



V Global Conference on Health and Climate Brasília, Brazil  
July 29–31, 2025

Selected **IDEAS LAB** Submissions

- [AI4PEP - AI for Climate-Resilient Health Systems across the Global South](#)
- [Popular Health Surveillance in the face of Climate Emergencies.](#)
- [“Towards Healthy, Safe, and Sustainable Food Procurement in Health Settings for Transformative Action”](#)
- [Geohealth- Mapping Climate-Driven Water Toxicity and Health Impacts Using GIS](#)
- [Digital Public Infrastructure \(DPI\) for Climate and Health](#)
- [Climate Adaptive and Resilient Ecosystems for Maternal and Neonatal Health \(CARE-MNH\)](#)
- [The Climate x Health Adaptation and Resilience Tool \(CHART\) - Protecting Health in a Changing Climate](#)
- [Malawi’s strategy to build health system resilience amid climate change](#)
- [GeoHealth Hub Peru – Low-Cost Air Monitoring for Health Equity](#)
- [The usage of The Cidacs Climate and Environmental Platform \(CIDACS-CLIMA\) to conduct research on Equity in Migration and Environmental adaptation \(EMERGE study\)](#)
- [“Climate Resilient Innovations for Malaria Control and Elimination”](#)
- [PREPARE-CC – Climate Change Preparedness, Resilience, and Adaptation in Complex Crises](#)
- [The benefits of synergized adaptation and mitigation actions in health systems.](#)
- [“Financing the Belém Health Action Plan through Blended Capital Solutions”](#)
- [Health in UNFCCC Negotiations: A Human Case for Ambitious Climate Action](#)
- [Andean Health and Climate Change Plan. Regional cooperation and integration.](#)
- [From Roots to Routes: Youth Driving Sustainable Change](#)
- [A Unified Health Voice for COP30: Regional Collaboration from Latin America and the Caribbean](#)
- [Ultra-local observatories for climate and health action](#)
- [Operationalizing Healthcare System Transformation within Planetary Boundaries: The Lancet Commission on Sustainable Healthcare](#)
- [Drought and health outcomes in Brazil: a study by the Cidacs-Clima platform](#)
- [Grand Challenges Brazil - Building awareness of climate-driven health challenges through community engagement](#)
- [REACH: Peer networks of health workers lead climate-health response](#)
- [Predictive Modelling for Climate Driven Malaria Dynamics in Urban African Regions](#)
- [Exploring Just Transitions for Climate Resilient Health Care Supply Chains](#)
- [Youth Power for Climate-Resilient Health: Bridging Advocacy, Action, and Equity](#)
- [Community Health in SemiArid Areas: Integrated Solutions to Climate Stresses in Sindia \(Senegal\)](#)





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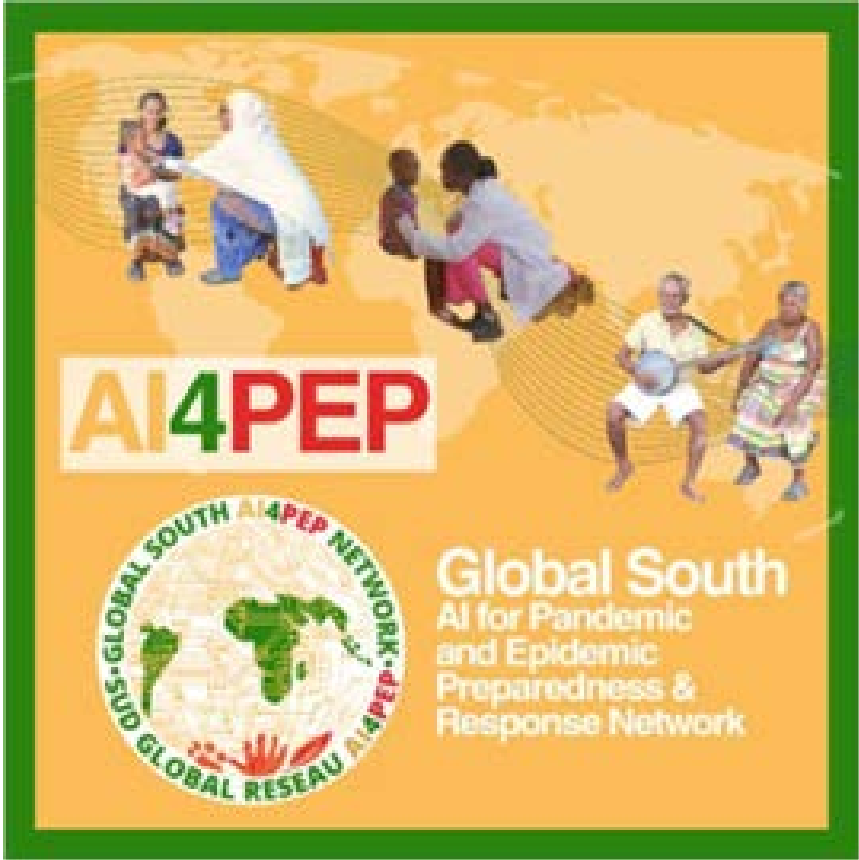


1. Project Title

AI4PEP - AI for Climate-Resilient Health Systems across the Global South

2. Context & Motivation

As climate change intensifies, healthcare systems, especially in the Global South, face growing challenges such as fragile infrastructure, limited resources, and rising disease burdens. Global South countries are facing climate-sensitive health threats amid disease surveillance and outbreak response challenges. Robust health systems need powerful AI innovations that can support real-time disease monitoring and early detection, improve diagnostic accuracy, and facilitate effective public health responses.



Caption: Global South AI for Pandemic and Epidemic Preparedness and Response Network.  
Credit: AI4PEP

3. What Was Done

AI4PEP established a network of artificial intelligence (AI) experts and public health professionals from institutions in 19 countries across the Global South to co-create and deploy AI-powered health solutions. Working with governments, health workers, and communities, our teams in Africa, Asia, the Middle East & North Africa, and Latin America & the Caribbean are improving how we predict, detect, and respond to climate-sensitive diseases. Together, we have created practical AI tools like early warning systems to help communities prevent and prepare for outbreaks of diseases such as malaria, dengue, cholera, and tuberculosis. These innovations are reshaping public health responses, building resilient health systems, and empowering communities with the tools and knowledge they need to protect themselves. Our efforts are saving lives, strengthening local health systems, and making sure no one is left behind.

4. Results and Insights

Our AI-powered solutions are being leveraged by governments, health agencies, and local communities to model disease spread, improve diagnoses, and support effective interventions. We are also helping to shape policies on the responsible and equitable use of AI for health in Global South countries.

5. Innovation & Impact

AI4PEP merges Southern-led research expertise with AI-based solutions that are tailored to local and regional disease context, offering a scalable model for Global South leadership in digital health innovation.

6. Cross-Cutting Elements

- Interdisciplinary approach
- Community participation
- Gender equity

7. Main Takeaways or Recommendations

- I-powered innovations can strengthen climate-sensitive health systems.
- Global South-based researchers are trailblazers for local digital health capacity.

8. Resources & Links

www.ai4pep.org

LinkedIn: @AI4PEP – Global South AI for Pandemic and Epidemic Preparedness and Response Network

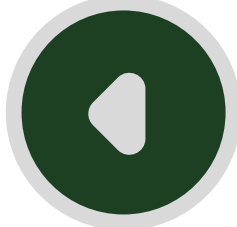
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### 1. Project Title

Popular Health Surveillance in the face of Climate Emergencies.

### 2. Context & Motivation

This experience presents the Popular Health Surveillance as a strategy to enhance health governance in the territory in the face of climate emergencies related to floods and droughts.

### 3. What Was Done

Through an emancipatory action research, indigenous peoples from the northeast and peasants from the MST in southern Brazil, representatives of the Unified Health System and academia participated in national and territorial workshops aimed at the elaboration of a Guide for Popular Health Surveillance in the face of Climate Emergencies.

### 4. Results and Insights

By integrating traditional knowledge, community practices, and technical knowledge from academia and health services, popular surveillance promotes a participatory and transformative approach, capable of addressing the challenges of climate emergencies in an integrated and sustainable manner.

### 5. Why is your idea innovative? Can it be scaled ord replicated?

It is a new modality of surveillance centered on popular protagonism in the defense of life that has a high emancipatory character. It has great potential to scale up to the Global South, where there are many weaknesses in the implementation of health rights through effective public policies.

### 6. Cross-Cutting Elements

Data production with control of the entire process by the community  
Affordable data collection technologies  
Generation of shared knowledge and dialogue of knowledge (academic, technical and popular)  
Ancestral and community knowledge in the identification of indicators  
Popular communication  
Articulation with academia, health services and the community

### 7. Main Takeaways or Recommendations

Popular Health Surveillance emerges as a fundamental strategy to strengthen the resilience of communities and enhance the actions of health systems.

The realization of more participatory and emancipatory surveillance practices has a greater capacity to transform realities for the promotion of health and the defense of life.

### 8. Resources & Links

Participatory Website in Health and Ecology of Knowledge: <https://ceara.fiocruz.br/participatorio/>  
Web Series Watch, People!: <https://www.youtube.com/@vigiapovo>  
Watch, People! : a guide to popular health surveillance. <https://ceara.fiocruz.br/participatorio/wp-content/uploads/2023/11/Guia-de-Vigila%CC%82ncia-Popular-em-Saude.pdf>  
Documentary of the experience - Popular Health Surveillance in the Face of Climate Emergencies (English subtitles): [https://www.youtube.com/watch?v=EZ\\_dSUuGcuc](https://www.youtube.com/watch?v=EZ_dSUuGcuc)  
Instagram: [https://www.instagram.com/participatorio\\_em\\_saude/](https://www.instagram.com/participatorio_em_saude/)

### 9. Contact Information

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*This project is developed by the Participatory Program in Health and Ecology of Knowledge at Fiocruz Ceará in partnership with the Coordination of Health Surveillance and Reference Laboratories of the Presidency of Fiocruz and supported by the Alliance for Health Policy and Systems Research and the Emergency Department of the World Health Organization (WHO).*



Photos: Action research workshops on Popular Surveillance in the face of climate emergencies in indigenous and peasant territories (Ceará and Rio Grande do Sul/Brazil)  
Credits: Research collection  
Painting: Tereza Queirós

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1. Project Title

“Towards Healthy, Safe, and Sustainable Food Procurement in Health Settings for Transformative Action”

2. Context & Motivation

This initiative focuses on health systems globally, targeting challenges in implementing healthy, safe, nutritious and sustainable food procurement within health settings. Despite established guidelines, practical and scalable implementation faces significant barriers such as aligning nutrition and sustainability criteria, reducing food waste, building policy coherence, and ensuring equitable access, particularly for vulnerable populations.



Initiative on Climate and Nutrition. Launched at COP27 with the leadership of the Government of Egypt and key international partners: WHO, FAO, UNEP, GAIN and SUN

3. What Was Done

A Sub-task Team, convened by the Alliance on Transformative Action on Climate and Health (ATACH) and co-led by the Initiative on Climate Action and Nutrition (I-CAN), launched multi-stakeholder efforts to develop practical guidance on healthy, safe, nutritious, and sustainable food procurement in health settings. The team drew from the WHO and FAO frameworks and aims to incorporate lessons from government, scientists, academia, and NGOs. The collaborative sessions review standards, share best practices, and develop principles for forthcoming guidance.

4. Results and Insights

- Emphasize that sustainable food procurement can catalyze healthier and safer food environments, contributing to climate action; however, bottlenecks remain, particularly in equity, waste, and practical implementation.
- Establish foundational collaborations across sectors.
- Identify persistent challenges, such as translating policy into scalable practice and ensuring alignment between health, nutrition, food safety and sustainability objectives.
- Highlight the critical need for policy coherence and capacity-building.

5. Why is your idea innovative? Can it be scaled or replicated?

This initiative is innovative for its cross-sector, evidence-based approach, integrating nutrition, climate, equity, and operational considerations in food procurement. It leverages global frameworks and practices to develop guidance that can be adapted across diverse settings, including beyond health, such as hospitals, schools, and other public institutions. This initiative is designed to facilitate scale-up, policy alignment, and knowledge exchange across the nutrition, health, and climate communities, aiming to build on the work of the ATACH Sub-team on healthy, nutritious, and sustainable food procurement in health settings.

6. Cross-Cutting Elements

- Policy Coherence and Equity.
- Interdisciplinary approach.

7. Main Takeaways or Recommendations

- Integrate health, food safety, nutrition, and sustainability criteria in procurement.
- Develop and implement practical, scalable procurement standards.
- Foster multisectoral collaboration and policy coherence.
- Empower procurement officers and food service providers through capacity-building on healthy, safe and sustainable food.
- Ensure equity and inclusivity in all interventions.

8. Resources & Links

- Action Framework for the Development and Implementation of Public Food Procurement and Service Policies for a Healthy Diet.
- Presentation of the Manual on Food Procurement. How together we can make the world's most healthy and sustainable public food procurement.
- Presentation of the Public Food Procurement for Sustainable Food Systems and Healthy Diets (FAO).

9. Contact Information

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## 1. Project Title

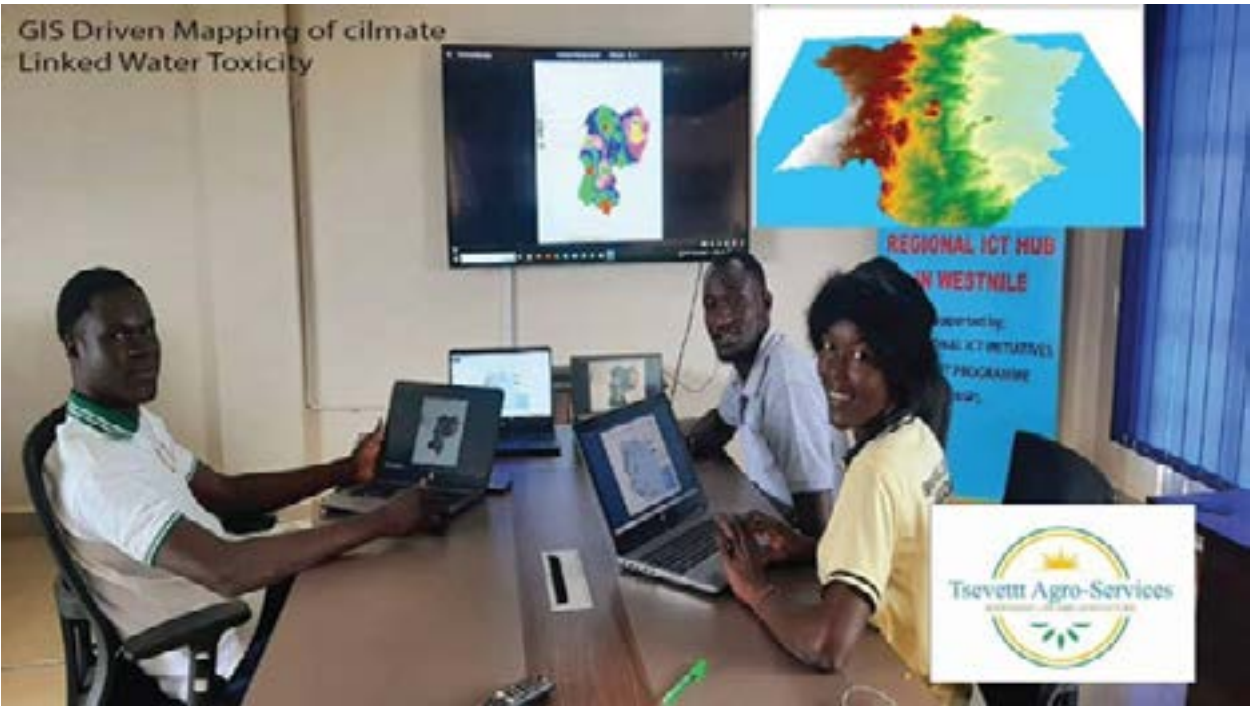
Geohealth- Mapping Climate-Driven Water Toxicity and Health Impacts Using GIS

## 2. Context & Motivation

Uganda's flood-prone West Nile region, communities face increasing health risks from water toxicity caused by climate-driven flooding. Polluted floodwaters contaminate streams, wetlands, and boreholes with heavy metals, affecting both humans and aquatic organisms.

## 3. What Was Done

We are developing a GIS-based flood and water toxicity mapping system, co-designed with local youth, health workers, and researchers. It integrates satellite data, preliminary ground testing of heavy metals and sediments in boreholes and streams, and tissue analysis of aquatic organisms to assess climate-driven water impacts on ecosystems and community health.



Tsevelt Agroservices team analysis the GIS data to map water toxicity, at the office.  
Credit: Tsevelt Agroservices

## 4. Results and Insights

Baseline GIS maps identified flood-prone and polluted zones. Initial lab analysis confirmed heavy metals in fish tissues and water sources. Collaboration with health institutions began to access data on water-induced illnesses. While data integration and community involvement progressed well, limited resources hinder broader water and tissue sampling and full health data access.

## 5. Why is your idea innovative? Can it be scaled or replicated?

It integrates GIS mapping, climate data, and on-ground toxicity analysis to assess flood and pollution risks linking water quality, aquatic health, and human health. The approach is scalable to other flood-prone and resource-limited regions facing similar environmental and public health threats.

## 6. Cross-Cutting Elements

- Youth leadership
- Interdisciplinary approach
- Community participation
- Gender equity
- Indigenous knowledge

## 7. Main Takeaways or Recommendations

- GIS-based mapping can identify climate-induced water toxicity hotspots.
- Community and institutional collaboration is key for sustainability.
- Integrating aquatic organism tissue analysis enhances early detection of health risks

## 8. Resources & Links

LinkedIn: <https://www.linkedin.com/company/tsevelt-agroservices/>

Google drive: <https://drive.google.com/drive/folders/1Gz8tNntR5GFfyV0U4XH5HkrVs9V5WeiM>

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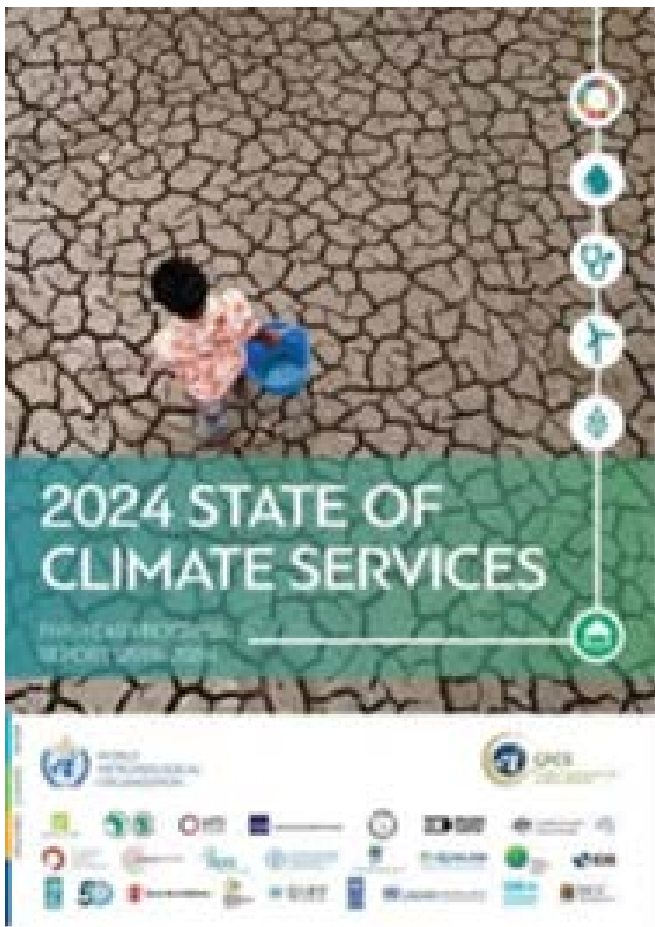
1. Project Title

Digital Public Infrastructure (DPI) for Climate and Health

2. Context & Motivation

Climate change is a growing and urgent health challenge, particularly for populations already facing health and economic disparities. Digital Public Infrastructure (DPI) (a set of interoperable digital systems and foundational building blocks that enable the effective delivery of services, promote inclusion, and support governance that benefits the public) is essential for integrating climate and health data, allowing policymakers and health leaders to make informed decisions as they build climate-resilient health systems. By combining satellite data, weather patterns, and health sector insights, we can better predict disease outbreaks, respond to changing health needs, and mitigate the impact of extreme weather events.

Digital Square is partnering with Wellcome, The Rockefeller Foundation, and the World Meteorological Organization (WMO) and World Health Organization (WHO) Climate and Health Joint Programme to support the development of DPI and digital public goods (DPGs) aimed at enhancing climate- and health-informed data systems. By leveraging cross-sectoral foundational DPI and DPGs, the consortium seeks to advance the operationalization of a shared implementation plan to integrate climate and health data and improve global health resilience to the increasing threats posed by climate change.



The Digital Public Infrastructure for Climate and Health project at PATH is supporting the WHO-WMO Climate and Health Joint Programme to operationalize their 2024 State of Climate Services.

3. What Was Done

We are working at the intersection of climate and digital health in 3 ways:

1. Fostering collaboration and knowledge sharing for integrated data

By adapting and expanding the Global Goods Guidebook to include climate and health use cases, we are helping stakeholders identify, implement, and scale open-source digital health tools that support climate- and health-informed services. The Guidebook is a compendium of Global Goods for Health (a subset of Digital Public Goods), mature and open-source software and services that are adaptable to different countries and contexts. A climate-health maturity model and all submitted software was reviewed by a cross-cutting peer review group of subject matter experts across geographies. It is a resource for policymakers, procurement officials, and health leaders seeking to reduce climate change's health and economic impacts at national and regional levels.

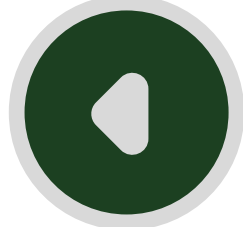
2. Supporting the capacity of the WMO-WHO Climate and Health Joint Programme

The WMO-WHO Climate and Health Joint Programme is a collaborative effort to strengthen, harmonize, and leverage resources and opportunities to empower and support WHO Member States and partners through interagency cooperation. In line with this effort, we support the Joint Programme office to foster knowledge sharing for advanced integration of climate health sciences and services for human health related to climate change, extreme weather and climate, water, air quality, solar radiation, and other environmental hazards. Under this pillar, the project has developed a 3-Year Action Plan for the Joint Office along with two initial climate-health use cases (heat health, and vector-born disease).

3. Advocating for global investment in DPI for climate health

By addressing the intersection of climate change and health in global fora such as the Brazil G20 Health Working Group, the UN General Assembly (UNGA), and the Global Digital Health Forum (GDHF), we underscore the importance of DPI for Health (DPI-H) in mitigating climate change risks and adapting to its impacts, especially in countries at highest risk of loss and damage. We urge donors and country leaders to prioritize funding for digital climate health solutions and advocate for DPI-focused investments to build robust health systems that respond and adapt to the changing climate.

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#### 4. Results and Insights

The development of climate-informed digital health data and information tools is still relatively nascent but rapidly growing field. Related climate-health policy, data privacy and data sharing considerations, and digital public infrastructure to share and visualize interoperable data is critical to decision making for strengthened health systems and healthier lives.

#### 5. Cross-Cutting Elements?

Interdisciplinary approach, Community participation, gender equity, data equity.

Example:

- Indigenous knowledge
- Community participation
- Gender equity

#### 6. Main Takeaways or Recommendations

- Making interoperable climate and health data easily available in a unified platform enhances decision-making for climate-informed health systems and appropriate prediction.
- This is a nascent but rapidly growing field.
- Data sharing policies are essential.

#### 7. Resources & Links

<https://digitalsquare.org/digital-public-infrastructure-for-climate-health-resilience>

<https://globalgoodsguidebook.org/global-goods/>

#### 8. Contact Information

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1. Project Title

Climate Adaptive and Resilient Ecosystems for Maternal and Neonatal Health (CARE-MNH)

2. Context & Motivation

Climate change has caused 32% of heat-related neonatal deaths in 29 LMICs, translating to 175,133 additional neonatal deaths between 2001 to 2019. Evidence suggests that a 1°C rise in temperature leads to a 5% increase in preterm births and a 6% increase in the risk of Low Birth Weight. India contributes significantly to this burden with 18.24% LBW prevalence. Despite these risks, MNH remains largely absent from climate policy frameworks. While global commitments like the Paris Agreement and the WHO's Health National Adaptation Plans (HNAPs) call for integrating health into climate action, few models address MNH directly. There is an urgent need to close this gap by embedding climate-adaptive interventions within MNH systems to protect the most vulnerable populations.

3. What Was Done

PATH, with support from the Children's Investment Fund Foundation (CIFF), synthesized evidence to establish the correlation between climate stressors and maternal and newborn health (MNH) outcomes by identifying key climate stressors, conducted exposure-outcome analysis, public health and economic impact modelling, and mapped locally relevant adaptation strategies to inform the design of Climate Adaptive and Resilient Ecosystems for Maternal and Neonatal Health (CARE-MNH). The model introduces the Maternal Climate Risk Score (MCRS) and District Climate-Health Profile (DCHP) to enable risk stratification and targeted service delivery in vulnerable geographies. CARE-MNH integrates system, service, community, and individual-level interventions to ensure comprehensive protection for pregnant women and children against climate-induced risks. Designed for integration across all levels of care, it supports the mainstreaming of climate adaptation into publicly funded maternal health and broader health system programs to ensure sustainability and scale. Currently, the model is being implemented in two Indian states (Madhya Pradesh and Maharashtra) through the development of Heat Health Adaptation Plans (HHAPs) and Air Quality Health Adaptation Plans (AQHAPs) focused on MNH.

CARE-MNH engages a broad spectrum of stakeholders across academic, government, philanthropic, and implementation sectors to ensure a robust, multi-disciplinary approach. Educational and research institutions such as the Indian Institute of Public Health (IIPH), Gandhinagar, and The Energy and Resources Institute (TERI) contribute to evidence generation and stressor-specific intervention design. Government bodies, including the State Departments of Health and Family Welfare, the State Disaster Management Authorities, and district/ city level officials, play a critical role in integrating climate-resilient interventions into existing MNH and health systems programs. Donors and philanthropies like CIFF to support strategic partnerships and resource mobilization to enable scale.

4. Results and Insights

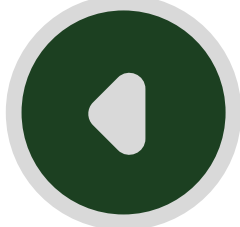
What were the outcomes?

The CARE-MNH initiative conducted a thorough evidence synthesis to investigate both scientific and policy aspects of climate-MNH interrelations. The review was organized around four objectives:

- Identify significant climate stressors such as heatwaves, droughts, floods, and air pollution and their direct and indirect impacts on MNH outcomes;
- Scrutinize the biological, environmental, and social pathways mediating these impacts;
- Evaluate practical, scalable interventions that mitigate risks or facilitate adaptation, particularly in LMICs contexts; and
- Assess pertinent national and international policies, including national and global case studies.

The review examined over 100 peer-reviewed articles, programmatic reports, and policy documents. Exposure to elevated ambient temperatures during gestation was correlated with a 1.05–1.24 times increased risk of stillbirth per 1°C rise and a 1.29-fold heightened risk of low birth weight. Climate change was responsible for 32% of all heat-related neonatal fatalities globally between 2001 and 2019. Increased PM2.5 concentrations were associated with a 37.7-gram reduction in birth weight and a 12% escalation in preterm birth risk per 10 µg/m³ increase. Rising sea levels and drought exerted indirect effects through water salinity, food insecurity, and disrupted health services.

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**5. Why is your idea innovative? Can it be scaled or replicated?**

The CARE-MNH model is unique as it operates at three interconnected levels:

- **Systems level:** Aligns with WHO's Climate-Resilient and Low-Carbon Health Systems (CR-LCHS) framework and India's National Program for Climate Change and Human Health (NPCCHH), it strengthens governance, infrastructure, service delivery, emergency preparedness, and digital surveillance systems.
- **Community level:** Engages local governance platforms at the village, city, and community level to build decentralized preparedness in climate-vulnerable areas.
- **Individual level:** Enables high-resolution outreach to high-risk pregnant women using MCRS integrated into national digital maternal and child health platforms.

To ensure scalability and sustainability, the model maps adaptation interventions to entry points within existing MNH and Health System Strengthening programs, thereby avoiding parallel systems and promoting convergence with national health policies and funding streams.

**6. Cross-Cutting Elements**

- Indigenous knowledge
- Community participation
- Interdisciplinary approach
- Gender equity

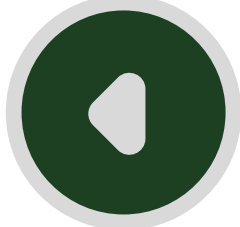
**7. Main Takeaways or Recommendations**

- Integrating climate adaptation into ongoing public health investments and existing MNH programs.
- Building the capacity of existing health workers to prepare and respond to adverse MNH outcomes in case extreme weather events.
- Embedding climate resilience into routine service delivery for MNH care.
- Developing dedicated Heat and Air Quality Action Plans to identify adaptation interventions and reduce the impacts of climatic stressors on MNH outcomes.
- Proactive engagement with development partners and policymakers to align future investments and scale-up of climate-resilient MNH models within national programs.

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1. Project Title

The Climate x Health Adaptation and Resilience Tool (CHART)  
- Protecting Health in a Changing Climate

2. Context & Motivation

In South Asia, rising temperatures, erratic precipitation, and frequent climate extremes such as droughts, floods, and cyclones threaten to overwhelm already strained health systems. India's annual mean surface temperature is projected to rise by 2.5–5°C by 2100, with central and coastal regions facing intensified climate impacts. The Intergovernmental Panel on Climate Change (IPCC) underscores the critical need for localized, inclusive, and participatory climate adaptation that blends scientific evidence with traditional and indigenous knowledge. Despite growing recognition of the links between climate and health, particularly for maternal, newborn, and child health (MNCH) practical tools and scalable, localized adaptation strategies remain limited. CHART is developed considering the geographies of India and Kenya, addressing climate risks like extreme heat, drought and flooding that threaten health systems, especially MNCH. It empowers local governments with tools for climate adaptation through data, community engagement, and cross-sector collaboration. PATH is providing technical guidance to gain contextual understanding of climate stressors and MNCH outcomes from India towards the development of this tool.



Caption: TWG Officials in India during a participative workshop

3. What Was Done

CHART was co-designed with government and community stakeholders to identify climate-health risks and local needs. Using predictive modeling, policy reviews, and human-centered design, we developed adaptation pathways for health systems. Phase 1 of the CHART initiative laid critical groundwork for transforming climate and health planning through three key pillars: cross-sectoral collaboration, participatory engagement, and integration of evidence into action. The establishment of District Co-Creation Panels (DCPs) introduced a new model for breaking down silos between departments, enabling more cohesive, resilience-oriented planning. Community- and health system-led discovery and co-design processes validated the relevance of CHART by grounding it in lived experience and local realities. In parallel, the integration of climate and health data modeling with indigenous knowledge set the stage for informed, context-sensitive adaptation strategies. As the project transitions into Phase 2, the focus will shift from exploration to more focused learning deepening stakeholder engagement, further refining and testing CHART content and prototypes, and scaling for impact.

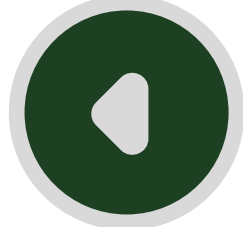
4. Results and Insights

CHART produced context-specific adaptation strategies for maternal and child health, shaped by 198+ community voices. It deepened understanding of climate-linked health burdens like extreme heat, rising care costs, and gendered vulnerabilities. The participatory process built strong government buy-in. Visual prototypes and TWG reviews ensured relevance and usability. Successes include co-created tools and a Phase 2 roadmap for adaptation and scaling.

5. Why is your idea innovative? Can it be scaled or replicated?

The Climate and Health Adaptation and Resilience Tool (CHART) is an AI-powered digital platform designed to enable scalable, participatory climate-health planning and address longstanding challenges in replicating localized adaptation efforts. Over the coming year, we are finalizing a core minimum viable product (MVP) that supports contextual adaptability across geographies. The MVP will incorporate generative AI for rapid localization, predictive modeling for climate-health risks, and multilingual interfaces to improve accessibility. We plan to beta test the platform in diverse settings to validate the universality of core components while identifying features that require contextual customization. In parallel, we are mapping critical integration points with government digital health systems to facilitate uptake and institutional alignment. To ensure long-term sustainability, we are also exploring blended financing models—including a fee-based model for private sector users—which will support platform maintenance, technical assistance, and ongoing iteration, while keeping the public version affordable for public and nonprofit stakeholders..

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**6. Cross-Cutting Elements**

- Gender equity – CHART integrates gender-responsive design, addressing climate-health impacts experienced disproportionately by women and girls.
- Youth leadership – Youth perspectives were included in the discovery and co-creation phases of CHART.
- Indigenous knowledge – Local practices and traditional coping mechanisms were documented and embedded into adaptation solutions.
- Interdisciplinary approach – The initiative blends public health, climate science, behavioral insights, and policy.
- Community participation – Over 198 participants were engaged through TWGs, community sessions, and user-led prototyping.

**7. Main Takeaways or Recommendations**

Some initial lessons learned include the following:

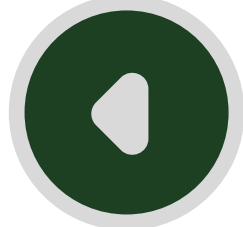
- Multi-sectoral collaboration is essential for the Planetary Health approach and for addressing complex, interlinked drivers of climate change and health. While feasible, such collaboration remains limited due to weak integration of health in climate policies and the minimal inclusion of climate considerations in health policies. Even where both exist, implementation rarely extends to the local level.
- Modeling the health impacts of climate change at the local level is possible but constrained by data limitations. While high-resolution climate data is readily available, health data is often fragmented, lacks sufficient granularity, or is not publicly accessible, creating barriers to robust, localized analysis.
- Communities and frontline health workers hold valuable knowledge and experience on the intersection of climate and health. Structured engagement and deep listening can help surface existing local and indigenous adaptation strategies, identify unmet needs, and guide the co-design of contextually relevant, scalable solutions.
- There is a pressing need for innovation, implementation, and evaluation to expand the evidence base on effective climate-health adaptations for MNCH. While some promising interventions exist, most have not been tested in low-resource settings, and few have undergone rigorous impact evaluation.

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IDEAS LAB  
V Global Conference on Health and Climate Brasília, Brazil  
July 29–31, 2025



1. Project Title

Malawi's strategy to build health system resilience amid climate change

2. Context & Motivation

Malawi, a highly climate-vulnerable country, faces severe health impacts from climate change. Cyclone Freddy in 2023 triggered a devastating cholera outbreak, affecting over 2.2 million people and overwhelming an under-resourced health system, among other acute health impacts. This crisis highlighted critical shortages of skilled health workers, health system vulnerability to growing needs and limited capacity to respond to climate-related health emergencies. Further, climate change is an accelerant of all disease burdens, threatening to tax already vulnerable health systems and to worsen health outcomes. As funding is increasingly austere, there is an opportunity to establish stronger, more resilient and versatile health systems that meet the growing and myriad burdens of disease driven by climate change. The cholera outbreak in Malawi is an example of how health systems are easily overwhelmed which can undermine health outcomes and access to care across the health sector. Our project addresses this urgent need by strengthening health system resilience and preparedness against escalating climate-induced health crises and future emergencies.

3. What Was Done

In March 2023, during Cyclone Freddy and the cholera outbreak, Malawi's Ministry of Health, worked with partners, including Seed Global Health, to lead response efforts. Highly skilled family medicine physicians conducted assessments in temporary camps, ensuring essential health services continued for displaced populations. These versatile professionals are crucial, as they can address the majority of health issues within communities, significantly enhancing health system resilience and adaptability – research demonstrates family medicine physicians can provide care for around 70% of health issues in communities.

Additionally, with support from The Rockefeller Foundation, Seed Global Health is leading a rapid Vulnerability and Adaptation Assessment (VAA) to identify climate-health risks.

This project seeks to develop a streamlined, accessible, and affordable rapid VAA process, providing a rapid and cost-effective toolkit for less-resourced countries. This abridged tool, adapted from the existing World Health Organization VAA, is designed to complement a full VAA (which Malawi has yet to update since 2015), enabling rapid decision-making for climate vulnerability responses and can be integrated into a full VAA when funding becomes available.

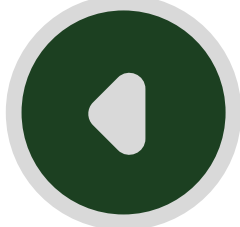
A rapid VAA will be designed and piloted in Malawi with the Ministry of Health, which will recommend adaptation strategies for Malawi's National Health Adaptation Plan and generate valuable lessons for other countries. This rapid VAA toolkit will strengthen Malawi's crisis response capabilities and build health system resilience.

4. Results and Insights

In a demonstration of strengthening health system resilience, the response to the cyclone-induced surge in cholera cases in Malawi strategically addressed not only the immediate outbreak but also concurrently strengthened vital maternal and newborn health services. Approximately 200 health workers were trained in cholera case management and Nsanje district's Kalembe Community Hospital became a comprehensive emergency obstetric and newborn care site. Health workers were able to perform interventions for pregnant women and newborns experiencing life-threatening complications, including severe bleeding, obstructed labour, eclampsia, and newborn asphyxia. All mothers and newborns, many of whom were referred from smaller health centres in Nsanje, were promptly managed and discharged safely.

Recognizing this crucial role health workers and family medicine physicians can play in transforming healthcare in Malawi and achieving multiple goals, the Ministry of Health has developed a ten-year plan to train two family medicine doctors for each of the 28 districts across the country. This will ensure there are capable health workers in primary care settings to provide quality care and prevent deaths not only for climate-related and other health emergencies but the numerous challenges for health care in Malawi – which is even more important in the context of funding cuts and doing 'more for less'.

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**5. Why is your idea innovative? Can it be scaled or replicated?**

Our project is innovative through its streamlined, accessible, and affordable rapid Vulnerability and Adaptation Assessment (VAA) toolkit for low-resource countries. This abridged tool, adapted from the WHO VAA, helps with rapid decision-making for climate vulnerability responses. It's designed to complement a full VAA and can be integrated into one when funding and resources are available and complements WHO's existing VAA.

Malawi's ten-year plan to train family medicine doctors provides a replicable model for sustainable health workforce development. Seed Global Health is committed to long-term investments in health systems and workforce to address health equity, mitigate climate change, and prevent future pandemics.

**6. Cross-Cutting Elements**

- Interdisciplinary approach
- Community participation
- Gender equity
- Health system strengthening and resilience
- Low-resource settings

**7. Main Takeaways or Recommendations**

- **Prioritize Climate-Resilient Health Systems:** Invest in tools like the rapid VAA and VAA for proactive risk identification and intervention.
- **Embrace Evidence-Based Planning:** Use rapid vulnerability assessments to generate actionable data for timely decisions and guide investments for impact.
- **Invest in the Health Workforce:** A skilled health workforce is critical for effective crisis response and healthcare transformation as the leading edge of strong health systems demonstrating agility and responsiveness to diverse and myriad needs being accelerated in climate change.
- **Align Investments with Local Priorities:** Ensure global initiatives support locally defined needs for maximum impact.

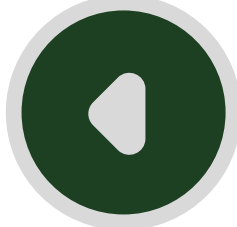
**8. Resources & Links**

<https://seedglobalhealth.org/2025/03/03/seed-global-health-announces-new-support-from-the-rockefeller-foundation-to-advance-climate-and-health-initiatives-in-malawi/>

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IDEAS LAB  
V Global Conference on Health and Climate Brasília, Brazil  
July 29–31, 2025



1. Project Title

GeoHealth Hub Peru – Low-Cost Air Monitoring for Health Equity

2. Context & Motivation

Peru's diverse geography, from the high-altitude Andes to the Amazon basin, faces uneven air quality surveillance, leaving rural areas, Indigenous communities, and urban non-capital cities without critical environmental health data. Historically, monitoring systems have been centralized and limited to the capital city, resulting in significant gaps in air pollution tracking and public health planning. This project addresses the urgent need for decentralized, real-time air quality data to generate evidence on the health impacts of air pollution.

3. What Was Done

GeoHealth Hub Peru is a flagship project of Centro Latinoamericano de Excelencia en Cambio Climático y Salud, at Universidad Peruana Cayetano Heredia. Funded by the U.S. National Institute of Health. Developed in collaboration with Emory University, Johns Hopkins University, and Universidad de Chile, this project established Peru's first nationwide network of low-cost air quality sensors across all 24 regions. This network provides real-time PM 2.5 data, especially in previously unmonitored areas, to expand knowledge, reveal exposure patterns, and support research into the effects of PM<sub>2.5</sub> exposure on cardiovascular and respiratory health.

4. Results and Insights

To date, more than 170 low-cost sensors have been installed across all 24 regions of Peru, providing real-time air quality data in previously unmonitored areas. Of these, 63% are located in urban areas and 37% in rural zones. The network was made possible through strong collaboration with public and private institutions.. Our monitors clearly showed the decline in air quality during the 2024 Amazon wildfires in the Amazon and Andes regions, as well as the increase in PM2.5 linked to transportation and industry in major cities. While these insights are crucial, key challenges remain for the network's sustainability, including limited connectivity, ongoing maintenance needs, and full integration into national systems.

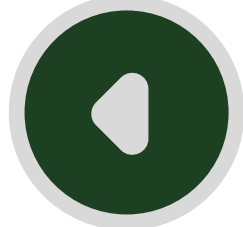
5. Innovation & Impact

This project's innovation lies in its delivery of real-time air quality monitoring to underserved areas using low-cost, scientifically validated sensors. . What truly sets it aside is its community-centered approach: sensors are prioritized in schools and health centers to ensure the data is directly useful to local populations. All data is openly accessible, and we provide training to partner institutions on how to interpret and apply air quality information in decision-making. The model is highly replicable in other low-resource settings, provided there is sustainable engagement with local and national stakeholders. Long-term success will depend on sustained funding and institutional commitment.

6. Cross-Cutting Elements

- Community participation
- Interdisciplinary approach
- The project integrates community participation through sensor hosting and engagement with local schools, health directorates, and municipalities. Its implementation brings together public health, environmental science, and policy.

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**7. Main Takeaways or Recommendations**

- Decentralized air quality monitoring is feasible and impactful, even in low-resource settings.
- Making air pollution visible at the local level empowers action and supports climate and health policy integration.
- Collaboration with national agencies ensures data credibility and policy relevance.
- Low-cost technologies must be paired with training, maintenance plans, and long-term institutional support to be effective.
- This network also lays the foundation for future research on the health impacts of air pollution in diverse geographic and demographic contexts.

**8. Resources & Links**

<http://www.geohealthperu.org>

Instagram: @climaupch

Linktr: <https://linktr.ee/climaupch>

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Caption: A teacher and two students from San Antonio School in Sijuay with a member of the Centro Clima team, following the installation of a low-cost air quality monitor at their school.







## IDEAS LAB

V Global Conference on Health and Climate Brasília, Brazil  
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### 1. Project Title

The usage of The Cidacs Climate and Environmental Platform (CIDACS-CLIMA) to conduct research on Equity in Migration and Environmental adaptation (EMERGE study)

### 2. Context & Motivation

The CIDACS Climate and Environmental Platform (CIDACS-CLIMA) was created to enable research to generate new knowledge on the links between climate and health that is currently not available from existing dispersed and unlinked resources and to inform mitigation and adaptation responses. The EMERGE study utilises data and collaborates with the CIDACS-CLIMA to conduct key research on how climate and environmental stressors impact internal displacement and migration, and disproportionately affect internal migrants compared to non-migrants in Brazil, exploring migration as a potential adaptation strategy to climate change. These initiatives take advantage of large cohorts (The CIDACS 100 Million Brazilian Cohort and Birth Cohort), linked with longitudinal climate and environmental data, to generate climate-driven migration estimates and quantify how migrants and their intersecting characteristics (i.e., indigenous migrants, migrants living in large urban centers or experiencing homelessness) can be disproportionately affected by extreme weather events.

### 3. What Was Done

The full group, which comprises a large team based in Brazil and a smaller team based in the UK, is developing a data platform to enable climate information to be merged with individual-level social and health records at the municipal and census tract levels to investigate the effects of climate and environmental stressors on key minoritised groups. So far, our data resources have enabled studies on exploring health inequalities related to migration, as well as the use of the climate platform available at the municipality level. This has generated studies examining the effects of heat/cold on mortality, as well as the role of social protection and cisterns as potential adaptation measures to droughts.

### 4. Results and Insights

Using data from the large CIDACS cohorts, we have produced unique evidence that internal migration, when towards municipalities that are wealthier and with better infrastructure, can lead to better perinatal and neonatal mortality outcomes [https://www.thelancet.com/journals/lanam/article/PIIS2667-193X(23)00029-7/fulltext, https://www.thelancet.com/journals/lanam/article/PIIS2667-193X(25)00030-4/fulltext]. We also generated evidence that internal migration, if not adequately supported, has a large potential to exacerbate Tuberculosis in large urban centres of Latin America (https://gh.bmj.com/content/10/4/e018674), and therefore should be better considered in climate change and Tuberculosis analytical frameworks (https://www.medrxiv.org/content/10.1101/2025.02.18.25322451v1). Using data from CIDACS-CLIMA, we have also generated evidence on the disproportionate effect of extreme heat and cold on mortality among Black and Indigenous individuals, as well as those living in poor-quality homes in Brazil (work under review). We have also produced evidence that wells programmes targeting regions prone to droughts in Brazil have the potential to reduce child mortality by up to 35%, and that, during droughts, women who receive conditional cash transfer programmes have up to 10% lower chance of having a child with low birth weight. We are now getting precise estimates on the effects of extreme cold and heat, as well as extreme rain and droughts, on hospitalisation and mortality among migrants in Brazil, specifically exploring migration that occurs between poor to/from wealthier regions, as well as from different Climates and urbanities.

### 5. Innovation & Impact

Our idea is innovative as it takes advantage of the large heterogeneity of Brazil to understand the differential effects of climate extremes on migrant groups from different socioeconomic backgrounds, moving from and to wealthier areas and from/to different biomes and climates. These results will mimic different types of migration worldwide and serve to inform more effective migration and adaptation strategies.

### 6. Cross-Cutting Elements

Our research takes into consideration key socioeconomic axes of inequalities in Brazil, considering its intersectionality and assessing the effects of (some) already implemented social interventions as ways of adapting to climate change. We are currently enrolling a number of community and policy stakeholders that will be part of our team to follow us through the research prioritisation, interpretation and translation.

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## 7. Main Takeaways or Recommendations

Our results are quantifying how we can think about migration and social policies, both important strategies to overcome poverty, as ways of adapting to the effects of climate change. A better understanding of the causal effects of climate extremes on migration and migrant health can also be used to rethink our world in such a way that migration becomes a choice and is adequately supported by governmental policies.

## 8. Resources & Links

### Websites:

<https://cidacs.bahia.fiocruz.br/plataforma/plataforma-de-dados-climaticos/>

### Publications:

[https://www.thelancet.com/journals/lanam/article/PIIS2667-193X\(23\)00029-7/fulltext](https://www.thelancet.com/journals/lanam/article/PIIS2667-193X(23)00029-7/fulltext)

[https://www.thelancet.com/journals/lanam/article/PIIS2667-193X\(25\)00030-4/fulltext](https://www.thelancet.com/journals/lanam/article/PIIS2667-193X(25)00030-4/fulltext)

<https://gh.bmj.com/content/10/4/e018674>

<https://doi.org/10.1186/s12874-025-02530-4>

<https://www.medrxiv.org/content/10.1101/2025.02.18.25322451v1>

### Resources:

<https://cidacs.bahia.fiocruz.br/wp-content/uploads/2025/03/Cidacs-Clima-Platform-Folder-ENG.pdf>

## 9. Contact Information

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IDEAS LAB  
V Global Conference on Health and Climate Brasília, Brazil  
July 29–31, 2025



1. Project Title  
“Climate Resilient Innovations for Malaria Control and Elimination”

2. Context & Motivation  
Climate change is intensifying malaria transmission and jeopardizing elimination efforts across affected regions in Africa, Asia, and Latin America. Extreme weather events—especially cyclones, floods, and heatwaves— trigger epidemic outbreaks, disrupt health systems, destroy supply chains, and displace communities across endemic and non-endemic regions alike. These disruptions disproportionately affect vulnerable populations, particularly children, migrants, and indigenous groups. A study also found that malaria transmission windows in highland regions are lengthening due to rising temperatures, increasing risks in previously unaffected areas.

3. What Was Done  
**Extended Chemoprevention:** Shifts in disease patterns and seasonality require adapting and extending chemoprevention protocols as seasonal malaria transmission extends beyond four months. Senegal conducted vulnerability assessments and reinforced their seasonal malaria chemoprevention program.

**Single-dose Radical Cure for p. vivax:** Co-developed by GSK and Medicines for Malaria Venture, Tafenoquine represents a breakthrough over the traditional 14-day regimen, sharply improving adherence and potentially cutting relapse rates, particularly for hard-to-reach and climate-affected populations such as indigenous peoples and migrants.

**Robust Antimalarials Pipeline:** R&D pipeline focused on preventive and treatment tools effective against resistant strains, which are simple to administer, long-acting and heat stable, and appropriate for remotely located, under-served populations. For example:

- Dispersible formulations of primaquine suitable for falciparum transmission-blocking in adults and children should be available by 2026 (single dose in combination).
- The triple combination ganaplacide-lumefantrine-cipargamin (single dose) could potentially be on the market by 2029, crucial for falciparum malaria elimination in Africa and Asia.
- Long-acting injectables for prevention across regions (aiming at one injection effective across malaria strains) will be vital in the context of climate change because of the simplicity of administration and suitability for mass drug administration.

**Malaria Vaccines:** The WHO has recommended two malaria vaccines, namely the RTS,S/AS01 vaccine (by GSK and PATH) and R21/Matrix-M (by Oxford and Serum Institute of India). Early-stage mRNA and viral-vector candidates promise even higher efficacy and simpler manufacturing.

4. Results and Insights  
Brazil and Thailand became the first malaria-endemic countries to launch single-dose tafenoquine for the prevention of vivax malaria relapse. Tafenoquine for adults and children was prequalified by WHO and included in the updated WHO guidelines for the prevention of vivax malaria relapse in South America.

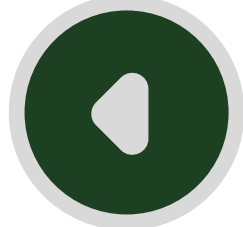
The first clinical trial for the first-in-line long-acting injectable for malaria prevention (MMV371) was carried out in 2024, which could offer up to 3 months of protection against all types of malaria.

Nineteen African countries have already deployed the malaria vaccines through routine childhood immunization programs, with the support of Gavi, UNICEF, WHO, and other contributors.



Caption and Credits: Baby receiving preventive medicine from his mother, Republic of Guinea - Photo: Toby Madden /MMV

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**5. Innovation & Impact**

Populations which are affected by climate change, especially the hardest to reach, need affordable and transformational health tools to cope with the additional challenges brought in by climate change. Innovative malaria tools can not only safeguard against the progress achieved in recent decades but also accelerate the pace toward malaria elimination. What is needed is clear: products that are easier to administer, heat-stable, and long-acting. The development and deployment of these tools are essential to enhance health systems' response capacity, aiming for the elimination of malaria and other infectious diseases.

**6. Cross-Cutting Elements**

Equity across underserved populations, Community participation, Health financing to scale innovations.

**7. Main Takeaways or Recommendations**

- Draw attention to malaria elimination in national climate change adaptation plans (nationally determined contributions).
- Accelerate the development and deployment of health tools tailored to the evolving needs of populations.
- Build and enhance the capacities of health systems and communities to foster resilience, preparedness and response, and protection for underserved populations.
- Showcase successful experiences from governments that have implemented innovative tools for malaria elimination as case studies to support health system adaptation.
- Strengthen supply chain and delivery systems to prepare for and address shifting transmission patterns.
- Scale innovations through blended capital solutions. .

**8. Resources & Links**

<https://www.mmv.org/our-work/global-health-and-societal-change/climate-change-and-malaria>

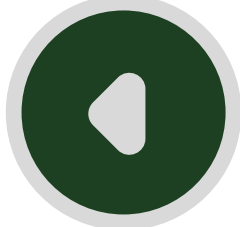
<https://www.malarianomore.org/what-will-it-take>

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IDEAS LAB  
V Global Conference on Health and Climate Brasília, Brazil  
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1. Project Title

PREPARE-CC – Climate Change Preparedness, Resilience, and Adaptation in Complex Crises

2. Context & Motivation

Climate change is intensifying health and development challenges, particularly in conflict-affected regions where fragile systems are least equipped to respond. In many low- and middle-income countries, overlapping crises, including conflict, migration, and disease outbreaks, amplify climate-related health risks and threaten stability. As crises escalate, rising displacement and social unrest highlight the urgent need for climate resilience as a strategy for conflict prevention and health promotion. The PREPARE-CC initiative addresses this critical climate-conflict-health nexus by generating evidence and testing solutions to strengthen preparedness, resilience, and health outcomes for women and children in the most vulnerable settings.

3. What Was Done

PREPARE-CC is mobilizing a global coalition of researchers, humanitarian organizations, and climate-health experts to develop innovative, equity-driven solutions for women and children in conflict-affected regions facing climate crises. Through evidence synthesis, mixed-methods case studies, and co-designed interventions in multiple high-risk geographies, the initiative will pilot approaches, such as early warning systems, simulation tools, and integrated health and nutrition strategies, to strengthen preparedness, resilience, and inclusive health outcomes.

4. Results and Insights

While PREPARE-CC is still in its early stages, the initiative is poised to generate a critical body of evidence at the underexplored intersection of climate change, health, and conflict. Early progress includes coalition-building, protocol development, and evidence synthesis, with Phase 1 expected to deliver 10 interdisciplinary case studies across conflict-affected settings. Generated evidence will inform the co-design of innovative, equity-driven interventions with embedded research in Phase 2, tailored to the needs of women and children in high-risk environments. Initial insights highlight the integration of knowledge across development and humanitarian sectors, combining global and local experience. Anticipated challenges may include navigating data gaps, fragile political contexts, and logistical constraints in complex operating environments.

PREPARE-CC introduces a new interdisciplinary model to address an overlooked intersection. By uniting actors across sectors and geographies, the initiative is pioneering a collaborative approach that blends scientific research, local knowledge, and systems thinking. Its emphasis on equity, embedded research, and scalable intervention design positions it as a replicable model for strengthening resilience and preparedness in other conflict affected settings.

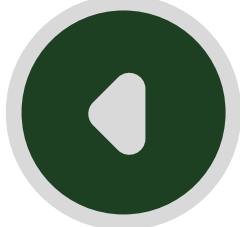
6. Cross-Cutting Elements

- Interdisciplinary Approach
- Gender Equity

7. Main Takeaways or Recommendations

- A significant gap persists at the intersection of climate change and health in fragile, conflict-affected settings, exacerbating the negative impacts of all three and resulting in profound inequities in climate preparedness, resilience, and adaptation for some of the world's most vulnerable and least supported populations.
- Leveraging evidence-based, multi-sectoral, and multi-partner approaches offers a powerful pathway to closing this gap, enabling the development of high quality, scalable, context-responsive models that can strengthen climate resilience and health equity across these settings.

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**8. Resources & Links**

PREPARE-CC lead institutions:

- SickKids Centre for Global Child Health - <https://www.sickkids.ca/en/care-services/centres/global-child-health/>
- Aga Khan University Institute for Global Health & Development - <https://www.aku.edu/ighd/Pages/home.aspx>
- The Carter Center - <https://www.cartercenter.org>

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IDEAS LAB  
V Global Conference on Health and Climate Brasília, Brazil  
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1. Project Title

The benefits of synergized adaptation and mitigation actions in health systems.

2. Context & Motivation

The Global Action Plan on Climate Change and Health approved by the 78th World Health Assembly includes a global target to promote climate change adaptation efforts to address health risks and support mitigation efforts that maximize health benefits. We want to highlight the experience of health facilities, Ministries of Health, technical agencies, and funders who synergize adaptation and mitigation actions. This is a worldwide project - both in the Global North and Global South

3. What Was Done

We are developing a series of case studies and videos that showcase how health systems and health institutions are taking action to ensure their facilities can withstand impacts of climate change in their operations and the care they provide to patients and communities, while also reducing their carbon footprint. One example is the LV Prasad Eye Institute, which has 308 eye care centres in four Indian states. Seasonal energy cuts and costs of diesel generators and their operation, plus a desire to become more environmentally sustainable, prompted this health institution's leadership to take action and fully convert their energy source to renewables - particularly solar.

4. Results and Insights

Within 3-4 years the costs of switching to solar energy were recovered.

7600MWh of electricity from the solar rooftop systems, have helped reduce emissions by 6100 tons of CO2.

Bringing primary care to the community's doorstep has also reduced the emissions of patients traveling to bigger cities for tertiary care.

Cost savings (300,000 USD per year) allow the institute to provide cataract surgeries to low income patients free of charge

The institute has provided 24 million services at their centers, 13.7 million community-based services, while reaching 13,000 villages.

With the right financing, switching to renewable energy is scalable - particularly in countries with access to the technology and maintenance services. The idea of bringing these cases to life is innovative as usually we discuss adaptation and mitigation actions as separate - while they can be layered and integrated for the benefit of human and environmental health

5. Cross-Cutting Elements

Interdisciplinary approach

6. Main Takeaways or Recommendations

- Connect climate actions in health systems that can both mitigate climate change through emissions reductions and environmental stewardship, while adapting to the impacts of climate change, together, building resilience.
- Energy transition is an excellent example of how health systems can facilitate this integration

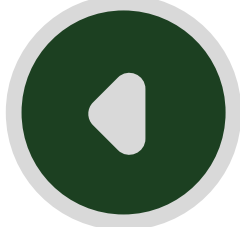
7. Resources & Links

[https://youtu.be/\\_hEYuC51L6k](https://youtu.be/_hEYuC51L6k)

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## IDEAS LAB

V Global Conference on Health and Climate Brasília, Brazil  
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### 1. Project Title

“Financing the Belém Health Action Plan through Blended Capital Solutions”.  
*Illustrative Example: Indonesia's 100/100 Plan for National Wolbachia Scale-Up*

### 2. Context & Motivation

Across the globe, countries are grappling with a surge in climate-impacted diseases—from dengue and malaria to heat-related illnesses and respiratory threats. Vector-borne diseases are expanding into new geographies and intensifying in regions like Southeast Asia and Latin America due to rising temperatures, erratic rainfall, and urbanization. Yet the financing tools available to governments remain outdated, fragmented, and insufficient. To deliver on the Belém Health Action Plan's call for climate-health resilience, countries need new ways to mobilize, blend, and align capital at scale.



Caption: A resident pours water on Oct. 4, 2024, into a bucket filled with *Aedes aegypti* mosquito larvae infected with the Wolbachia bacteria in Kembangan district, West Jakarta. The Jakarta administration is releasing the Wolbachia-infected mosquito eggs in an effort to control the spread of dengue in the city. (Antara/Rivan Awal Lingga) Link: <https://www.thejakartapost.com/opinion/2024/10/07/worry-not-of-wolbachia.html>.

**Illustrative example:** *This project is based in Indonesia, one of the countries hardest hit by the rise in climate-sensitive diseases. In 2024 alone, the country recorded over 240,000 dengue cases—the highest in its history—driven by climate change, urbanization, and growing insecticide resistance. Despite having proven solutions like Wolbachia mosquito technology, Indonesia has struggled to move beyond small-scale pilots due to fragmented financing and limited manufacturing capacity. The 100/100 Plan was developed to close this gap by scaling Wolbachia, a method to prevent the spread of dengue to 100 cities and protect more than 100 million people through a blended finance model that aligns domestic leadership with global and regional investment.*

### 3. What Was Done

This session convenes partners from governments, multilateral development banks, and technical organizations to explore how blended finance can unlock country-led solutions for climate-related health threats. The conversation showcases approaches that integrate catalytic grants, concessional loans, and domestic resources to finance innovations that protect communities from diseases exacerbated by climate change.

**On the project:** *Indonesia's 100/100 Plan to scale Wolbachia mosquito technology serves as an illustrative case—demonstrating how a blended capital model can support national coverage for dengue protection through a public-private partnership co-led by the Ministry of Health, UGM, Tahija Foundation, Oxitec, and the Health Finance Coalition.*

### 4. Results and Insights

- **Donor governments** will emphasize the catalytic role of grant funding to de-risk early-stage investments in climate-resilient health systems—particularly innovation, regulatory readiness, and system transformation.
- **Multilateral development banks** will highlight the importance of bridging Ministries of Health and Finance to unlock and coordinate concessional capital for integrated climate-health strategies.
- **Global financing platforms**, such as the Global Fund, will share lessons on how to align grant funding with national budgets and co-financing frameworks to ensure long-term financial sustainability and country ownership.
- **Country implementers** from Universitas Gadjah Mada, will underscore the critical importance of scaling locally proven, community-driven interventions—such as Wolbachia—for protecting populations from high-burden vector-borne diseases in the face of climate change.

Following the May 2025 presentation of the 100/100 Plan to Indonesia's Minister of Health, the coalition received a green light to proceed with a more detailed, financeable roadmap for Wolbachia scale-up. In response, the plan was updated to include a cost-optimized, phased strategy to protect 100 cities and over 110 million people by 2031, starting with a 30-city roll-out between 2026–2029.

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This plan showed significantly lower per-person costs than previously estimated and gained strong preliminary support from national authorities, global philanthropy, local funders, and development finance institutions like the Asian Development Bank (ADB).

*Key lessons include the importance of co-designing with local partners to ensure contextual adaptability, using catalytic grants to unlock larger concessional financing, and investing in scalable manufacturing and digital systems from the outset. The plan has reinforced that with the right coalition, Wolbachia is not only scientifically viable but also scalable, affordable, and financeable.*

This session reframes blended finance not as an experimental idea, but as the most viable strategy for addressing climate-driven health threats at scale (showcasing the illustrative example). By aligning capital to risk across the lifecycle of innovation—discovery, delivery, and scale—countries can mobilize the resources needed for both immediate protection and long-term resilience. **Indonesia’s approach offers a replicable example of how to operationalize this at national level, but the framework is adaptable to other regions and diseases affected by climate change.**

**5. Cross-Cutting Elements**

- Country ownership and public-private collaboration
- Community participation
- Inter-ministerial coordination (Health and Finance)
- Local innovation and manufacturing ecosystems
- Climate-health integration

**6. Main Takeaways or Recommendations**

- Climate-impacted diseases require climate-aligned financing—traditional health aid alone cannot meet the challenge.
- Blended finance models must match capital to risk: catalytic grants for innovation, concessional loans for scale, and domestic budgets for sustainability.
- Donor and multilateral leadership should prioritize de-risking strategies that enable country-driven, scalable platforms.
- Ministries of Health and Finance must co-lead to align funding with national strategies.
- Regional platforms and results-based approaches are key to attracting long-term capital.
- Success stories like Indonesia’s 100/100 Plan provide blueprints that can be adapted across regions.

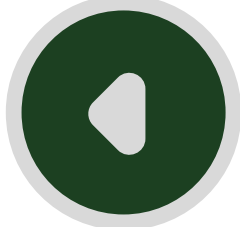
**7. Resources & Links**

- The Center for Tropical Medicine, Universitas Gadjah Mada
- Tahija Foundation
- Health Finance Coalition

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IDEAS LAB  
V Global Conference on Health and Climate Brasília, Brazil  
July 29–31, 2025



1. Project Title

Health in UNFCCC Negotiations: A Human Case for Ambitious Climate Action

2. Context & Motivation

While momentum on health in the Action Agenda has increased in recent years, health has historically been absent from the heart of UNFCCC negotiations.

3. What Was Done

Stakeholders including WHO, the Global Climate and Health Alliance, and the Friends of Climate and Health have worked to identify health entry points in UNFCCC negotiating streams, where health can serve as a driver of more ambitious climate decisionmaking, which in turn will protect and promote health.

4. Results and Insights

Momentum on health in the negotiations is evidenced by over 100 organisational signatories to health community recommendations, and 25 countries being represented among the Friends of Climate and Health group.

5. Innovation and Impact

This approach ensures that health is integrated across climate decisionmaking to guard against creating a health silo. Further capacity building of UNFCCC stakeholders, from negotiators to civil society, could scale up impact.

6. Cross-Cutting Elements

Interdisciplinary approaches - cross sectoral collaboration is essential to ensure that health is embedded in all areas of climate decisionmaking and implementation from national to international levels.

7. Main Takeaways or Recommendations

Health can provide a compelling and unifying case for action across all pillars of climate decisionmaking, from adaptation to mitigation to loss and damage to finance. Without positive outcomes on these issues, health will be placed at severe and increased risk.

8. Resources & Links

<https://www.iisd.org/projects/friends-climate-health>

<https://www.who.int/news/item/13-10-2022-updated-e-course-on-climate-change-negotiations-and-health>

<https://climateandhealthalliance.org/cop29-un-climate-change-conference/>

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IDEAS LAB  
V Global Conference on Health and Climate Brasília, Brazil  
July 29–31, 2025



1. Project Title

Andean Health and Climate Change Plan. Regional cooperation and integration.

2. Context & Motivation

The Andean Health and Climate Change Plan (AHCCP), implemented in Bolivia, Chile, Colombia, Ecuador, Peru and Venezuela, seeks to reduce the negative impact of climate change on public health. After the approval by Resolution by the Ministers of Health of the six Andean countries, its actions have focused on strengthening inter-institutional coordination, human resources, and interdisciplinary work, as well as promoting research, the systematization of ancestral knowledge, and sustainable and resilient health services. In addition, environmental care, social participation and the prevention of diseases related to vectors, zoonoses and extreme temperatures are prioritized.

3. What Was Done

The AHCCP is developed through participatory processes among the members of the Andean Committee, made up of delegates from the Ministries of Health of Bolivia, Chile, Colombia, Ecuador, Peru and Venezuela, the coordination of the secretariat of the Andean Health Agency-Hipólito Unanue Convention (ORAS-CONHU) together with partner organizations such as the Pan American Health Organization (PAHO/WHO) among others. The process included the identification of regional indicators, promoting the measurement of carbon footprints in health facilities, the development and management of regional projects, studies with young leaders, international congresses and multiple training events, and other actions.

4. Results and Insights

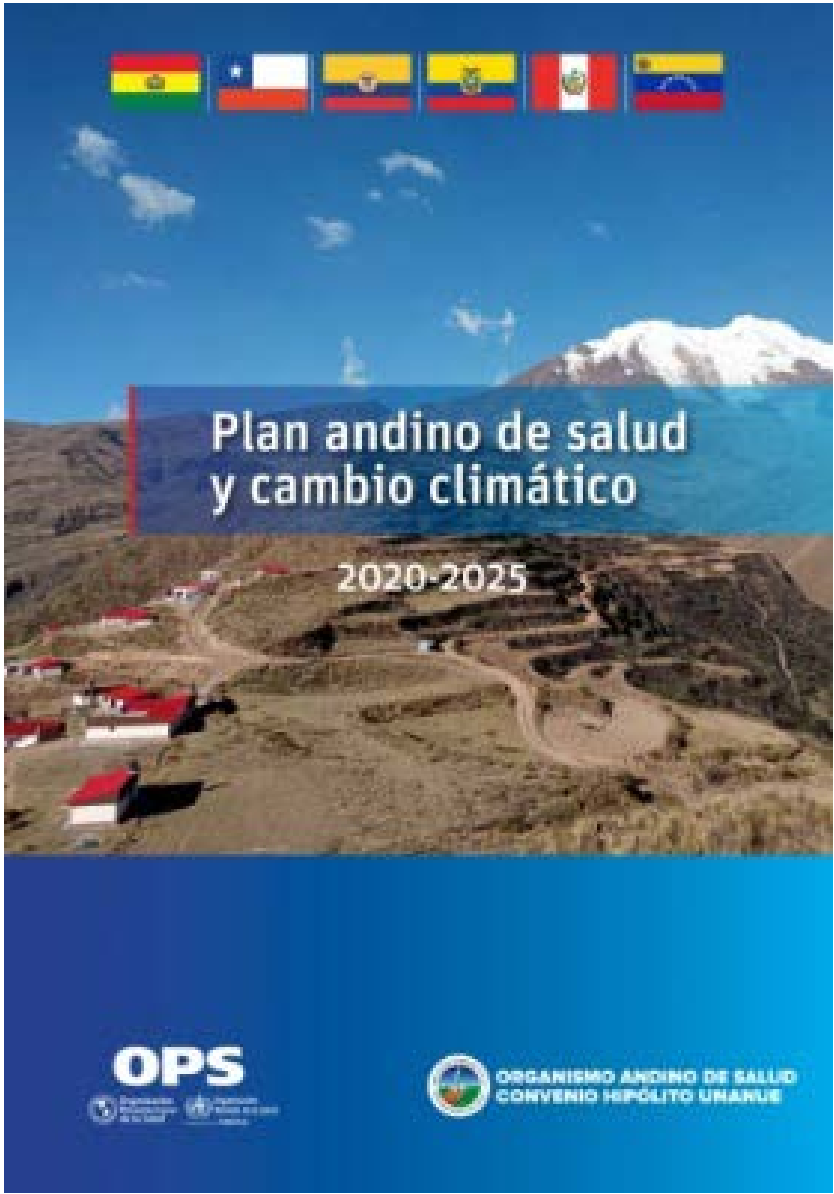
The implementation of the AHCCP has managed to position health as a central axis in the face of climate change, strengthen regional cooperation and train health professionals and the general population. A rights-based and social justice approach, sustainable and resilient health facilities, and the management and development of pilot projects have been promoted. In addition, areas for improvement in training, financing and regulations were identified, with plans for updating the AHCCP aligned with global frameworks.

5. Innovation & Impact

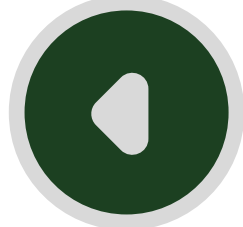
The AHCCP is innovative for being the first regional framework in South America that integrates health and climate change from a participatory and multilevel approach; brings together Andean ministries of health and various organizations to promote joint policies and projects; it promotes the generation and application of useful knowledge for decision-making and strengthens strategic alliances. In addition, it articulates its actions with global agendas, positioning the regional voice in international spaces. A new version of the AHCCP is planned to be made considering the Global Action Plan on Climate Change and Health as a framework; and the Belém Health Action Plan. The results of the final evaluation of the AHCCP are expected to spur the development of regional plans.

6. Cross-Cutting Elements

- The transversal elements have been:
- Regional integration and South-South and triangular cooperation.
- Social and environmental justice, reduction of inequalities and inequities.
- Intersectoral, interdisciplinary work, dialogues of knowledge and politics.
- Gender and intercultural approach.
- Health as a human right and a driver of sustainable development.
- Participation of children and adolescents; youth and Indigenous Peoples leadership.
- Ancestral knowledge.



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**7. Main Takeaways or Recommendations**

The climate crisis is also a social, rights and civilizational crisis (urgent changes are required in our model of development, production and consumption) where health and well-being must occupy a central place. It is a priority to develop approaches to strengthen governance in ministries of health and intersectoral work, advance social and environmental justice, and promote dialogues of knowledge and evidence-based decisions. It recommends integrating human rights and the rights of nature as axes of development and highlights the importance of ancestral knowledge to improve the relationship with Mother Earth. In addition, it highlights the urgency of advancing resilient and sustainable health systems with financial support.

**8. Resources & Links**

<https://www.orasconhu.org>

<https://www.orasconhu.org/es/content/plan-andino-de-salud-y-cambio-clim%C3%A1tico-2020-2025>

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## IDEAS LAB

V Global Conference on Health and Climate Brasília, Brazil  
July 29–31, 2025



### 1. Project Title

From Roots to Routes: Youth Driving Sustainable Change

### 2. Context & Motivation

In a world where pandemics and climate change demand urgent responses, youth play a key role in transforming ideas into concrete and sustainable actions. Combining and institutionalising intergenerational dialogue, youth engagement and the One Health approach across countries lead to meaningful impact and real-time solutions.



Caption: Intergenerational dialogue side event at WHA 2025 on misconceptions concerning planetary health.  
Credit: WHO Youth Council

### 3. What Was Done

WHO Youth Council is collecting data through Planetary Health Working Group and supporting best practices where youth are leading advocacy processes so that community monitoring, environmental education, and innovation are reflected in public policies.

### 4. Results and Insights

Youth advisory bodies in the form of environmental youth councils were established in several WHO regions and countries. Social participation, youth engagement and intergenerational dialogue take time, energy and resources to do correctly but pay the best interest on said investment. An ongoing issue of tokenistic youth engagement instead of meaningful youth engagement remains.

The idea outlines successful initiatives of youth engagement and intergenerational dialogue in the field of climate change/One Health that can be scaled onto different. It provides an overview of different possibilities that reflect how can one take into account the reality, context and culture of their country while adapting a meaningful youth engagement mechanism to the existing needs.

### 5. Cross-Cutting Elements

- Youth leadership
- Intergenerational dialogue
- Social participation
- One Health

### 6. Main Takeaways or Recommendations

Mechanisms for youth engagement in One Health can be adjusted to the needs and wants of each setting and context. The most important part of youth engagement or intergenerational dialogue is not the active participation itself but the follow-up that comes after.

### 7. Resources & Links

<https://www.who.int/initiatives/who-youth-engagement/who-youth-council>

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IDEAS LAB  
V Global Conference on Health and Climate Brasília, Brazil  
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1. Project Title

A Unified Health Voice for COP30: Regional Collaboration from Latin America and the Caribbean

2. Context & Motivation

Across Latin America and the Caribbean (LAC), climate change is already impacting health through extreme heat, air pollution, vector-borne diseases, and food insecurity. Deep structural inequalities compound vulnerability, while health systems face major gaps in readiness. Yet health remains sidelined in climate policies and negotiations. The region has an opportunity to provide a united, equitable and evidence-informed response that centers health in climate decision-making.

3. What Was Done

A participatory, region-wide process convened over 50 organizations, spanning health civil society, academia, Indigenous groups, and government, to create a Common Position that articulates six strategic pillars - protecting health, mitigation, adaptation, justice, health climate leadership and financing - with concrete, equity-centered asks for COP30 and beyond.

4. Results and Insights

The Position unites a diverse health community spreading across the LAC region, signaling strong demand for a shared climate-health platform. It elevates equity, Indigenous knowledge, gender, and territorial justice as core principles, highlighting widespread consensus on the need to center health and rights in climate action.

This is the first LAC-wide multisectoral health positioning in the LAC region. It connects frontline health challenges with global negotiations, offering a locally rooted, replicable model for regional, intersectional climate leadership which can drive policy influence.

5. Cross-Cutting Elements

- Climate justice and equity
- Intersectoral and interdisciplinary approach
- Indigenous knowledge and rights
- Community leadership and participation
- Health equity and social determinants

6. Main Takeaways or Recommendations

- Climate action and climate finance must protect and promote public health, not just respond to climate risks.
- Cross-sector alliances—especially with strong health leadership—are key to building climate-resilient societies.
- Equitable, just transitions in food, energy, and urban systems are essential to health and sustainability.
- Regional, participatory processes rooted in context can shape more ambitious and inclusive global climate outcomes.

7. Resources & Links

<https://climateandhealthalliance.org/position-paper-latin-america-and-the-caribbean-on-climate-change-and-health/>

@redclimasalud @GCHalliance

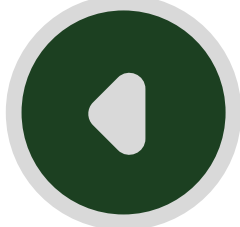
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Caption: A Unified Health Voice for COP30: Regional Collaboration from Latin America and the Caribbean  
Credit: Red de Clima y Salud de América Latina y el Caribe of the Global Climate and Health Alliance

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## IDEAS LAB

V Global Conference on Health and Climate Brasília, Brazil  
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### 1. Project Title

Ultra-local observatories for climate and health action

### 2. Context & Motivation

Porto Alegre, Brazil. Communities in the periphery of the city lack voice and influence over city policies that drive climate and health risks. The project tackles gaps in knowledge and disinformation, mobilizing local groups to engage in creating change in policies affecting their city and neighbourhood.



### 3. What Was Done

We mapped local risks to health and climate resilience (e.g. heat, floods) caused by urban policies that were focus of public debate – e.g. waste management and urban mobility. We then introduced climate and health risk reduction into the ongoing public discussions, in order to change narratives and influence urban decisions and investments. The intervention aimed to make those policies more climate resilient and healthy. Those involved were the university (that developed a rapid health impact assessment of the policies of interest), civil society organizations engaged in the policies debate, and local media.

### 4. Results and Insights

The intervention added the climate and health angles to public policies debates that were so far more engineering, labor or single issue focused. It expanded cooperation across interest groups and demonstrated how urban policies can offer a solution for climate and health. It amplified the voice and representation of local interests. That type of work is long term, we had limited follow-up so far, and these type of public interest-platforms need to persist over time to influence public decisions and track impacts.

### 5. Why is your idea innovative? Can it be scaled or replicated?

It creates a model for accountability over public decisions and investments affecting local groups. It addresses disinformation, enhances voice, supports collective action, and mobilizes local groups to engage in supporting urban public policies that will directly benefit them, by becoming resilient to climate and protect health. The ultra-local focus of urban policies is the entry point. It can be replicated by building local platforms that engage established community actors and universities. Countries and actors committed to climate action should support this type of long term, grassroots interventions.

### 6. Cross-Cutting Elements

- Community participation
- Civil society Leadership – gender, race, youth, trade unions/cooperatives
- Ultra-local accountability over public policies – waste management, transport and mobility, food systems

### 7. Main Takeaways or Recommendations

Strategic analysis of ultra-local climate and health risks can help engage with upstream drivers in urban public policies and investments.

It is important to connect local interests to the drivers of climate and health in sectors like transport or waste management, to obtain policy change where needed.

Long-term engagement and empowering of civil society on climate and health can enhance accountability over policy decisions by governments and private sector.

### 8. Resources & Links

<https://www.ufrgs.br/polpub/>

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## IDEAS LAB

V Global Conference on Health and Climate Brasília, Brazil  
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### 1. Project Title

Operationalizing Healthcare System Transformation within Planetary Boundaries: The Lancet Commission on Sustainable Healthcare

### 2. Context & Motivation

Healthcare contributes to environmental harm while failing to meet universal health goals. A shift is urgently needed toward systems that support health and wellbeing without breaching planetary limits.

### 3. What Was Done

We co-developed a global framework with independent researchers, clinicians, and policymakers to guide healthcare transformation through four principles: prevention, right care, depolluting care, and resilience.



### 4. Results and Insights

The Report of the Lancet Commission on Sustainable Healthcare will be launched post-COP30.

### 5. Why is your idea innovative? Can it be scaled or replicated?

This work reframes healthcare delivery as a lever for both health and sustainability. It's scalable through policies, institutions, and clinical practice, and already can inform local, national and global strategies.

### 6. Cross-Cutting Elements

- Gender equity
- Youth leadership
- Indigenous knowledge
- Interdisciplinary approach
- Community participation

### 7. Main Takeaways or Recommendations

Local leadership ensures trust and sustainability.

Sustainable healthcare transformation must address both mitigation and adaptation challenges together

Measurement and accountability are vital

Aligning quality and environmental goals unlocks transformation

### 8. Resources & Links

<https://www.linkedin.com/company/thelcsh>

<https://ysph.yale.edu/yale-center-on-climate-change-and-health/healthcare-sustainability-and-public-health/lancet-commission-on-sustainable-health-care/>

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IDEAS LAB  
V Global Conference on Health and Climate Brasília, Brazil  
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1. Project Title

Drought and health outcomes in Brazil: a study by the Cidacs-Clima platform

2. Context & Motivation

Climate change has increased the frequency and intensity of extreme weather events, such as low precipitation and droughts, posing substantial risks to human health. These risks operate through multiple pathways, including reduced water quantity and quality, intensified heatwaves, increased air pollution and decreased food supply. As a result, there is an increased risk of water-, food-, and vector-borne diseases, cardiovascular and respiratory illnesses, mental health disorders, nutritional deficiencies, and premature mortality. While existing research highlights the health impacts of climate change, there is still limited empirical evidence on the specific effects of droughts on birth outcomes, hospitalizations, and mortality, especially in low- and middle-income countries (LMICs), such as Brazil, where high exposure to climate extremes is combined with limited adaptive capacity.



Caption: A child sits on the ground cracked by drought, observing a small puddle of water at dusk. The image portrays the visible impacts of climate change and water scarcity on vulnerable communities.

3. What Was Done

To assess the impact of drought on birth outcomes in Brazil, we used data from the 100 Million Brazilians Cohort, linked to the Live Birth Information System (SINASC), covering the period from 2001 to 2020. The birth outcomes analyzed were low birth weight (LBW) and preterm birth. Drought severity was measured using the Standardized Precipitation Evapotranspiration Index (SPEI), which captures the balance between precipitation and evapotranspiration. We used the 6-month accumulation scale (SPEI-6), and droughts were defined as periods in which the SPEI was equal to or below -1, classified as moderate, severe, or extreme. To investigate the effects of drought on general and cause-specific morbidity and mortality in Brazil's semi-arid region, we conducted an ecological study using data from the Brazilian Unified Health System (SUS – DATASUS), covering the years 2012 to 2017. To capture prolonged drought, especially hydrological drought, we used the 12-month accumulation scale (SPEI-12).

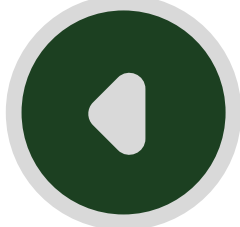
4. Results and Insights

Preliminary results, based on an analysis of more than 25 million live births, indicate that exposure to moderate, severe, and extreme drought (as measured by the SPEI-6) was associated with an increased odds of prematurity (OR: 1.03; 95% CI: 1.03–1.04; OR: 1.06; 95% CI: 1.05–1.07; OR: 1.09; 95% CI: 1.08–1.11), compared to those not exposed to drought. On the other hand, a slight reduction in the odds of low birth weight (LBW) was observed among those exposed to drought (OR: 0.99; 95% CI: 0.98–0.99; OR: 0.98; 95% CI: 0.97–0.99; OR: 0.92; 95% CI: 0.91–0.94), depending on the severity of the exposure. The effect on prematurity was more pronounced when the drought occurred in the Amazon and Caatinga biomes, as well as in the North and Northeast regions of the country.

Regarding hospitalization and mortality outcomes associated with prolonged drought in the semiarid region (a region encompassing 1,477 municipalities and approximately 31 million inhabitants) between 2012 and 2017, the preliminary analysis revealed greater drought severity in municipalities in the semiarid regions of Piauí and Pernambuco. By correlating hospitalization and mortality rates—both overall and from specific causes—with the severity of the drought, it was observed that these rates, on average, increase under more severe drought conditions, with respiratory causes being the most prevalent in hospitalizations and circulatory causes in deaths. Analysis of the spatial distribution of these rates over time showed that municipalities in Piauí, especially those with a low Municipal Human Development Index (MHDI – 2010) and a higher degree of population ageing, concentrated the highest rates.

These findings reinforce the importance of a more in-depth discussion of the role of public social protection policies as fundamental strategies for adapting to the adverse health effects of drought, especially among the most vulnerable populations, such as children and the elderly. Such an approach is essential to mitigate the socio-environmental inequities that tend to worsen in context of climate crisis.

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**5. Why is your idea innovative? Can it be scaled or replicated?**

This study is innovative in its use of large-scale, linked administrative data to evaluate the health impacts of drought with high spatial and temporal resolution. The methodological approach—integrating health, climate, and socioeconomic data—is replicable in other countries and geographic contexts, particularly in regions with a history of climate extremes such as droughts, and with at least minimally structured health and climate information systems. The findings and methods can meaningfully contribute to advancing the health and climate agenda in low- and middle-income countries facing challenges similar to those in Brazil, supporting the development of data-driven, context-specific adaptation strategies.

**6. Cross-Cutting Elements**

Relevant elements addressed in the project include:

Interdisciplinary approach: The project combines methods and knowledge from epidemiology, climate science, public health, data science, and geography to investigate the health impacts of droughts in a comprehensive and integrated manner.

Community participation (indirectly): Although not directly involved in data collection, the project focuses on generating evidence that supports public policies targeting vulnerable communities, particularly those in drought-prone regions such as Brazil's Semi-arid zone.

Gender equity (partially addressed): By analyzing adverse birth outcomes, the study contributes to understanding the health risks disproportionately affecting women and infants in the context of climate change.

**7. Main Takeaways or Recommendations**

Key lessons learned that may benefit other stakeholders working at the intersection of health and climate include:

Integration of large-scale environmental, socioeconomic, and health data: The use of linked administrative data—such as the 100 Million Brazilians Cohort and SUS health information systems—enables robust, territorially disaggregated analyses of climate change impacts on health.

Biomes matter: The effects of drought vary significantly across biomes such as the Semi-arid region, Pantanal, and Caatinga, highlighting the need for geographically tailored adaptation and mitigation policies.

Use of context-sensitive climate indicators: The application of the multiscalar Standardized Precipitation Evapotranspiration Index (SPEI) allowed for more nuanced assessments of climatic exposure across different temporal and geographic contexts.

Need for intersectoral approaches: Findings reinforce the importance of coordinated action across health, environment, social protection, and planning sectors to address drought impacts in an equitable and integrated manner.

Evidence to inform public policy: This research underscores the potential of scientific evidence to guide policies that protect vulnerable populations from climate extremes and strengthen the resilience of health systems

**8. Resources & Links**

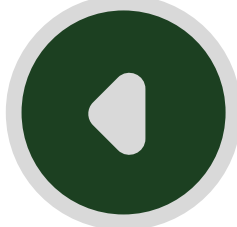
Grupo de Estudos em Nutrição e Meio Ambiente (GNUT): <https://cidacs.bahia.fiocruz.br/gnut/>

Plataforma Climática e Ambiental: <https://cidacs.bahia.fiocruz.br/plataforma/plataforma-de-dados-climaticos/>

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IDEAS LAB  
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1. Project Title

Grand Challenges Brazil - Building awareness of climate-driven health challenges through community engagement

2. Context & Motivation

The Grand Challenges Brazil initiative is a collaborative effort involving the Gates Foundation, the Brazilian Ministry of Health, Fiocruz, and CNPq. Its primary aim is to promote research and leverage it to foster innovation across a wide range of health issues.

The Grand Challenges family of initiatives seeks to identify and support transformational innovations. To achieve this, several partners—including GC Africa (Science for Africa Foundation), GC Brazil (Ministry of Health of Brazil), GC Ethiopia (Armauer Hansen Research Institute), GC India (Department of Biotechnology of India), and GC Rwanda (National Council for Science and Technology)—with the Gates Foundation, the Pasteur Network, and support from Wellcome, the Sanofi Collective, and the Rockefeller Foundation launched a request for proposals titled “Grand Challenges: Accelerating Innovations to Mitigate the Impact of Climate Change on Health, Agriculture, and Gender,” which aims to support research initiatives that can significantly advance scientific and technological development in addressing climate change and its effects on health, agriculture, and gender. In Brazil, four initiatives have been selected to promote the adoption of evidence-based practices and technologies that address the health and well-being impacts of climate change across various regions.

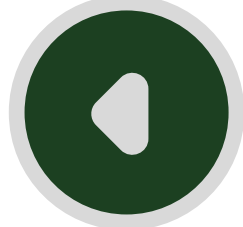


3. What Was Done

The four Brazilian projects selected in the RfP are employing different approaches to engage and empower vulnerable communities in addressing and mitigating health effects caused by global warming, droughts, and floods, as detailed below:

- **Heat Islands and Thermal Comfort in the Maré Favelas:** This project monitors indoor temperatures in homes within the Maré favelas aiming to implement constructive solutions that improve housing and health conditions, creating sustainable and replicable approaches. The project includes training young women from the community in climate science, who will then systematize and share the knowledge generated. It seeks to empower communities to take action and influence public policies in neglected territories.
- **Community-led interventions, participatory surveillance, and governance of public spaces to mitigate climate change in urban favela communities:** This initiative focuses on strengthening and promoting community-driven actions to minimize the adverse effects of climate change. By adopting a participatory, community-led approach, it aims to reduce the current and future risks of vector-borne and zoonotic diseases in urban favelas in Salvador, Brazil. The project emphasized skill building among residents, particularly women and youth, empowering them to take action. It also fosters new economic opportunities and enhances climate resilience from a holistic perspective.
- **A One Health Approach to Modeling Data on Arbovirus Infections Transmitted by Aedes in Brazil:** this project seeks to predict and monitor the effects of climate change on diseases caused by arboviruses. The information will be disseminated to an insular population living in southern Brazil. The outreach will involve women and schoolchildren as key participants to raise awareness within the community. They will help establish an early warning and participatory surveillance system for arbovirus outbreaks, and thus contributing to the management of infections caused by climate change.
- **Influence of adverse climate events on birth outcomes and maternal and child nutrition using data from the 100 Million Brazilian Cohort:** An initiative that focuses on co-developing public policy recommendations and disseminating scientific findings regarding the impacts of extreme precipitation events—such as droughts and excessive rainfall—on adverse birth outcomes, as well as maternal and child nutrition. The community engagement model emphasizes the active participation of stakeholders from various social sectors, ensuring that proposed solutions reflect the needs and realities of diverse communities.

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**4. Results and Insights**

**Heat Islands and Thermal Comfort in the Maré Favelas:** The project team has successfully enrolled and trained the young women who are already participating in the data collection process

**Community-led interventions, participatory surveillance, and governance of public spaces to mitigate climate change in urban favela communities:** The project team has identified and trained young leaders of the two locations in Bahia to collect data and promote awareness campaigns.

**One Health Approach to Modeling Data on Arbovirus Infections Transmitted by Aedes in Brazil:** The team is articulating with the State and Municipal Health Secretariats along with selected local leaders to initiate educational actions prior to the rainy season.

**Influence of adverse climate events on birth outcomes and maternal and child nutrition using data from the 100 Million Brazilian Cohort:** The team is in close contact with quilombolas and Black women representatives from the North and Northeast of Brazil to discuss research findings

**5. Why is your idea innovative? Can it be scaled or replicated?**

The methodological approach adopted by the projects can be replicable and also amplified to diverse contexts, but especially to bring solutions to urgent dilemmas of vulnerable communities at the low- and middle-income countries.

**6. Cross-Cutting Elements**

X- Community participation

X- Youth leadership

X- Gender equity

**7. Main Takeaways or Recommendations**

The four projects from the Grand Challenges cohort, working in Brazil on Climate and Health solutions, highlight the importance of communities in paving the way for public policy solutions to address climate change. They must be key beneficiaries, as well as leaders in the research process. At the national level, the projects and plans of implementation must be aligned with the stakeholders' priorities. Moreover, involving stakeholders from the beginning enhances a project's likelihood of success. From a regional perspective, it is important that the proposed solutions are contextualized within the social, environmental and historical frameworks, demanding the collaboration of multidisciplinary teams and the onset of complex actions. Additionally, it is necessary to concentrate on developing effective strategies to translate evidence into actionable steps that can foster meaningful and positive change that resonates throughout the community.

**8. Resources & Links**

Grand Challenges Brazil: <https://bit.ly/3SB2JAR>  
Redes da Maré: <https://www.redesdamare.org.br/>

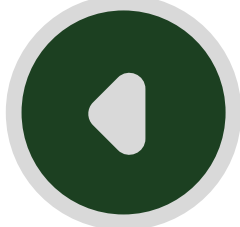
Building Healthy Communities in favelas of Salvador: <https://www.instagram.com/casaiesa/>

Nutrition and Environment Study Group (GNUT): <https://cidacs.bahia.fiocruz.br/gnut/>

**9. Contact Information**

Grand Challenges Brazil

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IDEAS LAB  
V Global Conference on Health and Climate Brasília, Brazil  
July 29–31, 2025



**1. Project Title**  
REACH: Peer networks of health workers lead climate-health response

**2. Context & Motivation**  
Health workers are trusted advisers to local communities facing climate health impacts across 70+ countries. They find practical solutions daily despite limited resources, but work in isolation. Connecting them through digital peer networks transforms scattered local innovations into coordinated action, leveraging their unique position to respond to these impacts.

**3. What Was Done**  
Since July 2023, The Geneva Learning Foundation connected health workers – primarily government staff – from local communities in Africa, Asia, and Latin America through a digital platform where they share climate health solutions and support each other's implementation. This peer network now includes over 60,000+ health professionals and 4,000+ local organizations ready to take coordinated action on climate health challenges.

**4. Results and Insights**  
In July 2023, health workers shared over 1,200 detailed observations and insights of climate change impacts on health. This community, network, and platform has demonstrated ability to turn shared knowledge into local action. TGLF's research is showing that health workers implement climate-health solutions 7x faster, using only local resources, when learning from peers versus traditional training or technical assistance. 82% continue independently after initial support. The network's size improves quality—diverse experiences create better solutions. Cost reduced by 86% compared to conventional approaches while reaching more people.

**5. Innovation & Impact**  
This model turns health workers from aid recipients into leaders of climate adaptation. As trusted community advisers, they identify problems and implement solutions immediately. The network now mobilizes 4,000+ locally-led organizations for coordinated climate health action—achieving rapid scale impossible through traditional top-down approaches, at significantly lower cost.

- 6. Cross-Cutting Elements**
- Community participation
  - Indigenous knowledge
  - Gender equity
  - Youth leadership
  - Interdisciplinary approach

**7. Main Takeaways or Recommendations**  
Investing in health workers as trusted advisers can drive climate adaptation fast, at low cost, and at scale.

Digital peer learning-to-action networks can deliver results 7x faster at 86% lower cost than traditional training and technical assistance approaches.

**8. Resources & Links**

Ten eyewitness reports from the frontline of climate change and health <https://www.gavi.org/vaccineswork/ten-eyewitness-reports-frontline-climate-change-and-health>

Sadki, R. (2025). When funding shrinks, impact must grow: the economic case for peer learning networks. Reda Sadki. <https://doi.org/10.59350/redasadki.20995>

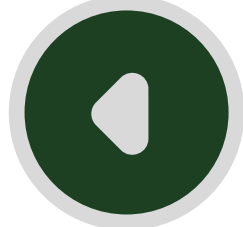
Sadki, R. (2024). How will we turn a climate change and health resolution at the World Health Assembly into local action?. Reda Sadki. <https://doi.org/10.59350/gnkzp-pk639>

Sadki, R. (2023). Investing in the health workforce is vital to tackle climate change: A new report shares insights from over 1,200 on the frontline. Reda Sadki. <https://doi.org/10.59350/3kkfc-9rb27>

WHO video using TGLF climate and health event testimonials <https://www.youtube.com/watch?v=IYdH3OrNB90>

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IDEAS LAB  
V Global Conference on Health and Climate Brasília, Brazil  
July 29–31, 2025



1. Project Title

Predictive Modelling for Climate Driven Malaria Dynamics in Urban African Regions

2. Context & Motivation

Deep in Douala Cameroon to support early warning systems and targeted interventions with regards to malaria and climate change.

3. What Was Done

Inputs of rainfall and temperature was use to study malaria prevalence in Cameroon and future projections carried out in Bonaberi and Tombel districts of Cameroon ,Simulations were done using the VECTRI malaria model of ICTP.I was the principal investigator then with three others.

4. Results and Insights

A positive relationship between temperature, rainfall and malaria is revealed in this study but Bonaberi has malaria all year round. The West region is the least affected by malaria The topic examines how climate change affects malaria transmission in Tombel and Bonaberi, focusing on factors like temperature, rainfall, and vector behavior to improve interventions and predictive . VECTRI model to perform better.

This project is innovative as it integrates climate data, urban-specific factors, with dynamic models like VECTRI to predict malaria trends in rapidly growing African cities. Unlike traditional rural-focused models, it captures urban microclimates, drainage, housing density, and land use changes. The approach enhances early warning systems and supports targeted interventions through interactive tools. It is scalable and replicable across cities using modular, open-source tools and local data. With minimal adaptation, it can be applied to other climate-sensitive diseases, making it a powerful, adaptable solution for urban health resilience under climate change.

5. Cross-Cutting Elements

The project promotes gender equity and youth leadership by involving women and young researchers in data collection and modelling. It uses an interdisciplinary approach, combining climate science, epidemiology, and machine learning. Community participation is central, with potential to integrate indigenous knowledge in future phases.

6. Main Takeaways or Recommendations

Urban malaria is rising and demands tailored, data-driven solutions that reflect urban realities.

Climate-informed predictive models can transform early warning systems and guide targeted interventions

Inclusive, interdisciplinary, and community-engaged approaches are essential for sustainable malaria control in African cities.

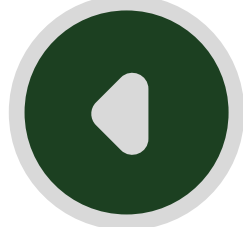
7. Resources & Links

Journal of Geoscience and Environment Protection, 2022, 10, 46-66  
https://www.scirp.org/journal/gep  
ISSN Online: 2327-4344  
ISSN Print: 2327-4336  
DOI: 10.4236/gep.2022.103004 Mar. 11, 2022 46 Journal of Geoscience and Environment Protection

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IDEAS LAB  
V Global Conference on Health and Climate Brasília, Brazil  
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1. Project Title

Exploring Just Transitions for Climate Resilient Health Care Supply Chains

2. Context & Motivation

With an eye on solutions, this Idea Lab and the project related to it address the impacts and risks the climate crisis poses to the health care supply chain—risks which threaten access to health and the overall viability of the globalized health care industry. To address the problem, it establishes a framework to bring together stakeholders from international agencies, research institutions, the private sector and health care providers to have an animated discussion on how issues of climate justice and health equity intersect with the multitrillion dollar health care supply chain. And it puts forth a set of forward looking, innovative, replicable solutions that can point toward adapting the supply chain for a just transition in the production of medical devices, diagnostics, pharmaceuticals, vaccines and more.

3. What Was Done

Building on the five High-Level Principles for Health Care Climate Action established during India's G20 Presidency, the Asian Development Bank (ADB) is producing a briefing paper for each principle that will inform government leadership, health care decision makers, finance, and the private sector. To address Principle 3 on health care supply chains, Unitaid, Health Care Without Harm and ADB have collaborated to produce a comprehensive analysis and a set of recommendations for building climate resilient global health care supply chains.

The paper sets forth six core strategies for transforming the health care supply chain so that it becomes more climate-resilient – both low-carbon and climate adaptive – while maintaining a focus on equity and improving health outcomes.

These six strategies are:

- Establishing a climate-resilient supply chain via innovation and design.
- Clean and resilient manufacturing.
- Low-carbon and climate adaptive transportation and logistics.
- Sustainable procurement
- Regulation, norms and standards
- Finance for a climate-resilient supply chain.

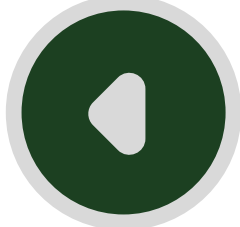
4. Results and Insights

The project finds that while decarbonizing health care's supply chain and establishing climate adaptation strategies both depend on broader societal transformation, national health ministries, private sector health systems and health supply chain manufacturers and suppliers, can all make a significant contribution to a climate resilient supply chain by implementing the six strategies, thereby also influencing and contributing to the acceleration of change in other sectors.

5. Cross-Cutting Elements

- health equity
- climate justice
- just transitions
- Health Economic Industrial Complex
- multisectoral strategies
- climate preparedness
- strategies to address climate risks and diseases
- climate-smart workforce/worker health
- climate adaptation
- climate mitigation

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**6. Main Takeaways or Recommendations**

Development of climate-resilient health supply chains will require investment in infrastructure ranging from manufacturing to warehousing, cold chain maintenance and last mile delivery that can withstand extreme weather and other climate impacts. It will also require other adaptations throughout the value chain that help ensure the continuous availability of vital products, as well as building the human resources capacity so that the workforce can adapt to new systems. Aligning health care with the ambition of the Paris agreement also requires decarbonizing health care supply chains, which are responsible for 70% of the health sector's significant carbon emissions.

Building climate-resilient health care supply chains that are both low-carbon and that adapt to climate impacts must also simultaneously address existing health disparities, ensuring that vulnerable populations, especially in low-resource areas, have equitable access to lifesaving health products. As part of this effort, health supply chains must diversify their sources and routes and decentralize manufacturing in order to promote development and prevent climate, pandemic, and conflict related disruptions to the steady and equitable access to health products. Given the vast and complex nature of the global health care supply chain, no single organization and no single strategy can drive systemic change alone. A collaborative, ecosystem-wide approach - bringing together suppliers, manufacturers, health care providers, policymakers, and patients is essential for achieving success.

**7. Resources & Links**

[https://unitaid.org/uploads/Report\\_From-milligrams-to-megatons\\_A-climate-and-nature-assessment-of-ten-key-health-products.pdf](https://unitaid.org/uploads/Report_From-milligrams-to-megatons_A-climate-and-nature-assessment-of-ten-key-health-products.pdf)

<https://unitaid.org/uploads/Building-climate-resilient-sustainable-low-carbon-health-supply-chains.pdf>

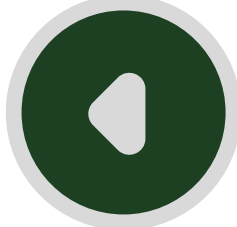
<https://global.noharm.org/focus/procurement/sustainable-procurement-index-health>

<https://iris.who.int/handle/10665/376678>

**8. Contact Information**

Josh Karliner, Health Care Without Harm, [www.noharm.org](http://www.noharm.org)  
Vincent Bretin, Unitaid, [www.unitaid.org](http://www.unitaid.org)  
Brian Riley, Asian Development Bank, [www.adb.org](http://www.adb.org)

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IDEAS LAB  
V Global Conference on Health and Climate Brasília, Brazil  
July 29–31, 2025



1. Project Title

Youth Power for Climate-Resilient Health: Bridging Advocacy, Action, and Equity

2. Context & Motivation

This project is based on the global work of the International Federation of Medical Students' Associations (IFMSA), with activities implemented across over 100 countries through our national member organizations. It addresses the urgent intersection of climate change and health, focusing on the lack of youth inclusion in decision-making, limited community resilience to climate-related health risks, and the need for equitable, interdisciplinary approaches to climate adaptation in health systems. Motivated by the growing impacts of climate change on vulnerable populations—particularly youth, Indigenous communities, and those in low-resource settings—this initiative empowers young health advocates to drive policy, lead community-based solutions, and contribute to building climate-resilient and equitable health systems.

3. What Was Done

The project mobilized young people globally to lead climate and health action through three key pillars:

- **Capacity Building:** We organized trainings such as the "EARTH" (Environment, Advocacy, and Resilience Training for Health) program and the IFMSA PreCOP29 workshop, equipping youth with skills in climate-health advocacy, policy engagement, and community mobilization using a One Health and equity-based approach.
- **Community-Based Action:** Through IFMSA's Environment and Health Program, we supported 34 local initiatives across 46 national organizations, focusing on community health surveillance, early warning systems, and education campaigns adapted to local contexts.
- **Policy Advocacy:** Youth delegates participated in high-level events like COP, the World Health Assembly, and regional climate-health dialogues. We also collaborated with governments to integrate youth perspectives in national climate-health policies.

Stakeholders included IFMSA's National and Local Member Prganizations, youth networks, local communities, ministries of health and environment, NGOs, academic institutions, and international agencies such as WHO and UNFCCC. These cross-sectoral partnerships ensured a holistic, equity-driven approach to climate-resilient health systems.

4. Results and Insights

The project successfully empowered young people to become active agents in climate-health advocacy and community resilience. Key outcomes include:

- **Youth Capacity Strengthened:** Hundreds of young medical students received training through programs like EARTH and PreCOP29, increasing their capacity to advocate for sustainable health systems and influence climate-health policy at local, national, and global levels.
- **Global Grassroots Impact:** 34 youth-led community projects were implemented across 46 countries, improving public awareness, enhancing early warning systems, and fostering local climate adaptation strategies.
- **Policy Influence:** IFMSA youth delegates contributed to shaping dialogues at major platforms such as COP, the World Health Assembly, and national climate consultations, ensuring youth voices were integrated into climate-health strategies.

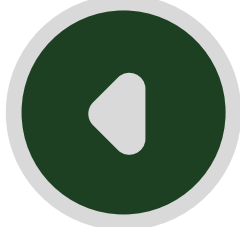
What worked well:

The decentralised, grassroots model allowed localized adaptation while benefiting from global coordination. Cross-sectoralcollaborationwithministries,NGOs,andinternationalorganizationsamplifiedimpactandlegitimacy. A strong digital infrastructure enabled knowledge sharing and real-time coordination across regions.

What could be improved:

Sustained funding remains a challenge, limiting the scale and continuity of some local initiatives. More systematic impact evaluation tools are needed to measure long-term outcomes of community-based interventions.

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5. Why is your idea innovative? Can it be scaled or replicated?

This initiative is innovative because it centers **youth leadership** as a driving force for climate-resilient health systems—something often overlooked in formal climate and health strategies. It integrates **capacity building, community engagement, and policy advocacy** in a single, youth-led framework grounded in the **One Health** and **equity-based approaches**, connecting global action with local impact. The use of **digital platforms** for training, coordination, and knowledge-sharing allows for real-time, cross-border collaboration and adaptability. By empowering young health professionals with practical tools, strategic influence, and a global network, it redefines what meaningful youth participation looks like in climate-health governance.

Yes, this model is highly **scalable and replicable**. It's already been applied in over 40 countries and is adaptable to various geographic, cultural, and policy contexts. Its emphasis on localized solutions, digital tools, and multi-stakeholder partnerships makes it ideal for replication by other youth networks, institutions, and community health programs globally.

6. Cross-Cutting Elements

- Youth leadership
- Community participation
- Gender equity
- Interdisciplinary approach
- Indigenous knowledge

7. Main Takeaways or Recommendations

**Youth are not just future leaders—they are present actors** in building climate-resilient health systems. Investing in their capacity and leadership transforms health and climate policy from the ground up.

**Community-driven and inclusive approaches**—especially those that engage Indigenous groups and local stakeholders—ensure that climate-health solutions are culturally relevant, equitable, and effective.

**Interdisciplinary collaboration is essential.** Addressing climate change and health requires integrating perspectives from public health, biodiversity, nutrition, social justice, and digital innovation.

**Policy spaces must make room for youth voices.** Formal mechanisms such as youth delegate programs and intergenerational dialogues are critical to embed young people's perspectives in national and global strategies.

**Scalable, digital, and decentralized models** empower action across diverse regions, enabling global coordination while respecting local needs.

8. Resources & Links

<https://ifmsa.org/environment-and-health/>

<https://ifmsa.org/wp-content/uploads/2023/05/IFMSA-Policy-Document-on-Climate-Change.docx.pdf>

9. Contact Information

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IFMSA Delegation for COP29



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IDEAS LAB  
V Global Conference on Health and Climate Brasília, Brazil  
July 29–31, 2025



1. Project Title

Community Health in SemiArid Areas: Integrated Solutions to Climate Stresses in Sindia (Senegal)

2. Context & Motivation

The project, located in Sindia (a semi-arid zone of Senegal in West Africa) , addresses health vulnerabilities exacerbated by climate change, mining pollution, and limited access to safe drinking water now considered critical determinants of health.

It aims to strengthen community resilience through decentralization, accessible technological tools, inclusive local actions, and integrated environmental solutions, with the goal of creating enabling conditions for community health and well-being.



Caption: A citizen-led initiative to repair rain-damaged roads, aimed at ensuring road safety, preventing accidents, and guaranteeing quick access to healthcare.  
Credit: Association for the Development of Sindia\_SENEGAL

3. What Was Done

The project, implemented in Sindia by Association for the Development of Sindia, combines decentralization, accessible technologies, and community mobilization to address climate-health challenges. It improves access to safe drinking water, waste management, awareness-raising, and health promotion through simple tools such as community radio and WhatsApp.

Inclusive community health actions (<<Set-sétal>> clean-up campaigns, reforestation, religious education – Quranic schools) strengthen local resilience by empowering community leaders and valuing local knowledge.

4. Results and Insights

The project reduced respiratory infections by 40% and improved access to safe drinking water in 18 villages. It strengthened social inclusion and reduced health inequalities by addressing environmental factors through the involvement of women, youth, formal schools, Quranic schools, policymakers, and local communities.

However, the lack of funding and support from government and local partners hinders the sustainable implementation of these initiatives.

5. Innovation & Impact

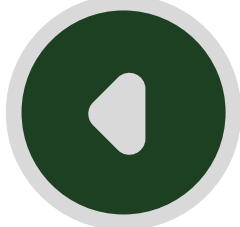
Our idea is innovative because it combines simple technologies (radio, WhatsApp, solar-powered boreholes) with strong adaptation to the local context. It is based on active community participation, involving all segments of society (community leaders, women, youth, Indigenous people, policymakers, health workers, formal and informal education sectors) in awareness-raising, clean-up campaigns, and collective reforestation. Decentralized governance and local monitoring committees strengthen citizen oversight and the social responsibility of extractive industries. This integrated model combining health, local knowledge, religion, water, environment, education, and governance is aligned with several SDGs (3, 4, 6, 11 and 13).

It is easily replicable in other semi-arid zones of the Sahel and beyond, thanks to its strong local anchoring and flexibility, without requiring complex funding.

6. Cross-Cutting Elements

- Community participation – citizen engagement
- Decentralization
- Accessible and low-cost technologies
- Gender equity
- Youth leadership
- Indigenous knowledge
- Interdisciplinary approach

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## 7. Main Takeaways or Recommendations

An integrated model based on local power (decentralization), hybrid knowledge (tradition and science), accessible technologies, and inclusive community mobilization is effective in addressing health and climate challenges in semi-arid zones.

- *"Health is rooted in humanity, our environment, and our solidarities."*
- *"Health cannot be conceived independently of what underpins human existence: our relationships with ourselves, with others, and with the environment."*

## 8. Resources & Links

Publications:

<https://www.linkedin.com/in/oumar-b-diallo-7a9309105/>

Participation in the global community health workshop: <https://chaireunesco-es.org/atelier-mondial-de-sante-communautaire/atelier-mondial-de-sante-communautaire-3e-edition/>

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<https://unescochair-ghe.org/global-community-health-annual-workshop-fifth-edition/>

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