

# CONSIDERATIONS TO INTEGRATE CLIMATE CHANGE MITIGATION AND ADAPTATION INTO HEALTH SYSTEM STRENGTHENING PROGRAMMING

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## INTRODUCTION: UNDERSTANDING THE SEVERITY AND IMPACTS OF CLIMATE CHANGE ON HEALTH SYSTEMS

Addressing gaps and improving health system performance is simply not enough to prepare a health system to tackle the effects of the climate crisis. Climate change's impact on the health and well-being of people globally is reaching catastrophic levels. As the earth continues to warm, tens of millions of people are at increased risk from rapid and unpredictable spread of infectious diseases, heatwaves, water and food insecurity and scarcity, air pollution, poverty and homelessness. Health services are often regarded as a first line defense in preventing adverse health outcomes, especially from those caused by climate impacts. Health systems are the foundation for individual and community level resilience. They serve as a critical structure for protecting all global citizens by providing accessible, affordable, accountable and reliable care when climate hazards strike. It is possible to prepare for climate change now by building climate resilient health systems. This includes key actions that should be part of any cross-cutting HSS approach such as promoting and capacitating effective and iterative risk management across all levels, fostering multi-sectoral engagement, and identifying actions and investments over the short- and long-term to increase system resilience.

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Observed climate impacts on health can be categorized in the following ways:

- **Direct impacts** from increased frequency and severity of extreme weather events, including heat, that can lead to physical injuries, death and mental health challenges.
- **Ecosystem mediated impacts**, such as through air pollution, shifting temperature or precipitation patterns that can alter prevalence and distribution of vector-, water- or food-borne diseases and/or impact health outcomes related to nutrition.
- **Socially mediated effects** that occur via impacts on social and human systems, like increased poverty, migration or conflict which can impact the ability to access care or negatively influence care seeking behavior.

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The World Health Organization (WHO) identifies four fundamental requirements for providing safe and quality care in the context of climate change. These are: (i) having adequate number of skilled workers in safe and decent working conditions, empowered and informed to protect and respond to environmental challenges; (ii) sustainable and safe management of water, sanitation and hygiene (WASH) and health care waste services; (iii) sustainable energy services; and (iv) appropriate infrastructure, technologies, products and processes, including all the operations that allow for the efficient functioning of a healthcare facility<sup>i</sup>.

## USAID'S VISION FOR HEALTH SYSTEM STRENGTHENING 2030

USAID's Vision for Health System Strengthening 2030 recognizes that integrated, systems-based approaches for strengthening health systems are now more critical than ever as demonstrated by other global challenges, such as COVID-19, and asserts that health systems are resilient when they are able to adjust resources, policy and focus to varying degrees to respond to long-standing and emerging challenges. Such resilience must be built for an effective response to ongoing health demands; acute, time-bound events; and longer-term destabilizing dynamics. USAID does this by focusing on the health system outcomes to be achieved and then taking an integrated, whole of society approach, with special attention on the local context when developing health system programs to achieve those outcomes. This means engaging traditional public and private health stakeholders, as well as other sectors that

impact health, such as WASH, agriculture, and environment; while ensuring representation from faith-based organizations, communities and other local organizations. In summary, the Vision posits that If USAID supports countries to monitor, anticipate, manage and adapt to health risks associated with climate change it would lead to more responsive health services and better health outcomes, especially in vulnerable populations.

**FIGURE 1: GRAPHICAL DEPICTION OF USAID’S VISION FOR HEALTH SYSTEM STRENGTHENING**

Graphical depiction of USAID’s Vision for HSS with the desired intermediate outcomes of Equity, Quality, and Resource Optimization that lead to positive health outcomes. Learning and Adaptation, the Building Blocks representing the six core functions of a health system, and Cross-Cutting Approaches that include Social and Behavior Change, Cross Sectoral Linkages, and Enabling Local Organizations are critical elements of activities that lead to high-performing health systems.

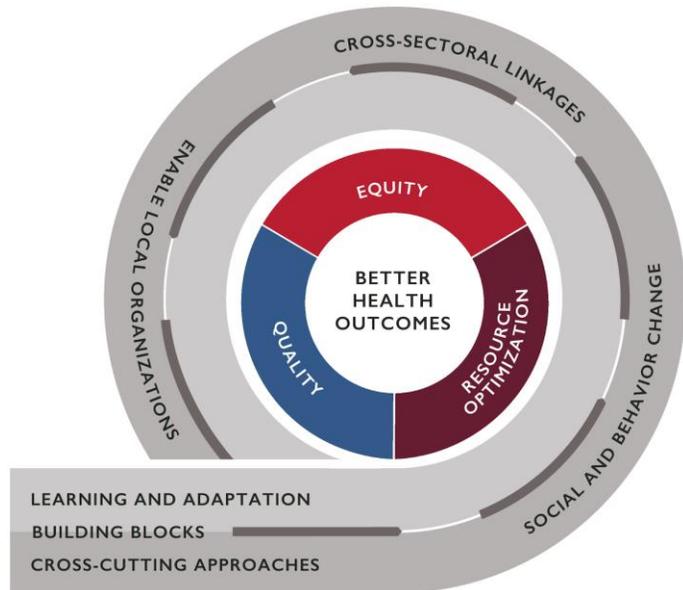


Image Source: <https://www.usaid.gov/global-health/health-systems-innovation/health-systems/Vision-HSS-2030>

**TAKING CONTEXT IN CONSIDERATION: OPPORTUNITIES TO APPLY A CLIMATE LENS TO HEALTH SYSTEMS STRENGTHENING PROGRAMMING**

Health systems practitioners should take steps to understand how climate change will affect its ability to manage and protect population health; evaluate the effectiveness of interventions and systems under diverse climatic conditions; and identify opportunities to enhance institutional capacity<sup>ii</sup>.

Ongoing health systems work being done at the country level can be strengthened to improve resilience and sustainability by adding a climate lens when developing new or adapting existing activities. The following questions can be used to assess the context of the health system and identify opportunities to integrate climate change adaptation or mitigation into HSS programming.

- Are climate services and surveillance data available and used across the health system to inform distribution and redistribution of health workers, financial resources, and supplies as needed to prepare and optimize response to changing epidemiology and environment? How can data be used to monitor resource needs in areas that have been moderately to severely impacted by a climate event?
- Are contingency plans in place to ensure efficient management of climate related emergencies at a sub-national and facility level? Are cross-sectoral coordination mechanisms in place for the implementation of contingency plans to allow for faster response and recovery, and leveraging of resources?

- Do primary health care benefits include services that respond to negative health outcomes from environmental stresses such as heat, poor air quality, and undernutrition and are accessible to populations who experience social, economic and geographic vulnerabilities? Will climate migrants have access to health benefits if moved or will these entitlements only be accessible in their “home/registered” geography?
- Are national policies and regulations in place and implemented to safely and sustainably reduce and manage health care waste (i.e., from generated trash (from packaging, use of consumables) and inefficient use of resources (expired drugs and products, mismanagement))? Are effective management systems in place, including guidance and training for health workers on proper waste management?
- How do communities (e.g., local health professionals, politicians, influencers, grassroots NGOs) participate in the health systems that serve them in general and specifically, engage in local decision-making for climate-change adaptation and mitigation?
- Are local-level health services adaptation plans for climate-change in place and costed? Are resources available or planned to implement these plans?
- Are supply chains, logistics systems and commodity security able to meet demands for climate change preparedness and adaptation?
- Are financial systems and processes flexible to respond to climate-related events that impact the functioning and performance of the health system (e.g., reallocation of resources)?
- Are there cost efficient opportunities to integrate renewable energy or improve efficiency in existing or new health facilities or supply chains to reduce their carbon footprint of the health system?

**Integrating climate change adaptation into development work does not require implementing development activities in a completely new way. It instead requires considering the climate impacts and identifying opportunities to adapt and transform as necessary.** As a first step, conducting vulnerability and leveraging health systems assessments<sup>1</sup>, to understand the breadth and depth of the climate challenge within the local country context on the health system prior to developing activities will help determine the approaches that should be considered. USAID programs should continue to monitor climate risk through climate risk management assessments to ensure sustainability of USAID program outcomes and propose opportunities for adaptive management<sup>2</sup>.

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<sup>1</sup> Two assessment tools include the USAID’s Health Systems Assessment Approach v3.0. <https://www.hfgproject.org/the-health-system-assessment-approach-a-how-to-manual/> and the High Performing Health Care Tool <https://hphctool.org/>

<sup>2</sup> Adaptation and mitigation are two strategies for addressing climate change. Mitigation refers to reducing emissions sources or enhancing sinks of greenhouse gases. Adaptation refers to making adjustments in natural or human systems in response to expected or unexpected climatic events and their effects. Building systems that are flexible and can adapt to contextual changes helps minimize the costs and consequences of climate impacts, so they do not hinder progress toward development goals.

## MEASUREMENT

In order to monitor climate resilience in USAID programs, data is needed at the country level. Standard health systems monitoring and evaluation (M&E) is not typically designed to track health sector resilience and does not incorporate or act on information regarding environmental shifts, including climate change or other hazards, that have implications for population health and system performance. Monitoring the impacts of adaptation on system performance is challenging. Climate impacts are variable to the smallest geographic scale and temporally; and impacts are multi-layered meaning that there will be several interacting upstream and downstream health impacts making it difficult to bound. Therefore, standard indicators alone related to climate and health will not sufficiently capture the changing risks, effectiveness of mitigation and adaptation strategies, and overall systems performance and resilience<sup>iiiiv</sup>.

Measures should not be limited to capturing quantitative evidence. In addition to the health indicators, indicators that monitor baselines for health risk of climate change are needed. This includes indicators that determine different degrees of vulnerability, and may be related to health (e.g. priority climate-related diseases), environment (e.g. climatic variables, urban vs rural), socioeconomics (e.g. poverty, demographics and occupation), and current level of interventions and health systems capacity and performance (e.g. availability and accessibility of health services, responsiveness)<sup>vi</sup>. These indicators should be integrated with the national information systems and be shared among relevant sectors. Qualitative metrics are strongly advised as these measures can better capture social dimensions and perceptions related to system change. Staff across all levels of the health system should be resourced and trained to input into and utilize data for local-level decision-making and future planning.

## USAID RESOURCES TO SUPPORT CLIMATE ADAPTATION

USAID developed [Climatelinks](#) as a global knowledge portal for USAID staff, implementing partners, and the broader community. This database of technical resources related to USAID's work to mitigate and adapt to climate change includes [Regional and Country Risk Profiles](#) and resources to support development of [Climate Vulnerability Assessments](#) (CVA). The Office of Health Systems has developed the [HSS Monitoring and Evaluation Guide](#) and [Compendium of Indicators](#) that provides operation guidance on planning, implementing, and evaluating HSS interventions. The High Performing Health Care Tool is a perception-based assessment that provides information about the functionality of health systems processes, functions, and intermediate outcomes.

## CONCLUSION

Climate change is threatening the sustainability of health systems performance and development goals through pressure from increased heat, extreme weather events, droughts, shifts in duration and prevalence of diseases, and the potential for novel diseases being introduced. Integrating climate change adaptation into development work does not require implementing development activities in a completely new way. It requires considering the climate impacts and identifying opportunities to adapt and transform as necessary. Health systems strengthening activities should include climate considerations by promoting and building capacity for effective and iterative risk management across all levels, fostering multi-sectoral engagement, and identifying actions and investments over the short- and long-term to increase system resilience.

For technical assistance please contact Liz Lugten ([elugten@usaid.gov](mailto:elugten@usaid.gov)) and Neetu Hariharan ([nhariharan@usaid.gov](mailto:nhariharan@usaid.gov)) from USAID's Office of Health Systems.

## References:

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<sup>i</sup> Checklists to assess vulnerabilities in health care facilities in the context of climate change. Geneva: World Health Organization; 2021. <https://www.who.int/publications/i/item/checklists-vulnerabilities-health-care-facilities-climate-change>

<sup>ii</sup> Building Climate-Resilient Health Systems. WHO, <https://www.who.int/activities/supporting-countries-to-protect-human-health-from-climate-change/climate-resilient-health-systems>.

<sup>iii</sup> Ebi, Kristie L et al. “Monitoring and Evaluation Indicators for Climate Change-Related Health Impacts, Risks, Adaptation, and Resilience.” *International journal of environmental research and public health* vol. 15,9 1943. 6 Sep. 2018, doi:10.3390/ijerph15091943

<sup>iv</sup> Sellers, Samuel, and Kristie L Ebi. “Climate Change and Health under the Shared Socioeconomic Pathway Framework.” *International journal of environmental research and public health* vol. 15,1 3. 21 Dec. 2017, doi:10.3390/ijerph15010003

<sup>v</sup> World Health Organization . WHO Guidance to Protect Health from Climate Change through Health Adaptation Planning. World Health Organization; Geneva, Switzerland

<sup>vi</sup> <https://hphctool.org/>