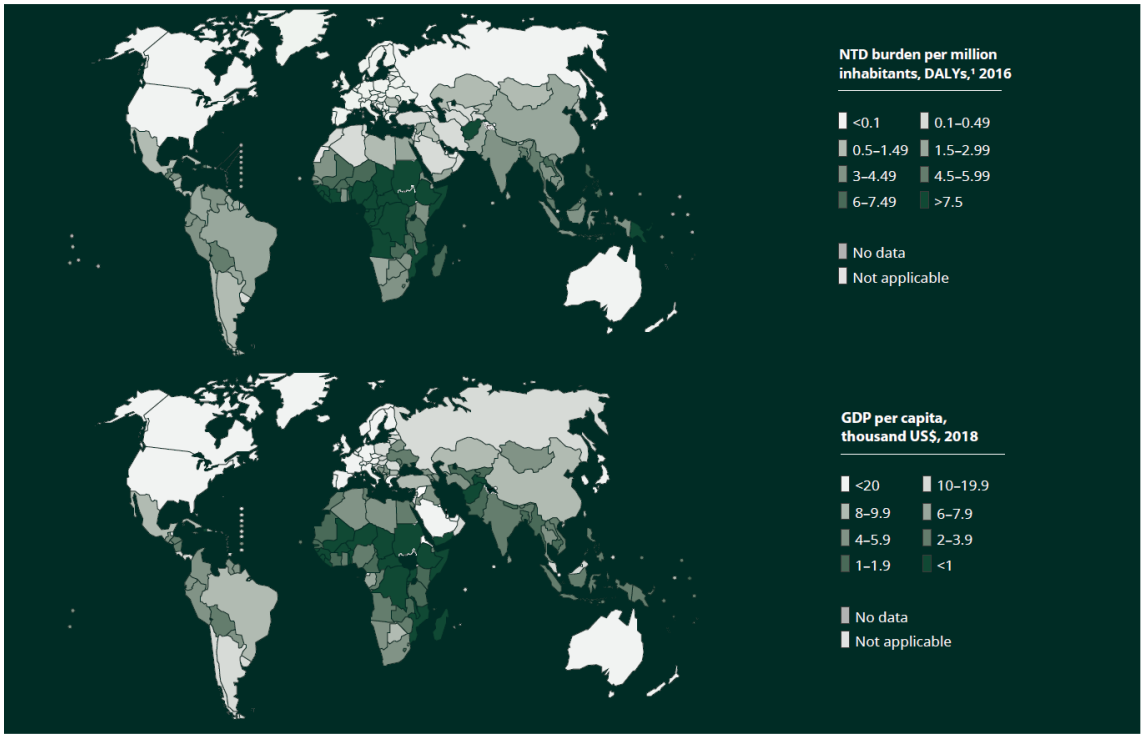

***Figure 1**. Geographical spread of NTD burden and gross domestic product (GDP)*

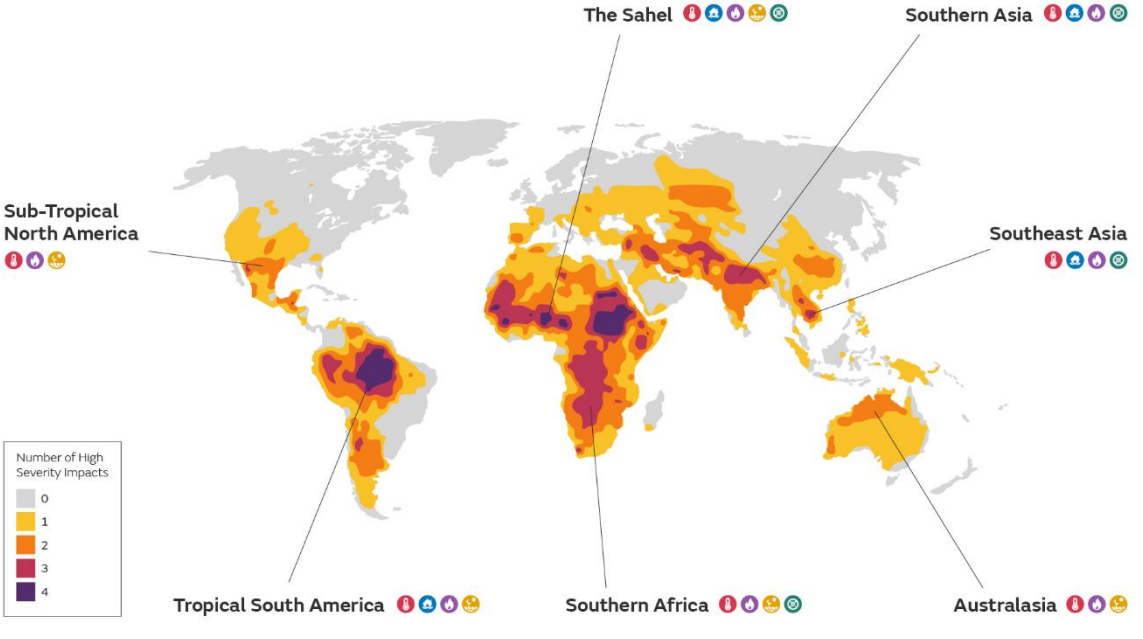

***Figure 2**. Geographical distribution of where multiple severe impacts may occur at similar times at 4°C of global warming above pre-industrial levels. Categories of severe impacts include extreme heat stress risk, river flooding, drought, and wildfire risk, overlaid with an indicator of food insecurity.*

Extreme weather events intensified by climate change disrupt healthcare infrastructure, hinder the delivery of essential NTD interventions, and strain already limited resources. Given the increasing unpredictability of extreme weather patterns, it is difficult for health systems to implement proactive measures. Scarce resources in affected regions may need to be increasingly diverted towards disaster response, leaving fewer investments for education and economic development, thereby reinforcing systemic vulnerability. As these disruptions to healthcare systems and socioeconomic development increasingly occur simultaneously, the challenges faced by communities already burdened by the health and socioeconomic ramifications of NTDs will intensify.[ix] In recent decades the number of extreme weather events has more than tripled, and worldwide economic costs from natural disasters have consistently outpaced the 30-year average of $140 billion annually. Projections estimate that due to climate change, average global incomes may be reduced by up to a quarter by 2100.[x]

The Co-Benefits of Integrated Multi-Sectoral Action

Addressing the increasingly uncertain and inequitable systemic impacts of climate change requires a multi-sectoral approach that engages stakeholders from both the climate and health sectors, among others. This approach should be grounded in collaboration, transparency, and active community engagement. Given the significant overlap in systems-level contributions to universal health coverage and multiple SDGs, climate action and NTD elimination present notable co-benefits such as improved health systems, enhanced resilience to environmental and health-related shocks, reduced poverty, and environmental conservation. The latest report by the Intergovernmental Panel on Climate Change (IPCC) highlights the importance of integrated mitigation and adaptation measures that mainstream health across various policy areas, which can yield substantial health benefits.[xi] The co-benefits of these integrated efforts align and contribute to multiple SDGs, including but not limited to ensuring healthy lives and well-being (SDG 3), ending poverty in all its forms everywhere (SDG 1), climate action (SDG 13), clean water and sanitation (SDG 6), sustainable cities and communities (SDG 11), partnerships for the goals (SDG 17), and others (Figure 3).[xii]

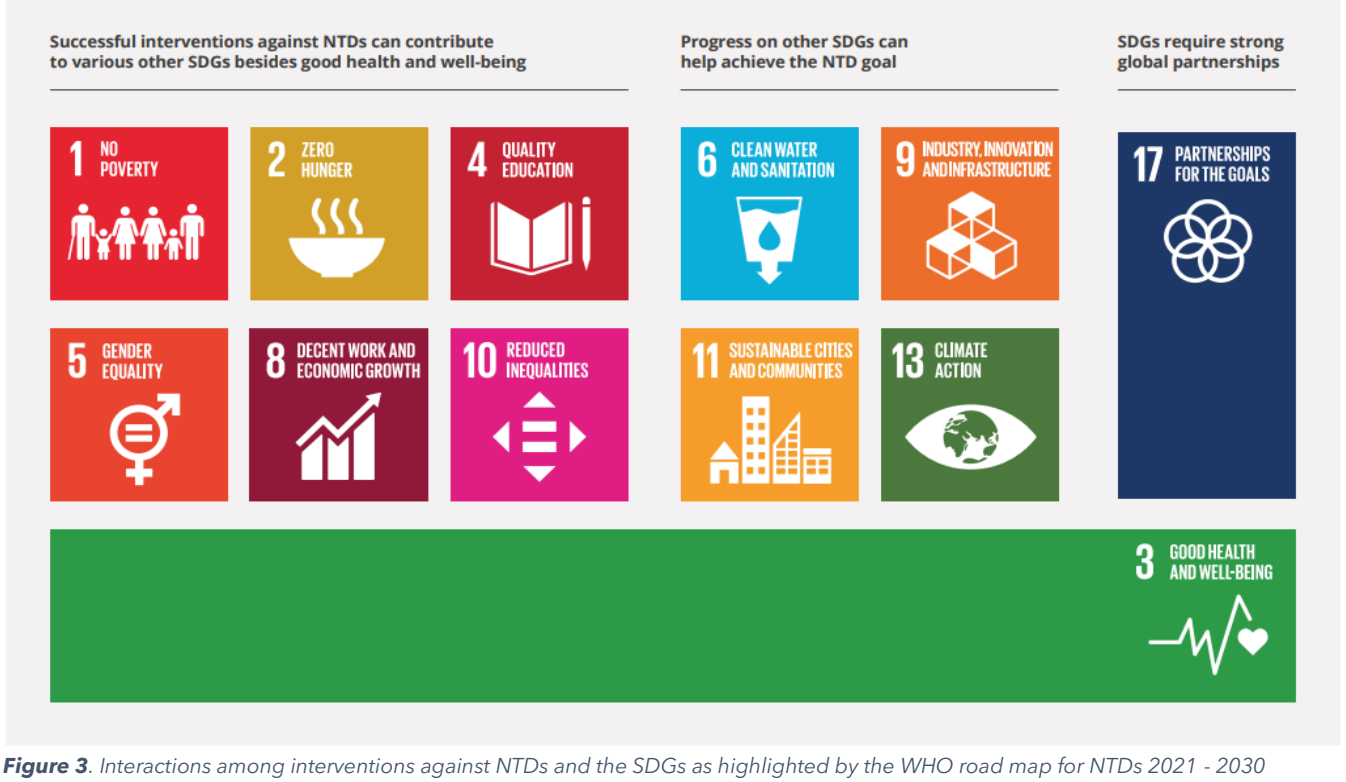

Figure 3. *Interactions among interventions against NTDs and the SDGs as highlighted by the WHO road map for NTDs 2021 - 2030*

Multiple stakeholders from systems that are facing risks from the impacts of climate change are in a position to influence both climate action and health outcomes. This presents opportunities to engage new partners to maximize these co-benefits across SDGs. Interventions against NTDs are often cost-effective investments that can reduce financial strain on households and contribute to achieving multiple SDGs.[xiii] Interventions can contribute to the alleviation of poverty, enabling people to pursue a quality education, lead productive lives, access clean water and sanitation, and promote equality.[xiv] For example, a two-round school-based deworming campaign with mebendazole in Laos cost only $0.13 per year per child, while mass drug administration (MDA) costs to eliminate lymphatic filariasis were estimated by a seven-country study to range from $0.07 to $2.67 per person treated.[xv] At the same time, NTD control and elimination efforts must adopt an integrated and comprehensive approach that not only addresses human treatment but also targets environmental interventions, which can more effectively reduce disease burden and alleviate poverty in co-endemic communities.

Thus, addressing these issues collectively can significantly improve both public health and environmental sustainability. Climate action measures to reduce greenhouse gas emissions, promote sustainable land use, and improve access to clean water and sanitation lead to NTD prevention and a decrease in transmission rates, ultimately reducing the burden of these diseases on communities. Additionally, integrating NTD programs with climate adaptation strategies can build community resilience to these overlapping health risks. For example, strengthening healthcare systems and implementing early warning systems can help communities prepare for and respond to climate-related health emergencies while also addressing NTDs. Finally, there are long-term cost savings and other economic benefits to integrated systems response—preventive measures such as vector control, vaccination campaigns, and habitat restoration are more cost-effective than treating advanced stages of NTDs or responding to climate-related disasters. Additionally, investments in innovation, green infrastructure and technology, and renewable energy can stimulate economic growth while improving public health outcomes and mitigating climate change.

By recognizing and leveraging the interconnectedness of climate, health, and environment, policy-makers can develop holistic national and local approaches that maximize co-benefits and contribute to sustainable development and improved well-being for all.

Key Recommendations for a Climate-Resilient Approach

Build Evidence to Drive Investments

Partners agree that developing a more robust scientific evidence base is a key priority. Policy and financial resource allocation should be driven by a strong evidence base highlighting the broader impacts of climate change on health and, more specifically, on NTDs. The current lack of a clear and comprehensive understanding of climate impacts on NTDs and the effectiveness of related interventions limits our ability to optimize investments and resource allocation strategies.

> "Practice and policy are where the rubber meets the road. We can do all the research to feed into the policy, but without the practice part it becomes a problem."
>
> –Dr. Martin Muchangi
> Director for Population Health and Environment, Amref Health Africa

The existing body of research underlines the urgent need for an interdisciplinary research agenda that integrates climate science, public health, and other relevant fields. This approach is essential to effectively investigate the impact of climate change on NTD elimination. While some current research has revealed that historically observable patterns of exposure and transmission are becoming less stable—likely due to climate change—notable research gaps remain. Addressing these gaps is essential to deepen our understanding of these changes and adapt investment and implementation strategies accordingly.

Growing evidence shows that the geographical spread and distribution of parasitic diseases are being altered by climate change, leading to emergence and reemergence of disease vectors in areas where habitats become more hospitable.[xvi] However, other studies indicate a varied impact on transmission risk, with some areas experiencing increased suitability and others decreased suitability for vector-borne diseases.[xvii] A growing body of research led by the WHO reveals evidence of the impact of climate change on health and select NTDs and malaria. There is supporting evidence showing impacts on the range, behavior, and intensity of lymphatic filariasis, dengue, and malaria vectors. However, there is also a paucity of information on how climate change may influence NTDs in the future, necessitating a focused effort to invest in research that fills these knowledge gaps.[xviii]

Moreover, the recently published, "Climate change, malaria and neglected tropical diseases: a scoping review", in the *Transactions of the Royal Society of Tropical Medicine & Hygiene* with support from Reaching the Last Mile, yielded several instructive findings, including:

- A distinct feature of the climate crisis is the rapid and destabilizing pace of change its impacts have on underlying global ecosystems. The uncertainty this generates regarding the future epidemiology of multiple diseases (not only those that have historically manifested as epidemics, but also those formerly considered as stable and endemic) is alarming.
- There is an urgent need to safeguard global health gains by investing in and scaling up proven interventions and making more progress before impacts of climate change render those interventions ineffective.
- The lack of predictability, even over short timeframes, requires existing surveillance and intervention systems to be reviewed and improved to inform resource allocation strategies. Integrated surveillance and intervention systems, covering multiple diseases and taking a One Health approach are needed.
- Integrating climate resilience into health systems is critical. This should encompass investing in health infrastructure, fostering cross-sectoral collaboration, adapting to the needs of displaced

populations, improving access to health products, and accelerating research and development to fill known gaps.[xix]

More research is needed to determine the extent to which climate change will impact control and elimination efforts across all NTDs. Moreover, there is a need to better understand which regions will be more exposed, who the most affected populations are, and how to mitigate those vulnerabilities. Policymakers need additional evidence to inform prioritization of adaptation or mitigation strategies and national action planning. The uncertainty of NTD transmission and the paucity of research on the effectiveness of adaptation and mitigation on elimination strategies presents significant challenges to establishing effective country-level agendas. Additional research in these areas can inform how partners across the ecosystem invest in and collaborate to implement strategies that maximize the co-benefits of adaptation, mitigation, and climate-resilient health systems development.

Partners advocate for a comprehensive research agenda to advance our understanding of the impacts of climate change on NTDs:

- ✓ Increase investment in generating evidence linking climate and specific NTDs, along with the development of localized monitoring models and a central repository of data and resources.
- ✓ Advance longitudinal studies tracking the influence of climate variables on the spatial and temporal distribution of disease vectors and NTD transmission dynamics.
- ✓ Investigate the socioeconomic and demographic factors that amplify vulnerability to NTDs in the context of climate change.
- ✓ Generate comprehensive studies examining the cost-effectiveness and scalability of climate-resilient strategies and interventions with co-benefits across sectors that advance UHC.
- ✓ Build interdisciplinary collaboration among researchers beyond just climate and health sectors, from fields such as the arts, engineering, education, ecosystem management, and urban design, to advance our understanding of how to effectively eliminate NTDs amidst climate change.

Integrate NTD Elimination and Climate Action

While we do not fully understand the extent of climate impacts on the prospects for NTD elimination, we must account for the uncertainty and risk that lies ahead in developing effective intervention strategies. Climate-resilient NTD elimination approaches may not only bolster the effectiveness of current disease control and elimination measures, but also contribute to achieving SDGs and building long-term climate resilience in communities burdened by NTDs.

Policies and guidelines at the global and regional levels need to emphasize integrating NTD control and elimination with broader climate resilience initiatives across sectors. This will ensure a more comprehensive response at national levels that accounts for the socioeconomic and environmental factors influencing disease transmission locally. For example, interventions and targets for the reduction of climate-sensitive diseases, including NTDs, should be included as priority actions for the health sector in countries' Nationally Determined Contributions, under the Paris Agreement, to help adapt to and mitigate against the impacts of climate change. These commitments could help governments to align and mobilize political and financial resources both for their fight against NTDs and their climate objectives.

The pillars of WHO's 2030 NTD road map are grounded in the One Health approach, which can serve as a model to adapt. Ultimately, strategies should embody a holistic and adaptable approach that acknowledges the complex interplay between health, environmental factors, social determinants of health, and climate resilience in the pursuit of NTD elimination. Climate considerations can be integrated into the three key elements of the approach in the road map:

- **Accelerating programmatic actions** must be done with the integration of the dynamic challenges posed by climate impacts on NTDs and should emphasize the need for climate-responsive measures.
- **Cross-cutting approaches** should enable comprehensive and integrated responses that engage a broad spectrum of stakeholders, recognizing the interconnected nature of climate impact risks with health, environmental shifts, and socioeconomic development.
- **Changing operating models and culture to facilitate country leadership** should ensure that strategies are tailored to the specific needs of each country and to the context of the climate impacts they are experiencing, to promote long-term sustainability in the battle against both NTDs and climate-related challenges.[xx]

Although more research is necessary, some interventions and strategies have shown to be potentially effective in eliminating NTDs within the context of a changing climate. Interventions that combine traditional public health measures with climate-responsive strategies are promising, demonstrating the need for flexibility in response to evolving environmental conditions. For example, the implementation of integrated vector management, which involves incorporating climate data to mitigate changes in vector distribution, has proven effective in controlling diseases like malaria.[xxi] It has also played a crucial role in recent initiatives aimed at verifying the elimination of river blindness for the first time in a West African context. Additionally, mobile health solutions that have been useful in speeding up the diagnosis of NTDs have potential to be adapted to improve surveillance of disease dynamics in areas impacted by climate.[xxii] Research has also found that the effectiveness of MDA for NTDs such as trachoma and lymphatic filariasis is sensitive to climate change due to a range of factors, spanning changing rainfall impacting vector behavior and predictability, to the exacerbation of NTD burdens during increased periods of drought.[xxiii]

Furthermore, climate change mitigation and adaptation actions, as well as NTD interventions, need to be integrated with broader national and international health and development agendas. Despite

posing a threat to the hard-won gains made by NTD programs over the past two decades, the COVID-19 pandemic brought to light the urgent need to better prepare countries and populations for future health emergencies. Increased intersectoral approaches are key to ensure that communities and systems are prepared to face such events and disruptions. The integration of measures to control climate-related diseases, including NTDs, with pandemic preparedness and response plans and strategies, is essential to ensure progress against disease control and elimination is not stalled, and to prevent further pushing populations living in NTD-endemic countries into poverty.

Finally, to achieve universal health coverage, it is critical to tackle NTDs and other related climate-linked diseases, which hinder progress and keep affected communities in a cycle of poverty. To attain UHC, it is crucial to adopt and augment national insurance schemes to provide a comprehensive package of essential health services accessible by all citizens, particularly the most economically vulnerable. Integrating NTD interventions into these schemes is essential for success. Including NTD control and elimination activities into an essential benefits package for health services would not only contribute to SDG 3.8: to 'achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all'. This inclusion would also enable citizens to live their lives with greater freedom, financial security, involvement in their community, and productivity.

Recognizing the urgency of this challenge, it is important to prioritize it in current and future resource allocation and programmatic strategies. Investments in community wide treatment and prevention are needed to move quickly and urgently to reduce disease prevalence and reach elimination, ensuring transmission is not exacerbated by climate change.

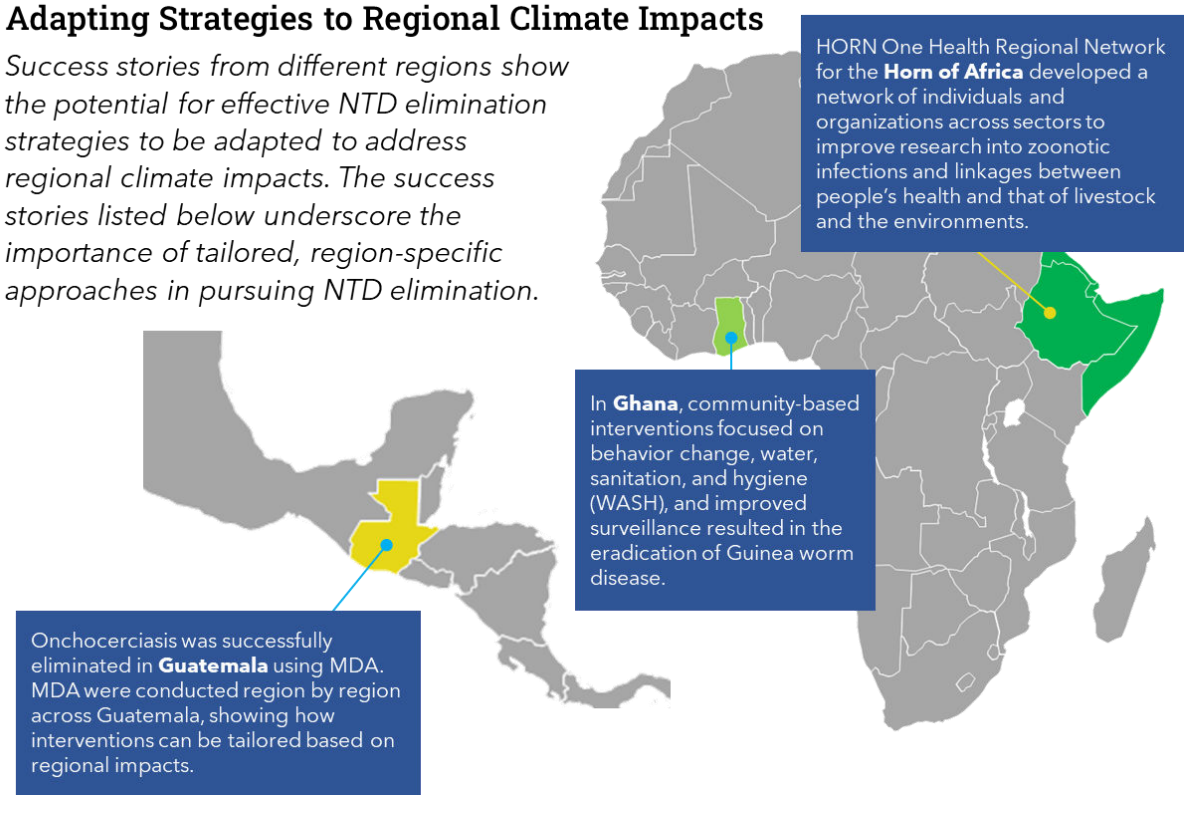

Figure 4. *Success stories of NTD interventions in different regions that can potentially be adapted to address regional climate impacts.*

Foster Greater Cross-Sectoral Learning and Collaboration

As the collective understanding of the impact of climate change upon NTD control and elimination grows, there is an opportunity to elevate and share lessons from NTD efforts within the mainstream health and climate discourse. COP28 provided a critical platform for the global health community to advocate for key multisectoral initiatives that respond to climate change impacts on health. The Reaching the Last Mile Forum, held on the inaugural "Health Day" at COP28, marked a significant milestone. Reaching the Last Mile, the Gates Foundation, and global partners announced they would expand the Reaching the Last Mile Fund (RLMF) from $100 million to $500 million to increase its reach from seven to 39 countries with the goal of eliminating river blindness and lymphatic filariasis from the continent of Africa by 2030.

Alongside other political and financial contributions to the intersection of climate and health, this commitment offers an opportunity to leverage significant degrees of transparency and collaboration in support of greater climate action and disease elimination. The momentum of continued collaboration among partners involved should be used to bring additional stakeholders into a multi-sector approach to climate-resilient health systems development.

Public and private partners across the fields of the arts, education, climate science, conservation, ecosystem management, engineering, medicine, public health, urban design, and public policy among others all play pivotal roles in successful integration efforts. The collective wisdom of partners from across society has the potential to build resilient health systems that not only combat NTDs effectively but also contribute to broader climate change resilience within communities.

Partner coordination, collaboration, and resource allocation strategies should be informed by scenario analyses and scientific

Building Momentum

Several initiatives in the last decade and a half collectively signify a growing recognition of the importance of collaborating across sectors, increasingly within the context of climate change.

The London Declaration on NTDs

In 2012, global health leaders fostered collaborative efforts between pharmaceutical companies, governments, and nonprofit organizations to provide essential medications for NTDs.

The Global Vector Control Response (GVCR) 2017–2030

Released by the WHO in 2017, called for vector control strategies and acknowledged the influence of climate change on the distribution of disease vectors and the need for adaptive measures.

WHO's 2021-2030 Road Map for NTDs

The road map, published in 2020, recognized the importance of considering climate and environmental impacts on NTD control through the One Health approach and the need for additional action. It emphasized the importance of multisectoral action to integrate and mainstream approaches.

The Kigali Declaration

In 2022, building on the progress of the last decade, global health leaders from the public and private sectors reconvened to reiterate their commitment to end NTDs and address the human, economic, and social burden of NTDs. The Declaration adopted the targets of the WHO's NTD road map for 2030.

COP28 UAE Climate and Health Declaration

In addition to hosting the first Health Day at COP and pledges made by the Reaching the Last Mile Forum, over 120 countries backed the Declaration acknowledging the need for governments to prepare healthcare systems to cope with climate-related health impacts.

evidence of climate impacts on disease burden and health systems. Drawing upon an acceleration of research and development to fill known gaps, we can integrate climate resilience and health system development and adapt to shifting needs of communities at risk. A significant opportunity exists for national governments, finance institutions, and philanthropists to unite and co-invest in targeting climate, health, and conservation, as outlined by insights from our partners and informed by the WHO's recently published scoping review on climate change, malaria, and NTDs.

Priority areas for co-investment

Research, Development, and Innovation

- Support research addressing knowledge gaps like understanding transmission dynamics for specific NTDs, modeling climate change impacts on NTDs, and projecting intervention effectiveness under future climate scenarios.
- Strengthen surveillance systems and integrated interventions for malaria and NTDs, essential for adaptable delivery programs.
- Foster collaborative open-source modeling platforms to standardize and accelerate research on climate-NTD interactions.

Capacity-Building Programs

- Enhance researcher and institutional capacity and leadership in NTD-endemic and climate vulnerable regions for contextually relevant analyses.
- Invest in healthcare infrastructure, workforce training, community empowerment, and climate & health research capabilities.

Community-Based Health Systems

- Support health systems integrating climate adaptation and NTD control, including water and sanitation improvements, health education, and sustainable livelihoods.
- Promote interdisciplinary research for comprehensive localized risk assessments of different adaptation, elimination, and mitigation scenarios.
- Elevate community leaders and align with the needs of affected populations.

Policy Advocacy and Governance Support

- Advocate for policies prioritizing climate resilience, public health, and environmental conservation.
- Support implementation and enforcement at all governance levels.
- Partner with environmental justice organizations and youth movements that bring experience working with local communities around the world.

Leverage Networks Across Climate and Health

Addressing the impact of climate change on NTD elimination efforts is of paramount importance. We should build on the momentum of COP28 to ensure progress in the elimination of NTDs continues to advance, not just in policy, but in practice. There is an opportunity for us not only to prevent setbacks but also to advance disease elimination while shaping climate-resilient health systems around people-centered care.

Partners have emphasized the importance of starting with smaller initiatives and building momentum, such as forming a working group within the NTD community that taps into different alliances or coalitions. Existing coalitions and partnerships, such as those in the table below (Figure 5), serve as potential frameworks for joint efforts and can be leveraged by partners across the climate and health ecosystem to advance and learn from emerging perspectives shared by partners. By tapping into existing alliances and collaborative initiatives, partners can create a unified front across sectors to amplify the importance of climate action and NTD elimination to stakeholders across the climate and health ecosystem, and beyond.

We welcome partners from across sectors and existing coalitions to join us in advancing the importance of integrating climate action and NTD elimination to build climate-resilient health systems. Partners can grow and leverage alliances, coalitions, and networks where they have influence to ensure that the perspectives highlighted in this paper are appropriately challenged, contextualized, and incorporated into efforts to advance NTD elimination while adapting to and mitigating the impacts of climate change.

Opportunities to Leverage Collaboration Across the Climate + Health Ecosystem

Coalition or Partnership	Approach to Impact	Regional Focus
Clim-HEALTH Africa	The network is a virtual hub of expertise from African and international institutions, universities, and NGOs building the capacity of African health and climate communities to integrate climate challenges into policy and programs.	Africa
Pan-African Climate Justice Alliance (PACJA)	PACJA is a consortium of over 1,000 diverse organizations from 51 African countries promoting climate, health, and environmental justice at the country, continental, and global levels.	Africa
Climate Health Africa Network for Collaboration and Engagement (CHANCE) Network	CHANCE facilitates interactions between climate and health communities of practice by networking and developing synergies; exchanging learning; providing technical support; and informing policy.	East and Southern Africa
Climate Action Network (CAN)	CAN is a network of over 1,900 civil society organizations from 130+ countries fighting the climate crisis using movement building and collaborative platforms, including a health working group, to center people most impacted.	Global
Global Health Security Agenda (GHSA)	The GHSA is multi-sectoral group of more than 70 countries, NGOs, and private sector companies aiming to build and improve country capacity and leadership in the prevention and effective response to infectious disease threats.	Global
Nature4Climate (N4C)	N4C is a coalition of 20 organizations across the environmental sector advancing nature-based solutions with health and economic benefits through partnerships, policy, and finance to build an equitable and sustainable future.	Global
Planetary Health Alliance (PHA)	PHA is a consortium of over 400 universities, NGOs, research institutes, and governments from over 60 countries that disseminates research and convenes stakeholders to integrate planetary health into global health and development.	Global
The Climate x Health Forum	The Climate x Health initiative was formed in the lead up to COP28 to build on existing efforts to channel growing interest and engagement in the climate and health landscape toward meaningful joint action for people and planet.	Global
The Global Climate & Health Alliance	The Alliance is made up of health and development organizations from around the world that aim to minimize the harmful health impacts of climate change and maximize the health co-benefits of climate change mitigation.	Global
The World Bank's Climate and Health Program	The Program aims to help countries assess their vulnerabilities through climate and health vulnerability assessments (CHVA), scale up investments in country and evidence led interventions to reduce the impact of climate change and facilitate collaborative approaches to health system policies and interventions.	Global

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