ADAPTATION FUND

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Adaptation Fund Board
Project and Programme Review Committee
Thirty-seventh Meeting
Bonn, Germany, 7-8 April 2026

PROPOSAL FOR
BENIN, BURKINA FASO, UGANDA, ZIMBABWE

ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY: Regional Project Concept

Countries/Region: Benin, Burkina Faso, Uganda, Zimbabwe
Project Title: Pioneering Innovative Adaptation Financing for Climate-Resilient Health Systems in Africa.
Thematic Focal Area: Innovation in adaptation finance
Implementing Entity: World Health Organization
Executing Entities: AECF
AF Project ID: AF00000414
IE Project ID:
Requested Financing from Adaptation Fund (US Dollars): 13,924,000
Reviewer and contact person: Mahamat Assouyouti
Co-reviewer(s): Timileyin Oyebade
IE Contact Person:

Technical Summary	The project "Pioneering Innovative Adaptation Financing for Climate-Resilient Health Systems in Africa" aims to foster active engagement and investment from private sector entities in the development and implementation of climate-resilient health systems, implement innovative financing mechanisms in pilot projects to strengthen the resilience of health systems to climate change, and strengthen the capacity of governments to design investment cases and invest in, or attract investments for, climate-resilient health technologies and infrastructure. This will be done through the three components below: Component 1: Private Sector Engagement in Climate-Resilient Health System (USD 1,000,000). Component 2: Innovative Adaptation Financing mechanisms deployment to support climate resilient technologies and infrastructure (USD 10,000,000) Component 3: Capacity building and Institutional strengthening (USD 1,000,000). Requested financing overview: Project/Programme Execution Cost: USD 1,121,000 Total Project/Programme Cost: USD 12,921,000 Implementing Fee: USD 1,003,000 Financing Requested: USD 13,924,000

	The proposal includes a request for a project formulation grant and/or project formulation assistance grant of USD 160,000. The initial technical review raises some issues, such as the quantification of benefits, compliance with the AF's results framework, additional information on environmental sustainability, compliance with ESP requirements such as risk categorization of project, absence of initial gender assessment etc. as discussed in the number of Clarification Requests (CRs) and Corrective Action Request (CAR) raised in the review.
Date	February 4, 2026

Review Criteria	**Questions**	**First Technical Review Comments February 4, 2026**
Country Eligibility	1. Are all of the participating countries party to the Kyoto Protocol and/or the Paris Agreement?	**Yes.**
	2. Are all of the participating countries developing countries particularly vulnerable to the adverse effects of climate change?	**Yes**. The proposal demonstrates that the countries are highly vulnerable to the adverse effects of climate change with events such as droughts, floods, water and vector-borne diseases. As per pages 6 - 12
Project Eligibility	1. Have the designated government authorities for the Adaptation Fund from each of the participating countries endorsed the project/programme?	**Yes.** As per the Endorsement letters dated Benin: 07 Jan 2026 Burkina Faso: 26 Dec 2025 Uganda: 12 Nov 2024 Zimbabwe 04 Apr 2024
	2. Does the length of the proposal amount to no more than fifty (50) pages for the project/programme concept, including its annexes?	**Yes.** Total Pages is 50

	3. Does the regional project / programme support concrete adaptation actions to assist the participating countries in addressing the adverse effects of climate change and build in climate resilience, and do so providing added value through the regional approach, compared to implementing similar activities in each country individually?	**No**. The project proposes several solutions to key issues in health-care resilience and infrastructure but needs to strengthen several elements of the proposal. **CR1:** Please explain more clearly how the regional approach offers added value beyond the shared vulnerabilities across the four countries, given their different contexts. The proposal refers to a joint regional training but does not detail the reasoning or methods behind these trainings. With country contexts varying, why is the regional approach advantageous in this case? **CAR1**: The regional approach proposed with the 4 countries is not clearly described. In addition to Figure 4, kindly describe better the rationale behind the proposed 4 countries which are in different geographic zones and with different vulnerability context. **CR2:** Which enterprises are intended to be chosen for both the training and grant programs? Are these organizations current partners within the health systems of the selected countries? If not, please clarify how the proposed trainings will deliver tangible benefits to the health systems, particularly in terms of leveraging channeling capacities to provide support beyond conventional business operations. **CR3:** Page 22 mentions a national call for proposals but Output 1 suggests that 5 – 7 enterprises will be mentored, from which the grantees will be selected following a review of the proposal pipelines. Kindly clarify if this call is a different activity or a precedent to

		the selection of the enterprises to be mentored in Output 1.1. **CAR2:** Based on the description of the output 1, the project may include Un-identified sub-projects. Please confirm if this is the case and follow the guidance on USPs and amend Part II, Section A as per USP guidance which is available at Guidance Document for Project/Programme with Unidentified Sub-Projects **CR4:** On page 24, it states that certain health facilities will be chosen to host the selected solutions after conducting vulnerability assessments. Could you clarify how many facilities will be chosen? Additionally, how will these selections correspond with the pre-identified solutions, ensuring that disparities in health outcomes across different areas are not worsened? Are these solutions primarily pilot programs with a limited focus, or is there a plan for wider implementation at this stage? **CAR3**: The proposal currently lacks quantitative connections between identified climate hazards and the proposed solutions. Could you please specify the number of healthcare facilities, households, and communities affected? Additionally, how many proposed solutions are expected to be implemented, and what is the anticipated number of beneficiaries and overall impact in relation to the issues outlined? **CR 5:** The proposal lacks a clear plan for scaling from pilot demonstrations to national adoption. Please clarify how project scaling will occur after the pilots, and what steps follow beyond the pilot stage to ensure institutionalization.

		CAR 4: The proposal mentions collaboration through regional institutional platforms (ATACH, Clim-Health Africa) but does not mention any concrete regional deliverables nor include any learning component within the proposal. Please clarify and incorporate accordingly.

	4. Does the project / programme provide economic, social and environmental benefits, particularly to vulnerable communities, including gender considerations, while avoiding or mitigating negative impacts, in compliance with the Environmental and Social Policy of the Fund?	***Yes**. However additional information is required.* *While the proposal includes a narrative on the economic, social and environmental benefits of the projects, it fails to include quantitative description of these benefits.* **CAR5:** The proposal does not include any explicit benefit for persons with disabilities, indigenous groups, internally displaced persons, or refugees, despite highlighting these groups as climate-vulnerable in the regional context. Please include a breakdown of the benefits and beneficiaries by country and output including gender-disaggregated beneficiaries, vulnerable and indigenous groups. Where possible, please quantify the environmental, social and economic benefits and include questions which would provide quantitative estimates of the benefits. **CA 6:** While the proposal includes a conceptual discussion of equitable distribution, the proposal lacks geographical and concrete targeting criteria for selecting facilities and districts. There is also no clear demonstration of how PBCRGs will require SMEs to prioritize these groups. Please clarify and incorporate accordingly. **CAR7:** While the proposal includes some gender narrative, there is no evidence of an initial gender assessment, no gender-responsive indicators, no sex-disaggregated baseline information. Kindly provide these.

	5. Is the project / programme cost-effective and does the regional approach support cost-effectiveness?	**Unsure.** While the proposal highlights cost-effectiveness in terms of the regional value and relative to the potential losses. There are still gaps that need to be addressed: **CR6:** The scope of interventions (5–7 enterprises, limited pilot facilities per country) is not clearly justified relative to the magnitude of national system-wide needs. Kindly clarify. **CR7:** The proposal does not articulate why these four specific types of interventions (solar, WASH, cold chain, early warning systems, retrofits) are prioritized over other possible health adaptation measures. Kindly clarify. **CR8:** The selection of target districts/facilities is not documented as well as a clear cost-benefit criterion or vulnerability-to-cost comparison. Please clarify. **CAR8:** The proposal does not include any quantitative cost-effectiveness analysis and no comparison against existing or other possible alternatives. Quantify the expected private-sector leverage. Please incorporate these. **CAR9**: Please revise the CN and provide a detailed cost effectiveness table with alternative solutions and indicative cost related to it.

	6. Is the project / programme consistent with national or sub-national sustainable development strategies, national or sub-national development plans, poverty reduction strategies, national communications and adaptation programs of action and other relevant instruments? If applicable, it is also possible to refer to regional plans and strategies where they exist.	**Yes.**
	7. Does the project / programme meet the relevant national technical standards, where applicable, in compliance with the Environmental and Social Policy of the Fund?	***Yes, however, additional information is required.*** **CAR10:** The proposal fails to show any criteria regarding energy requirements or standards for water quality testing. **CAR11:** The proposal needs to demonstrate compliance with the Fund's ESPs and gender policy. See **CAR5, CAR7, CAR17**.
	8. Is there duplication of project / programme with other funding sources?	**Unsure.** While the proposal maps ongoing projects in the participating countries, it does not explicitly articulate how documented failures/challenges from these projects have shaped the project design, neither does it demonstrate or integrate any learning component to exchange lessons with the other projects **CAR12:** Please address the above issues, especially the learning component of the project

	9. Does the project / programme have a learning and knowledge management component to capture and feedback lessons?	**No.** **CAR 13:** Although the proposal mentions that the proposal includes a regional learning component within component 3, this is not explicitly demonstrated in the project component and project justification section of the proposal as well as measurable learning outputs. Also, there is no explicit "KM Framework", No clear feedback loops, explicitly highlighted learning and sharing component with existing projects within the countries. Kindly address these.
	10. Has a consultative process taken place, and has it involved all key stakeholders, and vulnerable groups, including gender considerations in compliance with the Environmental and Social Policy and Gender Policy of the Fund?	**Yes.** The proposal demonstrates initial consultations were carried out with further commitment to carry out more consultations including community-level consultations at the **fully-developed proposal stage.**
	11. Is the requested financing justified on the basis of full cost of adaptation reasoning?	**No.** **CR 9:** The proposal does not quantitatively demonstrate that these interventions are fully relevant beyond business as usual, to achieve the project's intended resilience outcomes. Please include quantified hazard metrics and resilience outcomes to be achieved. **CAR 14:** Please clarify how reliance on private co-finance does not undermine AF-funded outputs, whether enterprises have expressed actual commitments, how risk-sharing will ensure AF outputs are fully realized even if co-financing falls short.

	12. Is the project / program aligned with AF's results framework?	**No.** **CAR15:** Please adjust the table strictly aligning with the AF table including the language as shown in the link below Results Framework Alignment Table (Amended in November 2025) (77 kB, DOC)
	13. Has the sustainability of the project/programme outcomes been taken into account when designing the project?	**No**. The proposal does not explain how ministries will finance ongoing adaptation measures beyond the project, nor how PBCRG-supported enterprises will sustain service agreements in low-income areas. **CAR 16:** Provide a detailed Sustainability & O&M Plan. Include: Who pays for O&M post-project (government budget lines, EaaS contracts etc.) Expected lifespan of technologies and replacement schedules, contingency plans for remote or low-income facilities. **CR 10:** Clarify long-term institutional ownership of PBCRG mechanisms. Which national institutions will take over PBCRG oversight, how will the mechanism be embedded in government budgeting, procurement, or PPP systems and how will the private-sector engagement will be sustained after AF funding ends. **CR 11:** Describe the replication and scaling strategy. How will the pilot lessons be translated into national rollout as well as cross-country replication, how will the project be financed beyond AF-funded sites?

		CR12: Please include information on how the environmental sustainability of the project will be achieved.
	14. Does the project / programme provide an overview of environmental and social impacts / risks identified, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?	**No.** **CAR 17:** Provide a complete AF ESP screening and assign a category, justification for category selection, risk level, justification, and mitigation action needed. Refer to **CAR 5** on initial gender assessment. **CAR 18**: 1. Please include the category in which the screening process is classified (i.e. Category A, B or C). 2. Please adjust the environmental and social impacts and risks table to remove text in column 2 on further assessment required. Please transfer this information to column 3. Since the some assessment will be done at the next stage, column 2 should remain blank for this stage. 3. Just above the environmental and social impacts and risks table please include a couple of sentences on how the risks of potential USPs in the project will be addressed. See also **CAR2.**
	15. Does the project promote new and innovative solutions to climate change adaptation, such as new approaches, technologies and mechanisms?	**Yes.**

Resource Availability	1. Is the requested project / programme funding within the funding windows of the regional projects/programmes?	**Yes.**
	2. Are the administrative costs (Implementing Entity Management Fee and Project/ Programme Execution Costs) at or below 10 per cent of the project/programme for implementing entity (IE) fees and at or below 10 per cent of the project/programme cost for the execution costs?	**No.** While the figures add up. **CR 12:** Page 23 notes that WHO and AECF will be leading component 2. Please clarify if this means that WHO will be an executing entity alongside AECF. If so, please ensure that the WHO does not exceed 1.5% of that component in the budget when the fully developed proposal is submitted. **CR13:** Please clarify if Africa Enterprise Challenge Fund (AECF) will be executing the PFG as well. If the intention is for WHO to execute the PFG please amend the PFG application form. Please note that this will not affect the PFG IE fee. **CAR19:** Please include the IE fee in the PFG as a separate budget line.
Eligibility of IE	1. Is the project/programme submitted through an eligible Multilateral or Regional Implementing Entity that has been accredited by the Board?	***Yes.*** *Accreditation Expiration Date: 24 November 2028.*
Implementation Arrangements	1. Is there adequate arrangement for project / programme management at the regional and national level, including coordination arrangements within countries and among them? Has the potential to partner with national institutions, and when possible, national implementing entities (NIEs), been considered, and included in the management arrangements?	n/a at concept stage
	2. Are there measures for financial and project/programme risk management?	n/a at concept stage

	3. Are there measures in place for the management of for environmental and social risks, in line with the Environmental and Social Policy and Gender Policy of the Fund? Proponents are encouraged to refer to the Guidance document for Implementing Entities on compliance with the Adaptation Fund Environmental and Social Policy, for details.	n/a at concept stage
	4. Is a budget on the Implementing Entity Management Fee use included?	n/a at concept stage
	5. Is an explanation and a breakdown of the execution costs included?	n/a at concept stage
	6. Is a detailed budget including budget notes included?	n/a at concept stage
	7. Are arrangements for monitoring and evaluation clearly defined, including budgeted M&E plans and sex-disaggregated data, targets and indicators, in compliance with the Gender Policy of the Fund?	n/a at concept stage
	8. Does the M&E Framework include a break-down of how implementing entity IE fees will be utilized in the supervision of the M&E function?	n/a at concept stage
	9. Does the project/programme's results framework align with the AF's results framework? Does it include at least one core outcome indicator from the Fund's results framework?	n/a at concept stage
	10. Is a disbursement schedule with time-bound milestones included?	n/a at concept stage

CONCEPT NOTE FOR REGIONAL PROJECT

PART I: PROJECT INFORMATION

Title of Project: Pioneering Innovative Adaptation Financing for Climate-Resilient Health Systems in Africa.

Countries: Benin, Burkina Faso, Uganda and Zimbabwe

Thematic Focal Area[1]: Innovation in adaptation finance

Type of Implementing Entity: Multilateral Implementing Entity

Implementing Entity: World Health Organisation (WHO)

Executing Entities: Africa Enterprise Challenge Fund (AECF)

Amount of Financing Requested: 13,924,000 (in U.S Dollars Equivalent)

Project Formulation Grant Request: Yes ☒ No ☐

Amount of Requested financing for PFG: $160,000 (in U.S Dollars Equivalent)

Letters of Endorsement (LOE) signed for all countries: Yes ☒ No ☐

NOTE: LOEs should be signed by the Designated Authority (DA). The signatory DA must be on file with the Adaptation Fund. To find the DA currently on file check this page: https://www.adaptation-fund.org/apply-funding/designated-authorities

Stage of Submission:

☒This proposal has been submitted before including at a different stage (pre-concept, concept)

☐ This is the first submission ever of the proposal at any stage

In case of a resubmission, please indicate the last submission date: 12/18/2024

Please note that the Concept note proposal document should not exceed 50 pages, including annexes.

[1] *Thematic areas are: Food security; Disaster risk reduction and early warning systems; Transboundary water management; Innovation in adaptation finance.*

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1. PROJECT BACKGROUND AND CONTEXT

1.1 Regional problem statement

Climate change is the greatest health challenge of the 21st century and threatens all aspects of the society in which we live. Climate change affects the social and environmental determinants of health – clean air, safe drinking water, sufficient food and secure shelter. Globally, the number of reported weather-related natural disasters has more than tripled since the 1960s. Rising sea levels and increasingly extreme weather events will destroy homes, medical facilities and other essential services. Floods are also increasing in frequency and intensity. Floods contaminate freshwater supplies, heighten the risk of water-borne diseases, and create breeding grounds for disease-carrying vectors such as mosquitoes. A lack of safe water can compromise hygiene and increase the risk of diarrheal disease. Climatic conditions strongly affect water-borne diseases and diseases transmitted through vectors. Climate change is known to lengthen the transmission seasons of important vector-borne diseases and to alter their geographic range. Extreme high temperatures contribute directly to deaths from cardiovascular and respiratory disease, particularly among elderly people. All populations will be affected by climate change, but some are more vulnerable than others. The World Health Organization (WHO) estimates that, between 2030 and 2050, climate change will cause approximately 250,000 additional deaths per year from malnutrition, malaria, diarrhea, and heat stress alone, with the greatest burden falling on low- and middle-income countries[2].

Sub-Saharan Africa, despite contributing less than 4% of global greenhouse gas emissions, bears a disproportionately high burden of these health-related climate impacts. The region is warming faster than the global average, with many countries already exceeding 1.5°C above pre-industrial levels[3]. This trend has intensified climate hazards such as prolonged droughts, erratic rainfall, and severe flooding, which in turn are accelerating the spread and severity of climate-sensitive diseases such as malaria, cholera, and dengue fever. These events undermine food security, damage health infrastructure, and disrupt essential services, particularly in fragile and rural contexts[4].Additionally, they exacerbate existent inequality gaps that continue to push marginalized groups into poverty and reduce their access to health products and services. For instance, women aged 25-34 who are 25% more likely to live in extremely poor households than men in the same age group experience the impact of climate change more severely.[5]

Health systems face a growing imperative to anticipate and mitigate the impacts on health and health care from increasingly frequent and severe natural disasters and extreme weather events. Similar to other critical facilities – such as fire and police stations healthcare facilities need to continue operations in the face of power outages, disruptions to transportation systems, and extreme weather. Health systems across the region remain underfunded and underprepared to manage these compounding risks. According to WHO's Africa Regional Office, fewer than 30% of African countries have implemented measures to climate-proof their health systems[6]. Most countries lack robust disease surveillance systems, climate-resilient infrastructure, emergency preparedness capacity, and predictable financing for adaptation. Vulnerability is particularly acute in Benin, Burkina Faso, Uganda, and Zimbabwe, all ranked "highly vulnerable" in the Notre Dame Global Adaptation Index (ND-GAIN) and assessed as having limited readiness to manage climate shocks[7].

While national strategies such as National Adaptation Plans (NAPs) and Health National Adaptation Plans (HNAPs) increasingly recognize health as a climate priority, implementation remains weak. A 2021 WHO

[2] https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health
[3] World Health Organization. (2014). Quantitative risk assessment of the effects of climate change on selected causes of death, 2030s and 2050s. Geneva: WHO.
[4] IPCC. (2021). Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press.
[5] UN Women, 2024, Two billion women and girls worldwide lack access to any form of social protection, For all women and girls
[6] World Health Organization Regional Office for Africa. (2020). Climate change and health in the African region. Brazzaville: WHO AFRO.
[7] World Health Organization Regional Office for Africa. (2022). State of Health Systems in the African Region. Brazzaville: WHO AFRO.

analysis of 19 NAPs found that all reviewed plans identified health as a "high-priority sector vulnerable to climate change" yet varied in their consideration of specific health risks[8]. The 2021 WHO Health and Climate Change Global Survey reported that although 51% of countries had a national health–climate strategy or plan, fewer than one quarter had achieved high or very high levels of implementation, with 70% citing insufficient financing as the primary barrier[9]. The UNFCCC estimates that by 2050, global health adaptation will require USD 26.8–29.4 billion annually[10]. Yet in low-income countries such as Benin, Burkina Faso, Uganda, and Zimbabwe, governments struggle to provide even basic health services, let alone make the necessary investments to adapt to climate risks[11]. The World Bank projects that by 2050, Sub-Saharan Africa will bear 80% of the global health costs from increased cases of malaria and diarrheal disease[12]. Without urgent adaptation, the resulting health burdens will contribute significantly to both the economic costs and non-economic loss and damage attributable to climate change[13].

Despite the scale of the challenge, adaptation finance remains grossly inadequate. Global climate finance flows remain heavily weighted toward mitigation, with adaptation finance reaching only USD 46 billion in 2019/2020—well below the estimated USD 140–300 billion needed annually by 2030[14]. Within this already limited pool, less than 0.5% of multilateral climate finance is allocated to projects that explicitly address human health[15], Most global health funders have yet to systematically integrate climate change considerations into their investments[16]. The 2018 Adaptation Gap Report, which took a special focus on health, concluded that "there is a significant global adaptation gap in health, as efforts are well below the level required to minimise negative health outcomes"[17]. This gap is particularly stark in the four target countries—Uganda, Benin, Burkina Faso, and Zimbabwe—where combined per capita health expenditure averages below USD 50 annually[18], well under the WHO-recommended minimum of USD 86 needed to deliver essential health services[19].

The financing gap is compounded by weak private sector engagement, limited access to innovative financing instruments, and insufficient institutional and technical capacity to design investment cases, attract climate finance, and implement climate-resilient health infrastructure and technologies. These barriers leave health systems exposed and unable to meet the adaptation needs of vulnerable populations[20]. The proposed project will directly address these gaps by unlocking private capital and incentivizing private sector participation through piloted demonstration projects that engage technology suppliers and service providers in delivering viable climate-resilient solutions. By fostering public–private partnerships and deploying innovative adaptation financing mechanisms, the project will create a sustainable financing ecosystem for health systems, strengthen government capacity, and bridge HNAP financial constraints, enabling long-term, climate-smart transformation of the health sector in Benin, Burkina Faso, Uganda, and Zimbabwe.

1.2 Climate change and Health Nexus

[8] University of Notre Dame. (2023). Notre Dame Global Adaptation Initiative (ND-GAIN) Country Index. Notre Dame, IN: ND-GAIN.
[9] World Health Organization. (2021). Health in the National Adaptation Plans: Review of 19 countries in the African Region. Geneva: WHO.
[10] World Health Organization. (2021). Health and Climate Change Global Survey Report. Geneva: WHO.
[11] United Nations Framework Convention on Climate Change. (2021). Needs Determination Report: Technical Summary. Bonn: UNFCCC.
[12] World Bank. (2023). World Development Indicators – Current health expenditure per capita (current US$). Washington, DC: World Bank.
[13] World Bank. (2022). Climate Change and Health Impacts: Economic Cost Assessment for Sub-Saharan Africa. Washington, DC: World Bank.
[14] United Nations Framework Convention on Climate Change. (2022). Technical paper on non-economic losses. Bonn: UNFCCC.
[15] OECD & Climate Policy Initiative. (2022). Climate Finance Provided and Mobilised by Developed Countries in 2016–2020. Paris: Organisation for Economic Co-operation and Development.
[16] World Health Organization. (2021). COP26 Special Report on Climate Change and Health: The Health Argument for Climate Action. Geneva: WHO.
[17] Coger, T., Bhatia, R., & Dar, O. (2022). Mainstreaming climate resilience into global health funding: Gaps and opportunities. The Lancet Planetary Health, 6(5), e391–e398.
[18] United Nations Environment Programme. (2018). The Adaptation Gap Report 2018: Health Chapter. Nairobi: UNEP.
[19] World Bank. (2023). World Development Indicators – Current health expenditure per capita (current US$). Washington, DC: World Bank.
[20] https://www.who.int/news/item/02-12-2023-41-funders--partners-endorse-new-guiding-principles-for-financing-climate-and-health-solutions-to-protect-health

Climate change is a defining health challenge across Benin, Burkina Faso, Uganda, and Zimbabwe, where climate variability acts as a risk multiplier that amplifies existing systemic weaknesses in public health systems. In Benin, recurrent floods and coastal erosion increase the transmission of malaria, dengue, and waterborne diseases, particularly cholera, while saltwater intrusion threatens safe drinking water and maternal health services[21]. Burkina Faso's recurrent droughts and extreme heat exacerbate malnutrition, respiratory illnesses from dust storms, and heat stress, especially among vulnerable groups and health workers[22]. Uganda faces intensified rainfall variability, with floods disrupting maternal and child health services, expanding malaria into highland zones, and fueling recurrent outbreaks of cholera and dysentery in urban flood-prone areas[23]. In Zimbabwe, recurrent droughts and cyclones undermine food security, trigger cholera outbreaks in peri-urban settlements, and disrupt critical services such as immunization and HIV care[24]. To address these risks, the proposal will deploy climate-resilient solutions tailored to each context: flood-proof WASH systems and vector control,climate-proof health facilities and highland malaria surveillance and resilient nutrition and continuity planning for climate disasters. Together, these interventions strengthen health system resilience to climate shocks and safeguard vulnerable populations in line with WHO's climate-resilient health systems framework[25].Figure (1) below highlights the climate change and health nexus linkages.

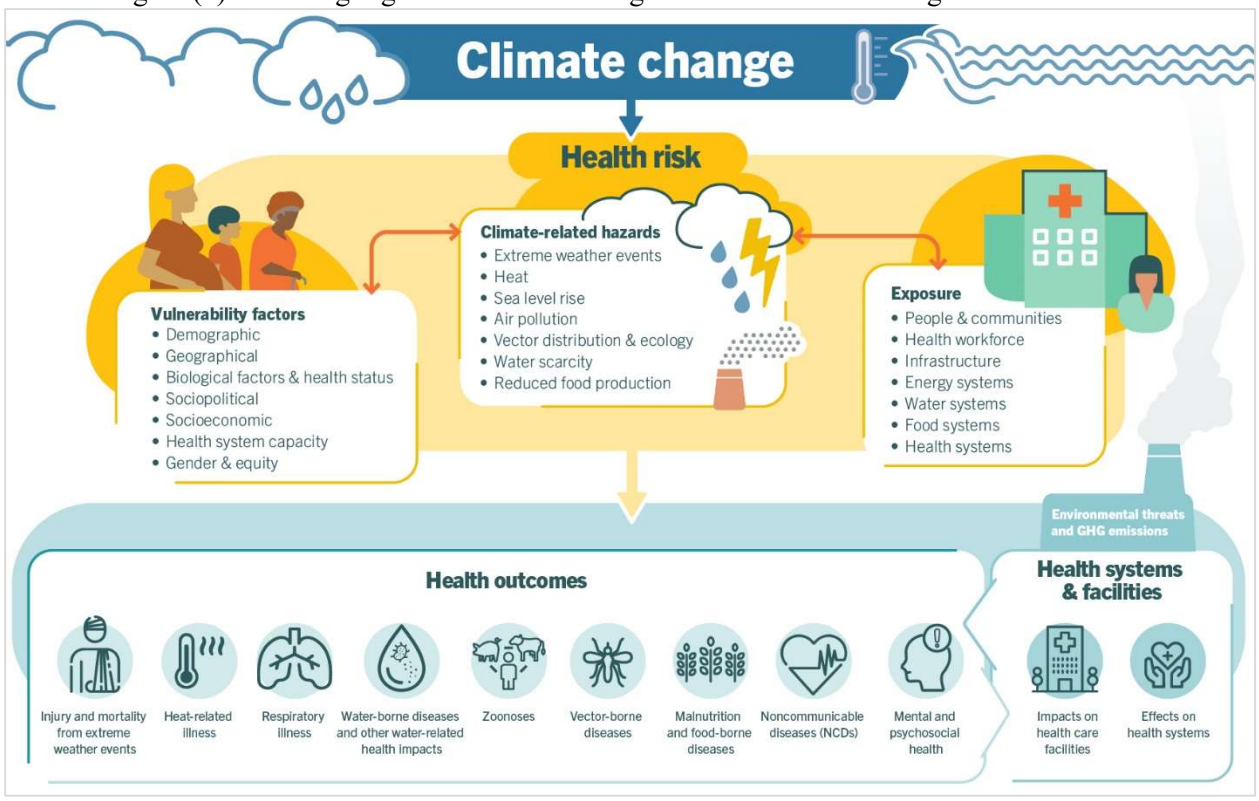

Figure 1: Climate Change and Health Nexus

This schematic diagram above clearly illustrates how climate change drives health risks by linking hazards such as extreme weather, heat waves, air pollution, and water scarcity with vulnerability factors like demographics, health status, socioeconomic conditions, and health system capacity. These interactions shape exposure for communities, health infrastructure, and essential systems, leading to outcomes including injuries, infectious diseases, malnutrition, NCDs, and mental health impacts. It visually demonstrates the

[21] WHO. (2021). Climate and Health Country Profile: Benin
[22] IPCC. (2022). Sixth Assessment Report: Impacts, Adaptation, and Vulnerability.
[23] Ministry of Health, Uganda. (2020). Health National Adaptation Plan (HNAP).
[24] Government of Zimbabwe & WHO. (2021). Climate Change and Health Country Profile: Zimbabwe.
[25] WHO. (2020). Operational framework for building climate-resilient health systems.

climate–health linkages and the need for integrated adaptation strategies to build resilient health systems while reducing environmental threats.

The ability of national health systems to respond to these growing risks is severely constrained. According to the WHO Africa Regional Office, over 60% of health facilities in low-income African countries lack reliable electricity, which compromises the delivery of essential services, including cold-chain storage for vaccines and emergency care. Furthermore, fewer than 20% of African countries have integrated climate risk management into health sector planning, leaving most systems without early warning, disease surveillance, or disaster preparedness capacity[26]. The IPCC's Sixth Assessment Report reinforces that Africa's health systems rank among the most vulnerable globally, due to chronic underinvestment, infrastructure gaps, and workforce shortages[27]. Without urgent action to strengthen health system resilience, the public health impacts of climate change are projected to worsen significantly—reversing decades of health and development progress.

Climate change poses escalating risks to health systems, particularly when it disrupts the operation of health care facilities. In Uganda, Zimbabwe, Benin, and Burkina Faso, fragile infrastructure, disease burden, and climate variability converge to undermine health service delivery. Extreme weather events, rising temperatures, and vector-borne disease outbreaks increase demand for care while simultaneously damaging infrastructure, interrupting supply chains, and reducing access to essential services[28]. Strengthening the climate resilience of health care systems is therefore critical to safeguarding public health across these vulnerable contexts[29].

1.3 Country-Specific Contexts

1.3.1 Uganda

Climate Context: Uganda is experiencing increasing climate variability, including more frequent floods, droughts, and landslides—particularly in mountainous districts such as Kasese. The country is projected to warm by over 2 °C by 2030, exacerbating disruption to rural livelihoods and infrastructure[30]. ND-GAIN ranks Uganda as the 32nd most vulnerable country globally, while placing it at only 172nd in readiness, signaling low adaptive capacity[31].A vulnerability and adaptability Assessment (VAA) was conducted in 716 selected Health facilities using the WHO-recommended methodological approach (WHO,2013).The VAA assessed facilities for the state of vulnerability to several climate change hazards, including floods, storms, drought, landslides and lightening as well as climate related extremes such as the rising water levels, heat waves and cold waves. For each priority climate change hazard and extreme, four dimensions were assessed including health workforce, WASH and health care waste, energy and infrastructure, technology, products and processes to facilitate the development of the countries National Health Adaptation Plan(H-NAP).

Health system vulnerabilities: Climate-related hazards in the Health Care Facilities (HCFs) VAA study revealed that half (47.6%) of the HCFs are exposed to drought, 39.7% are exposed to floods,31.1% to storms and water level rise at 12%. The study indicated that many healthcare facilities especially in the lower levels are more vulnerable and lack crucial resilience features: insufficient climate-safe energy sources, no protection for emergency backup systems, and inability to ensure service continuity during

[26] IPCC. Sixth Assessment Report: Impacts, Adaptation and Vulnerability – Chapter 9: Africa, 2022.
[27] WHO Africa Regional Office. Climate and Health Country Profiles: Regional Synthesis, 2023
[28] IPCC. (2022). Climate Change 2022: Impacts, Adaptation and Vulnerability.
[29] Watts, N., et al. (2021). The 2021 report of the Lancet Countdown on health and climate change: Code red for a healthy future.
[30] Uganda Climate Risk Country Profile, World Bank, 2021, and Uganda HNAP preparatory documents, Ministry of Health, 2024.
[31] ND-GAIN Country Index, Uganda profile, 2023.

extreme weather events[32]. Uganda also faces a high burden of malnutrition and communicable disease: approximately 39 percent of under-five children are stunted, contributing to lost GDP amounting to 5.6 percent annually[33]. The study found that the key climate sensitive diseases in Uganda are Asthma, cholera, dysentery, fever, guinea worm, malaria, skin diseases, typhoid and yellow fever. The National Health Adaptation Plan (HNAP 2024–30) is grounded in a comprehensive Vulnerability and Adaptation Assessment completed in 2023, which revealed critical gaps in climate-informed planning, infrastructure, and workforce training[34].Direct impacts of climate change and variability on human health were cited as the disappearance of herbal medicines, loss of biodiversity that leads to malnutrition, proliferation of pests and vectors due to favorable conditions for their reproduction and concomitant increases in water and vector-borne diseases.

Private Sector Climate–Health Landscape – Uganda: Uganda's private sector is increasingly engaged in climate finance and climate-related activities, though opportunities for direct participation in climate–health adaptation remain less developed than in mitigation. The strongest entry points are in the delivery of climate-resilient energy, water and associated water sanitation and hygiene (WASH), and technology solutions for health facilities. Energy Power Companies (EPCs) and Energy Service Companies (ESCOs) are active in supplying and installing solar energy systems in off-grid and weak-grid zones, including hybrid solar power systems with panels, inverters, batteries, surge protectors, and associated circuitry. The Uganda Energy Credit Capitalization Company (UECCC) plays a catalytic role by providing working capital loans—through Participating Financial Institutions (PFIs)—to solar companies operating on Pay-As-You-Go, pay plan, and cash business models[35]. These loans cover import and stock acquisition costs, including taxes, duties, and transport, enabling suppliers to scale service delivery.

UECCC also manages Results-Based Financing (RBF) schemes for off-grid solar, productive uses, and clean cooking solutions. Through its Credit Support Facility (CSF) and technical assistance programs, it facilitates private sector–led renewable energy projects and programs. Under the Government of Uganda and World Bank–funded Electricity Access Scale-Up Project (EASP), UECCC supports off-grid energy access for households, enterprises, industrial parks, and public institutions—including health facilities, schools, and water supply systems—via financial intermediation[36]. This includes targeted RBF programs for off-grid solar products (OGS), clean cooking solutions (CCS), and productive-use energy (PUE) technologies, with a focus on refugee-hosting districts.

Beyond UECCC-supported initiatives, several other private-sector-driven models contribute to climate–health resilience. Power Africa and the Uganda Off-Grid Energy Market Accelerator (UOMA) work with EPCs and SMEs to deploy solar PV and battery storage for health facilities, often under service-level agreements that include operations and maintenance (O&M)[37]. Social enterprises such as Fenix International, SolarNow, and Aptech Africa supply solar power systems to rural clinics and health posts, bundling financing and after-sales service. Water and sanitation enterprises like Safe Water Network Uganda and DrinkWell operate PPP models for water purification and distribution, improving climate-resilient WASH services in health settings[38],[39]. In the cold-chain sector, companies like SureChill and B Medical Systems provide solar direct-drive vaccine refrigerators to public health facilities under Gavi- or UNICEF-supported procurement frameworks, implemented through local private distributors[40].

[32] Uganda Climate Change & Health Vulnerability and Adaptation Assessment, Ministry of Health, 2023.
[33] Nutrition in Uganda: Stunting prevalence and GDP impact, WFP/UNICEF national projections, 2022.
[34] Official documentation: Uganda HNAP 2024–30, based on VAA completed in 2023.
[35] Uganda Energy Credit Capitalization Company (UECCC). (2023). Annual Report 2022/2023. Kampala: UECCC.
[36] World Bank. (2022). Electricity Access Scale-Up Project (EASP) – Project Appraisal Document. Washington, DC: World Bank.
[37] Power Africa. (2021). Power Africa in Uganda: Annual Report.
[38] Uganda Off-Grid Energy Market Accelerator (UOMA). (2022). Uganda Solar Market Trends Report. Kampala: UOMA.
[39] DrinkWell. (2020). PPP Water Kiosk Models in Sub-Saharan Africa.
[40] Safe Water Network Uganda. (2021). Public–Private Partnership Models for Safe Water Provision.

Access to capital for these enterprises is mixed: Impact investors, DFIs (e.g., FMO, SunFunder), and local banks show moderate appetite, especially for aggregated, multi-facility projects with secure payment streams. Most operate with short- to medium-term financing, donor subsidies, or concessional credit lines. Affordable long-term debt for scaling is scarce and often requires blending with grants or guarantees to mitigate perceived investment risks. Key barriers to scaling private participation include policy and regulatory uncertainty, foreign exchange volatility risks in boarder points especially South Sudan and Congo, the limited creditworthiness of rural health facilities, and high upfront technology costs. The proposed project's blended finance and PPP approach can address these gaps by de-risking investment, aggregating demand across multiple facilities, and demonstrating commercially viable models that integrate climate adaptation objectives into health service delivery. Partnerships with public agencies—particularly the Ministry of Health, Ministry of Energy and Mineral Development, and refugee-hosting district governments—are well-established, often mediated by development partners like Power Africa**,** UNCDF**,** and GIZ EnDev**,** SNV and Water aid.

1.3.2 Benin

Climate context: Benin is a small tropical country in West Africa, covering about 114,763 km ^{2}. It borders Togo to the west, Nigeria to the east, and Burkina Faso and Niger to the north. Benin's population is approximately 14 million people, the majority of whom reside in the low-lying southern coastal plain (including major urban centers like Cotonou and Porto-Novo)**.** Benin is highly vulnerable to a range of climate hazards, ranking in the top quartile globally for overall climate risk — 155th out of 181 countries on the Notre Dame Global Adaptation Index[41](ND-GAIN). which measures two dimensions of adaptation: (i) the vulnerability of six life-supporting sectors (food, water, health, ecosystem services, human habitat, and infrastructure); and (ii) countries 'economic, governance, and social readiness to respond to these vulnerabilities. The country faces high risk of river and urban flooding, extreme heat, water scarcity, and moderate coastal flooding, compounded by its geographic exposure and weak coping capacity. The 2010 floods, considered the worst in half a century, submerged over two-thirds of the national territory, affecting nearly one million people and disrupting schools, hospitals, and livelihoods[42]. A subsequent flood nine years later caused economic damages estimated at USD 85 million[43]. Climate projections indicate that over 98% of Benin's territory will be exposed to extreme heat by 2070, intensifying the already acute seasonal variability in rainfall patterns across coastal and northern zones[44].

Health system vulnerabilities: The public health system in Benin is structurally underfunded and underprepared to manage climate-related risks. Health expenditure stands at only 2.6% of GDP, while the Universal Health Coverage Index is 46.6, far below regional and global averages[45]. Malaria remains a leading cause of morbidity and mortality and is highly seasonal, closely tied to rainfall variability and microclimatic conditions. Yet, early warning systems and climate-sensitive disease surveillance are limited or absent at most primary healthcare levels. Frequent heat stress events strain infrastructure, and many health facilities suffer from power instability, poor drainage, and weak structural resilience — all of which impede service delivery during climate shocks[46]. Therefore, the country is highly vulnerable to natural disasters, like flooding and drought, which exacerbates nutritional instability and malnutrition. According to World Food Program, 9.6 percent of the population was food insecure while chronic malnutrition, which prevents body growth and cognitive development with irreversible consequences after the age of 2, affects 32 percent of young children. In this context, ensuring access to health services is especially relevant for mitigating climate shocks.

[41] Notre Dame Global Adaptation Initiative (ND-GAIN). Country Index: Benin, 2021.
[42] World Bank. Benin: Natural Disaster Risk Profile, 2011; UN OCHA, Floods in West Africa, 2010.
[43] WHO Africa. Benin Climate and Health Country Profile,2023.
[44] UNDP Benin. Post-Flood Impact Assessment Report, 2019
[45] ND-GAIN & World Bank Climate Change Knowledge Portal. Benin Climate Risk Profile, 2023.
[46] WHO Global Health Expenditure Database; UHC Index data (2021–2022)

Private Sector Landscape in Climate–Health: In Benin, ESCOs and EPCs such as ENGIE Energy Access[47], ZIZ Energie[48], and Nuru are active in deploying solar PV and hybrid systems for public institutions, including health facilities, often supported through Engineering, Procurement, Construction, and Finance (EPC+F) models or lease-to-own structures[49]. Many use PAYGO or rental contracts to spread costs for small-scale health facilities. Public–private partnerships are emerging through collaborations between the Ministry of Health, local communes, and donor programs like GIZ ProEnergie and the West African Clean Cooking Alliance[50]. Some enterprises bundle solar systems with productive-use applications like water pumping for WASH in clinics integrating resilience and operational cost savings[51].

Investment Appetite & Capital: Regional financiers such as BOAD, EBID, and IFC/Proparco express interest in bankable projects with clear off-take agreements.[52] Capital is mostly short- to medium-term and commercially priced; concessional finance is critical for affordability. Risks: Small project sizes, fragmented procurement, and limited O&M capacity are major issues. Payment risks at municipal level and the lack of credit guarantees reduce scalability.

1.3.3 Zimbabwe

Climate Context: Zimbabwe with a population size of 16 million people (2022) is a landlocked country that covers 390,757km^2 and is elevated in the central plateau. The country is largely semi-arid and generally experiences low and erratic rainfall. It faces acute exposure to climate variability, with observed increases of up to 2.6°C in daily minimum temperatures over the past century, coupled with a significant decline in average rainfall and increased unpredictability of weather patterns[53]. The frequency and severity of extreme events have intensified, including Cyclone Dineo in 2017, which displaced thousands and destroyed infrastructure in southern provinces, and widespread flooding in 2022 that disrupted livelihoods and damaged key public facilities[54]. In 2023/24, an El Niño-induced drought led to a 60% reduction in maize production, triggering a state of disaster and worsening food insecurity for over 2.7 million people[55]. With agriculture contributing roughly 17% of GDP and employing over 60% of the population, climate shocks directly threaten livelihoods and household nutritional status[56]. Climate projections show Zimbabwe becoming increasingly prone to multi-year drought cycles, flash flooding, and temperature extremes, especially in the southern and eastern districts.

Health system vulnerabilities: In early 2024, cholera outbreaks have underscored the acute public health vulnerabilities in Uganda, Zimbabwe, Burkina Faso, and Benin, exposing systemic weaknesses in water, sanitation, and health service delivery under intensifying climate pressures. Zimbabwe has been the hardest hit, with a cumulative total of 21,230 suspected and confirmed cases and 476 deaths between 12 February 2023 and 22 January 2024, reflecting a high case fatality rate (CFR) of 2.2%[57]. The outbreak has intensified since September 2023, peaking at over 2,000 new weekly cases in January 2024 and affecting all provinces, with Harare, Mashonaland Central, and Manicaland among the worst impacted[58]. Uganda, though reporting far fewer cases, registered 80 cases and 10 deaths within just nine days in September 2023, a strikingly high CFR of 12.5% that signals gaps in timely detection, case management, and outbreak response capacity.

[47] ENGIE Energy Access. (2023). Benin Country Operations Overview.
[48] ZIZ Energie. (2022). Decentralised Energy Solutions in West Africa – Benin Case Studies.
[49] Nuru. (2021). Hybrid Solar Energy Projects in Francophone Africa.
[50] GIZ. (2022). ProEnergie Programme – Benin Progress Report. Bonn: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.
[51] West African Clean Cooking Alliance. (2021). Market Assessment for Clean Cooking Solutions in UEMOA Countries.
[52] BOAD. (2023). Annual Report 2023. Banque Ouest Africaine de Développement.
[53] Government of Zimbabwe. National Climate Policy, 2017; World Bank. Zimbabwe Climate Risk Country Profile, 2021.
[54] UNOCHA. Zimbabwe: Humanitarian Needs Overview, 2022; Cyclone Dineo damage reports, 2017
[55] Zimbabwe Vulnerability Assessment Committee (ZimVAC), 2024 Rural Livelihoods Report; ReliefWeb, March 2024 El Niño response updates.
[56] FAO Zimbabwe Country Profile, 2023; Zimbabwe Livelihood Profiles, Famine Early Warning System Network (FEWS NET).
[57] World Health Organization. (2024). Multi-country outbreak of cholera, Situation Report No. 11 – 12 February 2024. Geneva: WHO.
[58] Ibid

While Burkina Faso and Benin have not reported cholera cases in this period, their fragile WASH systems, periodic flooding, and porous borders with outbreak-affected neighbors place them at significant risk of importation and rapid spread. These patterns point to the urgent need for climate-resilient WASH infrastructure, reliable surveillance systems, and health facilities equipped to maintain safe water, sanitation, and infection prevention measures even during extreme weather events and service disruptions[59].

Zimbabwe also carries a high burden of HIV/AIDS (13% adult prevalence), tuberculosis, and malaria, which stretch the system's absorptive capacity. With per capita health expenditure at around USD 20 and critical shortages of trained personnel and medicines, the system is ill-prepared to absorb new climate-related stressors[60]. A 2022 economic modelling report from the World Bank projected that, without scaled-up climate adaptation investments, Zimbabwe could lose up to 12% of its GDP annually by 2050 due to climate-driven health, agricultural, and infrastructure impacts[61]. Strengthening climate-resilient health systems is therefore not only a public health priority but an economic imperative for long-term stability and development.

Private Sector Landscape in Climate–Health: Zimbabwe's private sector is expanding in renewable energy and climate-resilient health infrastructure despite macroeconomic challenges. ESCOs like Distributed Power Africa (DPA)[62], Solar Shack, and Solar century Africa deliver EPC and EaaS models for hospitals and clinics, integrating hybrid storage for continuous power supply[63]. Others, such as Enviro Chem and Biogas Solutions Zimbabwe**,** provide clean cooking and waste-to-energy systems for institutional kitchens in health facilities[64].

Cold-chain suppliers, including B Medical Systems and local distributors, work under Gavi/UNICEF procurement, with installation and servicing subcontracted to private firms[65]. Borehole drilling companies and water purification SMEs partner with local councils and the Ministry of Health and Child Care to improve WASH services in clinics[66]. Investment Appetite & Capital: Impact investors and some local banks engage selectively, with stronger appetite for projects tied to donor programs or government service contracts. Most financing is short-term due to inflation and currency risks; FX volatility inflates equipment costs. Risks: Policy inconsistency, macroeconomic instability, and affordability constraints in rural health facilities are key investment barriers. Spare-parts availability and technical support for high-spec systems also remain a concern.

1.3.4 Burkina Faso

Climate Context: Burkina Faso, a landlocked country in the Sahel region of West Africa, is characterized by a predominantly arid to semi-arid climate and a rapidly growing population estimated at over 22 million. Its economy is heavily reliant on agriculture, which employs more than 80% of the population and contributes around 30% to GDP. However, this dependence on rain-fed agriculture, coupled with widespread poverty and limited infrastructure, makes the country exceptionally vulnerable to climate variability and extremes. Rising temperatures, erratic rainfall patterns, and the increasing frequency of

[59] Howard, G., Calow, R., Macdonald, A., & Bartram, J. (2016). Climate change and water and sanitation: Likely impacts and emerging trends for action. Annual Review of Environment and Resources, 41, 253–276.
[60] Global Health Expenditure Database (WHO), Zimbabwe; UNAIDS Country Report, 2023.
[61] World Bank. Zimbabwe Climate and Development Report, 2022
[62] Distributed Power Africa (DPA). (2023). Energy-as-a-Service Solutions for Health Facilities in Zimbabwe.
[63] Solar Shack. (2022). Off-Grid Solar Solutions for Community Infrastructure.
[64] EnviroChem. (2021). Institutional Clean Cooking and Waste-to-Energy Solutions in Zimbabwe
[65] Gavi. (2021). Cold Chain Equipment Optimisation Platform (CCEOP) – Annual Progress Report. Geneva: Gavi, the Vaccine Alliance.
[66] AfDB. (2023). Zimbabwe Private Sector Development Strategy. African Development Bank.

droughts and floods have led to growing food insecurity, environmental degradation, and systemic risks across sectors including health, water, and livelihoods[67].

Climate projections indicate that Burkina Faso will experience a temperature rise of between 1.9°C and 4.2°C by 2080 under high emissions scenarios, with a likely increase in heatwaves, crop failure, and extreme weather events[68]. According to the Notre Dame Global Adaptation Index (ND-GAIN), the country ranks among the 40 most vulnerable globally and scores particularly low in climate readiness, reflecting weak adaptive capacity, limited institutional coordination, and underdeveloped infrastructure[69]. Although a national Vulnerability and Adaptation Assessment (VAA) of health facilities has not been comprehensively conducted, climate risk profiles identify the health sector as critically exposed to hazards such as drought, extreme heat, and floods, particularly in remote and underserved regions[70].

Health System Vulnerabilities: Burkina Faso's health system faces multiple, interlinked vulnerabilities that are being amplified by the impacts of climate change. The health infrastructure—especially at lower levels of service delivery—lacks basic resilience features such as climate-proof buildings, backup energy systems, and access to safe water and sanitation. Extreme weather events have been shown to disrupt service delivery, damage health infrastructure, and compromise disease surveillance systems. The health workforce is limited, with fewer than 0.45 physicians and 3.6 nurses per 10,000 people, far below WHO-recommended thresholds[71]. Climate-related impacts on health are already evident. Epidemiological studies have linked short-term and long-term exposure to high temperatures and seasonal droughts with elevated rates of child mortality, undernutrition, and waterborne diseases. Around 30% of children under five suffer from chronic malnutrition (stunting), while food insecurity and water scarcity remain widespread in drought-affected regions[72]. Rising temperatures and irregular precipitation have also contributed to increases in vector-borne diseases such as malaria and diarrheal diseases linked to flood events[73].

While Burkina Faso's National Adaptation Plan (NAP), adopted in 2015, recognizes health as a priority sector, its implementation has been slow due to limited technical capacity, insufficient financing, and fragmented coordination mechanisms. Key adaptation objectives—including the integration of climate risk into health planning, strengthening health surveillance, and building climate-resilient infrastructure—remain under-resourced[74]. The country has yet to develop a standalone National Health Adaptation Plan (HNAP), and would benefit from a structured national vulnerability assessment of healthcare facilities to inform investment prioritization and resilience-building.

In recent years, Burkina Faso has made progress in integrating climate considerations into sectoral plans; however, the fiscal space for health remains narrow, with public health expenditure accounting for just over 5% of GDP, below the Abuja Declaration target of 15%[75]. This underinvestment limits the country's capacity to strengthen health infrastructure, procure climate-resilient technologies, and implement early warning systems. Efforts to mobilize external resources through climate finance channels—such as the Green Climate Fund (GCF), Adaptation Fund (AF), and bilateral partnerships—have been initiated but remain largely at the planning stage. Moreover, the absence of a costed National Health Adaptation Plan (HNAP) makes it difficult to align donor and government priorities and to attract sustained investment.The

[67] World Bank. (2023). Burkina Faso: Overview. https://www.worldbank.org/en/country/burkinafaso
[68] https://www.adaptationcommunity.net/wp-content/uploads/2021/01/Climate-Risk-Profile_Burkina-Faso_EN.pdf
[69] https://napglobalnetwork.org/wp-content/uploads/2021/10/napgn-en-2021-evaluation-burkina-faso-nap-2015-2020.pdf
[70] ND-GAIN Country Index (2023). University of Notre Dame. https://gain.nd.edu/our-work/country-index/
[71] https://www.climatecentre.org/wp-content/uploads/RCCC-ICRC-Country-profiles-Burkina_Faso.pdf
[72] World Health Organization. (2023). Global Health Workforce Statistics Database. https://www.who.int/data/gho
[73] UNICEF Burkina Faso. (2023). Nutrition Situation. https://www.unicef.org/burkinafaso/nutrition
[74] WHO Africa. (2022). Health and Climate Change Country Profile: Burkina Faso. (internal reports and climate-related disease trends)
[75] WHO Global Health Expenditure Database. (2023). Burkina Faso Health Spending Profile. https://apps.who.int/nha/database

fragmentation of funding streams and limited integration of health within broader climate finance strategies further restrict the sector's ability to build long-term resilience. Strengthening national budgetary allocation for health, improving coordination between climate and health authorities, and developing bankable health adaptation proposals are essential next steps to bridge this gap.

Private Sector Landscape in Climate–Health: Burkina Faso's climate–health private sector is shaped by off-grid electrification and WASH service provision. ESCOs such as ACCESS Energie**,** Nafa Naana**,** and Solar Koodoo supply solar PV for health facilities, typically via RBF contracts **or** performance-based service agreements under donor programs (e.g., World Bank's Energy Access Project, GIZ EnDev)[76],[77]. Some integrate cold-chain solutions, oxygen concentrators, and efficient water pumping[78]. Partnerships involve the Ministry of Health, the national power utility SONABEL, and the water utility ONEA, often brokered by NGOs like SNV and WaterAid[79]. Health-focused adaptation projects often combine energy, water, and waste management interventions, creating a bundled service model for rural facilities.

Investment Appetite & Capital: Interest from DFIs and specialized impact funds is present, especially for aggregated, service-based projects with donor-backed revenue guarantees. Capital is typically short-term or catalytic**;** long-term project finance is rare due to security concerns. **Risks:** Political instability, security risks in certain regions, and dispersed rural demand increase operational costs. Limited technical skills locally can undermine O&M sustainability.

The figure 2; below shows the state of vulnerability based on the standard precipitation index were temperature increases due to human-caused climate change across the project affected regions.

[76] ACCESS Energie. (2023). Solar PV Solutions for Health Facilities in West Africa.
[77] Nafa Naana. (2022). Clean Energy Solutions for Health and Community Services.
[78] World Bank. (2021). Burkina Faso Energy Access Project – Project Appraisal Document. Washington, DC: World Bank.
[79] WaterAid. (2021). Climate-Resilient WASH in Healthcare Facilities – Burkina Faso Case Study.

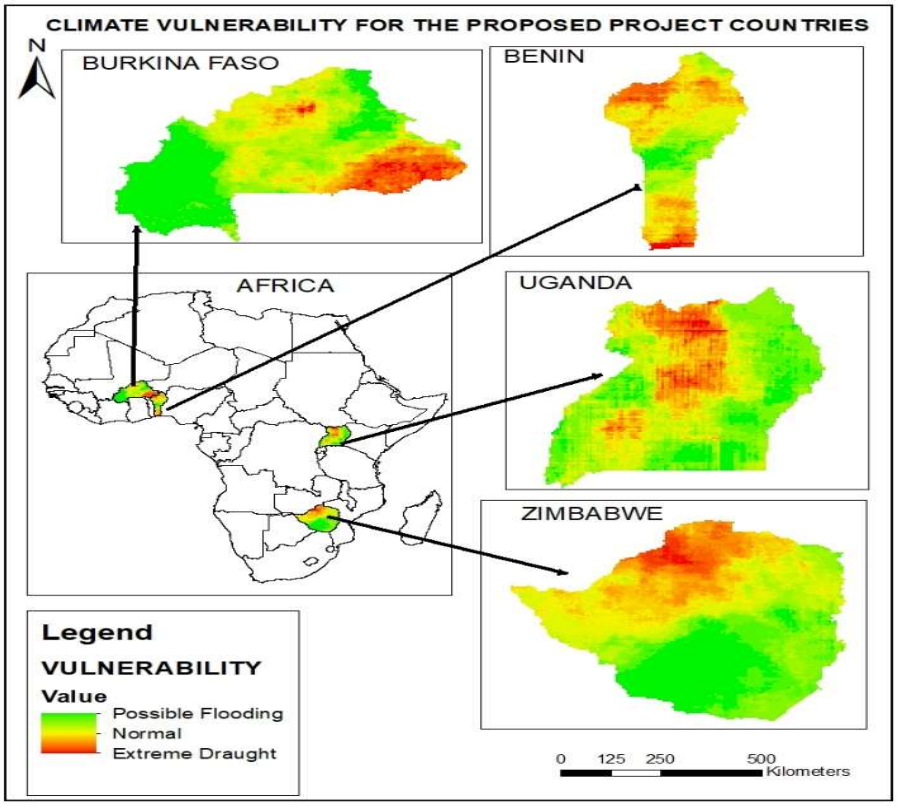

Figure 2: Climate vulnerability of the proposed project countries
Source: Centre for Remote Sensing and Geographic Information Services.

1.4 Policy and Strategic Context

Uganda's policy framework reflects significant progress in integrating climate change and health priorities. The country's First National Communication (2002), the National Adaptation Programmes of Action (NAPA, 2007), the Second National Communication (2014), and the forthcoming Third National Communication (in production, 2025) all identify health as a key sector affected by climate change. The Both the Intended Nationally Determined Contribution (INDC, 2015) and the Updated Nationally Determined Contribution (NDC, 2022) lists health as highly vulnerable sector. NDC (2022) lists health among 13 priority adaptation sectors, with specific targets such as developing 30 district climate–health profiles, scaling up climate-smart health infrastructure, and achieving 50% implementation of the Health National Adaptation Plan (HNAP) by 2030[80]. Uganda's HNAP—finalized by the Ministry of Health in 2024 with support from WHO and The Rockefeller Foundation—is informed by a rigorous Vulnerability and Adaptation Assessment (VAA) that identifies geographic and institutional risks to the health system[81]. Several studies have recommended increasing efforts to support climate change adaptation actions to better understand climate health risks, early warning, and reduction of infectious and vector-borne diseases, and increase resilience of health facilities and systems.

These priorities are further reinforced by complementary strategies, including the National Biodiversity Strategy and Action Plan (2015–2025), the National Climate Change Policy 2015,, sector-specific National Adaptation Plans (NAPs), and the National Strategy for Climate Change Mitigation, which considers the

[80] Government of Uganda. (2007). Uganda National Adaptation Programmes of Action (NAPA). Ministry of Water and Environment.
[81] Government of Uganda. (2022). Updated Nationally Determined Contribution. Ministry of Water and Environment.

health implications of mitigation actions[82]. The country also implements a NAP–Agriculture and Health Roadmap, supported by FAO and UNDP, to strengthen resilience in interlinked sectors[83]. Climate change budget tagging, now being rolled out across sectors, is expected to mandate dedicated allocations for climate action in every sector, including health[84]. At the national development planning level, climate–health objectives are embedded in the Third National Development Plan (NDPIII 2020/21–2024/25) and the Health Sector Development Plan II (HSDP II), both of which prioritize climate-resilient infrastructure, surveillance, and service delivery systems[85]. Vector-borne diseases,food and nutrition insecurity are the negative health impacts of largest concern in NDCs. Vector-borne diseases were highlighted in 33 NDCs, while food and nutrition insecurity were emphasized in 27 NDCs. Although 70% of NDCs reference health, only 28 (15%) link it to climate finance—most (20) making such actions conditional on additional funding. Just six NDCs specify concrete amounts or timelines for financing health-related adaptation actions, and fewer than one in six highlight the need for financial support for health-promoting climate measures.

Benin's Updated NDC (2021) identifies health as a core adaptation priority, with focus areas including climate-sensitive diseases, heat stress, improved disease surveillance, and climate-resilient infrastructure4. The country developed its National Adaptation Plan (NAP) in 2020 with UNDP and UNEP support, identifying the health sector among six core vulnerable areas. However, implementation progress is constrained by financial and technical gaps[86]. A draft Health National Adaptation Plan (HNAP) was initiated with WHO assistance and aligns with national efforts to expand early warning and monitoring systems. The National Health Development Plan (PNDS 2018–2022) also integrates climate considerations, focusing on strengthening health system capacity in flood-prone and underserved regions[87]. Broader resilience and sustainability goals are reflected in the Plan National de Development (2018–2025) and Vision Benin Alafia 2025, which recognize the health impacts of climate risks[88].

Zimbabwe has established a strong policy foundation for climate-health integration through its National Climate Policy (2017) and Updated NDC (2021), which explicitly include health among seven priority adaptation sectors[89]. Proposed actions include enhancing epidemic preparedness, upgrading climate-resilient health infrastructure, and improving access to climate information for vulnerable communities. Zimbabwe is currently finalizing its Health National Adaptation Plan (HNAP), developed with technical support from WHO and aligned with the WHO–ATACH framework for climate-resilient and low-carbon health systems[90]. The Ministry of Environment leads the implementation of the National Adaptation Plan Roadmap, while broader health resilience targets are integrated into the National Development Strategy 1 (2021–2025), which prioritizes risk reduction and infrastructure adaptation in water, sanitation, and healthcare[91].

Burkina Faso's Updated NDC (2021) emphasizes health as a key adaptation sector and allocates the majority of its adaptation financing targets toward strengthening climate resilience in vulnerable communities, including improved health service delivery[92]. The country adopted its National Adaptation Plan (NAP) in 2021, coordinated by the Permanent Secretariat for Sustainable Development

[82] Ministry of Health. (2023). Health National Adaptation Plan (HNAP).
[83] FAO & UNDP. (2021). NAP–Agriculture and Health Roadmap for Uganda.
[84] Ministry of Finance, Planning and Economic Development. (2023). Climate Change Budget Tagging Guidelines.
[85] National Planning Authority. (2020). Third National Development Plan (NDPIII 2020/21–2024/25); Ministry of Health. (2020). Health Sector Development Plan II (HSDP II).
[86] Government of Benin. (2021). Updated Nationally Determined Contribution (NDC).
[87] UNDP Climate Promise. (2021). Benin NAP Country Brief.
[88] Ministry of Health, Benin. (2018). Plan National de Développement Sanitaire (PNDS 2018–2022).
[89] Government of Zimbabwe. (2021). Updated Nationally Determined Contribution (NDC); National Climate Policy.
[90] WHO Africa Regional Office. (2023). Zimbabwe Commitment to Climate-Resilient Health Systems (WHO–ATACH).
[91] Government of Zimbabwe. (2021). National Development Strategy 1 (2021–2025).
[92] Government of Burkina Faso. (2021). Updated Nationally Determined Contribution (NDC).

(SP/CONEDD), which includes a health-focused chapter developed with WHO and the NAP Global Network[93]. While the NAP outlines health infrastructure upgrades, improved disease surveillance, and early warning systems, a 2021 evaluation revealed that only 41% of the planned health actions had been implemented, citing funding and coordination gaps[94]. The National Health Development Plan (PNDS 2021–2030) supports the integration of climate risks through investments in epidemic control and infrastructure in flood-prone areas[95].

Table 1: Policy and Strategic Context Summary

Country	NDC: Health Adaptation	National Adaptation Plan (NAP)	Health National Adaptation Plan (HNAP)	Health Development Plan climate focus	Other Dev Strategy with climate-health
Uganda	✓ Health is one of 13 adaptation sectors, with measurable targets: 30 district profiles, climate-smart infrastructure, HNAP at 50% by 2030	NAP includes an Agriculture & Health Roadmap, aligning health-sector climate action	Finalized HNAP (2023), based on robust VAA, developed with WHO & GIZ	Embedded in HSDP II climate-sensitive service delivery targets	NDPIII (2020/21–2024/25) mandates climate-resilient systems
Benin	✓ NDC (2021) names health priority: malaria, heat, surveillance	NAP finalized in 2020, health among six vulnerable areas; donor-supported but under-funded	Draft HNAP underway with WHO support, climate-health integration pending	PNDS 2018–2022 includes climate-informed surveillance & infrastructure improvements	PND 2018–2025 & Vision Alafia 2025 reference climate-health linkages
Zimbabwe	✓ NDC (2021) and National Climate Policy (2017) list health as priority adaptation sector	NAP Roadmap active under Ministry of Environment; multisectoral coordination	HNAP finalizing with WHO and as part of WHO–ATACH framework	Health resilience prioritized in National Development Strategy 1 (2021–2025)	MoH Strategic Plan includes climate-related risk reduction
Burkina Faso	✓ NDC (2021) allocates significant adaptation funding to health sector activities	NAP adopted 2021, health-specific chapter co-developed with WHO/NAPGN	HNAP processes initiated; part of multisectoral health adaptation roadmaps	PNDS 2021–2030 emphasizes epidemic control & infrastructure in hazard zones	SP/CONEDD strategy coordinates climate-health integration

Strategic framework for building climate resilience in health care facilities: Health care facilities are increasingly at the frontline of climate-related shocks while also contributing to environmental degradation. To address this dual challenge, the concept of climate-resilient and environmentally sustainable health care facilities has emerged—integrating resilience to climate hazards with efforts to reduce environmental harm. The framework in figure 2 below illustrates the interlinked dimensions of climate change impacts, health system readiness, and environmental sustainability that collectively enable facilities to deliver uninterrupted, safe, and sustainable health services now and into the future.

[93] NAP Global Network. (2021). Evaluation of Burkina Faso's National Adaptation Plan (2015–2020).
[94] Ibid.
[95] Ministry of Health, Burkina Faso. (2021). Plan National de Développement Sanitaire (PNDS 2021–2030).

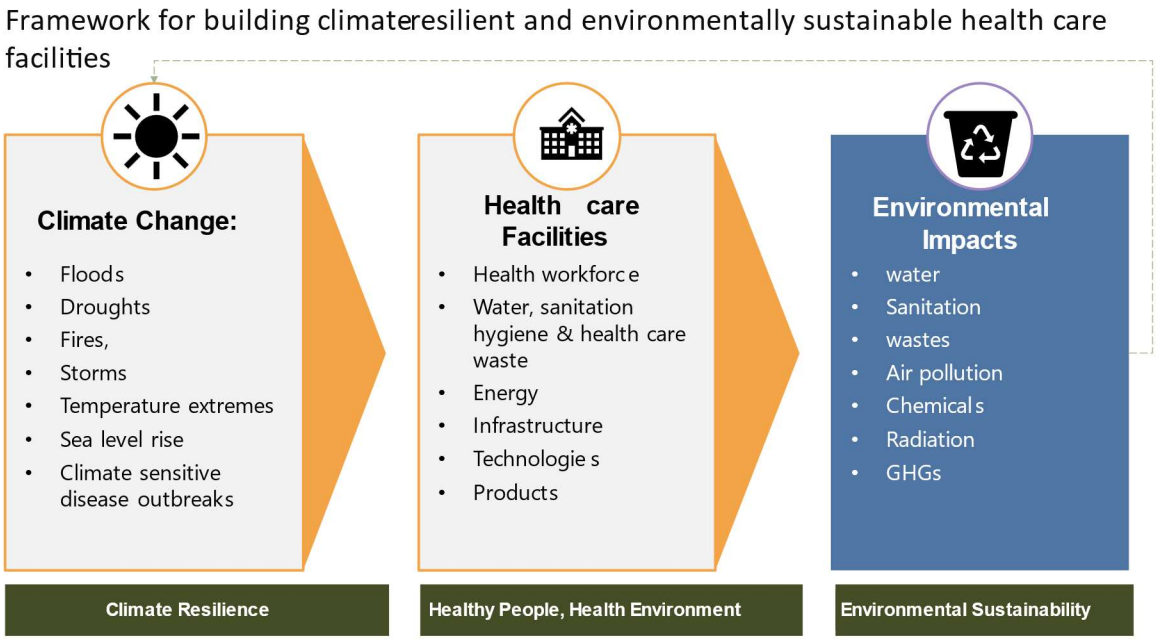

Figure 3: Framework for building climate-resilient and sustainable healthcare facilities

1.5 Barriers and Gaps (Cross-Cutting)

Across Uganda, Benin, Zimbabwe, and Burkina Faso, public health systems face mounting climate risks but remain critically under-resourced to adapt. Public investment in climate-resilient health infrastructure is severely inadequate, especially in rural and underserved areas where vulnerability is highest. Health facilities often lack essential features such as flood protection, climate-smart design, off-grid energy, and temperature-controlled environments to ensure continuity of care[96]. For example, in Uganda, over 60% of health centers lack reliable electricity, and many facilities in flood-prone areas are regularly disrupted by climate-induced hazards[97]. Despite policy commitments, capital investment for climate-proofing health infrastructure remains low in all four countries.

In addition to health facilities, health and social workers who form the bulk of the healthcare resourcing in rural and marginalized areas lack adequate capacity building to adapt to arising health issues related to climate change. Up to 70% of community health workers globally are women, [98] who also carry a disproportionate burden of care at the community and household levels. Lack of adequate skilling for them impacts their community and household contribution to health outcomes.

Private sector participation in health adaptation is also minimal, largely due to perceived risks, weak incentives, and absence of de-risking instruments. There is limited engagement in areas like resilient infrastructure development, early warning systems, digital health technologies, or clean energy for health facilities[99]. This gap is compounded by a lack of structured public–private partnership models that would enable co-financing or blended financing arrangements for adaptation-related services.

[96] WHO Africa Regional Office. (2023). Climate-Resilient and Sustainable Health Systems Framework for Africa (2024–2033)
[97] Ministry of Health Uganda. (2023). Health Vulnerability and Adaptation Assessment; WHO–Uganda Country Office.
[98] Johnson and Johnson,2023, Global Health Equity
[99] UNDP & WHO. (2022). Scaling Up Climate Finance for Health Systems in Africa: Opportunities for Private Sector Engagement.

In parallel, there is a weak institutional capacity for climate-health investment planning. Line ministries, especially those of health, often lack the technical tools, data, and trained personnel to design climate-informed investment cases, access climate finance, or track adaptation outcomes[100]. While Uganda and Zimbabwe have developed Health National Adaptation Plans (HNAPs), implementation is stalled by intersectoral coordination gaps and a lack of institutionalized climate budgeting within health systems. In Burkina Faso and Benin, HNAPs are still in draft or preparatory phases, reflecting limited institutional bandwidth for translating plans into operations.

Finally, there is limited access to innovative financing tools for adaptation. Most national adaptation efforts in the health sector rely on unpredictable donor grants or constrained domestic budgets. Tools such as catalytic grants, results-based financing, public-private investment platforms, or adaptation-oriented climate bonds are largely absent or underdeveloped in all four countries[101]. This leaves health systems overly reliant on short-term project-based funding, rather than long-term, scalable, and resilient financing models.

1.6 Alignment with National and Global Commitments

This project is firmly aligned with the health-related adaptation priorities outlined in the Updated Nationally Determined Contributions (NDCs) of Uganda, Benin, Zimbabwe, and Burkina Faso, all of which recognize public health as highly vulnerable to climate change. Outcome 1—establishing public-private partnerships and investment frameworks—directly supports NDC calls to leverage non-state actors and enhance the financing of health infrastructure and services in climate-exposed regions[102]. Outcome 2—enhancing health system resilience through innovative financing and climate-resilient technologies—operationalizes infrastructure and service delivery goals articulated in each country's NDC and, where available, in their National Adaptation Plans (NAPs) and Health National Adaptation Plans (HNAPs).

The project also strongly supports the WHO's Framework for Building Climate-Resilient and Sustainable Health Systems in Africa (2024–2033). Specifically, Outcome 2 aligns with the framework's pillars on health infrastructure, service delivery, and technologies; while Outcome 3—strengthening government capacity to design investment cases and mobilize adaptation finance—addresses gaps in leadership, governance, and financing capacity that the WHO Framework highlights as essential for long-term resilience[103].

Globally, the project represents a timely and tangible contribution to the UAE Climate and Health Declaration, endorsed at COP28 by all four participating countries. The Declaration commits signatories to accelerate the integration of climate risks into health planning and to mobilize diverse sources of finance to build climate-resilient health systems. All three outcomes—especially the focus on private sector engagement and public finance readiness—are practical enablers of these commitments[104]. Furthermore, the project advances the goals of Sustainable Development Goal 3 (Good Health and Well-being) and SDG 13 (Climate Action). Outcomes 1 and 2 promote inclusive, equitable access to climate-resilient health services, while Outcome 3 enables long-term sustainability through government ownership, improved investment readiness, and institutional innovation[105].

[100] NAP Global Network. (2021). Strengthening Institutional Frameworks for Health Adaptation in Sub-Saharan Africa.
[101] WHO–UNFCCC. (2023). Climate and Health Country Profiles for Benin, Burkina Faso, Uganda, Zimbabwe.
[102] Uganda (2022), Benin (2021), Zimbabwe (2021), Burkina Faso (2021) – Updated Nationally Determined Contributions.
[103] WHO Regional Office for Africa. (2023). Framework for Building Climate-Resilient and Sustainable Health Systems in Africa (2024–2033).
[104] UAE Ministry of Climate Change & Environment. (2023). UAE Climate and Health Declaration – COP28.
[105] United Nations. (2015). Sustainable Development Goals (SDG 3 and SDG 13).

2. PROJECT OBJECTIVES

The proposed project is anchored on the urgent need to build climate-resilient health systems in four of Africa's most climate-vulnerable countries. It recognizes the escalating health risks posed by climate change, the infrastructure and service delivery gaps in national health systems including WASH, and the growing need to harness private sector solutions and innovative finance to close these adaptation deficits and the HNAP financial constraints. Specifically, the project will;

1. Foster active engagement and investment from private sector entities in the development and implementation of climate-resilient health systems.
2. Implement innovative financing mechanisms in pilot projects to strengthen the resilience of health systems to climate change.
3. Strengthen the capacity of governments to design investment cases and invest in, or attract investments for, climate-resilient health technologies and infrastructure.

The project will be structured around three components:

- **Component 1:** Private Sector Engagement in Climate-Resilient Health System
- **Component 2:** Innovative Adaptation Financing mechanisms deployment to support climate resilient technologies and infrastructure
- **Component 3:** Capacity building and Institutional strengthening

3. PROJECT COMPONENTS AND FINANCING

Table 2: Project Components And Financing

Project/Programme Components	Expected Outcomes	Expected Outputs	Countries	Amount (US$)
1.Private Sector Engagement in climate-resilient health systems	**Outcome 1:1** Strategic Public-private partnerships and investment frameworks established to facilitate and enhance private sector engagement in building climate-resilient health systems.	**Output 1:1.1** Private sector capacities enhanced through technical assistance, training, workshops and investment-readiness support **Output 1.1.2** Competitive pipeline of private sector-led, climate-resilient health investment proposals developed for financing under Component 2 through pitch forums	Zimbabwe, Burkina Faso, Benin, Uganda	1,000,000
2. Innovative Adaptation Financing mechanisms deployment to support climate resilient technologies and infrastructure	**Outcome 2:1** Supporting climate resilient and gender responsive health technologies and infrastructure in selected pilot projects. **Outcome 2:2** Climate-resilient health systems supported through innovative	**Output 2:1.1** Evidence-based financing models for climate-resilient health systems identified and validated through market assessment. **Output 2: 2.1** Performance-Based Climate Resilient Grants (PBCRGs)	Zimbabwe, Benin, Burkina Faso, Uganda,	10,000,000

	and sustainable adaptation financing models with strong private sector participation.	deployed in pilot projects focused on climate-resilient health technologies and infrastructure. **Output 2.2.2** Climate-resilient technologies selected, financed, and installed in target health facilities. **Output 2:2.3** Healthcare infrastructure climate-proofed with WASH systems to withstand climate impacts.		
3. **Capacity building and Institutional strengthening**	**Outcome 3:1** Strengthened the capacity of government to develop gender-responsive policies, budgets **Outcome 3:2** Policy bodies are strengthened to develop gender-inclusive climate-resilience policies and systems through identification of vulnerabilities in the health sector	**Output 3:1.1** Government staff trained to integrate gender into climate policies and budgets. **Output 3.1.2** Gender-responsive climate resilience policies and guidelines adopted by relevant ministries. **Output 3.2.1** Climate and health vulnerability and adaptation assessments (V&As) conducted to generate evidence for developing Health National Adaptation Plans (HNAPs) in Zimbabwe, Benin, and Burkina Faso.	Zimbabwe, Benin, Burkina Faso, Uganda	1,000,000
4. Project/Programme Execution cost (9.5%)				**1,121,000**
5. Total Project/Programme Cost				**12,921,000**
6. Project Management Fee charged by the Implementing Entity (8.5%)				**1,003,000**
Amount of Financing Requested				**13,924,000**

4. PROJECTED CALENDAR

Milestones	Expected Dates
Start of Project/Programme Implementation	Mid/Late 2026
Mid-term Review	Early 2028
Project/Programme Closing	2029
Terminal Evaluation	2030

Table 3: Project Calendar

5. PROJECT JUSTIFICATION

A. Describe the project/programme components, particularly focusing on the concrete adaptation activities, how these activities would contribute to climate resilience, and how they would build added

value through the regional approach, compared to implementing similar activities in each country individually.

The urgency of strengthening health systems in Africa against climate risks was underscored during the inaugural dedicated Health Day sessions at COP28, where representatives from over thirty African countries committed to immediate climate health action by endorsing the UAE Climate and Health Declaration[106]. This landmark commitment reaffirmed the dual imperative of protecting public health and achieving climate resilience and emphasized the importance of aligning investments with the COP28 Guiding Principles for Financing Climate and Health. These principles call for: *(i)* accelerating transformative climate and health solutions to save and improve lives now and in the future; *(ii)* creating equitable, inclusive, accessible, and holistic approaches to climate–health financing and solutions; and *(iii)* building the core policymaking and implementation capacities of countries, communities, and financing institutions to deliver climate–health outcomes at scale[107].

This accreditation enabled WHO to mobilize critical climate finance to strengthen health systems globally, with a focus on adaptation measures. Additionally, the recent approval of the World Health Organization's Framework for Building Climate-Resilient and Sustainable Health Systems in the African Region (2024-2033) signals the right direction in addressing the growing impacts of climate change on health systems across the continent. These developments provide a solid foundation for building robust, climate-resilient health systems capable of managing the escalating risks posed by climate change in Africa. By adopting a regional approach targeting Zimbabwe, Burkina Faso, Benin, and Uganda, the project seeks to address shared challenges, foster collective action, and enhance climate resilience in health systems.

This project is informed by each of the four country's national priorities and vulnerabilities as outlined in their respective National Adaptation Plans (NAPs), National Adaptation Plan Communications (NAPCs), and Health National Adaptation Plans (H-NAPs). Zimbabwe's 2022 Initial Adaptation Communication, Burkina Faso's 2015 NAP, Benin's 2022 NAP, and Uganda's 2025-2030 H-NAP each detail the critical climate-related health challenges these countries face, including extreme weather events, vector-borne diseases, and limited access to clean water and sanitation. These documents emphasize the need for climate-resilient health infrastructure, early warning systems, and adaptation financing, all of which are central to this project. These dependencies also highlight the urgent need for climate-resilient health systems. Disruptions in these sectors directly impact public health and socio-economic stability, exacerbating health challenges such as vector- and water-borne diseases, and climate-induced health emergencies. Vulnerable populations, including persons with disabilities, women, and children, are disproportionately affected. National health strategies often lack adequate climate adaptation measures, leading to fragmented public health responses, limited early warning systems, weak primary healthcare services, and insufficient strategic partnerships. Health professionals frequently lack the training and tools to respond effectively to climate-driven health challenges. Without robust adaptation measures, these weaknesses will worsen, increasing the burden on already strained healthcare systems.

The project is guided by the World Health Organization's Framework for Building Climate-Resilient and Sustainable Health Systems in the African Region (2024- 2033). The Framework aims to strengthen national capacities, conduct vulnerability assessments, and develop Health National Adaptation Plans aligned with broader National Adaptation Plans. It also seeks to accelerate leadership, governance, and financing for climate-related health interventions. One of the targets of the framework is that at least 90% of Member States mobilize resources and implement essential public health measures to build resilient and

[106] United Nations Framework Convention on Climate Change (UNFCCC). (2023). UAE Climate and Health Declaration. COP28 UAE Presidency.
[107] COP28 Presidency. (2023). Guiding Principles for Financing Climate and Health. Dubai: COP28 UAE Presidency.

sustainable health systems. This framework underscores the importance of enhancing institutional capacity and access to finance for building climate resilient and sustainable health systems in the African region.

Component 1: Private Sector Engagement in Climate-Resilient Health Systems: This component aims to foster the active engagement of private sector actors in building climate-resilient health systems across Burkina Faso, Uganda, Benin, and Zimbabwe. These countries face overlapping challenges ranging from climate-induced infrastructure vulnerability to unreliable energy supply and overstretched public health systems yet offer untapped opportunities for the private sector to play a transformative role in adaptation.

Despite growing climate risks, the health sector in these countries has historically suffered from chronic underinvestment in climate adaptation infrastructure and services. This component responds by unlocking private capital, fostering innovation in climate-resilient technologies, and establishing investment frameworks that incentivize long-term private sector engagement. It targets both domestic and regional private actors, including renewable energy providers, green construction firms, WASH? health logistics companies, and digital health innovators.

The project directly addresses the health impacts of climate change—an increasingly urgent priority for African developing nations. It tackles rising burdens of climate-sensitive diseases, vulnerability to extreme weather events, and fragile health infrastructure. By integrating early warning systems, adaptation technologies, community-based health adaptation measures, the project enhances both adaptive capacity and systemic resilience. It also supports climate-informed national health planning and capacity building on innovative financing, making the health sector more adaptive and responsive in the face of accelerating climate risks through crowding in the private sector. Solutions will include installing solar-powered cold chains for vaccines, strengthening WASH services and training health workers on climate-responsive care.

The project promotes cost-effectiveness by aligning with existing initiatives, such as the WHO framework for climate-resilient health systems and selected countries' Health and Climate Change Strategies. Through joint regional training, shared early warning systems, and standardized tools, it avoids duplication and enhances efficiency. A regional platform enables shared investments in innovative financing models crowding in the private sector and lowering country-level costs.

Component 1 will build the foundation for sustainable private sector engagement in climate-resilient health systems by enhancing enterprise capacity and curating a pipeline of investment-ready proposals. Through a structured training and mentorship program (Output 1.1), enterprises will be equipped to design and align their models with climate adaptation objectives. A competitive selection mechanism (Output 1.2) will then identify the most promising proposals for further technical support and financing under Component 2's Performance-Based Climate Resilient Grants (PBCRGs).

Under **Output 1.1:** Private sector capacities enhanced through technical assistance, training, and investment-readiness support. This output aims to build foundational capacity among private sector actors to identify, develop, and align health sector interventions with climate adaptation objectives. It will focus on small and medium-sized enterprises (SMEs), energy service companies (ESCOs), health logistics providers including WASH Services, and digital health innovators across the four participating countries.

The activities under this **output 1.1** will focus on strengthening the foundational capacities of private enterprises to participate in climate-resilient health investments. This will include organizing training workshops and bootcamps on climate adaptation in the health sector, climate finance, proposal development, and ESG compliance. In parallel it is envisaged that 5–7 high-potential enterprises per country will receive tailored mentorship and coaching to refine their business models and prepare early-

stage investment concepts. Practical toolkits—covering investment templates, adaptation indicators, and financial modeling tools aligned to WHO HNAP guidelines or NDCs or NAPAs—will be developed and disseminated to guide this process.

A market survey will be undertaken to identify the most suitable business models, financing mechanisms, and climate-resilient technologies for each country context. Promising solutions will be piloted with selected enterprises to validate their commercial viability, operational performance, and adaptation benefits. The project will also pilot Results-Based Financing (RBF) and Performance-Based Contracting models with selected ESCOs, private-sector energy companies, and other service providers. For example, in Zimbabwe, where solar systems have been installed on more than 1,000 healthcare facilities but many are non-operational, an Energy-as-a-Service (EaaS) model maybe proposed, whereby ESCOs operate and maintain power systems and receive payments tied to verified performance indicators such as uptime, energy output, and system reliability.

A recent solar health facility performance study will inform the design of this approach. Similarly, in Burkina Faso, energy SMEs developing solar-powered cooling systems for rural health centers will be mentored to integrate cost savings and resilience metrics into their business models, while in Uganda, innovators providing cold-chain and WASH services to institutional health facilities maybe selected through a performance model to develop viable proposals aligned with national adaptation priorities. By combining market intelligence, real-world piloting, and performance-based financing, the project will de-risk private sector participation, build investor confidence, and create scalable models capable of mobilizing long-term adaptation finance for climate-resilient health systems.

Under **Output 1.2:** Competitive pipeline of private sector-led, climate-resilient health investment proposals developed for financing under Component 2. This output will establish a structured, competitive selection process to identify and refine a pipeline of high-quality investment proposals from private enterprises mentored under **Output 1.1**. These proposals will then become eligible for grant or blended finance under Component 2.

To develop a pipeline of investment-ready, climate-resilient and gender-inclusive health solutions, the project will implement a series of structured activities beginning with the launch of a "Climate-Health Innovation Challenge" in each participating country Burkina Faso, Uganda, Benin, and Zimbabwe. This challenge will be open to private enterprises operating in sectors such as renewable energy, health logistics, digital health, and WASH, with a focus on those offering solutions that address climate vulnerabilities in health systems. A national call for proposals will be issued, followed by screening and selection of 2–3 high-potential enterprises per country. These shortlisted businesses will then receive targeted technical assistance, including support to conduct feasibility studies, basic environmental and social screening, and investment proposal refinement tailored to the eligibility criteria of Component 2's PBCRGs. The project will also organize country-level pitch forums and regional investor panels to provide these enterprises with exposure to grant providers and external financiers such as DFIs, PFAN, and SEforALL. Finally, the project will publish a regional pipeline brief capturing the profiles, investment needs, and expected adaptation outcomes of the selected enterprises. For instance, in Zimbabwe, an ESCO offering solar-battery hybrid systems for health posts may be selected through the challenge, while in Benin, a telemedicine provider serving flood-prone rural populations could be supported to prepare a fully developed grant application for Component 2.

Component 2: Innovative Adaptation Financing Mechanisms Deployment to Support Climate-Resilient Technologies and Infrastructure. As climate shocks intensify and public sector fiscal space continues to shrink, there is an urgent need to leverage private sector innovation and investment to deliver climate-resilient health infrastructure and services. Component 2 responds to this challenge by deploying Performance-Based Climate Resilient Grants (PBCRGs) through a competitive, country-led challenge

model targeting energy, WASH, infrastructure, and digital health enterprises. Concrete adaptation pilot projects will be implemented to showcase the effectiveness of financing mechanisms through such performance-based climate-resilient grants to deploy resilient technologies in healthcare facilities, ensuring continued operation during extreme weather events. This component is co-led by WHO and AECF, with WHO providing technical oversight aligned with the Health National Adaptation Plan (HNAP) guidelines and country systems, and AECF managing the competition process, due diligence, investment structuring, and grant disbursement.

Under **Output 2.1**, the project will deploy Performance-Based Climate Resilient Grants (PBCRGs) through a competitive innovation challenge model to identify and finance private enterprises such as Energy Service Companies (ESCOs), WASH providers, and technology innovators capable of delivering transformative, climate-resilient health solutions. Country-specific challenges, aligned with WHO technical criteria and each nation's Health National Adaptation Plan (HNAP), will invite enterprises to submit proposals for high-impact interventions such as telemedicine and health-tech platforms for emergency response, solar-powered energy–water purification kiosks to address drought-related water stress, GSM-based early warning systems for extreme weather events, water funds for climate-resilient WASH systems, retrofitting of healthcare facilities for heat adaptation, and solar energy-as-a-service models to ensure uninterrupted power for critical health services. Proposals will be rigorously evaluated by a multi-stakeholder panel including WHO experts, national health authorities, and AECF investment specialists using a transparent scoring framework that prioritizes innovation, feasibility, adaptation impact, and value-for-money. By applying this competitive model, the project will not only select the most impactful solutions but also create a scalable pipeline of private sector-led climate adaptation investments, catalyzing long-term financing and market transformation in the health sector.

Once selected, 5 to 7 enterprises across the four countries will be awarded matching grants covering up to 50% of the total project cost leveraging more funds from the private sector to finance health outcomes. Grants will be disbursed in tranches tied to pre-agreed performance milestones, including successful technology installation, continuous service delivery during climate shocks, and verification of resilience outcomes (e.g., reduced service outages, enhanced water security, or maintained cold chain systems). In Zimbabwe, for instance, an energy service company may be funded to install solar-powered refrigerators and hybrid battery storage in rural health facilities vulnerable to heatwave-induced grid failure. Disbursement will be based on verified functionality during a blackout and documented vaccine temperature control. In Uganda, a WASH-focused SME may receive support to implement solar-powered rainwater harvesting and filtration systems in health facilities in Karamoja, with performance linked to consistent water access and reduced hygiene-related service disruptions during flood or drought periods.

In Burkina Faso, enterprises could be selected to deploy photovoltaic systems with battery backup and passive cooling in maternal wards in the Sahel region, where service interruptions during peak heat events are common. In Benin, enterprises may receive funding to install storm-resistant rooftop solar arrays and elevated battery enclosures in coastal health care facilities regularly impacted by flooding. These activities will be closely monitored by WHO and AECF to ensure compliance with WHO's standards for environmentally sustainable and climate-resilient health facilities. Through this structured, performance-based model, Output 2.1 will demonstrate how limited public funding can be used to catalyze private investment, scale practical adaptation solutions, and build the resilience of frontline health systems under increasing climate stress.

Output 2.2: Appropriate climate-resilient technologies, addressing specific climate impacts, selected, financed, and installed. Under this output, the project will finance the deployment of fit-for-purpose, climate-resilient technologies through the PBCRG mechanism, drawing directly from the pipeline of enterprises mentored and screened under Component 1. These enterprises operating in sectors such as renewable energy, WASH, digital health, and resilient infrastructure will be competitively selected based

on their capacity to install technologies that directly address climate stressors affecting health system functionality in their respective countries. Interventions that contribute to decarbonizing the healthcare sector by reducing greenhouse emissions can also help increase resilience. For example, increasing energy efficiency of healthcare buildings reduces operating costs and helps shore up resources that can be redirected toward patient care, capital investments, and financial reserves. Renewable energy investments and battery storage can help reduce utility costs and prevent power outages when the central grid is damaged.

WHO will provide technical oversight to ensure that proposed technologies are aligned with country-specific climate risks (e.g., floods, droughts, heatwaves, energy blackouts), and meet international standards for sustainability and resilience in health care systems. AECF, working with national authorities, will supervise the contracting, delivery, and installation of these technologies using a milestone-based financing approach. For example, in Zimbabwe, selected energy service companies will deploy solar-battery systems and cold-chain refrigeration units to stabilize vaccine storage and medical services in health facilities affected by frequent grid failures and heat-induced blackouts. In Uganda, WASH innovators will install solar-powered rainwater harvesting systems and smart filtration units in certain selected facilities located in water-scarce or flood-prone districts such as Karamoja and Rwenzori regions. These technologies will ensure continuous access to clean water during droughts and safe sanitation during floods safeguarding infection control and hygiene services.

In Burkina Faso, enterprises specializing in thermal comfort solutions will deploy passive cooling systems, solar thermal water heating, and rooftop insulation in maternal health centers operating in extreme heat conditions. In Benin, digital health and infrastructure firms may install storm-resilient solar technologies, elevated battery storage units, and IoT-based energy and water monitoring systems in low-lying coastal clinics vulnerable to seasonal flooding and storm surges. The adaptation impact of these installations is direct and measurable: reduced service interruptions during climate shocks, improved energy and water autonomy, and enhanced reliability of essential health services. By selecting and deploying technologies tailored to each facility's specific exposure, this output ensures that adaptation is both locally grounded and technically sound.

Output 2.3: Selected healthcare infrastructure climate-proofed to respond to specific climate impacts. This output complements the technology investments under Output 2.2 by addressing the structural and physical vulnerabilities of the health care facilities hosting the PBCRG-financed interventions. Using facility vulnerability assessments conducted in partnership with national health and infrastructure authorities, the project will support modest but high-impact retrofitting activities that make health care buildings safer, more durable, and climate-resilient.

Informed by WHO's framework on climate-resilient health infrastructure, the retrofitting will be integrated into the grant implementation process, ensuring that funded enterprises are not just installing technologies in vulnerable facilities but also contributing to their physical resilience. Grants will include budget lines for essential upgrades, with WHO engineers and government facility planners guiding the design and supervision of these works.

In Zimbabwe, this may include the reinforcement of hospital roofs, anchoring of solar equipment, and installation of heat-reflective building materials to counter storms and rising temperatures. In Uganda, select health centers may be fitted with raised foundation slabs, flood-resistant sanitation blocks, and drainage systems to withstand flash floods. In Benin, climate-proofing may involve elevated battery shelters, waterproofing, and sealed electrical systems in coastal health posts. In Burkina Faso, health centers may be upgraded with sun-shading designs, improved ventilation, and climate-smart window structures to enhance airflow and interior cooling without increasing energy demand.

These interventions will increase the longevity and functionality of the technology investments made under Output 2.2, ensure safer working conditions for health workers, and protect medical supplies and patient services from climate hazards. The result is a holistic adaptation model where infrastructure and technology work in tandem to ensure reliable health care in the face of growing climate uncertainty.

Added Value of the Regional Approach: Implementing this component through a regional lens unlocks transformative value by enabling cross-country learning, harmonized implementation, and cost-effective delivery. Proven adaptation technologies piloted in one country such as a solar-powered WASH system in Burkina Faso can be rapidly adapted and deployed in Uganda, accelerating impact without duplicating design or feasibility efforts. The harmonization of challenge fund criteria, technical support tools, and performance metrics ensures consistency, reduces transaction costs, and streamlines implementation across all four countries. Furthermore, the project will foster cross-sectoral collaboration with non-health sectors such as environment, water, energy, and disaster risk management, critical for addressing the social and environmental determinants of health.

This project leverages cross-country collaboration to address common challenges like extreme weather, waterborne diseases, and vector-borne diseases, making the intervention more cost-effective and impactful. By pooling resources and sharing best practices, Zimbabwe, Burkina Faso, Benin, and Uganda will collaborate through platforms like ATACH and Clim-health Africa to drive cross-learning and regional innovation. These countries will become leaders in adaptation financing, showcasing models for climate-resilient health systems and scaling up solutions across Africa, enhancing health system resilience and climate adaptation.

Component 3: Capacity Building and Institutional Strengthening: From floods and heatwaves that damage health infrastructure to changing disease patterns that strain frontline services, climate change is undermining the ability of health workers to deliver safe, timely, and effective care. These impacts are particularly acute in Zimbabwe, Benin, Burkina Faso, and Uganda, where climate-induced access barriers, staff shortages, and low institutional readiness continue to hinder adaptation efforts. Furthermore, climate-resilient and environmentally sustainable health care is still a relatively new and underdeveloped field for many health professionals, policymakers, and facility managers. Building institutional and workforce capacity is therefore not only necessary for successful project delivery—it is essential for sustaining climate adaptation in the health sector over the long term.

Output 3.1: Enhanced technical capacity to develop an enabling policy environment that fosters public and private investment in climate-resilient health technologies and infrastructure: Under this output, the project will focus on building the knowledge, leadership, and technical competencies of government health officials, planners, regulators, and health facility managers to create an enabling policy and investment environment for climate-resilient health infrastructure. WHO will lead the development of climate-health training modules, policy toolkits, and case studies aligned with national adaptation priorities.

For example, in Uganda, the Ministry of Health and Ministry of Energy will be jointly supported to integrate climate adaptation standards for health infrastructure into national health facility guidelines and building codes by holding national workshops that will bring together regulators, insurers, and clean energy providers to co-design an adaptation finance roadmap for climate-resilient health investments. In Zimbabwe, training will target provincial health planners and infrastructure units to adopt WHO-aligned guidelines on green procurement, environmental sustainability, and disaster preparedness. In Burkina Faso, technical assistance will help local governments establish climate screening criteria for health facility investments, ensuring that future public spending contributes to long-term resilience. These activities will contribute to climate resilience by embedding adaptation and sustainability principles into national health planning frameworks, creating incentives for private investment, and enabling ministries to effectively steward and scale up climate-resilient infrastructure beyond the life of the project.

Output 3.2: Strengthened capacity to design investment cases and attract or allocate investments for climate-resilient health technologies and infrastructure: This output aims to equip government institutions, facility managers, and health sector planners with the knowledge and tools to design and defend climate-resilient investment cases that can attract domestic and external financing. AECF and WHO will lead a structured programme of technical training, coaching, and investment-readiness workshops, grounded in real-world examples of climate adaptation in the health sector. Participants will receive practical guidance on climate hazard profiling, estimating resilience benefits (e.g., uninterrupted services during climate shocks), and structuring blended finance proposals that crowd in private investment while aligning with national adaptation priorities. Unlike the first component that targeted private sector this one will be for government institutions.

In Burkina Faso, where high temperatures and water scarcity are disrupting maternal health services, the project will support district health authorities to design investment cases for solar-powered maternity wards integrated with rainwater harvesting and clean water filtration systems. These proposals will model service uptime during heatwaves and droughts and quantify avoided health risks due to improved WASH infrastructure—ensuring alignment with national HNAP priorities and attracting adaptation-aligned finance.

In Zimbabwe, which frequently experiences power outages during heatwaves and storms, the Ministry of Health's infrastructure unit will be trained to develop investment proposals for resilient cold chain systems, such as solar-direct drive vaccine refrigerators and hybrid energy backup for regional health depots. Investment cases will include climate risk analytics (e.g., outage frequency and duration), show how adaptation measures will maintain vaccine integrity, and propose co-financing mechanisms to attract donor or private capital.

In Benin, where rising sea levels and coastal flooding are placing low-lying health posts at risk, health authorities will be supported to prepare detailed proposals for elevated, storm-resilient health outposts that integrate waterproofed electrical systems and raised solar battery banks. These cases will use flood risk maps and community access data to demonstrate health and economic co-benefits, including reduced service downtime during floods and improved maternal and child health outcomes.

In Uganda, which faces increasing water variability due to both prolonged droughts and flash flooding, the Ministry of Health will be coached to generate investment cases for climate-smart WASH systems in rural health centers. These will include solar pumping, elevated storage tanks, low-flush toilets, and real-time monitoring sensors to ensure water continuity during climate extremes. Cost-benefit analyses will capture improved hygiene, reduced disease outbreaks, and system durability under variable weather conditions—supported by operational data from PBCRG pilot sites. By strengthening the capacity to develop such targeted and evidence-based investment cases, this output will enable health sector institutions to move from reactive emergency response to proactive climate adaptation, while unlocking public and private financing for resilient health infrastructure and technologies. The regional nature of the intervention ensures that tools, templates, and training materials are harmonized and shared—accelerating institutional learning and enabling broader policy replication.

Theory of Change Narrative

If targeted investments are mobilized through innovative adaptation financing mechanisms, and private sector actors are capacitated and incentivized to deliver climate-resilient health solutions, and governments are supported to strengthen policy, regulatory, and investment frameworks, **then** national health systems in Benin, Burkina Faso, Uganda, and Zimbabwe will be better able to sustain essential services, mitigate climate-related health risks, and safeguard community well-being, **because** enhanced private sector engagement, improved financing models, and stronger institutional capacity will close critical adaptation

gaps in healthcare infrastructure, WASH systems, and service delivery, enabling these systems to withstand and respond effectively to climate shocks.

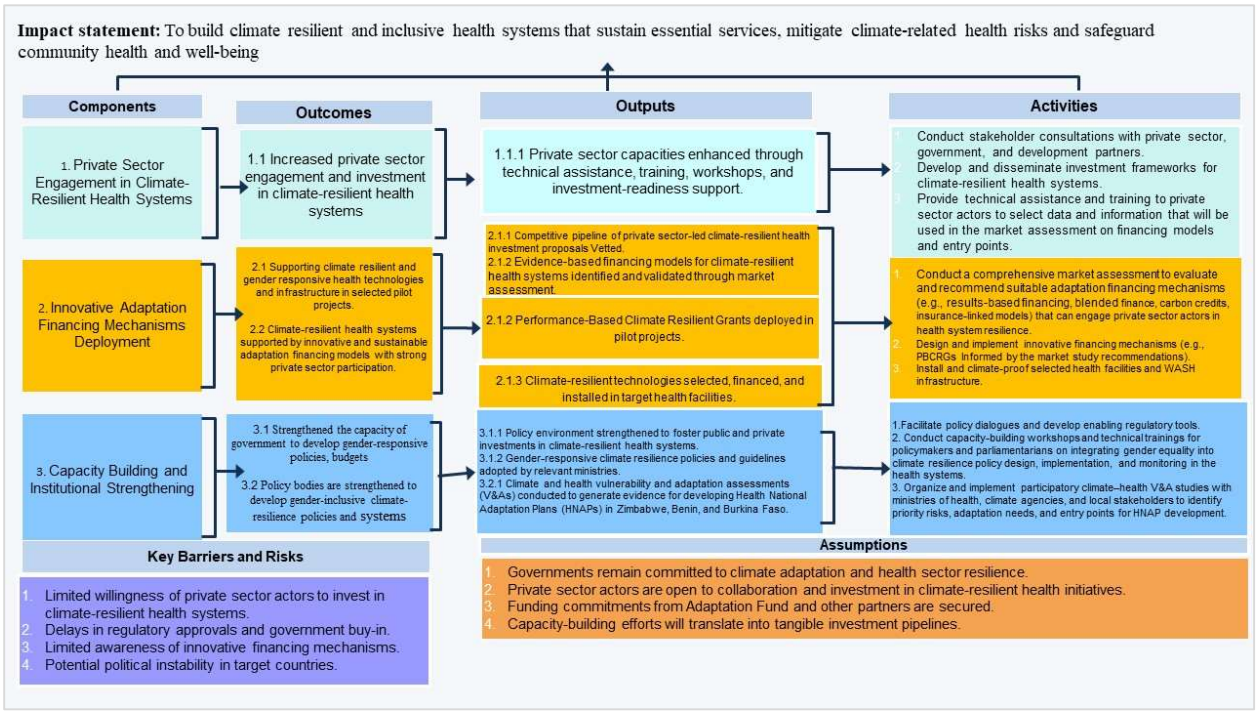

Figure 4: Theory of Change

Describe how the project /programme would promote new and innovative solutions to climate change adaptation, such as new approaches, technologies and mechanisms.

This project pioneers a regionally coordinated and innovation-driven approach to building climate-resilient health systems by integrating new technologies, adaptive service delivery models, and outcome-linked financing mechanisms. It does so across four climate-vulnerable countries—Burkina Faso, Uganda, Benin, and Zimbabwe—where health systems are already under pressure from erratic rainfall, rising temperatures, disease outbreaks, and infrastructure deficits. The project unfolds in three interconnected stages: first, by strengthening private sector readiness (Component 1); second, by deploying competitive performance-based adaptation grants informed by a market study (Component 2); and third, by reinforcing institutional capacity at national and sub-national levels with health vulnerability and adaptation assessments (V&As) (Component 3). Together, these components establish a scalable, gender inclusive innovation-friendly framework for climate adaptation in the health sector.

A core area of innovation lies in health workforce interventions that embed climate resilience and environmental sustainability into frontline practice. Through WHO-led training and bootcamps under Component 3, the project will equip healthcare professionals—from doctors and nurses to maintenance staff and waste handlers—with the knowledge to identify, manage, and reduce climate-related risks in health care delivery. For instance, in Zimbabwe's southern provinces, health workers will be trained to monitor heat-related illness patterns and implement heat action protocols in maternity wards. In Benin, targeted capacity building will enable facility managers in flood-prone communes to oversee emergency preparedness plans that ensure continuity of care during cyclones or coastal surges. These interventions are designed to address WHO-identified gaps in climate-health workforce integration, ensuring that resilience-

building becomes a daily operational practice rather than an isolated technical intervention[108].The project introduces Climate-resilient WASH infrastructure solutions that respond to the increasing volatility in water availability and quality.

In Uganda's Karamoja and Rwenzori regions, where prolonged droughts and flash floods undermine infection control in health centers, the project will fund the installation of solar-powered rainwater harvesting systems with filtration units and elevated storage tanks including planting of indigenous trees and fruit trees in piloted projects to better withstand climate shocks such as cyclones, heatwaves, and flooding. Similarly, in rural Masvingo (Zimbabwe) and northern Burkina Faso, solar-assisted groundwater pumps will be deployed to support hygiene access during dry spells. These systems, selected through a performance-based grant model under Component 2, will be monitored for adaptation outcomes such as improved patient hygiene access and reduced waterborne disease incidence. In peri-urban zones of Ouagadougou and Kampala, the project will pilot flood-resilient latrines with eco-san composting and urine diversion, reducing public health risks from sewage overflows during heavy rains[109].

In the energy domain, the project embraces Solar electrification of health facilities. SMEs mentored under Component 1 will compete under Component 2 to implement solar-battery hybrid systems, solar water heaters, and efficient lighting retrofits in climate-exposed health care facilities. For example, in Benin's coastal health posts, enterprises will be supported to install rooftop solar with battery enclosures elevated above storm surge levels. In Burkina Faso, SMEs will pilot solar cooling for drug storage in arid areas where diesel generators are unreliable due to fuel supply disruptions. These systems will be evaluated for performance indicators such as uninterrupted service delivery during storms and heatwaves, reduced fuel dependency, and emissions reductions[110].

The project also pilots innovative infrastructure and technology solutions that anticipate climate extremes. In southern Benin and northern Burkina Faso, the project will co-finance the deployment of mobile modular clinics on raised platforms or wheeled trailers, which remain operational during flash floods when access roads are cut off. These mobile units, designed to WHO's climate-resilient facility standards, ensure continuity of maternal care, emergency treatment, and vaccination campaigns during extreme events. In Uganda, digital health startups supported under Component (1) will integrate climate-informed early warning systems into national health surveillance platforms—linking temperature and rainfall forecasts with disease outbreak data to anticipate malaria or cholera spikes combined with awareness creation on natural disasters for the health workforce. Such anticipatory adaptation models will guide the pre-positioning of essential supplies and public health alerts through SMS-based platforms, especially in rural and underserved communities[111].

The project's most distinctive innovation lies in its financing architecture. Through AECF's deployment of Performance-Based Climate Resilient Grants (PBCRGs), funding is tied to tangible adaptation results—such as maintaining cold chain functionality during grid outages or sustaining hygiene services during water shortages. SMEs and service providers selected under a regional innovation challenge will receive matching grants, ensuring shared financial commitment while de-risking adaptation investment. For instance, an ESCO in Zimbabwe may receive a PBCRG to install solar systems in remote health care facilities, with disbursement milestones linked to functionality audits during blackout periods. This results-based approach is complemented by blended finance tools such as concessional capital for SMEs or risk guarantees for private facilities that mobilize private resources in fragile health settings.

[108] WHO (2020). Operational framework for building climate-resilient health systems. Geneva: World Health Organization
[109] WHO & UNICEF (2021). WASH in health care facilities: Global progress report.
[110] SEforALL (2022). Energizing Healthcare: Scaling Clean Energy Solutions
[111] World Meteorological Organization & WHO (2021). Climate Services for Health: Enhancing Resilience

To amplify regional learning and scale innovation, the project will establish a regional adaptation innovation platform, co-hosted by WHO and AECF, to bring together governments, entrepreneurs, and financiers. Through tech fairs, learning exchanges, and challenge calls, the platform will crowdsource and showcase solutions such as solar-powered vaccine fridges, climate-smart maternity wards, or flood-resistant sanitation units. For example, a youth-led Ugandan enterprise developing low-cost, pedal-powered water filtration carts may be supported to adapt their model for post-flood recovery in Benin's coastal zones. The platform will also prioritize innovations led by women and youth, reinforcing inclusive and locally grounded climate resilience.

Describe how the project/programme would provide economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project/programme would avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy of the Adaptation Fund.

Economic, Social, and Environmental Benefits

The proposed project will deliver substantial economic, social, and environmental benefits by integrating climate-resilient, low-carbon technologies into national health systems in Benin, Burkina Faso, Uganda, and Zimbabwe, while creating enabling conditions for sustained public–private investment in adaptation. With a total financing request of USD 13.924 million, the project's three components—private sector engagement, deployment of innovative adaptation financing mechanisms, and institutional capacity building—are designed to maximize adaptation impact per dollar spent, particularly for vulnerable communities.

Economic Benefits

The project will strengthen economic resilience by transforming the financing, delivery, and maintenance of climate-resilient health infrastructure into a sustainable market opportunity. Under Component 1, technical assistance and investment-readiness support will enable SMEs, including women and youth-led enterprises_ to develop bankable climate–health investment proposals, access competitive pitch forums, and form public–private partnerships. This will expand services in renewable energy, water purification, and climate-proof construction, creating green jobs in technical installation, maintenance, and supply logistics. In countries where unemployment exceeds 30%[112], targeted SME support will improve incomes while closing infrastructure gaps.

The project will employ gender responsive financial mechanisms, like a blended contribution fund, which allows investees to match the investment with another commodity other than money. This lowers barriers for vulnerable groups especially women and youths to access resources that strengthen their resilience to climate induced health shocks. By supporting women-led enterprises, which account for 58% of MSMEs in Africa and employ millions, the programme will catalyze local economic activity, job creation, and incomes (e.g. solar, WASH, climate-proof infrastructure)[113]. Empowering female health workers and community health cooperatives, who make up 70% of the health workforce (most of whom are unpaid or underpaid), strengthens service delivery and fosters livelihoods[114]

[112] International Labour Organization (ILO). (2022). World Employment and Social Outlook – Trends 2022.
[113] World Economic Forum. (2022, August). How female-led startups in Africa can uplift the continent.
[114] World Health Organization. (2019, March 20). Female health workers drive global health. Retrieved from [https://www.who.int/news-room/commentaries/detail/female-health-workers-drive-global-health]

Component 2 will deploy Performance-Based Climate Resilient Grants (PBCRGs) to co-finance solar-powered medical equipment, WASH systems, and climate-proof infrastructure. These technologies will reduce recurrent costs for rural health facilities—currently 10–20% of operational budgets for diesel fuel and water trucking by up to 40%[115]. For example, solar electrification in Zimbabwe and Benin will lower annual energy costs, freeing resources for medicines and staff salaries. In Uganda, solar-powered water filtration units will cut water procurement costs while creating maintenance contracts for local enterprises[116]. In Burkina Faso, climate-proofing facilities against extreme heat and flooding will reduce service disruptions, sustaining community productivity and easing the disproportionate care burden typically borne by women during health service outages.

The project will also stimulate local supply chains for solar modules, water treatment units, rainwater harvesting systems, and modular health infrastructure, reducing import dependence and retaining economic value domestically[117]. Under **Component 3**, policy reforms will integrate adaptation standards into building codes and investment planning, lowering market entry barriers for domestic and foreign investors. At the macro level, WHO estimates that climate-related health burdens could cost Sub-Saharan Africa 2–4% of GDP annually by 2030[118]. By ensuring continuous service delivery during floods, droughts, and heatwaves, the programme will protect workforce productivity in key economic sectors.

Social Benefits

The programme will generate transformative social benefits by strengthening climate–resilient health systems for women, youth, refugees, and marginalized populations. In contexts where climate change drives health inequities, migration, and conflict, reliable access to essential services reduces vulnerability and strengthens social cohesion[119].Under Component 1, SMEs will deploy solutions such as solar-powered vaccine cold chains, flood-resilient sanitation, and safe water disinfection systems—critical for maintaining continuity of care during climate shocks. In Zimbabwe, youth-led solar enterprises will preserve vaccine potency during heatwaves; in Benin, SMEs will construct raised-latrine systems to prevent cholera outbreaks; and in Uganda, private firms will expand safe water access for peri-urban communities. These interventions will reduce the risk of disease outbreaks, improve public health, and foster inclusive participation in climate–health markets[120]. Additionally, they will reduce the care burden facing women due to climate related health challenges at the household and community levels.

Component 2 will scale these benefits through PBCRGs informed through the market assessment that require measurable outcomes before disbursement. Priority investments—such as solar electrification, climate-resilient WASH, and climate-informed disease surveillance—are expected to benefit over 5 million people by enabling faster outbreak detection, reducing waterborne disease incidence, and maintaining service delivery during climate events[121]. Early warning systems will be strengthened to detect and respond to climate-sensitive disease outbreaks, while digital health and climate data systems will be integrated into public health risk assessments. The requirement for 30–50% private co-financing will also ensure community engagement and long-term sustainability of installed systems[122].The market study will provide recommendation on the appropriate financing instruments customized to financing realities and disbursement processes in participating countries to enable full participation of the private sector in financing the health care system which has historically been the work of the public sector financing.

[115] IRENA & WHO. (2021). Renewable Energy Solutions for Health Facilities.
[116] Uganda Ministry of Health. (2022). Annual Health Sector Performance Report 2021/22
[117] World Bank. (2020). Harnessing the Solar Supply Chain in Sub-Saharan Africa.
[118] World Health Organization. (2015). Quantitative Risk Assessment of the Effects of Climate Change on Selected Causes of Death, 2030s and 2050s.
[119] UNHCR. (2021). Climate Change and Displacement in Africa.
[120] WHO & UNDP. (2022). Gender, Climate Change and Health: Interlinkages and Policy Implications.
[121] WHO Africa Regional Office. (2021). Strengthening Climate-Resilient Health Systems in Africa.
[122] African Development Bank (AfDB). (2022). Private Sector Co-Financing for Climate Resilience.

Component 3 will institutionalize equity gains by training ministries of health, regulators, and facility managers to integrate gender, inclusion, and climate resilience into policy and investment decisions. This will include modules on gender analysis, inclusive budgeting and gender sensitive safeguards, embedding equity into national health and climate policies. Governance reforms will embed representation of women, youth, and marginalized groups in adaptation planning, ensuring adaptation measures reflect diverse community needs[123]. Emphasis will be placed on ensuring that existing national health policies and strategies are updated to explicitly incorporate climate change risks and adaptation measures, making them climate responsive. Furthermore, the project will foster cross-sectoral collaboration with non-health sectors such as environment, water, energy, and disaster risk management, critical for addressing the social and environmental determinants of health.

Environmental Benefits

The project will achieve a triple environmental dividend: reducing GHG emissions from health facilities, conserving natural resources, and embedding environmental performance into health sector governance. Through **Component 1**, SMEs/investees will gain the capacity to deliver low-carbon, resource-efficient health infrastructure, shifting away from high-emission, resource-intensive models[124]. **Component 2** will finance solar electrification of ~40 health facilities, replacing diesel generators and avoiding an estimated 20,000–25,000 tonnes of CO_2 equivalent annually[125]. Climate-resilient WASH systems, including rainwater harvesting and solar-powered treatment units, will reduce groundwater depletion and prevent flood-related contamination, safeguarding aquatic ecosystems[126]. Facility retrofits such as elevated platforms, flood-proof sanitation, and improved ventilation will minimize material waste and environmental degradation.

By eliminating diesel generator emissions in enclosed health care facility spaces, the project will improve indoor air quality, reducing respiratory risks for patients and staff. By preventing wastewater overflows during floods, it will reduce pathogen discharge into local water bodies, protecting downstream communities[127]. **Component 3** will reinforce these benefits by embedding environmental safeguards into health infrastructure policies, developing low-carbon procurement guidelines, and integrating environmental performance indicators into PPP agreements[128].

Describe or provide an analysis of the cost-effectiveness of the proposed project/programme and explain how the regional approach would support cost-effectiveness.

This table 2 below explains how the Implementing Entity (WHO), in collaboration with AECF and national partners, will optimize a modest budget to deliver maximum value across the three project components. It highlights implementation strategies, leveraging mechanisms, and country-specific examples that demonstrate high-impact outcomes even with limited resources.

Table 4: Cost-effectiveness analysis

Project Component	Concrete Adaptation Benefit	Avoided Losses	Trade-Offs (Compromises)	Estimated Number of Beneficiaries

[123] UNFCCC. (2022). Technical Paper on Gender-Responsive Approaches to Climate Adaptation in the Health Sector.
[124] World Bank. (2020). Climate-Smart Health Care: Low-Carbon and Resilient Solutions for the Health Sector.
[125] IRENA & WHO. (2021). Renewable Energy Solutions for Health Facilities.
[126] WHO. (2019). Water, Sanitation and Hygiene in Health Care Facilities: Practical Steps to Achieve Universal Access.
[127] WHO. (2023). Guidance for Climate-Resilient and Environmentally Sustainable Health Care Facilities.
[128] African Development Bank (AfDB). (2022). Integrating Environmental Safeguards into Climate-Resilient Infrastructure

1. Private Sector Engagement in Climate-Resilient Health Systems	Pipeline of innovative SMEs delivering solar energy, WASH, and cold-chain solutions for health facilities; creation of green jobs in service delivery, supply chains, and maintenance.	Loss of access to healthcare facilities, Increased mortality, reduced vaccine spoilage, increased disease burden, avoided energy costs from diesel generators, ensured continuity of health services during outages, health infrastructure damage by extreme events, and reduced morbidity from unsafe water.	Requires upfront Technical Assistance for SMEs and regulatory oversight; risk of uneven access between rural and urban areas if not carefully targeted.	~6.5 million direct and indirect beneficiaries across 4 countries (health facility users, SME employees, and communities).
2. Innovative Adaptation Financing via PBCRGs	Performance-based climate resilience grants mobilizing 30–50% private co-finance, ensuring scalable and replicable climate-health solutions (solar-powered cold chains, water purification kiosks, EWARS systems).	Avoided high-cost emergency repairs, reduced burden on national health budgets, and avoided outbreak response costs through early detection.	High verification costs for PBCRG monitoring; upfront need for catalytic grants; requires strong governance to ensure compliance and equity.	~5 million indirect beneficiaries through improved surveillance, reliable energy, and safe water systems across facilities.
3. Capacity Building and Institutional Strengthening	Stronger policy, planning, and intersectoral governance	Avoided policy fragmentation and inefficiency	Slower short-term returns as institutional reforms take time; requires sustained political will and inter-ministerial coordination.	All participating ministries, regulators, and ~50 health facilities (indirectly reaching ~3.5 million people).

Regional Dimension and Added Value: The project promotes cost-effectiveness by building on and complementing existing efforts across the four countries. For example, it aligns with the WHO operational framework for building climate-resilient health systems, as well as national initiatives such as Uganda's H-NAP and NAPs and NDCs. By harmonizing regional approaches—such as joint training, standard-setting, and shared early warning systems, the project reduces duplication and maximizes efficiency. Furthermore, the regional platform enables knowledge pooling and shared investments, particularly in digital tools and climate data analytics and crowding in the private sector finance, thereby reducing per-country implementation costs.

Piloted successes in each country will serve as practical learning cases: For instance, mobile clinics deployed in flood-prone districts of Zimbabwe can be adapted for use in Uganda's mountainous flood-vulnerable Rwenzori region. In Benin, raised solar-powered WASH infrastructure in coastal communes can inform designs for clinics in flood-exposed areas of Burkina Faso. Likewise, Uganda's innovations in solar-powered water disinfection can be replicated across Sahelian communities in Burkina Faso where drought-resilient water systems are urgently needed.

The project will establish a regional knowledge and innovation hub to document and disseminate these pilot outcomes. Through peer-to-peer learning, cross-country study visits, and digital knowledge exchanges, governments, SMEs, and health institutions will have access to tested solutions and replicable models. This regional approach reduces risk, accelerates scale-up, and ensures each country benefits not only from its own pilots, but from the entire regional portfolio of tested interventions.

Describe how the project/programme is consistent with national or sub-national sustainable development strategies, including, where appropriate, national or sub-national development plans,

poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist. If applicable, please refer to relevant regional plans and strategies where they exist.

The proposed project is strongly aligned with the national and sub-national development priorities, poverty reduction strategies, climate policies, and health sector plans of Uganda, Zimbabwe, Burkina Faso, and Benin. It supports implementation of national communications to the UNFCCC, updated Nationally Determined Contributions (NDCs), Health National Adaptation Plans (HNAPs), and National Adaptation Plans (NAPs). The project also advances relevant regional strategies including the WHO AFRO Framework for Building Climate-Resilient Health Systems (2024–2033), the Africa CDC's Continental Framework on Public Health Adaptation to Climate Change, and the African Union's Agenda 2063 and Climate Change Strategy (2022–2032) all of which underscore the extreme vulnerability of the health sector to climate change and the growing risks from vector-borne diseases, water insecurity and extreme weather events as detailed in the table below;

Table 5: Relevant regional, National, and Subnational plans/strategies

Level	Policy/Plan/Strategy/Framework	Objectives alignment
INTERNATIONAL	United Nations Framework Convention on Climate Change, 1992	Commits countries to precautionary risk management to prevent climate-related harm to environment and health; project operationalizes this through climate-proofed health infrastructure.
	Paris Agreement (2015)	Supports Article 7 on adaptation, by strengthening resilience of health systems, mobilizing adaptation finance, and fostering international cooperation.
	Sustainable Development Goals (SDGs, 2015)	Advances SDG 3 (health), SDG 6 (WASH), SDG 7 (clean energy), SDG 13 (climate action), and SDG 17 (partnerships), through integrated climate-health investments.
	Sendai Framework for Disaster Risk Reduction (2015–2030)	Promotes resilience of critical infrastructure, including health systems; project activities (solarization, WASH, disaster-prepared clinics) directly address this.
REGIONAL	WHO AFRO Framework for Building Climate-Resilient Health Systems (2024–2033)	Calls for climate-proof energy, WASH, infrastructure, and governance pillars; project integrates these into country-level interventions.
	Africa CDC Continental Framework on Public Health Adaptation to Climate Change	Emphasizes early warning, institutional capacity, and cross-border collaboration; project contributes via regional training and private sector engagement.
	African Union Agenda 2063	Promotes inclusive and sustainable development; project supports climate-resilient service delivery and regional investment mobilization.
	AU Climate Change Strategy (2022–2032)	Prioritizes adaptation in essential services; project aligns by piloting innovative finance and technology for health systems.
UGANDA	Vision 2040; NDPIII (2020/21–2024/25); Updated NDC (2022);	Prioritizes inclusive growth and resilient infrastructure; project supports climate-resilient health facilities, clean energy, and WASH for underserved areas. Strengthens health systems and climate-proof infrastructure; project delivers solarization, resilient WASH, and continuity of care. Identifies health as a priority adaptation sector; project integrates climate risk into facility design, energy, water, and surveillance.
	HSDP III; Climate Change Finance Strategy (2016);	Calls for reliable power, safe water, and IPC in facilities; project deploys solar cold chains and resilient WASH. Mobilizes climate finance and private sector; project's PBCRGs and SME pipeline operationalize this.
	NDC (2022);	Mainstreams climate resilience in health planning and operations; project supports EWARS, resilient infrastructure, and workforce capacity.
	Green Growth Development Strategy (2017–2030)	Aligns with priorities on resilient health infrastructure, decentralized solar/WASH, climate finance mobilization, and adaptation in vulnerable districts (Karamoja, Rwenzori).

ZIMBABWE	HNAP (2025 -2030); Renewable Energy Policy (2019)	Prioritizes clean energy, WASH, and mobile services for continuity; project pilots solar cold chains and flood-resilient posts. Expands distributed renewables in public services; project solarizes clinics and strengthens O&M capacity.
	National Development Strategy 1 (2021–2025);	Climate-smart infrastructure and equitable care; project delivers resilient energy and WASH in vulnerable provinces.
	National Climate Policy (2017);	Main streams climate risk in sectors incl. health; project applies resilience standards in facilities.
	Vision 2030;	Modernizes infrastructure and universal health access; project supports reliable utilities and resilient service delivery.
BURKINAFASO	PNDES II (2021–2025)	Improves access to basic services and health modernization; project climate-proofs clinics and strengthens WASH.
	Updated NDC (2021)	Targets adaptation in health and energy; project deploys solar systems and resilient water services in clinics.
	HNAP (2022)	Embeds resilience in health operations; project backs surveillance, resilient infrastructure, and staff training.
	National Climate Change Adaptation Plan;	Guides climate-proof public infrastructure; project applies facility retrofits against heat/flood risks.
	Strategy for a Green Economy (2020)	Advances green tech and PPPs; project leverages SMEs and PBCRGs for low-carbon health services.
BENIN	Government Action Programme (2021–2026)	Focuses on flood-resilient infrastructure and coastal health; project implements raised sanitation and storm-resilient water systems.
	NAP (2020);	Focuses on flood-resilient infrastructure and coastal health; project implements raised sanitation and storm-resilient water systems.
	Updated NDC (2021);	Calls for off-grid energy and health adaptation measures; project delivers solarization and resilient WASH in priority communes.

In sum, the project fully aligns with both the development and climate resilience priorities of the participating countries and the broader regional frameworks guiding health adaptation in Africa. Its integrated model of service delivery, blended finance, and institutional capacity enhancement reflects a coherent and strategic response to national and continental adaptation goals.

Describe how the project/programme meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund.

The project is aligned to the national laws, technical standards, and decrees of Uganda, Zimbabwe, Burkina Faso, and Benin. It will ensure that all relevant permits are obtained and that screening processes for proposed activities include legal compliance with national technical requirements. The project also adheres to the Adaptation Fund's Environmental and Social Policy (ESP), Gender Policy, and the environmental and social standards of WHO and AECF. The table below summarizes how the project meets applicable national technical standards and how each country's environmental and infrastructure compliance frameworks are integrated into the project design.

Table 6: Relevant national technical standards

Country	National Technical Standards	Description	Project Alignment
Uganda	• National Building Control Act (2013) • Ministry of Health Infrastructure	These standards cover public health infrastructure design, environmental screening, and building code compliance. NEMA requires ESIAs or EPBs for	Project infrastructure and WASH activities will be screened using NEMA guidelines and adhere to the Ministry of Health construction standards. Site-

	Guidelines • National Environmental Act (2019) • NEMA Environmental Impact Assessment Regulations	infrastructure projects, guided by a screening process[129],[130].	specific ESMPs will be developed based on ESIA findings.
Zimbabwe	• Environmental Management Act (CAP 20:27) • Ministry of Health and Child Care Construction Guidelines • Zimbabwe National Building Code (2000)	The Environmental Management Agency (EMA) regulates infrastructure development and pollution control. The Ministry of Health oversees technical health facility design and service safety[131],[132].	All infrastructure investments will undergo EMA screening. Mobile health units and solar-powered facilities will meet national building codes and public health engineering standards.
Burkina Faso	• Code de l'Environnement (2013) • Decree No. 2001-185 on Environmental Assessment • National Construction and Sanitation Standards	Environmental permits are governed by the Ministry of Environment. Projects must conduct EIE (étude d'impact environnemental) for Category B and C interventions[133].	The project will apply Burkina Faso's ESIA procedures, including stakeholder consultations. Health posts will be designed using flood-resilient construction specifications.
Benin	• Environmental Framework Law (1999) • Decree No. 2001-235 on EIA Procedures • Building and Urban Planning Codes (2017) • Sanitation and Water Quality Regulations	Benin's Agency for Environment requires an Environmental and Social Notice or full ESIA, depending on project scale. Building standards govern facility resilience and energy use[134],[135].	Project components will follow national EIA procedures, integrating WHO WASH and energy recommendations. Elevated WASH systems will comply with flood safety norms and permit requirements.

A key pillar of the project's safeguard strategy is the establishment of a grievance redress mechanism (GRM) at both community and national levels. This mechanism will allow stakeholders to raise concerns, receive feedback, and seek resolution throughout the project lifecycle. It will be accessible, transparent, and responsive, ensuring that affected individuals or groups have a voice and that potential conflicts are addressed constructively and in line with the principle of "do no harm."

The project will also prioritize inclusive stakeholder engagement, with particular attention to women, youth, indigenous peoples, and persons with disabilities. Consultations will be participatory, culturally sensitive, and conducted in local languages where appropriate. The principle of free, prior, and informed consent (FPIC) will be observed in communities where customary land use or indigenous rights are implicated. To

[129] Uganda National Building Control Act (2013). https://ulii.org/ug/legislation/act/2013/10
[130] National Environment Act (2019), Uganda. https://www.nema.go.ug/sites/all/themes/nema/docs/National%20Environment%20Act,%202019.pdf
[131] Environmental Management Act (CAP 20:27), Zimbabwe. https://www.ema.co.zw/index.php/legislation.
[132] Ministry of Health and Child Care, Zimbabwe. Health Infrastructure Standards (internal guidelines).
[133] Burkina Faso Environmental Code (2013). https://www.greengrowthknowledge.org/national-documents/burkina-faso-code-de-l-environnement
[134] Loi Cadre sur l'Environnement (1999), Benin. https://faolex.fao.org/docs/pdf/ben47429.pdf
[135] Building and Urban Planning Code, Benin. https://cadredevbenin.org.

ensure equity, gender action plans will be implemented across all project components and implementing partners will receive training on gender-sensitive programming and environmental and social safeguards.

Describe if there is duplication of the project/programme with other funding sources, if any.
The proposed project—*Pioneering Innovative Financing for Climate-Resilient Health Systems in Africa*—does not duplicate existing donor or government-supported initiatives in Uganda, Benin, Burkina Faso, or Zimbabwe. Instead, it offers a unique value proposition by introducing performance-based climate financing (PBCRG), de-risking mechanisms, and decentralized climate-resilient health technologies that are currently absent from national or regional adaptation programmes. This innovation fills a critical gap in adaptation finance by linking climate-proof infrastructure development with outcome-based financing and private sector engagement—a model that is yet to be deployed in the health sector in Sub-Saharan Africa, as summarized in the table below.

Table 7: Relevant projects in the target countries

Activity or Projects/ Organization/ Donor	Objectives/Scope	Implementation Status	Funding Sources	Possible Complementarities and Synergies
Health systems strengthening (maternal & child health) – Ministry of Health, UNICEF, Gavi (Uganda)	Immunization, supply chains, basic facility upgrades, service delivery	Ongoing, national	UNICEF, Gavi, GoU	Project adds climate-risk integration: PBCRGs for solar cold chains, resilient WASH, and continuity-of-care in off-grid districts (Karamoja, Rwenzori). Coordinates to avoid overlap in supported facilities.
Uganda Climate Smart Agriculture Transformation Project – World Bank (UGA)	Climate-smart agriculture, value chains, resilience of rural livelihoods	2022–2027, national	World Bank, GoU	Complementary: current focus is agriculture, not health facilities. Project targets health-sector resilience (solar power, water treatment, EWARS) in the same climate-affected geographies.
GCF Wetlands Restoration (UGA)	Ecosystem restoration, flood regulation, community adaptation	Ongoing in selected basins	GCF, GoU, partners	Synergy via risk reduction upstream; project translates those gains into facility-level resilience (raised sanitation, backup power, safe water) for nearby health posts.
Early Warning Systems – UNDP (Burkina Faso)	Meteorological & hazard EWS for food security/disaster response	Ongoing, national	UNDP, partners	Project connects national EWS to health EWARS/GIS, enabling climate-informed disease surveillance and faster outbreak response at facility level.
Climate-smart pastoralism – IFAD (Burkina Faso)	Pastoral livelihoods, water points, drought coping	Ongoing, Sahel zones	IFAD, Govt	Complementary: livelihood focus; project covers health infrastructure (solar hybrid systems for maternal/primary care, rainwater harvesting, resilient sanitation) in Centre-Nord/Sahel.
ProResilience – GIZ (Benin)	Community resilience, food systems, disaster prep	Ongoing, selected communes	GIZ	Synergy through facility-focused upgrades (raised, solar-powered latrines; flood-safe WASH) that are not financed under community programmes. Technical standards aligned to avoid duplication.
EAU pour TOUS – AFD (Benin)	Urban water infrastructure and flood protection	Ongoing, urban/coastal	AFD	Complementary: AFD finances network/HW works; project brings health-sector WASH & energy inside clinics (solar treatment, storage, MHM-enabled facilities) in Sèmè-Podji/Cotonou.

Health Resilience Fund – UNICEF & partners (Zimbabwe)	Service delivery support, limited rehab	2022–2026, national	Multi-donor	Project mainstreams climate risk and decentralized adaptive systems (mobile solar clinics, waste mgmt, EWARS) in provinces like Matabeleland, where HRF has general support.
NDS1 public investments – Government of Zimbabwe	Infrastructure modernization, social protection	2021–2025	GoZ, various	RBF leverage public investments by de-risking private SME delivery (O&M contracts, pay-for-performance) to sustain climate-resilient utilities in clinics.
WHO climate–health technical assistance (multiple countries)	Policy, planning, surveillance, capacity building	Ongoing	WHO, partners	Non-duplicative: this project pilots performance-based adaptation finance and technology deployment—complements WHO TA with capital + PBCRG instruments.
AECF Challenge Funds (energy, agriculture, livelihoods) – Regional	De-risking private investments, innovation windows	Ongoing in other sectors	Donor consortium via AECF	Non-duplicative: applies AECF's competition model to health adaptation for the first time—PBCRGs + SME pipeline for clinic energy/WASH/EWARS delivery.

In conclusion, the project introduces distinct value through its integrated financing model, decentralized infrastructure pilots, and regional learning components. It addresses critical adaptation deficits that are not currently being met by existing national or donor initiatives and does so in a way that complements, rather than replaces, ongoing public health and climate finance efforts.

B. If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.

Knowledge management and knowledge generation will be an integral part of the project and fully mainstreamed throughout all three components. The project will introduce, and pilot innovative technologies and financial mechanisms designed to enhance climate resilience within health systems across Benin, Burkina Faso, Uganda, and Zimbabwe. These include solar-hybrid energy systems for maternal health clinics, climate-resilient WASH infrastructure such as elevated latrines and solar-powered water purification units, and digital solutions for early warning and health system monitoring. These pilots are not only designed for local benefit but also as demonstrative models to be showcased nationally and internationally as scalable solutions to climate-health challenges in low-income and climate-vulnerable settings[136].

A critical component of knowledge generation will come from the deployment of Performance-Based Climate Resilient Grants (PBCRGs) under Component 2. This mechanism will enable the selection and financing of competitively screened private sector-led adaptation solutions, especially from SMEs developing or deploying decentralized, resilient health technologies. The grant-making process itself—including pitch forums, due diligence, and results-based disbursements—will be documented and used as a case study for innovative blended finance in the health-adaptation nexus[137]. This documentation will inform future challenge fund designs across the region and contribute to the emerging body of knowledge on private sector engagement in adaptation finance.

Beyond technical documentation, the project will actively promote training, awareness, and continuous learning on climate change, health risks, and resilience planning. Throughout the lifecycle of the project, stakeholders at multiple levels—including health workers, technicians, local government officials, and

[136] WHO (2020). Guidance for Climate-Resilient and Environmentally Sustainable Health Care Facilities.
[137] Africa Enterprise Challenge Fund (AECF). (2023). Private Sector Engagement in Adaptation: Lessons from Blended Finance in Africa

private sector actors—will be engaged through targeted capacity-building aligned with the Health National Adaptation Plans (HNAPs) of each country[138]. These trainings will cover topics such as climate risk screening, adaptive infrastructure design, environmental safeguards, and investment readiness for adaptation technologies.

The centerpiece of the project's learning architecture is the regional knowledge and innovation platform established under Component 3. This platform will host cross-country learning exchanges, high-level policy dialogues, and technical webinars, enabling peer learning between the four countries and beyond. Expert-led regional trainings will present project methodologies and results, share operational lessons, and demonstrate replicable models of climate-resilient service delivery. The platform will also serve to mainstream water and health-related data systems into national and regional knowledge hubs, strengthening institutional learning and evidence-based policymaking. By creating a repository of tested tools, training curricula, and case studies, the platform will act as a regional public good for ongoing replication, upscaling, and harmonization of resilience-building interventions[139].

Moreover, lessons learned will be captured systematically through routine monitoring, evaluations, and learning reviews (MEL), and shared through open-access reports, policy briefs. Partnerships with WHO's Health and Climate Change Unit and Africa CDC will ensure that these lessons feed into continental strategies and inform the broader global adaptation discourse. In addition, the use of gender-sensitive indicators and inclusive participation metrics will ensure that knowledge generated reflects the realities of vulnerable groups, especially women, youth, and marginalized communities, thereby informing more equitable adaptation policy and practice including new innovative funding models that involve the private sector[140].

C. Describe the consultative process, including the list of stakeholders consulted, undertaken during project/programme preparation, with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy of the Adaptation Fund.

The preparation of this regional project has involved a preliminary but targeted consultative process, with a strong focus on government leadership, inter-ministerial collaboration, early engagement of key stakeholder institutions and the AECF gender team. The objective has been to ensure alignment with national priorities, secure institutional buy-in, applicable gender mainstreaming policies and identify the adaptation needs and opportunities most relevant to climate-resilient health systems in each participating country. The process has been participatory and inclusive, laying the foundation for deeper community and stakeholder engagement during full project design.

To date, consultations have been held with the Ministries of Health in Burkina Faso, Uganda, Benin, and Zimbabwe. These discussions were essential in validating the project's relevance, identifying key vulnerability hotspots, and aligning proposed interventions with ongoing health sector reforms and infrastructure development plans. In Uganda and Zimbabwe, the project team also engaged with the national task forces on climate change and health, as well as selected health facility managers and frontline staff in climate-exposed districts, to understand facility-level challenges related to infrastructure, WASH, and service continuity during climate shocks. Engagement has also extended to the Designated National Authorities (NDAs) for the Adaptation Fund and the National Climate Change Focal Points, who provided guidance on national climate adaptation priorities, compliance with environmental and social safeguards, and alignment with national climate and development strategies. Their inputs have informed both the strategic framing and the institutional structure of the project.

[138] Ministry of Health Uganda, Health National Adaptation Plan (2022); Ministry of Health Zimbabwe (2023).
[139] WHO AFRO (2024). Framework for Building Climate-Resilient and Sustainable Health Systems (2024–2033)
[140] Adaptation Fund (2021). Environmental and Social Policy; Gender Policy and Action Plan

In recognition of the cross-sectoral nature of health adaptation, the project has initiated consultations with relevant inter-ministerial departments, including those responsible for energy, water, finance, and environment. These actors will play a critical role in enabling policy and financing frameworks, particularly for performance-based grants, infrastructure standards, and climate-smart service delivery. The inclusion of the Private Sector Foundation in initial consultations has also helped define early ideas for de-risking instruments and investment incentives aimed at mobilizing private capital for health adaptation.

While these initial consultations have provided strong technical and institutional grounding, the project team is fully committed to expanding the scope and depth of engagement during the full project development phase. This will include structured consultations with community groups, civil society organizations, women's networks, youth groups, persons with disabilities, indigenous communities, and other marginalized populations, ensuring that their voices inform design decisions and benefit-sharing mechanisms. The project will also ensure that free, prior, and informed consent (FPIC) is obtained in contexts where indigenous or customary land rights may be affected.

All future engagement processes will be guided by the Environmental and Social Policy of the Adaptation Fund, with a focus on transparency, inclusion, and responsiveness. Gender considerations will be mainstreamed through disaggregated stakeholder mapping, inclusive facilitation methods, and the development of a gender action plan to ensure equitable participation and benefit sharing. The below table summarizes the stakeholder consultations.

Summary of stakeholder consultations

Table 8: Stakeholder consultations

Date	Stakeholder Consulted	Topics Discussed & Issues Raised	Recommendations	Target Group & Gender Considerations
March 2024	Ministries of Health, Environment, Finance; Climate Change Focal Points (GCF, AF, GEF)/WHO Country offices	Policy and regulatory challenges; awareness gaps; evaluation of proposed climate-resilient technologies and WASH services	Align interventions with national climate-health strategies; address regulatory barriers; prioritize vulnerable regions	Government officials, technical experts; ensure representation of women in decision-making bodies
June 2024	Meteorological Departments, Members of Parliament (Committee on Health), Ministry of Energy	Climate data integration into health planning; early warning systems; energy solutions for health facilities	Enhance data sharing protocols; invest in solar and hybrid systems for health facilities	Parliamentarians, technical staff; encourage women-led climate data initiatives
Oct 2024	Private companies (ESCOs, EPCs), Financial Institutions/AECF senior management/ partnerships	Innovative financing competition model for vetted investees; risk mitigation instruments; pipeline development	Adopt performance-based grants; provide concessional financing; build capacity for proposal development	Private sector, SMEs; promote female-led enterprises in the innovation challenge
Feb 2025	Civil society organizations, Women's and Youth Networks, Indigenous community leaders	Community-level needs; cultural considerations; benefit-sharing mechanisms	Integrate free, prior, informed consent (FPIC); design gender-responsive benefit-sharing frameworks	Marginalized groups: ensure women and youth are active participants and beneficiaries
Aug 2025	All stakeholder groups (multi-sector workshop)	Finalization of country-led Concept Note for Adaptation Fund; validation of project components; selection of oversight committee	Approve final concept; establish country committees; ensure ongoing community engagement	All stakeholder categories; maintain gender balance in oversight committees

Stakeholder engagement promotes ownership, accountability, and sustainability of project outcomes. Engaging line ministries ensures that the project aligns with existing policies and avoids duplication of efforts. Regional and local consultations provide an opportunity to address specific challenges unique to different contexts, promoting tailored interventions. The stakeholders identified pathways that expose individuals and communities to climate-induced health hazards. These include droughts that affect the availability of safe and adequate water supply for domestic consumption, as well as floods that contaminate water sources with disease-causing pollutants which result in water-related diseases such as typhoid and cholera. In addition, heavy rainfall that results in the proliferation of stagnant water increases the breeding of vectors, such as mosquitoes, which increases the prevalence of vector-borne diseases, such as malaria.

D. Provide justification for funding requested, focusing on the full cost of adaptation reasoning.

The funding requested from the Adaptation Fund is fully justified by the urgency, scale, and complexity of climate-induced risks affecting health systems in Burkina Faso, Uganda, Benin, and Zimbabwe. These countries face increasing threats from climate change including rising temperatures, floods, droughts, and extreme weather events that are already undermining the resilience of health infrastructure, disrupting essential services, exacerbating disease outbreaks, and disproportionately affecting vulnerable populations, especially women, children, the elderly, and persons with disabilities. Without external support, these countries lack the fiscal space, technical capacity, and risk mitigation tools required to implement transformative adaptation interventions in the health sector.

Under a baseline (non-adaptation) scenario, health systems in these countries will continue to suffer from chronic underinvestment in climate-resilient infrastructure, unreliable WASH services, and lack of adaptive technologies, particularly in remote or climate-vulnerable regions. Health facilities will remain susceptible to flooding, power outages, and disease outbreaks, with little capacity to anticipate or respond effectively to climate shocks. Climate-sensitive diseases such as malaria, cholera, and diarrheal illnesses are projected to increase in incidence and spread due to temperature and rainfall variability, further burdening already overstretched systems. In this scenario, public resources will remain focused on reactive crisis management rather than forward-looking resilience-building.

The requested Adaptation Fund support will cover the full incremental costs of adaptation necessary to transition from reactive, climate-vulnerable health service delivery to proactive, climate-resilient health systems. These include investments that would not be undertaken under a development-only approach due to high up-front costs, perceived risks, and limited institutional capacity.

Specifically, the funding will enable:

i. Deployment of climate-resilient technologies such as solar-powered cold chains, modular mobile clinics, and rainwater harvesting systems; Retrofitting and climate-proofing of critical healthcare infrastructure in vulnerable regions; Introduction of performance-based climate finance mechanisms that incentivize adaptation results;
ii. Capacity building for governments and local actors to develop investment-grade adaptation solutions; Creation of a regional innovation and learning platform to amplify cost-effectiveness through cross-country collaboration.

Moreover, the project will generate long-term social and economic co-benefits, including reduced disease burden, improved productivity, and avoided costs associated with emergency responses. These benefits, while development-relevant, would not be realized without the climate adaptation investments funded by the Adaptation Fund. The table below gives a summary of the cost of reasoning.

Table 9: Full cost of adaptation justification

Component	Baseline Scenario (Without Project)	Adaptation Fund Scenario (With Project)	Full Cost of Adaptation Justification
1. Private Sector Engagement in Climate-Resilient Health Systems	Limited private sector involvement in climate-health solutions. Few or no investment-ready projects in health adaptation. No coordinated pipeline of solutions tailored to climate risks.	Private sector actors receive technical assistance, are trained in adaptation financing, and develop investment-ready, climate-resilient health projects. Competitive pipeline developed through pitch forums.	Adaptation Fund enables capacity building, blended finance design, and risk de-risking to catalyze private investment in climate-health adaptation. Public finance lowers the barrier for entry.
2. Innovative Adaptation Financing Mechanisms	Health infrastructure is exposed to frequent disruptions from floods, droughts, and heatwaves. No access to adaptation grants or climate-proof technologies. Reactive maintenance dominates.	Performance-Based Climate Resilient Grants (PBCRGs) are deployed to finance off-grid clinics, modular solar units, WASH systems, and climate-proof infrastructure in high-risk zones.	Funding covers incremental costs of deploying resilient technologies and offsets financial risks of new adaptation models. Supports transformation from reactive to preventive health systems.
3. Capacity Building and Institutional Strengthening	Limited capacity to design and implement climate adaptation policies or to attract climate finance. Fragmented institutional frameworks and lack of climate-health data systems.	National governments supported to develop investment cases, policy frameworks, and institutional capacities to mainstream climate resilience in health planning.	Adaptation Fund resources enable national readiness, evidence-based investment design, and coordination platforms that would otherwise be unaffordable.

E. Describe how the sustainability of the project/programme outcomes has been taken into account when designing the project/programme.

Sustainability is a core principle guiding the design of this programme, ensuring that its adaptation outcomes continue to deliver tangible benefits well beyond the implementation period. The project promotes financial, institutional, technical, environmental, and social sustainability in Burkina Faso, Uganda, Benin, and Zimbabwe—particularly within vulnerable health systems that face increasing climate-related risks. The sustainability of the project is embedded in several strategies. First, national capacity will be strengthened through training, systems development, and knowledge management platforms to ensure continuity beyond the project period. Second, strategic partnerships and financing mechanisms (Output 2.1 and 2.2) will crowd in private finance. Third, the project will institutionalize climate-resilient health policies and integrate gender and climate risk management into core national planning processes, ensuring long-term ownership and sustainability as detailed here below;

At the financial level, the project deploys Performance-Based Climate-Resilient Grants (PBCRGs) and blended finance mechanisms to catalyze additional investment from the private sector, development finance institutions, and public budgets. These mechanisms will support demonstration pilots that de-risk investments in climate-resilient health infrastructure, enhancing their replicability and bankability. The project will also assist countries in developing pipelines of adaptation projects aligned with the GCF and other climate finance windows to secure sustained funding beyond the project lifecycle.

Institutional sustainability is reinforced by building capacities within ministries of health, environment, planning, and finance to integrate climate resilience into national health strategies and public investment systems. Dedicated technical assistance and policy tools will support the institutionalization of climate-resilient investment planning and regulation at national and sub-national levels, ensuring local ownership and long-term system integration.

On the technical front, the project emphasizes context-appropriate and low-maintenance technologies—such as solar-powered cold chains, rainwater harvesting systems, and modular climate-proofed health infrastructure—that are resilient to local hazards like droughts and floods. These technologies have already

been successfully piloted in health facilities in Uganda and Zimbabwe, showing reductions in power outages and improved continuity of care during climate events[1]. Training programmes will be implemented for local health personnel and technicians to ensure skills transfer, local operations and maintenance, and cost-effective management over time.

The environmental sustainability of the project is anchored in WHO's Guidance for Climate-Resilient and Environmentally Sustainable Health Care Facilities, which emphasizes efficient resource use, hazard mitigation, and waste reduction[141]. In alignment with this guidance, the project will promote the retrofitting of health infrastructure using climate-resilient materials and passive cooling designs to reduce energy consumption. Renewable energy systems, particularly off-grid solar photovoltaic (PV), will be deployed to ensure uninterrupted essential services and reduce dependency on diesel generators[142]. In flood- and drought-prone regions, the project will strengthen water, sanitation, hygiene (WASH), and healthcare waste management systems to prevent contamination and manage infection risks effectively. Environmentally responsible procurement practices will be promoted to prioritize low-emission and non-toxic medical supplies. Moreover, facility managers will be trained to use WHO's facility-level climate resilience assessment tools to identify, monitor, and mitigate environmental risks such as hazardous waste, water pollution, and indoor air contamination[143].

These measures will ensure that health care facilities not only withstand climate-related shocks but also reduce their ecological footprint, enhance resource efficiency, and contribute to Universal Health Coverage (UHC) objectives[144]. Social sustainability is also embedded through inclusive planning and participatory implementation. Vulnerable populations—including women, persons with disabilities, youth, and rural communities will be directly engaged through Community Health Adaptation Committees and gender-responsive budgeting. Their participation ensures locally relevant solutions and fosters long-term stewardship.

At the regional level, the project will contribute to long-term sustainability by establishing a Regional Knowledge Hub on Climate-Resilient Health Systems and conducting cross-country training and peer-learning exchanges. These efforts will reinforce national systems and facilitate replication of successful practices across similar contexts in Sub-Saharan Africa. Given that the project targets regions already experiencing environmental stress and public health deficits, these sustainability measures are essential for maintaining health service delivery, reducing environmental risks, and ensuring long-term resilience. The alignment with WHO's Operational Framework and IPCC risk reduction guidance provides further assurance that sustainability has been fully integrated into the project design[145].

Provide an overview of the environmental and social impacts and risks identified as being relevant to the project/programme.

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Compliance with the Law	Further Assessment will be conducted for full proposal	The environmental and social impacts and risks associated with the project have been identified and will be addressed in line with the Adaptation Fund's Environmental and Social Policy (ESP), as well as relevant national laws and

[141] WHO Uganda Country Office (2022). Climate Resilience Assessment in Health Facilities in Karamoja Region.
[142] WHO. (2020). Guidance for Climate-Resilient and Environmentally Sustainable Health Care Facilities. Geneva: World Health Organization.
[143] WHO. (2015). Operational Framework for Building Climate Resilient Health Systems.
[144] WHO & UNFCCC (2021). Health and Climate Change Country Profile – Zimbabwe.
[145] IPCC. (2022). Climate Change 2022: Impacts, Adaptation and Vulnerability – Africa Chapter.

		international protocols. As detailed in Section II–F of the concept note, the project will comply with applicable environmental regulations, acts, and institutional frameworks in Burkina Faso, Uganda, Benin, and Zimbabwe. These include national laws on environmental impact assessment (EIA), public health, water resources, and waste management. **Conflict and security risks:** Among the four target countries, Burkina Faso is currently experiencing heightened security risks due to ongoing armed conflict and political instability, particularly in northern and eastern regions where non-state armed groups operate. While project activities will be focused in secure zones, a comprehensive security risk assessment will be undertaken during the full proposal development to ensure the safety of project personnel, partners, and beneficiaries. The project will adopt adaptive implementation approaches, such as working through local NGOs and decentralized government structures where necessary, and will comply with UN security protocols and national contingency plans[146]. **Environmental Risks:** Environmentally, the project carries low to moderate risks primarily related to construction, retrofitting of health infrastructure, and the installation of renewable energy and WASH systems. These may include minor disruptions to local ecosystems, increased solid waste during rehabilitation works, and potential improper disposal of medical or hazardous waste. Mitigation measures will include adherence to EIA requirements, use of sustainable construction materials, procurement of non-toxic medical supplies, and training of facility managers in sustainable waste management practices. Overall, the project design will be guided by the principles of "do no harm," human rights-based approaches, and environmental stewardship. Additional consultations with international partners such as WHO, UNDP, and national disaster management agencies will inform conflict mitigation and safeguard strategies in the full proposal stage.
Access and Equity	Further Assessment will be conducted for full proposal	The project will not reduce or prevent communities in the targeted areas from accessing basic services. The project will take a number of transparent steps that will help ensure that the benefits of the project are being distributed fairly with no discrimination nor favouritism. Project targeting will comprise targeting criteria based on gender and age quotas. The project will advertise broadly through the mass media (radio, social media, town hall and village meetings, workshops etc.) for the implementation of an outreach/mobilisation strategy.
Marginalized and Vulnerable Groups	Further Assessment will be conducted for full proposal	Though private sector-led, the project ensures inclusivity by requiring supported companies to engage and benefit marginalized groups—such as displaced persons, women, youth, and persons with disabilities. Private sector investees must integrate equity into their models, consult local communities, and prioritize vulnerable populations in service delivery. For example, firms providing solar-powered WASH or health infrastructure in refugee-hosting areas will be expected to hire locally and ensure accessibility. Participatory consultations, grievance mechanisms, and safeguards on land and customary rights will help embed social justice in climate resilience interventions.
Human Rights	Further Assessment will be conducted for full proposal	The project will uphold a human rights-based approach by ensuring that interventions align with national constitutions and legal frameworks—such as Uganda's Constitution Article 21 (equality and non-discrimination), Benin's Law No. 2012-36 on the protection of human rights defenders, Burkina Faso's 2015 Constitution (Articles 1 and 2 on dignity and equality), and Zimbabwe's Constitution Section 44 on the duty to respect fundamental rights. All project partners, including private sector actors, will be required to apply human rights due diligence in employment, land use, and service delivery. For example,

[146] OCHA. (2024). Humanitarian Needs Overview: Burkina Faso

		private healthcare providers installing climate-resilient technologies must ensure equitable access for women, persons with disabilities, and displaced populations. Free, Prior and Informed Consent (FPIC) will be obtained for all community-level infrastructure, and accessible grievance redress systems will be integrated to ensure accountability and uphold dignity throughout the project.
Gender Equity and Women's Empowerment	Further Assessment will be conducted for full proposal	The project will promote gender equity and women's empowerment in alignment with national legal frameworks and the Adaptation Fund's gender policy for implementing entities. The national policies will include Uganda's National Gender Policy (2007), Benin's Law No. 2011-26 on the Prevention and Punishment of Violence Against Women, Burkina Faso's Law No. 061-2015/CNT on the Prevention and Repression of Violence Against Women, and Zimbabwe's Gender Commission Act [Chapter 10:31]. These laws emphasize equal participation, protection, and access to opportunities. In this project, women will be prioritized in the design and implementation of climate-resilient health services—such as being included in community adaptation committees, receiving training on clean energy technologies, and benefiting from targeted grants for female-led health enterprises—ensuring they are not only beneficiaries but also decision-makers in building climate-resilient systems.
Core Labour Rights	Further Assessment will be conducted for full proposal	The project will uphold core labor rights in line with national labor laws and international standards, particularly those enshrined in the ILO's Fundamental Principles and Rights at Work. Each of the participating countries—Uganda, Benin, Burkina Faso, and Zimbabwe—is a signatory to key ILO Conventions, including Convention No. 87 (Freedom of Association), No. 98 (Right to Organize and Collective Bargaining), No. 100 (Equal Remuneration), and No. 111 (Non-Discrimination in Employment). The project will ensure that all workers—particularly those involved in infrastructure retrofitting, waste management, and health service delivery—are employed under safe and fair conditions, with no tolerance for child labor or forced labor. Contractors will be required to comply with national employment codes and health and safety regulations. In Uganda, for instance, the Employment Act, 2006, and the Occupational Safety and Health Act, 2006 will apply; in Burkina Faso, the Code du Travail (Law No. 028-2008/AN); in Zimbabwe, the Labour Act [Chapter 28:01]; and in Benin, the Labor Code (Law No. 98-004 of 1998). Worker safety, nondiscrimination, and fair wages will be embedded in procurement and implementation guidelines.
Indigenous Peoples	Further Assessment will be conducted for full proposal	The project will uphold the rights of Indigenous Peoples by applying the principles of Free, Prior, and Informed Consent (FPIC) wherever activities may affect culturally distinct or marginalized communities, such as the Batwa in Uganda or pastoralist groups in Burkina Faso. Consultations will be culturally appropriate and aligned with national human rights frameworks and international standards like the UN Declaration on the Rights of Indigenous Peoples. The project will ensure no disruption of land rights or cultural heritage and will co-design interventions with affected communities to respect traditional governance and livelihood systems.
Involuntary Resettlement	Further Assessment will be conducted for full proposal	The project does not anticipate any involuntary resettlement, as activities are focused on upgrading existing health infrastructure, deploying off-grid technologies, and supporting private sector adaptation investments within already established facilities or designated green zones. Where land use changes may be necessary—such as installing solar panels or expanding health service access—activities will be implemented on government-owned or voluntarily provided land, in full compliance with national land laws (e.g., Uganda's Land Act Cap 227, Burkina Faso's Law No. 034-2009/AN on Rural Land Tenure). Transparent community consultations will be undertaken to avoid displacement, and grievance redress mechanisms will be established to address any emerging land-related concerns.
Protection of Natural Habitats	Further Assessment will be conducted for full proposal	The project will avoid activities that may lead to degradation or conversion of natural habitats. All interventions—such as health facility retrofitting, installation of solar energy systems, and WASH infrastructure upgrades—will take place within existing built environments or previously developed land. In

		cases where nature-based solutions are applied (e.g., reforestation for flood control or green buffers around health facilities), the project will actively contribute to the restoration of degraded habitats. Environmental screening processes will be guided by national environmental laws—such as Uganda's National Environment Act, 2019, and Zimbabwe's Environmental Management Act [Chapter 20:27]—to ensure full compliance with biodiversity protection measures.
Conservation of Biological Diversity		The project will contribute to the conservation of biological diversity by ensuring that all planned activities avoid sensitive ecological zones and do not result in habitat fragmentation or species loss. Environmental assessments will be conducted in line with national biodiversity laws—such as Uganda's National Biodiversity Strategy and Action Plan (NBSAP II), Benin's Loi n°2002-16 sur le régime de la faune, and Zimbabwe's Parks and Wildlife Act—to identify and mitigate any risks to flora and fauna. Where feasible, the project will integrate nature-based solutions (e.g., vegetative buffers or reforestation) around health facilities, enhancing ecosystem services while supporting climate resilience.
Climate Change	Further Assessment will be conducted for full proposal	The project is fully aligned with national climate policies and specifically integrates the priorities outlined in each country's Health National Adaptation Plan (HNAP). By enhancing climate-resilient infrastructure, deploying solar energy systems, and integrating early warning and surveillance for climate-sensitive diseases, the project operationalizes the adaptation priorities of the HNAPs. This alignment ensures that interventions are responsive to country-specific climate and health vulnerabilities, while also supporting long-term adaptation planning in line with NDC targets.
Pollution Prevention and Resource Efficiency	Further Assessment will be conducted for full proposal	The project will enhance pollution prevention and resource efficiency by promoting solar energy use, sustainable water systems (e.g., rainwater harvesting), and eco-friendly waste management in health facilities. Energy-efficient technologies and low-emission medical supplies will reduce environmental impact, aligning with WHO's climate-resilient health care guidelines.
Public Health	Further Assessment will be conducted for full proposal	The project will strengthen public health by climate-proofing health infrastructure, improving WASH systems, and ensuring uninterrupted essential services through renewable energy. These interventions will reduce disease risks, enhance epidemic preparedness, and align with national Health National Adaptation Plans (HNAPs) and WHO's Operational Framework for building climate-resilient health systems.
Physical and Cultural Heritage	Further Assessment will be conducted for full proposal	The project will comply with the 1972 UNESCO World Heritage Convention and national heritage protection laws in Uganda, Benin, Burkina Faso, and Zimbabwe. Prior to construction, site-specific Environmental and Social Impact Assessments (ESIAs) will screen for cultural heritage risks. Where relevant, consultations with heritage authorities and local communities will ensure protection of sacred sites, monuments, and intangible heritage. Mitigation measures will be integrated into project design to avoid or minimize any adverse impacts.
Lands and Soil Conservation	Further Assessment will be conducted for full proposal	Under the project, private sector investees will ensure that infrastructure upgrades avoid impacts on physical and cultural heritage by complying with national heritage laws. Activities will also safeguard land and soil through low-impact construction, erosion control, and soil stabilization measures, embedded in ESMPs and investor agreements.

Demonstrate how the project/programme aligns with the Results Framework of the Adaptation Fund

The project directly aligns with the Adaptation Fund Strategic Results Framework by enhancing the climate resilience of health systems in Zimbabwe, Benin, Burkina Faso, and Uganda. It contributes to Outcome 6 ("Increased capacity of national and sub-national centers and networks to respond rapidly to extreme weather events") through a combination of private sector engagement, innovative adaptation financing, and institutional strengthening. The interventions, including *Performance-Based Climate Resilient Grants*

(PBCRGs), will enable the deployment of tested and innovative solutions such as solar-powered health facilities, resilient WASH systems, early warning systems, cold chain solutions, and climate-smart infrastructure retrofits. These outputs will translate into measurable indicators such as the number of functioning climate-resilient health facilities, the number of private sector partnerships formalized, and the adoption of climate-proof technologies in health infrastructure. By integrating community engagement, gender inclusion, and private investment mobilization, the project ensures that vulnerable populations benefit from timely, reliable, and climate-adaptive health services, while strengthening national and local institutional capacities to respond to climate-related health risks.

Project Objective(s)	**Project Objective Indicator(s)**	**Fund Outcome**	**Fund Outcome Indicator**	**Grant Amount (USD)**
Strengthen climate resilience of health systems in Zimbabwe, Benin, Burkina Faso, and Uganda through private sector engagement, innovative adaptation financing, and institutional capacity building	- % increase in climate-resilient health infrastructure in target countries - % increase in private sector investment in health adaptation projects	Outcome 6: Increased capacity of national and sub-national centers and networks to respond rapidly to extreme weather events	Number of functioning climate-resilient health facilities in target countries responding effectively to climate disasters such as floods, power outages, and water shortages	13,924,000

Project Outcome(s)	**Project Outcome Indicator(s)**	**Fund Output**	**Fund Output Indicator(s)**	**Grant Amount (USD)**
Outcome 1: Public-private partnerships and investment frameworks established to facilitate and enhance private sector engagement in building climate-resilient health systems	-Number of partnerships/investees from private sector participating - Number of technologies adopted in the health sector to address climate disasters	Output 1.1: Enhanced capacity of public and private sectors to respond to climate change impacts	- Number of private sector actors trained and supported (Output 1.1) - Number of competitive investment proposals selected for financing (Output 1.2)	1,000,000
Outcome 2: Health systems' resilience enhanced through innovative adaptation financing to support the development and diffusion of innovative adaptation practices, tools and technologies	- Number of PBCRGs deployed (Output 2.1) - Amount of private capital leveraged for health adaptation (USD) -% increase in use of climate-resilient technologies and tools in health facilities (Output 2.2) -Number of health facilities climate-proofed (Output 2.3)	Output 2.1: Physical assets created, developed, improved, or strengthened to withstand climate variability and change	- Number of health facilities equipped with climate-resilient technologies (e.g., solar refrigeration, solar heating) -Number of facilities retrofitted to withstand climate impacts - No. of innovative adaptation practices, tools and technologies accelerated, scaled-up and/or replicated -No. of physical assets strengthened or constructed to withstand conditions resulting from climate variability and change	10,000,000
Outcome 3: Strengthened government capacity to design investment cases and attract or allocate	- Number of strategies /innovations adopted involving the private sector (Output 3.2)	Output 3.1: -Strengthened capacity of	- No. of targeted institutions with increased capacity to minimize exposure to climate variability risks (by type, sector and	1,000,000

investments for climate-resilient health technologies and infrastructure	-Number of capacity training and workshops held (Output 3.1) -Number of Personnel Trained in Climate Monitoring as a percentage of individual planned to be trained (disaggregated by gender)	Health facilities to respond rapidly to extreme weather events	scale) - No. of staff trained to respond to, and mitigate impacts of, climate-related events (by gender). -No. of technical committees/associations formed to respond effectively to disasters	

6. IMPLEMENTATION ARRANGEMENTS

The World Health Organization (WHO) will serve as the Multilateral Implementing Entity (MIE), ensuring that project activities are executed in a transparent, efficient, and accountable manner. WHO Headquarters (HQ) and the African Regional Office (AFRO) will provide overall oversight, quality assurance, and compliance with Adaptation Fund regulations. They will ensure timely and accurate financial reporting, prudent budget utilization, and adherence to operational and policy guidelines. In addition, WHO will contribute global technical expertise, policy guidance, and access to international best practices and tools relevant to climate change and health adaptation. HQ and AFRO will also lead on quality assurance of project outputs.

The African Enterprise Challenge Fund (AECF) will act as the Executing Entity (EE). AECF will lead day-to-day project management and coordination efforts, working closely with National Designated Authorities (NDAs) and Ministries of Health (MOHs) to ensure alignment of project activities with national priorities and targets. AECF will oversee activity implementation, manage project funds, and ensure compliance with agreed protocols and standards. To foster transparency and accountability, AECF will maintain regular communication and coordination with all stakeholders.

WHO and AECF will set aside a fund dedicated to financing the transfer and adoption of climate change adaptation solutions in the health sector. This fund will be capitalized through the grant from the Adaptation Fund and potentially mobilize government contributions, international donors, and private sector financing. It will provide Performance-Based Climate Resilient Grants (PBCRGs) to healthcare facilities and private sector actors to incentivize investment in climate change adaptation solutions, offset upfront costs, and catalyze private sector participation.
Private sector investees (e.g., ESCOs, PPPs) and community actors (village health committees, hospital administrators, youth and gender groups) will directly engage in the design and uptake of the climate change adaptation solutions. Ultimately, communities and health facilities will be the direct beneficiaries, gaining access to climate-resilient, clean energy-enabled, and sustainable health services.

WHO Country Offices (WCOs) will serve as the operational arms of the project, supporting the Ministries of Health and private players in implementing activities on the ground. WCOs will backstop day-to-day operations including planning, procurement, disbursement, technical implementation, and monitoring at national and subnational levels.

National Designated Authorities (NDAs) and national Implementing Entities (NIEs) will reinforce coordination, avoiding duplication of efforts and safeguarding alignment with national adaptation priorities.

At the country level, a Project Steering Committee (PSC) will be established to provide overall governance. Co-chaired by WHO and the MOH, the PSC will meet quarterly to review project progress, approve annual work plans and budgets, provide strategic direction, and resolve implementation bottlenecks.

To ensure technical rigor, a Technical Working Group (TWG) will be convened, bringing together technical staff from government institutions, academia, civil society, and private sector partners. The TWG will provide guidance on thematic areas, including climate-resilient infrastructure, early warning systems, data integration, and gender and social inclusion.

A roster of technical consultants will be maintained and engaged on a needs basis to provide specialized expertise in areas such as health infrastructure design, WASH engineering, GIS-based surveillance, and climate-resilient health policy development.

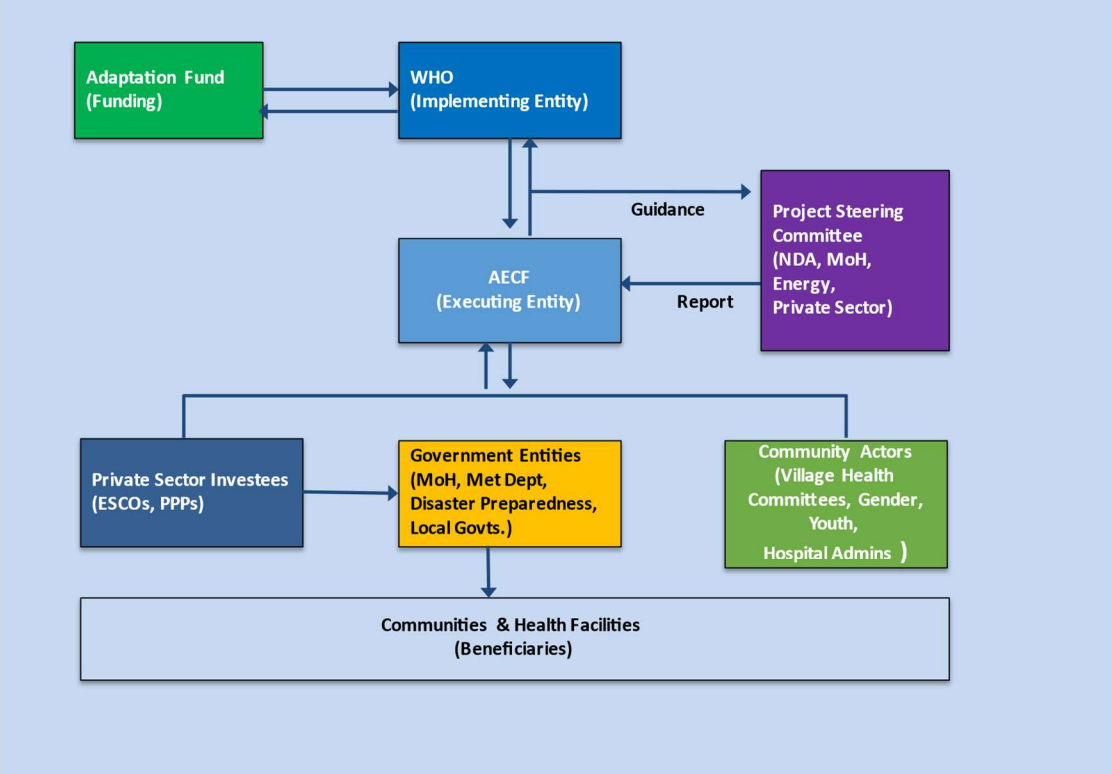

Figure 5: Implementation Arrangements

7. ENDORSEMENT BY GOVERNMENTS AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. Record of endorsement on behalf of the government

[147] *Provide the name and position of the government official and indicate date of endorsement for each country participating in the proposed project/programme. Add more lines as necessary. The endorsement*

6. Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

letters should be attached as an annex to the project/programme proposal. Please attach the endorsement letters with this template; add as many participating governments if a regional project/programme:

(Enter Name, Position, Ministry) General Directorate of Cooperation Primary contact: Amidou OUEDRAOGO General Director of Cooperation La Cooperation General Directorate of Cooperation Avenue du General Sangoule Lamizana, Ouagadougou, Burkina Faso, 03 BP 7067 Ouagadougou 03 Burkina Faso Burkina Faso Tel: +226 76584928 Email: dg.coop@finances.gov.bf; Alternate emails: amidouedll@gmail.com;	Date*: 07/12/2024*
(Enter Name, Position, Ministry) Direction Générale de l'Environnement et du Climat (DGEC) Primary contact: Mr. Ibila Djibril Directeur Général Environnement et du Climat Direction Générale de l'Environnement et du Climat (DGEC) 01 BP 3502 / 01 BP 3621 Cotonou Benin Tel: +229 01 21 31 29 12/01 21 31 50 58 Email: dgec.mcvt@gouv.bj; Alternate emails: ibdjibr@gmail.com; ibdjibril@gouv.bj;	Date*: 07/18/2024*
(Enter Name, Position, Ministry) Minister of Finance, Planning and Economic Development Primary contact: Mr. Ramathan Ggoobi Permanent Secretary /Secretary to the Treasury Minister of Finance, Planning and Economic Development Plot 2 -8 Apollo Kaggwa Road, P.O. Box 8147, Kampala, Uganda Uganda Tel: +256 414 707 000/ +256 414 235 054 / +256 414 707135 Email: finance@finance.go.ug; Alternate emails: ramathan.ggoobi@finance.go.ug;	Date*: 12/11/2024*
Climate Change Management Department Primary contact: Mr. Washington Zhakata Chief Director Climate Change Management and Meteorological Services Climate Change Management Department 12th Floor, Kaguvi Building, 4th and Central Avenue, Harare Zimbabwe Tel: +263 242 701681 Email: climatechange@mecw.gov.zw; Alternate emails: washingtonzhakata@gmail.com;	Date: 04/04/2024

B. **Implementing Entity certification**

Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/programme contact person's name, telephone number and email address

<table>
<tr><td colspan="2">I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.</td></tr>
<tr><td colspan="2">Name & Signature
Implementing Entity Coordinator: VILLALOBOS Prats, Elena WHO Headquarters villalobose@who.int

P.P.
Dr Jeremiah MUSHOSHO, Team Lead – Climate Change, Health and Environment (WHO AFRO)
  </td></tr>
<tr><td>Date: (08, 31, 2025)</td><td>Tel. and email: mushoshoj@who.int</td></tr>
<tr><td colspan="2">Project Contact Person: Dr Jeremiah MUSHOSHO, Team Lead – Climate Change, Health and Environment (WHO AFRO)</td></tr>
<tr><td colspan="2">Tel. And Email: +263772326001</td></tr>
</table>

MINISTÈRE DU CADRE DE VIE
ET DES TRANSPORTS
EN CHARGE DU DÉVELOPPEMENT DURABLE
RÉPUBLIQUE DU BÉNIN

01 BP 3502 - 01 BP3621 Cotonou
+ 229 21 31 29 12/ 21 31 47 12
mcvt.info@gouv.bj
www.cadredevie.gouv.bj

ADAPTATION FUND

Direction Générale de l'Environnement et du Climat

Cotonou, le 07 JAN 2026

N° 0012 **/DGEC/MCVT/DGCCPC/SD**

Letter of Endorsement by Benin Government

To: The Adaptation Fund Board c/o
Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for Pioneering Innovative Financing for Climate-Resilient Health Systems in Africa.

In my capacity as Designated Authority for the Adaptation Fund in Benin, I confirm that the above regional project/programme proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in the country.

Accordingly, I am pleased to endorse the above project/programme proposal with support from the Adaptation Fund. If approved, the project/programme will be implemented by World Health Organization (WHO) and executed by Africa Enterprise Challenge Fund (AECF).

Sincerely,

Le Directeur Général

M. Ibila DJIBRIL,
Director General for Environment and Climate,
Designated Authority for the Adaptation Fund.

BURKINA FASO

La Partie ou la Mort, nous Vaincrons

Ministry of Economy and Finance

General Directorate of Cooperation

ADAPTATION FUND

Letter of Endorsement by Government

Ouagadougou, the 26th December, 2025

To: The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for Pioneering Innovative Adaptation Financing for Climate-Resilient Health Systems in Africa

In my capacity as Designated Authority for the Adaptation Fund in Burkina Faso, I confirm that the above regional project proposal is in accordance with the government's priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in Burkina Faso.

Accordingly, I am pleased to endorse the above concept note for regional project with support from the Adaptation Fund. If approved, the project will be implemented by the World Health Organization (WHO) and executed by the Ministry of health.

Sincerely,

M. Amidou OUEDRAOGO
Primary Focal Point/Designated Authority
General Director of Cooperation
Tel : +226 76 58 49 28
Email : amidoued11@gmail.com

Telephone: 256 41 4341305/230487
Fax : 256 41 4233524
Email : finance@finance.go.ug
Website : www.finance.go.ug
Plot No. 2-8 Apollo Kaggwa Road
In any correspondence on
This subject pleasquote No. ALD 79/251/02

Ministry of Finance, Planning &
Economic Development,
P.O Box 8147
Kampala, Uganda

12th November 2024

The Adaptation Fund Board,
C/O Adaptation Fund Board Secretariat,
Email: Secretariat@Adapttaion-Fund.org,
Fax: 202 522 3240/5.

ENDORSEMENT LETTER FOR THE PROJECT TITLED "PIONEERING INNOVATIVE FINANCING FOR CLIMATE RESILIENT HEALTH SYSTEMS IN AFRICA"

On behalf of the Government of Uganda, I confirm that the above regional project/programme is in line with Uganda's priorities in implementing adaptation actions to reduce the effects of climate change on our people and economy.

Accordingly, I am pleased to endorse the above regional project/programme proposal to be supported by the Adaptation Fund.

If approved, the project /programme will be implemented by World Health Organization (WHO) and executed by the African Enterprise Challenge Fund (AECF).

Ramathan Ggoobi
PERMANENT SECRETARY/ SECRETARY TO THE TREASURY

Copy to:
- Hon. Minister of Finance, Planning and Economic Development
- The Permanent Secretary, Ministry of Health
- The Permanent Secretary, Ministry of Water and Environment

All communications should be addressed, "The Secretary for Environment, Climate and Wildlife."

P Bag 7753 Causeway,
Zimbabwe
Telephone: 701681/3
Fax: 252673

Your Ref.:
Our Ref:

ZIMBABWE

MINISTRY OF ENVIRONMENT, CLIMATE AND WILDLIFE

11th Floor, Kaguvi Building
Cnr 4th Street/Central Avenue
Harare
ZIMBABWE

3 April 2024

To: The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Subject: Endorsement for Pioneering Innovative Adaptation Financing for Climate Resilient Health Systems in Africa

In my capacity as designated authority for the Adaptation Fund in Zimbabwe, I confirm that the above regional project/programme proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in Zimbabwe.

Accordingly, I am pleased to endorse the above project/programme proposal with support from the Adaptation Fund. If approved, the project/programme will be implemented by WHO and executed by Africa Enterprise Challenge Fund.

MINISTRY OF ENVIRONMENT,
TOURISM & HOSPITALITY INDUSTRY
11 TH FL, KAGUVI BUILDING
04 APR 2024
CNR, CENTRAL AVENUE & FOURTH ST
P. O. BAG 7753, CAUSEWAY, HARARE, ZIMBABWE
REGISTRY

Sincerely,

Mr Washington Zhakata
Director Climate Change Management Department
Nationally Designated Authority
Ministry of Environment, Climate and Wildlife

Revised PFG Submission Form[1]

Project Formulation Grant (PFG)

Submission Date: 31 August 2025

Adaptation Fund Project ID: AF00000414
Country/ies: Benin, Burkina Faso, Uganda and Zimbabwe
Title of Project/Programme: Pioneering Innovative Adaptation Financing for Climate-Resilient Health Systems in Africa
Type of IE (NIE/RIE/MIE): Multilateral Implementing Entity
Implementing Entity: World Health Organization (WHO)
Executing Entity/ies: Africa Enterprise Challenge Fund (AECF)

A. Project Preparation Timeframe

Start date of PFG	October 2025
Completion date of PFG	February 2026

B. Proposed Project Preparation Activities ($)

List of Proposed Project Preparation Activities	Output of the PFG Activities	US$ Amount	Budget note[2]
Four (4) National Stakeholder Consultations in the target countries	Final agreed priorities; Selected Districts/Provinces and healthcare facilities; Agreed implementation arrangements with government and partners	US$40,000	Covers 4 joint missions by WHO & AECF teams (flights, accommodation, venue hire, facilitation, and documentation). Costs are moderated by using local co-hosts and virtual follow-ups. This budget is not adequate for the activity, and we will explore potential co-funding from the IE, EE, and external funders.
Three (3) Climate Change Vulnerability and	Priority actions identified, including geographical areas, vulnerable populations, climate-	US$60,000	Technical experts and local consultants engaged for three in-country studies, including

[1] As presented in AFB/PPRC.33/40 Annex 1.
[2] The proposal should include a detailed budget with budget notes indicating the break- down of costs at the activity level. It should also include a budget on the Implementing Entity management fee use.

Adaptation Assessments in Benin, Burkina Faso, and Zimbabwe.	sensitive diseases, healthcare facilities, and capacity needs.		data collection, analysis, and validation workshops. This budget is not adequate for the activity, and we will explore potential co-funding from the IE, EE, and external funders.
Private sector landscape and financing models market assessment in four (4) countries	Country profiles highlighting private sector size, structure, and key sectors; major actors (corporates, SMEs, startups, investors, associations); enabling environment (policies, legal, regulatory); access-to-finance ecosystem (banks, MFIs, DFIs, VC, impact investors, blended finance); gaps and opportunities in financing models	US$30,000	Desk review, key informant interviews, and investor roundtables conducted by consultants across 4 countries. This budget is not adequate for the activity, and we will explore potential co-funding from the IE, EE, and external funders.
Environmental Impact Assessments (EIA) and Feasibility Studies for identified Sites	Full EIA reports and feasibility studies prepared for identified sites, covering technical, financial, environmental, and social aspects	$30,000	May require more funding due to technical rigor: It includes site visits, environmental baselines, feasibility modeling, and stakeholder validation. We will explore potential co-funding from the IE, EE, and external funders.
Total Project Formulation Grant		**US$160,000**	

The Project Formulation Grant (PFG) activities are designed to generate the evidence, partnerships, and technical groundwork required for a robust program design. National stakeholder consultations in the four countries (US$40,000) will secure government ownership, align with national health and climate priorities, and build consensus around target geographies, communities, and healthcare facilities. Climate change vulnerability and adaptation assessments in Benin, Burkina Faso, and Zimbabwe (US$60,000) will provide country-specific evidence on risks, vulnerable populations, and capacity needs, ensuring interventions are responsive to climate-sensitive health challenges. Uganda already has and existing recent vulnerability and adaptation assessment.

A private sector landscape and financing models assessment across the four countries (US$30,000) will map key actors, financing flows, and opportunities for innovative models to mobilize private capital into climate-resilient health systems. Finally, environmental impact assessments and feasibility studies for selected sites (US$30,000) will deliver the technical, financial, environmental, and social due diligence required for compliance and bankability. Together, these activities, costed at US$160,000, will ensure the project is evidence-based, nationally owned, environmentally sound, and financially viable, thereby laying the foundation for successful implementation and scaling.

C. Implementing Entity

This request has been prepared in accordance with the Adaptation Fund Board's procedures and meets the Adaptation Fund's criteria for project identification and formulation.

Implementing Entity Coordinator, IE Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
VILLALOBOS PRATS, Elena WHO Headquarters villalobose@who.int	Jeremiah Mushosho, WHO AFRO. P.P. 	31 August 2025.	Dr. Jeremiah Mushosho	+263772326001	mushoshoj@who.int