



ADAPTATION FUND

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Adaptation Fund Board
Project and Programme Review Committee
Thirty-eighth Meeting
Bonn, Germany, 19-23 October 2026

PROPOSAL FOR CAMBODIA



ADAPTATION FUND

ADAPTATION FUND BOARD SECRETARIAT
TECHNICAL REVIEW OF PROJECT PROPOSAL FOR
"BUILDING CLIMATE RESILIENCE FOR CAMBODIA'S HEALTH FACILITIES AND
WORKFORCE THROUGH COMMUNITY-LED MULTI-HAZARD ADAPTATION"

Project Title Building Climate Resilience for Cambodia's Health Facilities and Workforce through Community-Led Multi-Hazard Adaptation

Project ID AF00000588

Category Regular size project (over \$1 million)

Type Single country project

Stage Concept

Country Cambodia

Implementing Entity WHO

Financing Requested USD 4,866,553.00

Reviewer Camila Florez

Co-reviewer(s)

IE Contact Person

Ada Moadsiri,Antonios Kolimenakis,Elena Villalobos,Nicole Sarkis

Secretariat's Overall Comment

The project aims to build climate resilience in Cambodia's health facilities and health system capacity to sustain services in the face of climate hazards and climate-related health risks.

The proposal includes a request for a project formulation grant of USD 99,278.

The initial technical review raised several issues, such as the estimated number of beneficiaries, relevant stakeholders consultations, ESP Principles, among the issues discussed in the number of Clarification Requests (CRs) and Corrective Action Request (CAR) raised in the review.

Country Eligibility

Is the country party to the Kyoto Protocol, or the Paris Agreement?

Response: Yes

Secretariat: Cambodia ratified the Paris Agreement on 6 February 2017, and ratified the Kyoto Protocol on 22 August 2002.

Is the country a developing country particularly vulnerable to the adverse effects of climate change?

Response: Yes

Secretariat: Yes. Cambodia is vulnerable to increased warming, flooding, and droughts, which affect the health system and heighten health risks.

Project Eligibility

Has the designated government authority for the Adaptation Fund endorsed the project/programme?

Response: Yes

Secretariat: Yes. As per the Endorsement letter dated July 23, 2026.

Does the length of the proposal amount to no more than Fifty pages for the project/programme concept, including its annexes?

Response: Cleared

Secretariat: The proposal, including annexes, is 23 pages long.

CAR1: Kindly add paragraph numbers to the proposal.

CAR2: Kindly ensure that all tables and figures have a caption.

Does the project / programme support concrete adaptation actions to assist the country in addressing adaptive capacity to the adverse effects of climate change and build in climate resilience?

Response: Not Cleared

Secretariat: The program aims to improve the resilience of health care facilities in face of climate hazards and climate-sensitive health risks in Cambodia. However, the concept note offers limited information on the actual concrete adaptation actions proposed and how these address climate change impacts. The project needs to outline concrete adaptation measures and outcomes that will produce tangible assets on the ground. The project also offers limited information on where it would be implemented, mentioning three unnamed regions.

CR1: Please develop further section I of the proposal to further explain the climate risks posed to Cambodia's health system and in section II underscore how these risks are addressed by the proposed project activities.

Section I should outline

relevant climate change scenarios according to best available scientific information, as well as the economic social, development and environmental context in which the project/programme would operate.

CR2: In Section II, Part A, fully describe the proposed project components organized by project outputs and specific activities for each output. Clearly outline the concrete adaptation options and measures that will be implemented and the specific adaptation outputs and outcomes that the project will lead to.

CR3: Also, indicate the estimated number of beneficiaries to be supported.

CR4: Please explicitly indicate how project activities support one or more AF Strategic Objectives, including objective numbers and descriptions in Part II, Section B.

CAR3: Overall, the information provided is limited and does not provide specific information on where the project will be implemented in Cambodia. Thus, the project has Unidentified Sub-Projects (USPs), though not indicated in the proposal as such and this needs justification. A project with USPs has direct implications for the Environmental and Social Management System (EMSM) to ensure compliance with the AF ESP. Please justify the use of USPs for this project.

CAR4: Kindly provide a theory of change to show the causal pathway from activities through outputs and outcomes to impact.

CAR5: Kindly revise the numbering of outputs to a numbered sequence, such as for Component 1, outputs 1.1, 1.2, and 1.3.

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 and Gender Policy of the Fund?

Response: Not Cleared

Secretariat: The concept note outlines project economic, social, and environmental benefits, however, the explanation is too general and without concrete data. The document does not provide information on the expected beneficiaries of the project. There is no reference to the equitable distribution of benefits to vulnerable communities, households, and individuals.

CR5: Please outline the economic, social, and environmental benefits with concrete and quantifiable data where possible.

CR6: The concept note needs to provide specific information on the expected direct beneficiaries, disaggregated by gender and age, where possible. It should also indicate whether marginalized and vulnerable groups and indigenous communities have been identified in the project area and if so, to specify how the project benefits those groups.

CR7: Kindly clarify the mechanisms that will be used to ensure equitable distribution of project benefits across gender, age, and vulnerable groups.

CAR6: Please include an initial gender analysis. Ensure that the preliminary gender analysis disaggregates the likely beneficiaries by gender, noting general differences regarding the roles and needs of women, men and other gender groups. Ensure that the initial gender assessment include consultations to women.

Is the project / programme cost effective?

Response: Not Cleared

Secretariat: No. The concept note explains the cost-effectiveness of project components as the result of an integrated approach on the health system. However, the explanation is too general and difficult to assess without concrete adaptation actions outlined (CR2 and CAR3). Thus, the information provided does not demonstrate the cost-effectiveness of the project scope and approach.

CR8: Please provide a sound justification of the cost-effectiveness of the project and selected measures. For this, the proposal should explain alternative options to the proposed measures and include some quantitative estimates where possible.

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?

Response: Not Cleared

Secretariat: Yes, but information is needed.

The project is aligned to Cambodia's NDC 3.0 and the National Action Plan for Public Health, among others.

CR9: Kindly explain the project's relevance and alignment with each plan or strategy's specific goals, e.g., "The proposed project is aligned with [Plan], under [Specific Action], contributing to [Specific Outcome]."

CR8: Please clarify how the proposed project supports the NSFSN's strategic outcomes, improving nutrition and promoting healthy diets. Which project action supports these?

CAR7: Please indicate alignment with Cambodia's National Sustainable Development Strategy.

Does the project / programme meet the relevant national technical standards, where applicable, in compliance with the Environmental and Social Policy of the Fund?

Response: Not Cleared

Secretariat: No. Part II, section E, does not identify specific national standards and regulations.

CAR8: Kindly provide a comprehensive table listing all applicable national technical standards (including Environmental Impact Assessments (EIAs), building codes, and any other sector-specific regulations) for the proposed project. The columns in the table should include: i. Specific name/number of the standard/regulation, ii. Goals/objectives iii. How it is related to the proposed project (mention specific project output) iv. Project's compliance status/approach v. Competent authority/authorities overseeing procedures. (suggested)

Is there duplication of project / programme with other funding sources?

Response: Not Cleared

Secretariat: No, but more information is needed.

Part II, section F includes a list of projects in Cambodia; however it does not include a comprehensive analysis of potential overlap

CAR9: Kindly include a comprehensive table listing of projects that are or have been implemented in the country and are related or complementary to the proposed project. This includes regional projects. For each, please include the following details:

- i. Project title, Donors/Funding Entity, timeline
- ii. Description and Objectives
- iii. Main project interventions,
- iv. Specific location (region/country/county)
- v. Target Population
- vi. Lessons learned
- vii. Overlaps and synergies with the proposed project, including how the proposed project will build upon an existing or previous project
- viii. Duplication (yes or no, explain)

CR9: Please carry-on a thorough review of relevant projects to be included in this section, such as UNDP' and WHO's (funded by GEF), regional project "Building Resilience of Health Systems in Asian LDCs to Climate Change" which has supported health surveillance and early warning systems in Cambodia.

Does the project / programme have a learning and knowledge management component to capture and feedback lessons?

Response: Not Cleared

Secretariat: Yes, but amendments are required. The project has a learning and knowledge management component (Component 5) to capture and disseminate lessons.

CR9: Kindly develop Component 5 further to reflect what has been stated in Part II, Section G. Please specify how will the project keep track of experience gained, and how frequently the experiences and lessons gained

will be documented and tracked (monthly, quarterly etc).

CR10: In Part II, Section G, please specify:

- i. Who will be responsible for tracking the experiences gained, how this will be done, and when the tracking will take place (e.g. an M&E Officer/ Knowledge Management Officer in the Project Management Unit).
- ii. How the knowledge generated will be sustained after the project concludes.

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?

Response: Not Cleared

Secretariat: No. The proposal only indicates consultations with Cambodia's government and UNICEF.

CR11: Please hold consultations in the country with relevant stakeholders and then prepare a table that provides the following:

- i. The organizations, departments and names of stakeholders consulted.
- ii. A summary of the subjects/issues discussed and any agreements reached.
- iii. Date of the consultations.

CR12: Limited evidence is provided to demonstrate how vulnerable groups and indigenous people have informed the initial project design. Please clarify the following:

- i. Whether vulnerable groups and indigenous from the three selected regions, were consulted during the concept development and how have their views been incorporated.
- ii. Please ensure a consultation is undertaken with the vulnerable groups and the Ministry responsible for gender to further inform the concept note and that these are well-documented.

CR13: Please also clarify whether representatives of the target regions were consulted and how their interests and concerns were taken into account in the project design.

Is the requested financing justified on the basis of full cost of adaptation reasoning?

Response: Not Cleared

Secretariat: No. The proposal does not describe the full cost of adaptation reasoning with a baseline scenario without AF resources and an AF project scenario per project outcome.

CR14: Please further explain the full cost of adaptation. The justification should provide details on the baseline scenario, the additionality by project component, and how the requested financing is justified from this perspective.

CR15: Please clarify whether the project would require co-financing to achieve its outcomes and outputs.

Is the project / program aligned with AF's results framework?

Response: Not Cleared

Secretariat: Yes, but amendments are required.

CR16: Kindly indicate the alignment with the AF strategic results framework in section II.A, per each project component.

Has the sustainability of the project/programme outcomes been taken into account when designing the project?

Response: Not Cleared

Secretariat: Yes, but further information is needed. The proposal presents institutional, technical, social and operational sustainability but does not cover all dimensions.

CAR10: In addition to the information presented, kindly also address economic, environmental, and financial sustainability, including: (i) organisations responsible for continuing activities and whether responsibilities will be formalised through commitments/MOUs; (ii) participation of communities and vulnerable groups in decision-making, not only consultation; and (iii) government financing of maintenance and recurrent costs and partner commitments.

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?

Response: Pending

Secretariat: No. The proponent has assessed the possible risks against the 15 AF principles, considering the project's adherence to national laws and the project objectives. Overall, the risks identification is generic and does not elaborate on the local context. The risk assessment should be substantiated. The proponent has not indicated the project category.

CAR11: ESP Principles 1, 4 and 6 always apply and assessments may be required; therefore "No further assessment required" must be unchecked/left blank.

CAR12: Please indicate the category in which the screening process has classified the project.

CR14: Kindly indicate which project components or activities would lead to the identified risks, and explain the risks identified in detail.

CAR13: Given that the proposal does not clearly indicate the project outputs and activities, once this is addressed, the ESP assessment will need to be updated. Please identify the project activities to the point where adequate environmental and social risk identification is possible and update the proposal accordingly.

CAR14: Kindly clarify whether any activities/components will be treated as Unidentified Sub-Projects (USPs) under AF guidance. If yes, please explain which activities would be considered USPs, why, and how USP risks will be screened and managed prior to implementation (including how this will be reflected in the ESMP/ESIA scope, stakeholder engagement, and grievance mechanisms).

CAR15: An initial gender analysis is required at the concept note stage. Kindly include with the resubmission.

Resource Availability

Is the requested project / programme funding within the cap of the country?

Response: Cleared

Secretariat: Yes

Is the Implementing Entity Management Fee at or below 8.5 per cent of the total project/programme budget before the fee?

Response: Cleared

Secretariat: Yes. The proponent has also submitted a PFG of US \$99,278.

CAR: Please include budget notes for the PFG IE fee.

Are the Project/Programme Execution Costs at or below 9.5 per cent of the total project/programme budget (including the fee)?

Response: Cleared

Secretariat: Yes

Eligibility of IE

Is the project/programme submitted through an eligible Implementing Entity that has been accredited by the Board?

Response: Cleared

Secretariat: Yes. WHO is accredited.



ADAPTATION FUND

CONCEPT NOTE PROPOSAL FOR SINGLE COUNTRY

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme: Building Climate Resilience for Cambodia's Health Facilities and Workforce through Community-Led Multi-Hazard Adaptation

Country: Cambodia

Thematic Focal Area: Health and Water; Climate Information and Early Warning Systems

Type of Implementing Entity: Multilateral Implementing Entity

Implementing Entity: World Health Organization

Executing Entities: Ministry of Health, Ministry of Environment, Council for Agricultural and Rural Development (CARD), UNICEF Cambodia

Amount of Financing Requested: 4,866,553 (in U.S Dollars Equivalent)

Project Formulation Grant Request (available to NIEs only): Yes ☒ No ☐

Amount of Requested financing for PFG: 99,278 (in U.S Dollars Equivalent)

Letter of Endorsement (LOE) signed: 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 concept has been submitted before

☒ This is the first submission ever of the concept proposal

In case of a resubmission, please indicate the last submission date: Click or tap to enter a date.

Please note that concept note documents should not exceed 50 pages, including annexes.

Project/Programme Background and Context:

Cambodia faces escalating climate-related health threats exacerbated by its geographic vulnerability to multiple hazards, including more frequent and intense floods and droughts, rising temperatures, and air pollution, which together undermine health system resilience and population health. Seasonal flooding already affects a substantial share of the population each year, damaging or disrupting the functionality of health facilities, medical equipment, and supplies, and constraining access to essential services. Rising temperatures and increasing numbers of high heat index days heighten risks of heat stress and exacerbate chronic illnesses, particularly among people with cardiovascular and respiratory diseases. At the same time, ambient PM_{2.5} concentrations in Cambodia remain approximately three to four times higher than the latest WHO annual air quality guideline value (5 µg/m³), contributing to excess respiratory and cardiovascular morbidity and mortality. [1][2][3][4][5][6][7]

These climate hazards directly compromise primary health care (PHC) service delivery while simultaneously increasing demand for health services due to increased risk for climate-sensitive diseases, including dengue fever, diarrheal diseases, respiratory and heat-related illnesses, non-communicable diseases and water-borne infections, as documented in Cambodia's national climate and health assessments. Climate change exacerbates the burden of noncommunicable diseases (NCDs), including cardiovascular and respiratory conditions, through pathways such as heat stress, air pollution exposure, and disruptions to continuity of care and access to essential health services during extreme weather events. In addition, climate variability and extremes undermine water, sanitation, and hygiene conditions, increasing risk of malnutrition. [3][5][8][9]

In this context, climate-resilient and environmentally sustainable health care facilities (CRESHCF) are those which can anticipate, respond to, cope with, recover from, and adapt to climate-related shocks and stresses, while minimizing negative environmental impacts for present and future generations, consistent with emerging WHO guidance on climate-resilient, low-carbon health systems. This guidance promotes practical interventions across four core areas—health workforce, water/sanitation/hygiene/waste management, sustainable energy, and infrastructure/technologies—to strengthen resilience, optimize resource use, reduce pollution and greenhouse gas emissions, and support progress towards universal health coverage. [10]

Primary health facilities serve as the cornerstone of Cambodia's health system, providing essential services to rural and vulnerable populations, yet many remain highly exposed to flooding, heat, and other climate hazards, with limited adaptive capacity. Most facilities lack comprehensive climate-resilience measures, operate with limited integration of climate-sensitive disease early warning information, and health workers receive minimal training on climate–health linkages and climate-related emergency preparedness. Critical infrastructure gaps—such as unreliable or unsafe water supply, unstable electricity, and inadequate sanitation and waste management—are often most acute during extreme weather events, compounding service disruptions and infection risks. Community awareness of climate-health risks remains low, which constrains demand for preventive and early care during climate hazards and can widen existing health inequities. [1][5][9][10]

Cambodia's Climate Change Strategic Plan (2024–2033) identifies climate-resilient health care facilities and services as key adaptation priorities, aligned with broader national efforts to strengthen resilience of social sectors. The government's commitment to building resilience to climate change and strengthening primary health care is also reflected among the strategic enablers of the forthcoming Health Strategic Plan (2025–2034), which emphasizes integrated risk management for climate-sensitive health outcomes. However, recent climate and health vulnerability assessments highlight that mechanisms for systematically integrating climate adaptation into routine health service delivery, planning, and budgeting remain nascent, with limited coordination across health, disaster risk management, and environment sectors at subnational level. [5][9][10][11]

This project directly responds to Cambodia's identified health adaptation gaps by reducing underlying risks through prevention and mitigation across sectors; strengthening risk assessment, information, and knowledge management (including surveillance, early warning, and operational research); and advancing risk-based, people- and community-centered approaches that prioritize vulnerable populations consistent with Cambodia's updated NDC and climate-health commitments.

Project/Programme Objectives:

Overarching Objective:

To strengthen the climate resilience of primary health care facilities and health system capacity to sustain quality services in the face of climate hazards and climate-sensitive health risks in Cambodia through adaptive institutional capacity.

Specific Objectives:

1. Institutionalize guidelines for Climate resilient and environmentally sustainable health care facilities (CRESHCF) and learning into national health policies, protocols, and planning mechanisms aiming to reduce physical and service vulnerability in at least 100 primary health care facilities in at least three provinces¹ through the implementation of CRESHCF and multi-hazard adaptation measures.
2. Integrate climate-sensitive disease surveillance and multi-hazard early warning systems into health information architecture and Primary Health Care operations.
3. Strengthen behavioral and organizational capacity of health care staff through climate-health sensitization, adaptation protocols, and co-created response guidelines.
4. Enable community-level behavioral adaptations through risk communication, early warning systems, and co-created 'climate hazard-health' action plans, which consider health and nutrition outcomes.
5. Establish monitoring frameworks for climate-sensitive diseases, behavioral outcomes, and infrastructure performance to demonstrate proof of concept and inform adaptive management.

¹ Potential provinces which will be decided after the climate vulnerability and adaptation assessment and multi-hazard mapping verification processes.

Project/Programme Components and Financing:

Fill in the table presenting the relationships among project components, activities, expected concrete outputs, and the corresponding budgets. If necessary, please refer to the attached instructions for a detailed description of each term.

For the case of a programme, individual components are likely to refer to specific sub-sets of stakeholders, regions and/or sectors that can be addressed through a set of well-defined interventions/projects.

Project/ Programme Components	Expected Concrete Outputs	Expected Outcomes	Amount (US\$)
1. Climate Vulnerability Assessment and Multi-Hazard Mapping	A. Disease-environmental linkage and CRESHCF-based vulnerability assessment completed involving at least 100 primary health care facilities across at least three provinces covering climate hazards and climate-sensitive disease patterns B. Multi-hazard risk maps developed at operational district-level integrating climatic, epidemiological, and socioeconomic data within each selected province C. Community behavioral and cultural insights assessment conducted (including with vulnerable groups) in target districts served by the 100 primary health care facilities.	i. All 100 health care facilities' leadership systematically understand their climate and disease vulnerabilities. ii. Provincial health departments, other provincial departments, local government and other planners have evidence-based understanding of multi-hazard risks and disease patterns to guide adaptation investments based on the multi-hazard risk maps developed.	\$980,000
2. Integration of Climate Data into Health Information Systems	A. Integrated climate-sensitive disease early warning and weather alert systems; health information systems capture CRESHCF vulnerabilities, climate-sensitive disease indicators, and relevant early-warning data; B. The 100 health care facilities to receive real-time alerts and response protocols based on hazard forecasts; C. routine social and behavioral data collection protocols implemented at primary health care level in the 100 facilities	i. Health systems are prepared to integrate climate and disease data to anticipate health threats; ii. The 100 health facilities receive actionable early warnings; and iii. Behavioral data informs adaptive management by health care facility staff	\$560,000

3. Infrastructure and Behavioral Adaptations of Health Care Facilities	A. Climate-resilient physical adaptations implemented at select health care facilities including clean water, improved sanitation and hygiene, and solarization (as applicable) B. At least a quarter of all health care staff at 100 facilities upskilled on protocols for climate-sensitive diseases C. Supply chains strengthening plan for climate-shock resilience (pre-positioned supplies, cold chain systems) developed D. Appropriate CRESHCF guidelines developed and operationalized in at least 100 health care facilities	i. Health care facilities sustain delivery of quality services and preservation of care pathways despite climate hazards ii. Health care staff and leadership demonstrate competency in climate-sensitive disease management and workplace adaptation behaviors iii. Health systems identified actions for ensuring supply continuity during shocks	\$1,200,000
4. Risk Communication and Community Engagement	A. Behavioral capability, opportunity, and motivation barriers assessed through formative research with target communities B. Co-created heat-health action plans developed with vulnerable groups (e.g., pregnant women, elderly persons, outdoor workers, children under 5 years) using trusted local communication channels C. Mechanism for developing timely and tailored early warning social-behavior change messages developed for climate vulnerabilities and identified hazards in local contexts and through community-preferred communication channels D. Community dialogue and accountability mechanisms established	i. At least 100 health care facilities' catchment communes adopt protective behaviors during climate hazards and learnings disseminated to all ii. Vulnerable groups are aware of climate health risks iii. Health facilities receive community feedback for service improvements through local leadership and authorities and vice versa	\$720,000
5. Monitoring, Learning and Institutional Integration	A. Monitoring framework established for climate-sensitive diseases, behavioral outcomes, infrastructure functionality, and health system performance B. Routine monitoring data collected and used to inform real-time adaptations to	i. Lessons learned from pilot facilities inform expansion; ii. adaptation approaches become routine practice in health service delivery	\$600,000

	response protocols C. Learning events and knowledge products generated and document lessons and scale best practices D. CRESHCF implementation guidelines and approaches institutionalized into Ministry of Health and other concerned ministries' policies, strategies, protocols, and planning frameworks. E. Multi-sectoral, national-provincial, and local governance coordination and monitoring mechanisms established		
6.	Project/Programme Execution cost		\$ 425,303
7.	Total Project/Programme Cost		\$ 4,485,303
8.	Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)		\$ 381,250
	Amount of Financing Requested		\$ 4,866,553

Projected Calendar:

Indicate the dates of the following milestones for the proposed project/programme

Milestones	Expected Dates
Start of Project/Programme Implementation	Month 1 (upon AF Board approval)
Mid-term Review	Month 24
Project/Programme Closing	Month 48
Terminal Evaluation	Month 51

PART II: PROJECT / PROGRAMME JUSTIFICATION

A. Describe the project/programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience. For the case of a programme, show how the combination of individual projects will contribute to the overall increase in resilience.

The proposed project operationalizes the Climate Resilient and Environmentally Sustainable Health Care Facilities (CRESHCF) framework through five integrated components addressing climate-resilient health systems from facility to community level. An intersectoral coordination mechanism will be established to guide implementation, align stakeholders across health, climate, and related sectors, and ensure coherent decision-making, information sharing, and accountability throughout the project lifecycle.

Multi-Hazard and Vulnerability Mapping (Component 1) establishes the evidence base for targeted adaptation. Cambodia's changing climate presents concurrent hazards: heat waves causing heat stroke and exacerbating non-communicable disease complications; flooding disrupting health care facility operations and creating vector-borne disease risk; drought stressing water-dependent functions; air pollution triggering respiratory illness and other conditions. This mapping will build upon UNICEF's Children's Climate Risk Index for Cambodia [15]. Additionally, a CRESHCF-based assessment maps facility-specific vulnerabilities, disease-climate relationships, and community behavioral risks, drawing where feasible on existing regional and global climate and hazard mapping tools previously used in Cambodia to refine analysis and prioritization. This evidence will inform and drive downstream adaptations. More broadly, existing coordination platforms, such as the National Climate Change Technical Working Group will help to foster collaboration and information exchange between key stakeholders across the health and environmental sectors.

Digital Integration (Component 2) extends surveillance and early warning from passive response to anticipatory action. Integrating climate-sensitive disease indicators, climate vulnerability data, and weather forecasts into health information systems enables real-time alerts to health care facilities and staff guidance. Routine behavioral data collection (e.g., care-seeking during heat waves) informs adaptation of protocols and messaging.

Facility-Level Infrastructure and Behavioral Adaptations (Component 3) create the physical and operational foundation for climate resilience. Infrastructure upgrades—including climate resilient WASH systems and installation of rooftop solar systems—directly address facility vulnerability. Behavioral adaptations—revised Standard Operating Procedures and Implementation Guidelines for symptom-based care of climate-sensitive diseases and conditions (including mental health), health worker training on heat stress and respiratory distress management, supply chain pre-positioning—ensure staff competency and service continuity during climate shocks.

Community Engagement and Risk Communication (Component 4) link facility-centric behavior change (e.g., health care workers) to community-centered behavior change (e.g. care-seeking, heat-protective practices, safe use of water and sanitation, infection prevention behaviors). Formative research assesses barriers to protective behaviors (capability gaps in knowing early warning signs, opportunity gaps in accessing safe water, sanitation and hygiene practices, motivation barriers related to trust and perceived risk). Trusted local actors such as Village Support Health Group volunteers, community leaders, and peer groups will be engaged in developing co-created multi-hazard response action plans; as will vulnerable groups using local communication

channels, embed local knowledge and increase ownership. Early warning messages tailored to literacy levels and preferred communications channels increase uptake.

Monitoring and Institutional Integration (Component 5) ensure adaptation becomes routine practice and learning scales. A monitoring framework tracks climate-sensitive disease trends, facility functionality, behavioral adoption, and health system performance. Evidence informs real-time protocol adjustments and feeds into operability and institutionalization of actions—aiming to embed CRESHCF approaches into national health planning, protocols, and guidelines.

Together, these components address the full adaptation logic: evidence-based planning combined with facility infrastructure and staff capacity enable early warning and decision support, thereby supporting community behavioral change, performance monitoring, and institutional embedding. This systems-level approach ensures sustainability beyond project end.

B. Describe how the project/programme provides 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 will avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

Economic Benefits:

- By strengthening the resilience of health facilities and services, the project will help reduce disruptions to the health system during climate-related hazards such as floods, heatwaves and droughts. This in turn can limit emergency expenditures (estimated between USD5,000-15,000 per primary health care facility per year) and reduce productivity losses associated with preventable climate-sensitive diseases.
- Improvements in infrastructure efficiency, particularly in areas such as water management, will help lower the operational costs of health facilities. These savings can allow facilities to reallocate limited operational budgets toward expanding essential health services.
- Strengthening supply chain resilience will improve the storage and management of essential medicines and supplies, reducing wastage and minimizing stockouts that can interrupt service delivery.
- Ensuring continuity of services, including food security and nutrition during climate shocks will help maintain community trust and reliance on public health facilities, which is essential for progress toward universal health coverage and financial protection for vulnerable populations.

Social Benefits:

- The project will improve access to primary health care services during climate hazards, which is particularly important for poor, rural and elderly populations who often have limited alternatives for seeking care.
- Through the introduction of early warning systems and strengthened community awareness, the project will contribute to reducing mortality and morbidity linked to climate-sensitive diseases and extreme weather events.
- Gender equity considerations are integrated throughout the project. Activities will include targeted engagement with pregnant women and lactating mothers, households with the children under the age of five, who face heightened vulnerability to thermal stress and climate-related health risks, as well as broader efforts to address gender-specific climate-

health vulnerabilities.

- Community resilience will be strengthened through participatory adaptation planning. Communities will work with health authorities to co-develop local action plans, helping to build social cohesion while strengthening collective capacity to anticipate and respond to climate-related health risks.

Environmental Benefits:

- The project will introduce climate resilient WASH systems in health facilities to support more sustainable water use, reduce water losses, improve wastewater and sanitation management, and limit contamination of soil and water sources. By reducing exposure pathways for water- and soil-borne diseases, these systems will protect environmental health.
- The solarization of HCFs, in addition to improving service continuity and energy support for heat stress management, will help to reduce greenhouse gas emissions and reliance on diesel generators, improving energy efficiency, and lowering the carbon footprint of essential health services.

Vulnerable Groups Focus:

The project places particular emphasis on populations that are most exposed or sensitive to climate-related health risks:

- Children under 5 years and older persons, who are especially susceptible to heat-related illness, will benefit from household-level heat-health action plans and improved community alert systems.
- Pregnant women and lactating mothers, who face higher vulnerability to both heat stress and infectious diseases, will receive targeted risk communication and strengthened facility-based care protocols.
- Outdoor workers, including agricultural workers and construction workers exposed to occupational heat stress, will be supported through engagement with employers and the promotion of workplace adaptation measures.
- Low-income and rural households, which face compounded access barriers during extreme weather and heightened exposure to climate-related health risks, will benefit from stronger community engagement in identifying and implementing behavioral adaptations.

Environmental and Social Policy Compliance:

The project has been designed to fully comply with the Adaptation Fund Environmental and Social Policy. This includes ensuring that communities are meaningfully engaged throughout the project cycle and that their informed consent is obtained for activities that affect them. Stakeholder consultations will be inclusive, with particular efforts made to ensure the participation of vulnerable groups.

Infrastructural improvements to health care facilities, including climate-resilient WASH upgrades and solarization, will entail only minor rehabilitation, retrofitting and installation works within existing facility premises. No greenfield construction, land acquisition or physical displacement is envisaged. The project will comply with the Adaptation Fund Environmental and Social Policy and Gender Policy and will be implemented in accordance with the UN's Environmental and Social Standards Framework and applicable national environmental, social, health and safety regulations. [16] All proposed works will be subject to site-specific

environmental and social screening, and any potential risks related to construction impacts, water-source protection, wastewater and sanitation management, occupational and community health and safety, infection prevention, waste management, and solar equipment or battery disposal will be managed through proportionate mitigation measures, including site-specific Environmental and Social Management Plans where required, prior to and during implementation.

Gender considerations are integrated into the project design, including specific targets to support women's participation in training activities and decision-making processes. In addition, all procurement and infrastructure-related activities will adhere to recognized labor standards to ensure safe and fair working conditions throughout project implementation.

C. Describe or provide an analysis of the cost-effectiveness of the proposed project/programme.

The proposed project is designed to be highly cost-effective by maximizing health and adaptation benefits per dollar invested. The selection of at least 100 health care facilities across at least three provinces, serving an estimated 500,000 people, yields a cost-effectiveness ratio of less than 10 USD per capita, which compares favourably with the avoided health burden and economic losses associated with climate-related illnesses and disruptions to essential services. The integrated design—combining facility-level resilience, climate-informed service delivery, community engagement, and systems strengthening—reduces the risk of costly health outcomes and prevents redundant, siloed investments (e.g. stand-alone infrastructure or communication projects that do not address underlying system gaps).

Cost-effectiveness is further enhanced by building on existing health system structures, including primary health care facilities, provincial and district health authorities, health information systems, and community health networks, rather than establishing parallel delivery mechanisms. Using a single investment package to deliver multiple adaptation benefits—reducing physical vulnerability of facilities, improving continuity of essential services during floods, droughts, heatwaves and other hazards, strengthening early warning and anticipatory action, and improving community-level protective behaviours—optimizes resource use. Over time, institutionalized CRESHCF standards, climate-health protocols, training modules, and monitoring tools within Ministry of Health systems will reduce the need for repeated small-scale retrofits, lower unit costs for replication, and decrease emergency response expenditures. As a result, the project provides strong value for money both through direct benefits to participating facilities and their catchment populations, and by establishing a scalable adaptation model that government and partners can expand to additional primary health care facilities after project completion.

D. Describe how the project/programme is consistent with national or sub-national sustainable development strategies, including, where appropriate, national adaptation plan (NAP), national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.

The project directly supports:

- ***National Climate Change Action Plan for Public Health 2020-2024 (extended to 2025):***
The project contributes to the plan's objective of strengthening the resilience of Cambodia's health service delivery system to respond to and cope with the impacts of

climate change and disaster risks. In particular, it supports efforts to improve preparedness, strengthen health facility resilience, and enhance surveillance and early warning mechanisms for climate-sensitive health risks. [17]

- **Cambodia Climate Change Strategic Plan (2024-2033):** The project aligns with the strategic outcome that calls for expanding compliance with WHO guidance on Climate-Resilient and Environmentally Sustainable Health Care Facilities (CRESHCF). It also supports national efforts to strengthen health-related early warning systems and to better align technologies and data systems with internationally recognized standards for climate-informed health surveillance and response. [18]
- **Cambodia's Nationally Determined Contribution (NDC) 3.0 (2025):** The project is consistent with Cambodia's updated national climate commitment, which strengthens adaptation action under human health, WASH, climate risk management, and resilient social services among priority areas for protecting communities from climate impacts. By improving climate resilience of primary health care facilities, strengthening interoperability of climate-informed surveillance and disease-based early warning systems with such systems outside the health sector, and enhancing community-level preparedness and protective behaviors, the project contributes directly to the implementation of NDC 3.0 adaptation priorities in the human health sector. [19]
- **Cambodia the third National Strategy for Food Security and Nutrition (NSFSN), 2024-2028:** The project will contribute to the strategic outcomes of NSFSN of improving nutrition for children under the age of five years and promoting healthy diets in the country and National Strategic Plan for Rural ASH. Importantly, the CRESHCF will serve as the strategic implementation mechanism to support the Pentagonal Strategy-Phase I of the Royal Government of Cambodia. [20]
- **Sustainable Development Goals:** The project contributes to several SDGs, including **SDG 3 (Good Health and Well-being)** through strengthening resilient health services; **SDG 5 (Gender Equality)** by addressing gender-specific climate-health vulnerabilities and promoting women's participation in adaptation activities; **SDG 6 (Clean Water and Sanitation)** through improved water management and water security measures; and **SDG 13 (Climate Action)** by enhancing adaptation capacity and resilience of the health sector and communities to climate-related risks.

E. 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 adheres to:

The project has been designed to comply with relevant national technical standards and to fully align with the Environmental and Social Policy of the Adaptation Fund. Compliance with Cambodian environmental regulations will be ensured through the preparation of an Environmental and Social Impact Assessment (ESIA) in accordance with national Environmental Impact Assessment (EIA) guidelines during the project preparation phase. The assessment will identify potential environmental and social risks and inform the integration of appropriate mitigation measures throughout project implementation.

Technical components of the project will follow recognized international standards. Digital systems developed under the project will be designed in line with WHO guidance for health information systems to ensure interoperability, data quality, and long-term usability within the

national health system. Similarly, the early warning components will follow WHO recommendations on climate-sensitive disease surveillance and public health early warning systems, ensuring that the approach is consistent with global best practices while remaining adapted to the Cambodian context.

The project will also fully comply with the Adaptation Fund's Environmental and Social Policy. A gender analysis will be conducted to ensure that project activities address gender-related vulnerabilities and promote equitable access to project benefits. Stakeholder consultations will be undertaken throughout the design and implementation phases to ensure that community perspectives are reflected in project activities. Based on the current assessment, the project is not expected to involve involuntary resettlement or to adversely affect the rights or livelihoods of indigenous peoples.

F. Describe if there is duplication of project/programme with other funding sources, if any.

The project complements but does not duplicate:

- **UNICEF WASH programs:** Addresses water and sanitation in schools and communities; whereas this project addresses health facility water systems for service delivery. WHO and UNICEF collaborate on the Joint Monitoring Programme (JMP) initiative that tracks global progress on WASH in schools, households and health care facilities.
- **UNICEF Children's Climate Risk Index for Cambodia:** Detailed, child-centred data at the commune level, highlighting areas where children are most at risk to climate and environmental hazards (namely drought, flooding, heat, high-speed wind, vector-borne diseases, and air pollution) due to a lack of essential services.
- **ADB's Resilient Health Infrastructure Project:** Focuses on infrastructural upgrading of priority hospitals to be more climate-resilient, whereas this project will focus on behavioral and infrastructural adaptations at primary health care-level.
- **UNDP's "Advancing Early Warning for All" Project (2026–2030):** Focuses on multi-hazard disaster early warning for climate- and weather-related events across four high-risk provinces (Ratanakiri, Kratie, Stung Treng, and Banteay Meanchey). Whereas this project will focus on enabling health early warning systems to integrate with existing hazard monitoring, forecasting, and warning communication infrastructure for a more coherent, whole-of-government approach.
- **World Bank:** Through the Health Equity and Quality Improvement Project, they organized a National Climate and Health Vulnerability Assessment in 2024². The key aspects of capacity and adaptation assessment were not covered, and the vulnerability measures identified helped to inform the development of this proposal. The last comprehensive National Climate Change and National Climate Change Health V&A led by the government took place in 2010.

² <http://documents1.worldbank.org/curated/en/099070324141522773/pdf/P5019931c19b1f03a18eb51ea32a6e3845e.pdf>

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

The project includes a strong learning and knowledge management component designed to capture practical lessons-learned from implementation and support their dissemination across the health system and beyond. Regular learning reviews will be organized on a quarterly basis with health centre staff, district and provincial health managers, other relevant departments as needed, and community representatives. These sessions will provide a structured opportunity to document successes, identify challenges encountered during implementation, and adapt approaches where needed.

Experiences from the project will be translated into a range of knowledge products, including case studies from each participating district, best practice guidance, and practical adaptation toolkits for health facilities. These materials will be shared with national health authorities and relevant regional health networks to support broader learning on climate-resilient health systems.

The project will also promote regional knowledge exchange. Cambodian health teams will participate in regional forums related to Climate-Resilient and Environmentally Sustainable Health Care Facilities (CRESHCF), while opportunities will be explored to host practitioners from other ASEAN countries interested in learning from Cambodia's experience.

In addition, evidence generated through project implementation will be synthesized into summary briefs examining the effectiveness, cost-effectiveness and sustainability of the adaptation measures introduced. These briefs will support the Ministry of Health mainly and concerned ministries in refining policies and strategies related to climate change and health.

Finally, lessons learned will be integrated into national systems to ensure that knowledge generated through the project informs long-term practice. This will include updating relevant national guidelines, strengthening health worker training curricula, and contributing to the development of Ministry of Health protocols on climate and health.

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

Stakeholder consultation conducted during concept development:

The following stakeholders were consulted through consultative meetings:

- Ministry of Health (Preventive Medicine Department and National Institute of Public Health)
- Ministry of Environment
- Council for Agricultural and Rural Development
- Ministry of Education, Youth and Sport

Civil society and technical partners:

- UNICEF Cambodia

Stakeholders which will be consulted in proposal development process:

Civil society and technical partners:

- NGOs working on health, water, and environment
- Academic institutions

Health facility and health worker representatives:

- Consultation with Provincial health departments

Community consultations:

- Consultation with commune representatives

Gender considerations in consultations:

- Health worker and VHSG consultations including women health care staff

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

Cambodia's PHC system is increasingly disrupted by climate hazards—heat waves, floods, droughts, and air pollution—which simultaneously damage facility infrastructure and drive higher burdens of climate-sensitive diseases such as dengue, diarrheal disease, respiratory illnesses, and heat-related conditions. Standard health system investments have not been designed to anticipate or manage these climate-related shocks, and most primary health care facilities currently lack climate-resilient infrastructure, links to multi-hazard early warning systems, and staff trained on climate-health. The project therefore focuses on the incremental measures required for facilities, systems, and communities to cope with climate variability and change; these measures would not be implemented or would be implemented only partially and in a non-climate-informed way, through business-as-usual development spending.

The Adaptation Fund will support adaptation activities addressing the incremental costs of climate change with focus on addressing:

1. Interconnected vulnerabilities:

Because the same climate hazards often damage infrastructure, disrupt supplies, and increase disease burdens simultaneously, it is neither practical nor accurate to fully separate climate-specific from general system-strengthening costs. For example, a climate-resilient water system in a PHC both ensures safe service delivery during drought and improves day-to-day operations; however, its design (storage capacity, protection from flood contamination, redundancy) and siting are driven by climate risk analyses supported by this project. The project therefore adopts a systems approach in which integrating adaptation into routine health service delivery is more cost-effective than implementing isolated, hazard-specific pilot projects in parallel to the health system. The requested budget represents the cost of achieving climate-resilient PHC models that can be maintained and scaled by government after the project, rather than a marginal add-on to existing development projects.

2. Efficiency: Integrating climate adaptation into routine health service delivery is more cost-effective than standalone adaptation projects.

Integrating climate adaptation into routine health service delivery allows Cambodia to strengthen resilience using existing systems, staff, and platforms, rather than creating parallel, standalone adaptation projects. By embedding climate-risk assessments, early warning triggers, and climate-sensitive protocols into primary health care operations, the project reduces duplication of infrastructure, supervision, and training costs. This integrated approach also generates long-term efficiencies: once Climate Resilient and Environmentally Sustainable Health Care Facilities standards, climate-health curricula, and data flows are institutionalized, they can be applied nationally at marginal cost, whereas isolated pilots

would require repeated start-up investments. As a result, each dollar invested delivers both core health benefits and reduced climate-related disruption, improving the value for money of Adaptation Fund resources.

Where project activities resemble “normal” development—such as strengthening WASH in facilities, upgrading storage, or enhancing data systems—they have been designed and budgeted only to the extent that they are necessary for climate resilience. For example, UNICEF WASH programmes focus on schools and communities, whereas this project adapts facility-level water and sanitation systems specifically so that PHCs remain operational and safe during floods and droughts. Similarly, ADB’s resilient hospital infrastructure project targets larger hospitals, while this project addresses both infrastructure and behavioral adaptation in primary-level facilities that would otherwise be left behind. The proposed Adaptation-funded activities are thus justified as the adaptation-relevant share of broader system improvements and are sufficient to deliver the intended adaptation outcomes even in the absence of additional co-financing.

3. National priorities:

The project is fully grounded in Cambodia’s existing national climate and health agenda. Cambodia’s National Climate Change Action Plan for Public Health explicitly positions health system strengthening—including resilient facilities, early warning, and climate-sensitive surveillance—as a core pathway for health adaptation, and this project operationalizes that vision at primary care level. By piloting Climate-Resilient and Environmentally Sustainable Health Care Facilities, integrating climate and disease data into health information systems, and embedding climate-health protocols in routine service delivery, the project translates national priorities into concrete, scalable practice.

Budget Justification by Component:

- **Component 1 (Assessments):** \$980,000

Activities such as CRESHCF-based facility vulnerability assessments, integration of climatic, epidemiological, and socio-economic data into multi-hazard risk maps, and community behavioral risk assessments are required because climate hazards are changing the frequency, intensity, and spatial distribution of health risks. Routine health planning in Cambodia does not currently include systematic analysis of climate-disease linkages or mapping of hazard exposure for PHCs, so this analytical work represents the cost of tailoring service delivery and infrastructure to climate risk rather than to average historical conditions. Without this component, infrastructure adaptations or capacity-building would proceed in a generic way and may fail to protect services during heat waves, floods, or droughts in the highest-risk districts.

- **Component 2 (Digital systems):** \$560,000

The development of frameworks, tools, and tested plans to integrate weather forecasts, climate-sensitive disease indicators, and facility vulnerability data into health information systems is explicitly motivated by the need for early warning and anticipatory action in a changing climate. Current health information systems focus on retrospective reporting and are not configured to receive or act on hazard alerts; the cost here covers system design, interoperability work, and change management so that PHCs receive real-time alerts and actionable guidance. Routine digital health investments would not bear the cost of linking

meteorological, environmental, and behavioral data to operational decisions in PHC facilities.

- **Component 3 (Infrastructure and capacity):** \$1,200,000

Improved backup water systems for droughts, flood-proof storage of medicines and supplies, and climate-responsive sanitation, including hand-washing facilities in health care facilities—are specifically designed to keep PHCs functional during climate extremes that are already disrupting operations using a self-sustaining innovative model tried and tested in Viet Nam most recently. [21] Likewise, technology which reduces exposure of health hazards from health care waste management —such as safer segregation, on-site treatment, and climate-resilient temporary storage and disposal options—will also be explored and, where feasible, integrated into facility upgrade packages

Sensitizing health care staff on climate-sensitive disease management, heat stress protocols, and climate-responsive supply chain strategies, and developing CRESHCF-aligned SOPs and clinical practice guidelines are adaptation-specific capacities that would not be prioritized under routine in-service training. In the absence of climate change, such targeted upgrades and protocols would not be required at this scale to maintain continuity and safety of care.

- **Component 4 (Community engagement):** \$720,000

Formative research on climate-health risk perceptions, co-creation of multi-hazard and heat-health action plans, and design of early-warning social and behavior change messages targeted at groups such as pregnant women, outdoor workers, and older people are all driven by climate-specific vulnerabilities. Standard health promotion activities might address general hygiene or maternal health, but they do not typically include guidance on recognizing when to seek care in response to multi-hazard early warnings. The funding requested allows the project to tailor communication content, channels, and community engagement mechanisms to climate-related risks and to link them to facility-level response protocols.

- **Component 5 (M&E and learning):** \$600,000

The monitoring framework focuses on climate-sensitive disease trends, facility functionality under hazard conditions, and adoption of adaptation behaviors, rather than generic service coverage indicators. Learning events, case studies, and adaptation toolkits are oriented toward scaling CRESHCF and multi-hazard approaches, and the project's work aims to embed these climate-specific standards and practices into the Ministry of Health's protocols, supervision tools, and training curricula. These institutionalization costs are necessary to sustain adaptation beyond the project period; they are not required to maintain routine PHC services under historical climate norms.

- **Execution costs:** \$425,303

Execution and management costs cover coordination across health, water, statistics, and community actors to implement climate-specific interventions at facility and community level, as well as safeguards, Environmental and Social Impact Assessment, and compliance with the Adaptation Fund's Environmental and Social and Gender policies. These are directly related to delivering a multi-sector adaptation project that must manage climate-related risks, not to expanding routine service delivery.

- **Implementing Entity fee:** \$381,250

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

Sustainability has been considered from the outset of the project design to ensure that the results continue beyond the life of the programme. The approach focuses on strengthening existing systems and capacities rather than creating parallel structures, so that the interventions can be maintained and expanded through government systems.

At the institutional level, the project will work closely with the Ministry of Health to ensure that climate-resilient and environmentally sustainable health care facility (CRESHCF) approaches are embedded within national protocols, health worker training curricula and planning frameworks. This will enable the Ministry and subnational health authorities to continue implementing and expanding these approaches after the project ends. District and provincial health offices will integrate climate resilience considerations into their routine supervision of health facilities and performance monitoring processes, ensuring that adaptation measures remain part of regular health system oversight.

Technical sustainability will be supported by building the capacity of the primary health care workforce and local technicians. Health staff will be trained to operate and carry out basic maintenance of installed systems and equipment, while district-level technicians will be able to support more specialized servicing. The digital early warning system introduced through the project will be integrated into existing health information systems so that it becomes part of the routine data and decision-making processes of the health sector. At the community level, village health support groups and facility staff will be equipped to maintain key adaptation practices such as heat-health action plans and safe water practices during floods.

The project also places strong emphasis on social sustainability. Participatory planning with communities will ensure that adaptation measures respond to local needs and that communities feel ownership over the interventions. This participatory approach is expected to encourage continued adoption of protective behaviours and sustained engagement with health facilities. Health worker motivation will also be supported through opportunities for professional development and through recognition of their role in protecting communities from climate-related health risks.

Operational sustainability will be reinforced through a strong monitoring and learning component. The project will generate evidence on which interventions are most effective and cost-efficient, enabling the Ministry of Health to prioritize resources for maintaining the most impactful measures. Lessons learned from the pilot sites will be systematically documented and shared with other health facilities, creating opportunities for replication and scale-up within Cambodia's health system without continued external project support.

K. 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
<i>Compliance with the Law</i>		Potential risk of misalignment with existing laws will be mitigated through compliance assessment as part of planned activities.
<i>Access and Equity</i>		Access and equity measures will be integrated into M&E activities.
<i>Marginalized and Vulnerable Groups</i>		Impact and unintended consequences must be further assessed through planning activities.
<i>Human Rights</i>	√	
<i>Gender Equality and Women's Empowerment</i>	√	
<i>Core Labour Rights</i>	√	
<i>Indigenous Peoples</i>	√	
<i>Involuntary Resettlement</i>	√	
<i>Protection of Natural Habitats</i>	√	
<i>Conservation of Biological Diversity</i>	√	
<i>Climate Change</i>		Climate change resilience is an inherent focus of the proposed project so impact will be assessed further.
<i>Pollution Prevention and Resource Efficiency</i>		Pollution Prevention and Resource Efficiency are also core aspects of the proposed project so impact will be assessed further.
<i>Public Health</i>		Impact on public health will be included in impact assessment of this project.
<i>Physical and Cultural Heritage</i>	√	
<i>Lands and Soil Conservation</i>	√	

PART III: IMPLEMENTATION ARRANGEMENTS

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

Project Objective(s)	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant amount (USD)
Reduce physical vulnerability of PHCs to climate hazards through implementation of CRESHCF and multi-hazard adaptation measures	Percentage of target PHCs with completed multi-hazard risk maps; Proportion of hazards addressed through CRESHCF operationalization among the target PHCs; Number of hazard events where PHCs remain operational	Increased resilience and adaptive capacity of health and social care systems to address the impacts of climate variability and change	Number of health care facilities with improved capacity to cope with climate change impacts; Number of beneficiaries with enhanced adaptive capacity	980,000
Integrate climate-sensitive disease surveillance and multi-hazard early warning systems enabling anticipatory action	Early warning system operational; Number of PHCs receiving timely climate and disease alerts; Percentage of alerts resulting in protective action	Increased adaptation and resilience of health and livelihoods to climate variability and change	Number of devices deployed for early warning; Number of people within catchment area of health care facilities with access to early warning systems	560,000
Strengthen capacity of health workforce for climate-sensitive disease management and adaptation and infrastructural adaptations	Number of health care workers trained in CRESHCF and climate-health integration; Percentage of staff demonstrating competency in symptom-based care for climate-sensitive diseases; Percentage of target PHCs with improved infrastructure resilience	Strengthened adaptive capacity and resilience of provinces to climate change impacts	Number of individuals trained in climate-resilient practices; Percentage of targeted institutions implementing climate-smart practices	1,200,000
Enable community-level protective behaviors during climate hazards	Percentage of target population aware of climate health risks and early warning signals; Percentage adopting protective behaviors (seeking care early, using safe water) during hazard events	Reduced vulnerability and increased resilience of communities to climate change impacts	Number of community members aware of climate risks; Percentage of targeted communities implementing risk reduction measures	720,000
Establish sustainable monitoring and institutional adaptation	Number of MOH policies reviewed and updated to include climate-resilience; Number of knowledge products (case studies, practice briefs) published and disseminated to relevant stakeholders	Strengthened institutional and regulatory frameworks and systems for climate resilience	Number of policies and regulations that reflect climate-resilience targets; Percentage of health care facilities that have integrated at least one climate adaptation	600,000

PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. Record of endorsement on behalf of the government

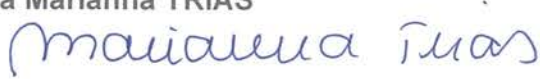
Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:

H.E. CHOUP Paris, Secretary of State, Ministry of Environment	Date: 23 July 2026
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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

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plan (Cambodia Climate Change Strategic Plan (2024-2033), Circular Strategy on Environment (2023-2028), Long-term Strategy for Carbon Neutrality (LTS4CN) and the Nationally Determined Contribution (NDC3.0)) and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy and the Gender 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.

Name & Signature: Dr Jaana Marianna TRIAS 	
Implementing Entity Coordinator	
Date: 03 August-2026	Tel. and email: +855 023216610; wpkhmwr@who.int
Project Contact Person: Dr Ada MOADSIRI	
Tel. And Email: +855012462653; moadsiria@who.int	

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ADAPTATION FUND

CONCEPT NOTE PROPOSAL FOR SINGLE COUNTRY

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme: Building Climate Resilience for Cambodia's Health Facilities and Workforce through Community-Led Multi-Hazard Adaptation

Country: Cambodia

Thematic Focal Area: Health and Water; Climate Information and Early Warning Systems

Type of Implementing Entity: Multilateral Implementing Entity

Implementing Entity: World Health Organization

Executing Entities: Ministry of Health, Ministry of Environment, Council for Agricultural and Rural Development (CARD), UNICEF Cambodia

Amount of Financing Requested: 4,866,553 (in U.S Dollars Equivalent)

Project Formulation Grant Request (available to NIEs only): Yes ☒ No ☐

Amount of Requested financing for PFG: 99,278 (in U.S Dollars Equivalent)

Letter of Endorsement (LOE) signed: 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 concept has been submitted before

☒ This is the first submission ever of the concept proposal

In case of a resubmission, please indicate the last submission date: Click or tap to enter a date.

Please note that concept note documents should not exceed 50 pages, including annexes.

Project/Programme Background and Context:

Cambodia faces escalating climate-related health threats exacerbated by its geographic vulnerability to multiple hazards, including more frequent and intense floods and droughts, rising temperatures, and air pollution, which together undermine health system resilience and population health. Seasonal flooding already affects a substantial share of the population each year, damaging or disrupting the functionality of health facilities, medical equipment, and supplies, and constraining access to essential services. Rising temperatures and increasing numbers of high heat index days heighten risks of heat stress and exacerbate chronic illnesses, particularly among people with cardiovascular and respiratory diseases. At the same time, ambient PM_{2.5} concentrations in Cambodia remain approximately three to four times higher than the latest WHO annual air quality guideline value (5 µg/m³), contributing to excess respiratory and cardiovascular morbidity and mortality. [1][2][3][4][5][6][7]

These climate hazards directly compromise primary health care (PHC) service delivery while simultaneously increasing demand for health services due to increased risk for climate-sensitive diseases, including dengue fever, diarrheal diseases, respiratory and heat-related illnesses, non-communicable diseases and water-borne infections, as documented in Cambodia's national climate and health assessments. Climate change exacerbates the burden of noncommunicable diseases (NCDs), including cardiovascular and respiratory conditions, through pathways such as heat stress, air pollution exposure, and disruptions to continuity of care and access to essential health services during extreme weather events. In addition, climate variability and extremes undermine water, sanitation, and hygiene conditions, increasing risk of malnutrition. [3][5][8][9]

In this context, climate-resilient and environmentally sustainable health care facilities (CRESHCF) are those which can anticipate, respond to, cope with, recover from, and adapt to climate-related shocks and stresses, while minimizing negative environmental impacts for present and future generations, consistent with emerging WHO guidance on climate-resilient, low-carbon health systems. This guidance promotes practical interventions across four core areas—health workforce, water/sanitation/hygiene/waste management, sustainable energy, and infrastructure/technologies—to strengthen resilience, optimize resource use, reduce pollution and greenhouse gas emissions, and support progress towards universal health coverage. [10]

Primary health facilities serve as the cornerstone of Cambodia's health system, providing essential services to rural and vulnerable populations, yet many remain highly exposed to flooding, heat, and other climate hazards, with limited adaptive capacity. Most facilities lack comprehensive climate-resilience measures, operate with limited integration of climate-sensitive disease early warning information, and health workers receive minimal training on climate–health linkages and climate-related emergency preparedness. Critical infrastructure gaps—such as unreliable or unsafe water supply, unstable electricity, and inadequate sanitation and waste management—are often most acute during extreme weather events, compounding service disruptions and infection risks. Community awareness of climate-health risks remains low, which constrains demand for preventive and early care during climate hazards and can widen existing health inequities. [1][5][9][10]

Cambodia's Climate Change Strategic Plan (2024–2033) identifies climate-resilient health care facilities and services as key adaptation priorities, aligned with broader national efforts to strengthen resilience of social sectors. The government's commitment to building resilience to climate change and strengthening primary health care is also reflected among the strategic enablers of the forthcoming Health Strategic Plan (2025–2034), which emphasizes integrated risk management for climate-sensitive health outcomes. However, recent climate and health vulnerability assessments highlight that mechanisms for systematically integrating climate adaptation into routine health service delivery, planning, and budgeting remain nascent, with limited coordination across health, disaster risk management, and environment sectors at subnational level. [5][9][10][11]

This project directly responds to Cambodia's identified health adaptation gaps by reducing underlying risks through prevention and mitigation across sectors; strengthening risk assessment, information, and knowledge management (including surveillance, early warning, and operational research); and advancing risk-based, people- and community-centered approaches that prioritize vulnerable populations consistent with Cambodia's updated NDC and climate-health commitments.

Project/Programme Objectives:

Overarching Objective:

To strengthen the climate resilience of primary health care facilities and health system capacity to sustain quality services in the face of climate hazards and climate-sensitive health risks in Cambodia through adaptive institutional capacity.

Specific Objectives:

1. Institutionalize guidelines for Climate resilient and environmentally sustainable health care facilities (CRESHCF) and learning into national health policies, protocols, and planning mechanisms aiming to reduce physical and service vulnerability in at least 100 primary health care facilities in at least three provinces¹ through the implementation of CRESHCF and multi-hazard adaptation measures.
2. Integrate climate-sensitive disease surveillance and multi-hazard early warning systems into health information architecture and Primary Health Care operations.
3. Strengthen behavioral and organizational capacity of health care staff through climate-health sensitization, adaptation protocols, and co-created response guidelines.
4. Enable community-level behavioral adaptations through risk communication, early warning systems, and co-created 'climate hazard-health' action plans, which consider health and nutrition outcomes.
5. Establish monitoring frameworks for climate-sensitive diseases, behavioral outcomes, and infrastructure performance to demonstrate proof of concept and inform adaptive management.

¹ Potential provinces which will be decided after the climate vulnerability and adaptation assessment and multi-hazard mapping verification processes.

Project/Programme Components and Financing:

Fill in the table presenting the relationships among project components, activities, expected concrete outputs, and the corresponding budgets. If necessary, please refer to the attached instructions for a detailed description of each term.

For the case of a programme, individual components are likely to refer to specific sub-sets of stakeholders, regions and/or sectors that can be addressed through a set of well-defined interventions/projects.

Project/ Programme Components	Expected Concrete Outputs	Expected Outcomes	Amount (US\$)
1. Climate Vulnerability Assessment and Multi-Hazard Mapping	A. Disease-environmental linkage and CRESHCF-based vulnerability assessment completed involving at least 100 primary health care facilities across at least three provinces covering climate hazards and climate-sensitive disease patterns B. Multi-hazard risk maps developed at operational district-level integrating climatic, epidemiological, and socioeconomic data within each selected province C. Community behavioral and cultural insights assessment conducted (including with vulnerable groups) in target districts served by the 100 primary health care facilities.	i. All 100 health care facilities' leadership systematically understand their climate and disease vulnerabilities. ii. Provincial health departments, other provincial departments, local government and other planners have evidence-based understanding of multi-hazard risks and disease patterns to guide adaptation investments based on the multi-hazard risk maps developed.	\$980,000
2. Integration of Climate Data into Health Information Systems	A. Integrated climate-sensitive disease early warning and weather alert systems; health information systems capture CRESHCF vulnerabilities, climate-sensitive disease indicators, and relevant early-warning data; B. The 100 health care facilities to receive real-time alerts and response protocols based on hazard forecasts; C. routine social and behavioral data collection protocols implemented at primary health care level in the 100 facilities	i. Health systems are prepared to integrate climate and disease data to anticipate health threats; ii. The 100 health facilities receive actionable early warnings; and iii. Behavioral data informs adaptive management by health care facility staff	\$560,000

3. Infrastructure and Behavioral Adaptations of Health Care Facilities	A. Climate-resilient physical adaptations implemented at select health care facilities including clean water, improved sanitation and hygiene, and solarization (as applicable) B. At least a quarter of all health care staff at 100 facilities upskilled on protocols for climate-sensitive diseases C. Supply chains strengthening plan for climate-shock resilience (pre-positioned supplies, cold chain systems) developed D. Appropriate CRESHCF guidelines developed and operationalized in at least 100 health care facilities	i. Health care facilities sustain delivery of quality services and preservation of care pathways despite climate hazards ii. Health care staff and leadership demonstrate competency in climate-sensitive disease management and workplace adaptation behaviors iii. Health systems identified actions for ensuring supply continuity during shocks	\$1,200,000
4. Risk Communication and Community Engagement	A. Behavioral capability, opportunity, and motivation barriers assessed through formative research with target communities B. Co-created heat-health action plans developed with vulnerable groups (e.g., pregnant women, elderly persons, outdoor workers, children under 5 years) using trusted local communication channels C. Mechanism for developing timely and tailored early warning social-behavior change messages developed for climate vulnerabilities and identified hazards in local contexts and through community-preferred communication channels D. Community dialogue and accountability mechanisms established	i. At least 100 health care facilities' catchment communes adopt protective behaviors during climate hazards and learnings disseminated to all ii. Vulnerable groups are aware of climate health risks iii. Health facilities receive community feedback for service improvements through local leadership and authorities and vice versa	\$720,000
5. Monitoring, Learning and Institutional Integration	A. Monitoring framework established for climate-sensitive diseases, behavioral outcomes, infrastructure functionality, and health system performance B. Routine monitoring data collected and used to inform real-time adaptations to	i. Lessons learned from pilot facilities inform expansion; ii. adaptation approaches become routine practice in health service delivery	\$600,000

	response protocols C. Learning events and knowledge products generated and document lessons and scale best practices D. CRESHCF implementation guidelines and approaches institutionalized into Ministry of Health and other concerned ministries' policies, strategies, protocols, and planning frameworks. E. Multi-sectoral, national-provincial, and local governance coordination and monitoring mechanisms established		
6.	Project/Programme Execution cost		\$ 425,303
7.	Total Project/Programme Cost		\$ 4,485,303
8.	Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)		\$ 381,250
	Amount of Financing Requested		\$ 4,866,553

Projected Calendar:

Indicate the dates of the following milestones for the proposed project/programme

Milestones	Expected Dates
Start of Project/Programme Implementation	Month 1 (upon AF Board approval)
Mid-term Review	Month 24
Project/Programme Closing	Month 48
Terminal Evaluation	Month 51

PART II: PROJECT / PROGRAMME JUSTIFICATION

A. Describe the project/programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience. For the case of a programme, show how the combination of individual projects will contribute to the overall increase in resilience.

The proposed project operationalizes the Climate Resilient and Environmentally Sustainable Health Care Facilities (CRESHCF) framework through five integrated components addressing climate-resilient health systems from facility to community level. An intersectoral coordination mechanism will be established to guide implementation, align stakeholders across health, climate, and related sectors, and ensure coherent decision-making, information sharing, and accountability throughout the project lifecycle.

Multi-Hazard and Vulnerability Mapping (Component 1) establishes the evidence base for targeted adaptation. Cambodia's changing climate presents concurrent hazards: heat waves causing heat stroke and exacerbating non-communicable disease complications; flooding disrupting health care facility operations and creating vector-borne disease risk; drought stressing water-dependent functions; air pollution triggering respiratory illness and other conditions. This mapping will build upon UNICEF's Children's Climate Risk Index for Cambodia [15]. Additionally, a CRESHCF-based assessment maps facility-specific vulnerabilities, disease-climate relationships, and community behavioral risks, drawing where feasible on existing regional and global climate and hazard mapping tools previously used in Cambodia to refine analysis and prioritization. This evidence will inform and drive downstream adaptations. More broadly, existing coordination platforms, such as the National Climate Change Technical Working Group will help to foster collaboration and information exchange between key stakeholders across the health and environmental sectors.

Digital Integration (Component 2) extends surveillance and early warning from passive response to anticipatory action. Integrating climate-sensitive disease indicators, climate vulnerability data, and weather forecasts into health information systems enables real-time alerts to health care facilities and staff guidance. Routine behavioral data collection (e.g., care-seeking during heat waves) informs adaptation of protocols and messaging.

Facility-Level Infrastructure and Behavioral Adaptations (Component 3) create the physical and operational foundation for climate resilience. Infrastructure upgrades—including climate resilient WASH systems and installation of rooftop solar systems—directly address facility vulnerability. Behavioral adaptations—revised Standard Operating Procedures and Implementation Guidelines for symptom-based care of climate-sensitive diseases and conditions (including mental health), health worker training on heat stress and respiratory distress management, supply chain pre-positioning—ensure staff competency and service continuity during climate shocks.

Community Engagement and Risk Communication (Component 4) link facility-centric behavior change (e.g., health care workers) to community-centered behavior change (e.g. care-seeking, heat-protective practices, safe use of water and sanitation, infection prevention behaviors). Formative research assesses barriers to protective behaviors (capability gaps in knowing early warning signs, opportunity gaps in accessing safe water, sanitation and hygiene practices, motivation barriers related to trust and perceived risk). Trusted local actors such as Village Support Health Group volunteers, community leaders, and peer groups will be engaged in developing co-created multi-hazard response action plans; as will vulnerable groups using local communication

channels, embed local knowledge and increase ownership. Early warning messages tailored to literacy levels and preferred communications channels increase uptake.

Monitoring and Institutional Integration (Component 5) ensure adaptation becomes routine practice and learning scales. A monitoring framework tracks climate-sensitive disease trends, facility functionality, behavioral adoption, and health system performance. Evidence informs real-time protocol adjustments and feeds into operability and institutionalization of actions—aiming to embed CRESHCF approaches into national health planning, protocols, and guidelines.

Together, these components address the full adaptation logic: evidence-based planning combined with facility infrastructure and staff capacity enable early warning and decision support, thereby supporting community behavioral change, performance monitoring, and institutional embedding. This systems-level approach ensures sustainability beyond project end.

B. Describe how the project/programme provides 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 will avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

Economic Benefits:

- By strengthening the resilience of health facilities and services, the project will help reduce disruptions to the health system during climate-related hazards such as floods, heatwaves and droughts. This in turn can limit emergency expenditures (estimated between USD5,000-15,000 per primary health care facility per year) and reduce productivity losses associated with preventable climate-sensitive diseases.
- Improvements in infrastructure efficiency, particularly in areas such as water management, will help lower the operational costs of health facilities. These savings can allow facilities to reallocate limited operational budgets toward expanding essential health services.
- Strengthening supply chain resilience will improve the storage and management of essential medicines and supplies, reducing wastage and minimizing stockouts that can interrupt service delivery.
- Ensuring continuity of services, including food security and nutrition during climate shocks will help maintain community trust and reliance on public health facilities, which is essential for progress toward universal health coverage and financial protection for vulnerable populations.

Social Benefits:

- The project will improve access to primary health care services during climate hazards, which is particularly important for poor, rural and elderly populations who often have limited alternatives for seeking care.
- Through the introduction of early warning systems and strengthened community awareness, the project will contribute to reducing mortality and morbidity linked to climate-sensitive diseases and extreme weather events.
- Gender equity considerations are integrated throughout the project. Activities will include targeted engagement with pregnant women and lactating mothers, households with the children under the age of five, who face heightened vulnerability to thermal stress and climate-related health risks, as well as broader efforts to address gender-specific climate-

health vulnerabilities.

- Community resilience will be strengthened through participatory adaptation planning. Communities will work with health authorities to co-develop local action plans, helping to build social cohesion while strengthening collective capacity to anticipate and respond to climate-related health risks.

Environmental Benefits:

- The project will introduce climate resilient WASH systems in health facilities to support more sustainable water use, reduce water losses, improve wastewater and sanitation management, and limit contamination of soil and water sources. By reducing exposure pathways for water- and soil-borne diseases, these systems will protect environmental health.
- The solarization of HCFs, in addition to improving service continuity and energy support for heat stress management, will help to reduce greenhouse gas emissions and reliance on diesel generators, improving energy efficiency, and lowering the carbon footprint of essential health services.

Vulnerable Groups Focus:

The project places particular emphasis on populations that are most exposed or sensitive to climate-related health risks:

- Children under 5 years and older persons, who are especially susceptible to heat-related illness, will benefit from household-level heat-health action plans and improved community alert systems.
- Pregnant women and lactating mothers, who face higher vulnerability to both heat stress and infectious diseases, will receive targeted risk communication and strengthened facility-based care protocols.
- Outdoor workers, including agricultural workers and construction workers exposed to occupational heat stress, will be supported through engagement with employers and the promotion of workplace adaptation measures.
- Low-income and rural households, which face compounded access barriers during extreme weather and heightened exposure to climate-related health risks, will benefit from stronger community engagement in identifying and implementing behavioral adaptations.

Environmental and Social Policy Compliance:

The project has been designed to fully comply with the Adaptation Fund Environmental and Social Policy. This includes ensuring that communities are meaningfully engaged throughout the project cycle and that their informed consent is obtained for activities that affect them. Stakeholder consultations will be inclusive, with particular efforts made to ensure the participation of vulnerable groups.

Infrastructural improvements to health care facilities, including climate-resilient WASH upgrades and solarization, will entail only minor rehabilitation, retrofitting and installation works within existing facility premises. No greenfield construction, land acquisition or physical displacement is envisaged. The project will comply with the Adaptation Fund Environmental and Social Policy and Gender Policy and will be implemented in accordance with the UN's Environmental and Social Standards Framework and applicable national environmental, social, health and safety regulations. [16] All proposed works will be subject to site-specific

environmental and social screening, and any potential risks related to construction impacts, water-source protection, wastewater and sanitation management, occupational and community health and safety, infection prevention, waste management, and solar equipment or battery disposal will be managed through proportionate mitigation measures, including site-specific Environmental and Social Management Plans where required, prior to and during implementation.

Gender considerations are integrated into the project design, including specific targets to support women's participation in training activities and decision-making processes. In addition, all procurement and infrastructure-related activities will adhere to recognized labor standards to ensure safe and fair working conditions throughout project implementation.

C. Describe or provide an analysis of the cost-effectiveness of the proposed project/programme.

The proposed project is designed to be highly cost-effective by maximizing health and adaptation benefits per dollar invested. The selection of at least 100 health care facilities across at least three provinces, serving an estimated 500,000 people, yields a cost-effectiveness ratio of less than 10 USD per capita, which compares favourably with the avoided health burden and economic losses associated with climate-related illnesses and disruptions to essential services. The integrated design—combining facility-level resilience, climate-informed service delivery, community engagement, and systems strengthening—reduces the risk of costly health outcomes and prevents redundant, siloed investments (e.g. stand-alone infrastructure or communication projects that do not address underlying system gaps).

Cost-effectiveness is further enhanced by building on existing health system structures, including primary health care facilities, provincial and district health authorities, health information systems, and community health networks, rather than establishing parallel delivery mechanisms. Using a single investment package to deliver multiple adaptation benefits—reducing physical vulnerability of facilities, improving continuity of essential services during floods, droughts, heatwaves and other hazards, strengthening early warning and anticipatory action, and improving community-level protective behaviours—optimizes resource use. Over time, institutionalized CRESHCF standards, climate-health protocols, training modules, and monitoring tools within Ministry of Health systems will reduce the need for repeated small-scale retrofits, lower unit costs for replication, and decrease emergency response expenditures. As a result, the project provides strong value for money both through direct benefits to participating facilities and their catchment populations, and by establishing a scalable adaptation model that government and partners can expand to additional primary health care facilities after project completion.

D. Describe how the project/programme is consistent with national or sub-national sustainable development strategies, including, where appropriate, national adaptation plan (NAP), national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.

The project directly supports:

- ***National Climate Change Action Plan for Public Health 2020-2024 (extended to 2025):***
The project contributes to the plan's objective of strengthening the resilience of Cambodia's health service delivery system to respond to and cope with the impacts of

climate change and disaster risks. In particular, it supports efforts to improve preparedness, strengthen health facility resilience, and enhance surveillance and early warning mechanisms for climate-sensitive health risks. [17]

- ***Cambodia Climate Change Strategic Plan (2024-2033)***: The project aligns with the strategic outcome that calls for expanding compliance with WHO guidance on Climate-Resilient and Environmentally Sustainable Health Care Facilities (CRESHCF). It also supports national efforts to strengthen health-related early warning systems and to better align technologies and data systems with internationally recognized standards for climate-informed health surveillance and response. [18]
- ***Cambodia's Nationally Determined Contribution (NDC) 3.0 (2025)***: The project is consistent with Cambodia's updated national climate commitment, which strengthens adaptation action under human health, WASH, climate risk management, and resilient social services among priority areas for protecting communities from climate impacts. By improving climate resilience of primary health care facilities, strengthening interoperability of climate-informed surveillance and disease-based early warning systems with such systems outside the health sector, and enhancing community-level preparedness and protective behaviors, the project contributes directly to the implementation of NDC 3.0 adaptation priorities in the human health sector. [19]
- ***Cambodia the third National Strategy for Food Security and Nutrition (NSFSN), 2024-2028***: The project will contribute to the strategic outcomes of NSFSN of improving nutrition for children under the age of five years and promoting healthy diets in the country and National Strategic Plan for Rural ASH. Importantly, the CRESHCF will serve as the strategic implementation mechanism to support the Pentagonal Strategy-Phase I of the Royal Government of Cambodia. [20]
- ***Sustainable Development Goals***: The project contributes to several SDGs, including **SDG 3 (Good Health and Well-being)** through strengthening resilient health services; **SDG 5 (Gender Equality)** by addressing gender-specific climate-health vulnerabilities and promoting women's participation in adaptation activities; **SDG 6 (Clean Water and Sanitation)** through improved water management and water security measures; and **SDG 13 (Climate Action)** by enhancing adaptation capacity and resilience of the health sector and communities to climate-related risks.

E. 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 adheres to:

The project has been designed to comply with relevant national technical standards and to fully align with the Environmental and Social Policy of the Adaptation Fund. Compliance with Cambodian environmental regulations will be ensured through the preparation of an Environmental and Social Impact Assessment (ESIA) in accordance with national Environmental Impact Assessment (EIA) guidelines during the project preparation phase. The assessment will identify potential environmental and social risks and inform the integration of appropriate mitigation measures throughout project implementation.

Technical components of the project will follow recognized international standards. Digital systems developed under the project will be designed in line with WHO guidance for health information systems to ensure interoperability, data quality, and long-term usability within the

national health system. Similarly, the early warning components will follow WHO recommendations on climate-sensitive disease surveillance and public health early warning systems, ensuring that the approach is consistent with global best practices while remaining adapted to the Cambodian context.

The project will also fully comply with the Adaptation Fund's Environmental and Social Policy. A gender analysis will be conducted to ensure that project activities address gender-related vulnerabilities and promote equitable access to project benefits. Stakeholder consultations will be undertaken throughout the design and implementation phases to ensure that community perspectives are reflected in project activities. Based on the current assessment, the project is not expected to involve involuntary resettlement or to adversely affect the rights or livelihoods of indigenous peoples.

F. Describe if there is duplication of project/programme with other funding sources, if any.

The project complements but does not duplicate:

- **UNICEF WASH programs:** Addresses water and sanitation in schools and communities; whereas this project addresses health facility water systems for service delivery. WHO and UNICEF collaborate on the Joint Monitoring Programme (JMP) initiative that tracks global progress on WASH in schools, households and health care facilities.
- **UNICEF Children's Climate Risk Index for Cambodia:** Detailed, child-centred data at the commune level, highlighting areas where children are most at risk to climate and environmental hazards (namely drought, flooding, heat, high-speed wind, vector-borne diseases, and air pollution) due to a lack of essential services.
- **ADB's Resilient Health Infrastructure Project:** Focuses on infrastructural upgrading of priority hospitals to be more climate-resilient, whereas this project will focus on behavioral and infrastructural adaptations at primary health care-level.
- **UNDP's "Advancing Early Warning for All" Project (2026–2030):** Focuses on multi-hazard disaster early warning for climate- and weather-related events across four high-risk provinces (Ratanakiri, Kratie, Stung Treng, and Banteay Meanchey). Whereas this project will focus on enabling health early warning systems to integrate with existing hazard monitoring, forecasting, and warning communication infrastructure for a more coherent, whole-of-government approach.
- **World Bank:** Through the Health Equity and Quality Improvement Project, they organized a National Climate and Health Vulnerability Assessment in 2024². The key aspects of capacity and adaptation assessment were not covered, and the vulnerability measures identified helped to inform the development of this proposal. The last comprehensive National Climate Change and National Climate Change Health V&A led by the government took place in 2010.

² <http://documents1.worldbank.org/curated/en/099070324141522773/pdf/P5019931c19b1f03a18eb51ea32a6e3845e.pdf>

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

The project includes a strong learning and knowledge management component designed to capture practical lessons-learned from implementation and support their dissemination across the health system and beyond. Regular learning reviews will be organized on a quarterly basis with health centre staff, district and provincial health managers, other relevant departments as needed, and community representatives. These sessions will provide a structured opportunity to document successes, identify challenges encountered during implementation, and adapt approaches where needed.

Experiences from the project will be translated into a range of knowledge products, including case studies from each participating district, best practice guidance, and practical adaptation toolkits for health facilities. These materials will be shared with national health authorities and relevant regional health networks to support broader learning on climate-resilient health systems.

The project will also promote regional knowledge exchange. Cambodian health teams will participate in regional forums related to Climate-Resilient and Environmentally Sustainable Health Care Facilities (CRESHCF), while opportunities will be explored to host practitioners from other ASEAN countries interested in learning from Cambodia's experience.

In addition, evidence generated through project implementation will be synthesized into summary briefs examining the effectiveness, cost-effectiveness and sustainability of the adaptation measures introduced. These briefs will support the Ministry of Health mainly and concerned ministries in refining policies and strategies related to climate change and health.

Finally, lessons learned will be integrated into national systems to ensure that knowledge generated through the project informs long-term practice. This will include updating relevant national guidelines, strengthening health worker training curricula, and contributing to the development of Ministry of Health protocols on climate and health.

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

Stakeholder consultation conducted during concept development:

The following stakeholders were consulted through consultative meetings:

- Ministry of Health (Preventive Medicine Department and National Institute of Public Health)
- Ministry of Environment
- Council for Agricultural and Rural Development
- Ministry of Education, Youth and Sport

Civil society and technical partners:

- UNICEF Cambodia

Stakeholders which will be consulted in proposal development process:

Civil society and technical partners:

- NGOs working on health, water, and environment
- Academic institutions

Health facility and health worker representatives:

- Consultation with Provincial health departments

Community consultations:

- Consultation with commune representatives

Gender considerations in consultations:

- Health worker and VHSG consultations including women health care staff

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

Cambodia's PHC system is increasingly disrupted by climate hazards—heat waves, floods, droughts, and air pollution—which simultaneously damage facility infrastructure and drive higher burdens of climate-sensitive diseases such as dengue, diarrheal disease, respiratory illnesses, and heat-related conditions. Standard health system investments have not been designed to anticipate or manage these climate-related shocks, and most primary health care facilities currently lack climate-resilient infrastructure, links to multi-hazard early warning systems, and staff trained on climate-health. The project therefore focuses on the incremental measures required for facilities, systems, and communities to cope with climate variability and change; these measures would not be implemented or would be implemented only partially and in a non-climate-informed way, through business-as-usual development spending.

The Adaptation Fund will support adaptation activities addressing the incremental costs of climate change with focus on addressing:

1. Interconnected vulnerabilities:

Because the same climate hazards often damage infrastructure, disrupt supplies, and increase disease burdens simultaneously, it is neither practical nor accurate to fully separate climate-specific from general system-strengthening costs. For example, a climate-resilient water system in a PHC both ensures safe service delivery during drought and improves day-to-day operations; however, its design (storage capacity, protection from flood contamination, redundancy) and siting are driven by climate risk analyses supported by this project. The project therefore adopts a systems approach in which integrating adaptation into routine health service delivery is more cost-effective than implementing isolated, hazard-specific pilot projects in parallel to the health system. The requested budget represents the cost of achieving climate-resilient PHC models that can be maintained and scaled by government after the project, rather than a marginal add-on to existing development projects.

2. Efficiency: Integrating climate adaptation into routine health service delivery is more cost-effective than standalone adaptation projects.

Integrating climate adaptation into routine health service delivery allows Cambodia to strengthen resilience using existing systems, staff, and platforms, rather than creating parallel, standalone adaptation projects. By embedding climate-risk assessments, early warning triggers, and climate-sensitive protocols into primary health care operations, the project reduces duplication of infrastructure, supervision, and training costs. This integrated approach also generates long-term efficiencies: once Climate Resilient and Environmentally Sustainable Health Care Facilities standards, climate-health curricula, and data flows are institutionalized, they can be applied nationally at marginal cost, whereas isolated pilots

would require repeated start-up investments. As a result, each dollar invested delivers both core health benefits and reduced climate-related disruption, improving the value for money of Adaptation Fund resources.

Where project activities resemble “normal” development—such as strengthening WASH in facilities, upgrading storage, or enhancing data systems—they have been designed and budgeted only to the extent that they are necessary for climate resilience. For example, UNICEF WASH programmes focus on schools and communities, whereas this project adapts facility-level water and sanitation systems specifically so that PHCs remain operational and safe during floods and droughts. Similarly, ADB’s resilient hospital infrastructure project targets larger hospitals, while this project addresses both infrastructure and behavioral adaptation in primary-level facilities that would otherwise be left behind. The proposed Adaptation-funded activities are thus justified as the adaptation-relevant share of broader system improvements and are sufficient to deliver the intended adaptation outcomes even in the absence of additional co-financing.

3. National priorities:

The project is fully grounded in Cambodia’s existing national climate and health agenda. Cambodia’s National Climate Change Action Plan for Public Health explicitly positions health system strengthening—including resilient facilities, early warning, and climate-sensitive surveillance—as a core pathway for health adaptation, and this project operationalizes that vision at primary care level. By piloting Climate-Resilient and Environmentally Sustainable Health Care Facilities, integrating climate and disease data into health information systems, and embedding climate-health protocols in routine service delivery, the project translates national priorities into concrete, scalable practice.

Budget Justification by Component:

- **Component 1 (Assessments):** \$980,000

Activities such as CRESHCF-based facility vulnerability assessments, integration of climatic, epidemiological, and socio-economic data into multi-hazard risk maps, and community behavioral risk assessments are required because climate hazards are changing the frequency, intensity, and spatial distribution of health risks. Routine health planning in Cambodia does not currently include systematic analysis of climate-disease linkages or mapping of hazard exposure for PHCs, so this analytical work represents the cost of tailoring service delivery and infrastructure to climate risk rather than to average historical conditions. Without this component, infrastructure adaptations or capacity-building would proceed in a generic way and may fail to protect services during heat waves, floods, or droughts in the highest-risk districts.

- **Component 2 (Digital systems):** \$560,000

The development of frameworks, tools, and tested plans to integrate weather forecasts, climate-sensitive disease indicators, and facility vulnerability data into health information systems is explicitly motivated by the need for early warning and anticipatory action in a changing climate. Current health information systems focus on retrospective reporting and are not configured to receive or act on hazard alerts; the cost here covers system design, interoperability work, and change management so that PHCs receive real-time alerts and actionable guidance. Routine digital health investments would not bear the cost of linking

meteorological, environmental, and behavioral data to operational decisions in PHC facilities.

- **Component 3 (Infrastructure and capacity):** \$1,200,000

Improved backup water systems for droughts, flood-proof storage of medicines and supplies, and climate-responsive sanitation, including hand-washing facilities in health care facilities—are specifically designed to keep PHCs functional during climate extremes that are already disrupting operations using a self-sustaining innovative model tried and tested in Viet Nam most recently. [21] Likewise, technology which reduces exposure of health hazards from health care waste management —such as safer segregation, on-site treatment, and climate-resilient temporary storage and disposal options—will also be explored and, where feasible, integrated into facility upgrade packages

Sensitizing health care staff on climate-sensitive disease management, heat stress protocols, and climate-responsive supply chain strategies, and developing CRESHCF-aligned SOPs and clinical practice guidelines are adaptation-specific capacities that would not be prioritized under routine in-service training. In the absence of climate change, such targeted upgrades and protocols would not be required at this scale to maintain continuity and safety of care.

- **Component 4 (Community engagement):** \$720,000

Formative research on climate-health risk perceptions, co-creation of multi-hazard and heat-health action plans, and design of early-warning social and behavior change messages targeted at groups such as pregnant women, outdoor workers, and older people are all driven by climate-specific vulnerabilities. Standard health promotion activities might address general hygiene or maternal health, but they do not typically include guidance on recognizing when to seek care in response to multi-hazard early warnings. The funding requested allows the project to tailor communication content, channels, and community engagement mechanisms to climate-related risks and to link them to facility-level response protocols.

- **Component 5 (M&E and learning):** \$600,000

The monitoring framework focuses on climate-sensitive disease trends, facility functionality under hazard conditions, and adoption of adaptation behaviors, rather than generic service coverage indicators. Learning events, case studies, and adaptation toolkits are oriented toward scaling CRESHCF and multi-hazard approaches, and the project's work aims to embed these climate-specific standards and practices into the Ministry of Health's protocols, supervision tools, and training curricula. These institutionalization costs are necessary to sustain adaptation beyond the project period; they are not required to maintain routine PHC services under historical climate norms.

- **Execution costs:** \$425,303

Execution and management costs cover coordination across health, water, statistics, and community actors to implement climate-specific interventions at facility and community level, as well as safeguards, Environmental and Social Impact Assessment, and compliance with the Adaptation Fund's Environmental and Social and Gender policies. These are directly related to delivering a multi-sector adaptation project that must manage climate-related risks, not to expanding routine service delivery.

- **Implementing Entity fee:** \$381,250

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

Sustainability has been considered from the outset of the project design to ensure that the results continue beyond the life of the programme. The approach focuses on strengthening existing systems and capacities rather than creating parallel structures, so that the interventions can be maintained and expanded through government systems.

At the institutional level, the project will work closely with the Ministry of Health to ensure that climate-resilient and environmentally sustainable health care facility (CRESHCF) approaches are embedded within national protocols, health worker training curricula and planning frameworks. This will enable the Ministry and subnational health authorities to continue implementing and expanding these approaches after the project ends. District and provincial health offices will integrate climate resilience considerations into their routine supervision of health facilities and performance monitoring processes, ensuring that adaptation measures remain part of regular health system oversight.

Technical sustainability will be supported by building the capacity of the primary health care workforce and local technicians. Health staff will be trained to operate and carry out basic maintenance of installed systems and equipment, while district-level technicians will be able to support more specialized servicing. The digital early warning system introduced through the project will be integrated into existing health information systems so that it becomes part of the routine data and decision-making processes of the health sector. At the community level, village health support groups and facility staff will be equipped to maintain key adaptation practices such as heat-health action plans and safe water practices during floods.

The project also places strong emphasis on social sustainability. Participatory planning with communities will ensure that adaptation measures respond to local needs and that communities feel ownership over the interventions. This participatory approach is expected to encourage continued adoption of protective behaviours and sustained engagement with health facilities. Health worker motivation will also be supported through opportunities for professional development and through recognition of their role in protecting communities from climate-related health risks.

Operational sustainability will be reinforced through a strong monitoring and learning component. The project will generate evidence on which interventions are most effective and cost-efficient, enabling the Ministry of Health to prioritize resources for maintaining the most impactful measures. Lessons learned from the pilot sites will be systematically documented and shared with other health facilities, creating opportunities for replication and scale-up within Cambodia's health system without continued external project support.

K. 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
<i>Compliance with the Law</i>		Potential risk of misalignment with existing laws will be mitigated through compliance assessment as part of planned activities.
<i>Access and Equity</i>		Access and equity measures will be integrated into M&E activities.
<i>Marginalized and Vulnerable Groups</i>		Impact and unintended consequences must be further assessed through planning activities.
<i>Human Rights</i>	√	
<i>Gender Equality and Women's Empowerment</i>	√	
<i>Core Labour Rights</i>	√	
<i>Indigenous Peoples</i>	√	
<i>Involuntary Resettlement</i>	√	
<i>Protection of Natural Habitats</i>	√	
<i>Conservation of Biological Diversity</i>	√	
<i>Climate Change</i>		Climate change resilience is an inherent focus of the proposed project so impact will be assessed further.
<i>Pollution Prevention and Resource Efficiency</i>		Pollution Prevention and Resource Efficiency are also core aspects of the proposed project so impact will be assessed further.
<i>Public Health</i>		Impact on public health will be included in impact assessment of this project.
<i>Physical and Cultural Heritage</i>	√	
<i>Lands and Soil Conservation</i>	√	

PART III: IMPLEMENTATION ARRANGEMENTS

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

Project Objective(s)	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant amount (USD)
Reduce physical vulnerability of PHCs to climate hazards through implementation of CRESHCF and multi-hazard adaptation measures	Percentage of target PHCs with completed multi-hazard risk maps; Proportion of hazards addressed through CRESHCF operationalization among the target PHCs; Number of hazard events where PHCs remain operational	Increased resilience and adaptive capacity of health and social care systems to address the impacts of climate variability and change	Number of health care facilities with improved capacity to cope with climate change impacts; Number of beneficiaries with enhanced adaptive capacity	980,000
Integrate climate-sensitive disease surveillance and multi-hazard early warning systems enabling anticipatory action	Early warning system operational; Number of PHCs receiving timely climate and disease alerts; Percentage of alerts resulting in protective action	Increased adaptation and resilience of health and livelihoods to climate variability and change	Number of devices deployed for early warning; Number of people within catchment area of health care facilities with access to early warning systems	560,000
Strengthen capacity of health workforce for climate-sensitive disease management and adaptation and infrastructural adaptations	Number of health care workers trained in CRESHCF and climate-health integration; Percentage of staff demonstrating competency in symptom-based care for climate-sensitive diseases; Percentage of target PHCs with improved infrastructure resilience	Strengthened adaptive capacity and resilience of provinces to climate change impacts	Number of individuals trained in climate-resilient practices; Percentage of targeted institutions implementing climate-smart practices	1,200,000
Enable community-level protective behaviors during climate hazards	Percentage of target population aware of climate health risks and early warning signals; Percentage adopting protective behaviors (seeking care early, using safe water) during hazard events	Reduced vulnerability and increased resilience of communities to climate change impacts	Number of community members aware of climate risks; Percentage of targeted communities implementing risk reduction measures	720,000
Establish sustainable monitoring and institutional adaptation	Number of MOH policies reviewed and updated to include climate-resilience; Number of knowledge products (case studies, practice briefs) published and disseminated to relevant stakeholders	Strengthened institutional and regulatory frameworks and systems for climate resilience	Number of policies and regulations that reflect climate-resilience targets; Percentage of health care facilities that have integrated at least one climate adaptation	600,000

PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. Record of endorsement on behalf of the government

Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:

H.E. CHOUP Paris, Secretary of State, Ministry of Environment	Date: 23 July 2026
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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

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plan (Cambodia Climate Change Strategic Plan (2024-2033), Circular Strategy on Environment (2023-2028), Long-term Strategy for Carbon Neutrality (LTS4CN) and the Nationally Determined Contribution (NDC3.0)) and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy and the Gender 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.

Name & Signature: Dr Jaana Marianna TRIAS 	
Implementing Entity Coordinator	
Date: 03 August-2026	Tel. and email: +855 023216610; wpkhmwr@who.int
Project Contact Person: Dr Ada MOADSIRI	
Tel. And Email: +855012462653; moadsiria@who.int	

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ADAPTATION FUND

CONCEPT NOTE PROPOSAL FOR SINGLE COUNTRY

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme: Building Climate Resilience for Cambodia's Health Facilities and Workforce through Community-Led Multi-Hazard Adaptation

Country: Cambodia

Thematic Focal Area: Health and Water; Climate Information and Early Warning Systems

Type of Implementing Entity: Multilateral Implementing Entity

Implementing Entity: World Health Organization

Executing Entities: Ministry of Health, Ministry of Environment, Council for Agricultural and Rural Development (CARD), UNICEF Cambodia

Amount of Financing Requested: 4,866,553 (in U.S Dollars Equivalent)

Project Formulation Grant Request (available to NIEs only): Yes ☒ No ☐

Amount of Requested financing for PFG: 99,278 (in U.S Dollars Equivalent)

Letter of Endorsement (LOE) signed: 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 concept has been submitted before

☒ This is the first submission ever of the concept proposal

In case of a resubmission, please indicate the last submission date: Click or tap to enter a date.

Please note that concept note documents should not exceed 50 pages, including annexes.

Project/Programme Background and Context:

Cambodia faces escalating climate-related health threats exacerbated by its geographic vulnerability to multiple hazards, including more frequent and intense floods and droughts, rising temperatures, and air pollution, which together undermine health system resilience and population health. Seasonal flooding already affects a substantial share of the population each year, damaging or disrupting the functionality of health facilities, medical equipment, and supplies, and constraining access to essential services. Rising temperatures and increasing numbers of high heat index days heighten risks of heat stress and exacerbate chronic illnesses, particularly among people with cardiovascular and respiratory diseases. At the same time, ambient PM_{2.5} concentrations in Cambodia remain approximately three to four times higher than the latest WHO annual air quality guideline value (5 µg/m³), contributing to excess respiratory and cardiovascular morbidity and mortality. [1][2][3][4][5][6][7]

These climate hazards directly compromise primary health care (PHC) service delivery while simultaneously increasing demand for health services due to increased risk for climate-sensitive diseases, including dengue fever, diarrheal diseases, respiratory and heat-related illnesses, non-communicable diseases and water-borne infections, as documented in Cambodia's national climate and health assessments. Climate change exacerbates the burden of noncommunicable diseases (NCDs), including cardiovascular and respiratory conditions, through pathways such as heat stress, air pollution exposure, and disruptions to continuity of care and access to essential health services during extreme weather events. In addition, climate variability and extremes undermine water, sanitation, and hygiene conditions, increasing risk of malnutrition. [3][5][8][9]

In this context, climate-resilient and environmentally sustainable health care facilities (CRESHCF) are those which can anticipate, respond to, cope with, recover from, and adapt to climate-related shocks and stresses, while minimizing negative environmental impacts for present and future generations, consistent with emerging WHO guidance on climate-resilient, low-carbon health systems. This guidance promotes practical interventions across four core areas—health workforce, water/sanitation/hygiene/waste management, sustainable energy, and infrastructure/technologies—to strengthen resilience, optimize resource use, reduce pollution and greenhouse gas emissions, and support progress towards universal health coverage. [10]

Primary health facilities serve as the cornerstone of Cambodia's health system, providing essential services to rural and vulnerable populations, yet many remain highly exposed to flooding, heat, and other climate hazards, with limited adaptive capacity. Most facilities lack comprehensive climate-resilience measures, operate with limited integration of climate-sensitive disease early warning information, and health workers receive minimal training on climate–health linkages and climate-related emergency preparedness. Critical infrastructure gaps—such as unreliable or unsafe water supply, unstable electricity, and inadequate sanitation and waste management—are often most acute during extreme weather events, compounding service disruptions and infection risks. Community awareness of climate-health risks remains low, which constrains demand for preventive and early care during climate hazards and can widen existing health inequities. [1][5][9][10]

Cambodia's Climate Change Strategic Plan (2024–2033) identifies climate-resilient health care facilities and services as key adaptation priorities, aligned with broader national efforts to strengthen resilience of social sectors. The government's commitment to building resilience to climate change and strengthening primary health care is also reflected among the strategic enablers of the forthcoming Health Strategic Plan (2025–2034), which emphasizes integrated risk management for climate-sensitive health outcomes. However, recent climate and health vulnerability assessments highlight that mechanisms for systematically integrating climate adaptation into routine health service delivery, planning, and budgeting remain nascent, with limited coordination across health, disaster risk management, and environment sectors at subnational level. [5][9][10][11]

This project directly responds to Cambodia's identified health adaptation gaps by reducing underlying risks through prevention and mitigation across sectors; strengthening risk assessment, information, and knowledge management (including surveillance, early warning, and operational research); and advancing risk-based, people- and community-centered approaches that prioritize vulnerable populations consistent with Cambodia's updated NDC and climate-health commitments.

Project/Programme Objectives:

Overarching Objective:

To strengthen the climate resilience of primary health care facilities and health system capacity to sustain quality services in the face of climate hazards and climate-sensitive health risks in Cambodia through adaptive institutional capacity.

Specific Objectives:

1. Institutionalize guidelines for Climate resilient and environmentally sustainable health care facilities (CRESHCF) and learning into national health policies, protocols, and planning mechanisms aiming to reduce physical and service vulnerability in at least 100 primary health care facilities in at least three provinces¹ through the implementation of CRESHCF and multi-hazard adaptation measures.
2. Integrate climate-sensitive disease surveillance and multi-hazard early warning systems into health information architecture and Primary Health Care operations.
3. Strengthen behavioral and organizational capacity of health care staff through climate-health sensitization, adaptation protocols, and co-created response guidelines.
4. Enable community-level behavioral adaptations through risk communication, early warning systems, and co-created 'climate hazard-health' action plans, which consider health and nutrition outcomes.
5. Establish monitoring frameworks for climate-sensitive diseases, behavioral outcomes, and infrastructure performance to demonstrate proof of concept and inform adaptive management.

¹ Potential provinces which will be decided after the climate vulnerability and adaptation assessment and multi-hazard mapping verification processes.

Project/Programme Components and Financing:

Fill in the table presenting the relationships among project components, activities, expected concrete outputs, and the corresponding budgets. If necessary, please refer to the attached instructions for a detailed description of each term.

For the case of a programme, individual components are likely to refer to specific sub-sets of stakeholders, regions and/or sectors that can be addressed through a set of well-defined interventions/projects.

Project/ Programme Components	Expected Concrete Outputs	Expected Outcomes	Amount (US\$)
1. Climate Vulnerability Assessment and Multi-Hazard Mapping	A. Disease-environmental linkage and CRESHCF-based vulnerability assessment completed involving at least 100 primary health care facilities across at least three provinces covering climate hazards and climate-sensitive disease patterns B. Multi-hazard risk maps developed at operational district-level integrating climatic, epidemiological, and socioeconomic data within each selected province C. Community behavioral and cultural insights assessment conducted (including with vulnerable groups) in target districts served by the 100 primary health care facilities.	i. All 100 health care facilities' leadership systematically understand their climate and disease vulnerabilities. ii. Provincial health departments, other provincial departments, local government and other planners have evidence-based understanding of multi-hazard risks and disease patterns to guide adaptation investments based on the multi-hazard risk maps developed.	\$980,000
2. Integration of Climate Data into Health Information Systems	A. Integrated climate-sensitive disease early warning and weather alert systems; health information systems capture CRESHCF vulnerabilities, climate-sensitive disease indicators, and relevant early-warning data; B. The 100 health care facilities to receive real-time alerts and response protocols based on hazard forecasts; C. routine social and behavioral data collection protocols implemented at primary health care level in the 100 facilities	i. Health systems are prepared to integrate climate and disease data to anticipate health threats; ii. The 100 health facilities receive actionable early warnings; and iii. Behavioral data informs adaptive management by health care facility staff	\$560,000

3. Infrastructure and Behavioral Adaptations of Health Care Facilities	A. Climate-resilient physical adaptations implemented at select health care facilities including clean water, improved sanitation and hygiene, and solarization (as applicable) B. At least a quarter of all health care staff at 100 facilities upskilled on protocols for climate-sensitive diseases C. Supply chains strengthening plan for climate-shock resilience (pre-positioned supplies, cold chain systems) developed D. Appropriate CRESHCF guidelines developed and operationalized in at least 100 health care facilities	i. Health care facilities sustain delivery of quality services and preservation of care pathways despite climate hazards ii. Health care staff and leadership demonstrate competency in climate-sensitive disease management and workplace adaptation behaviors iii. Health systems identified actions for ensuring supply continuity during shocks	\$1,200,000
4. Risk Communication and Community Engagement	A. Behavioral capability, opportunity, and motivation barriers assessed through formative research with target communities B. Co-created heat-health action plans developed with vulnerable groups (e.g., pregnant women, elderly persons, outdoor workers, children under 5 years) using trusted local communication channels C. Mechanism for developing timely and tailored early warning social-behavior change messages developed for climate vulnerabilities and identified hazards in local contexts and through community-preferred communication channels D. Community dialogue and accountability mechanisms established	i. At least 100 health care facilities' catchment communes adopt protective behaviors during climate hazards and learnings disseminated to all ii. Vulnerable groups are aware of climate health risks iii. Health facilities receive community feedback for service improvements through local leadership and authorities and vice versa	\$720,000
5. Monitoring, Learning and Institutional Integration	A. Monitoring framework established for climate-sensitive diseases, behavioral outcomes, infrastructure functionality, and health system performance B. Routine monitoring data collected and used to inform real-time adaptations to	i. Lessons learned from pilot facilities inform expansion; ii. adaptation approaches become routine practice in health service delivery	\$600,000

	response protocols C. Learning events and knowledge products generated and document lessons and scale best practices D. CRESHCF implementation guidelines and approaches institutionalized into Ministry of Health and other concerned ministries' policies, strategies, protocols, and planning frameworks. E. Multi-sectoral, national-provincial, and local governance coordination and monitoring mechanisms established		
6.	Project/Programme Execution cost		\$ 425,303
7.	Total Project/Programme Cost		\$ 4,485,303
8.	Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)		\$ 381,250
	Amount of Financing Requested		\$ 4,866,553

Projected Calendar:

Indicate the dates of the following milestones for the proposed project/programme

Milestones	Expected Dates
Start of Project/Programme Implementation	Month 1 (upon AF Board approval)
Mid-term Review	Month 24
Project/Programme Closing	Month 48
Terminal Evaluation	Month 51

PART II: PROJECT / PROGRAMME JUSTIFICATION

A. Describe the project/programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience. For the case of a programme, show how the combination of individual projects will contribute to the overall increase in resilience.

The proposed project operationalizes the Climate Resilient and Environmentally Sustainable Health Care Facilities (CRESHCF) framework through five integrated components addressing climate-resilient health systems from facility to community level. An intersectoral coordination mechanism will be established to guide implementation, align stakeholders across health, climate, and related sectors, and ensure coherent decision-making, information sharing, and accountability throughout the project lifecycle.

Multi-Hazard and Vulnerability Mapping (Component 1) establishes the evidence base for targeted adaptation. Cambodia's changing climate presents concurrent hazards: heat waves causing heat stroke and exacerbating non-communicable disease complications; flooding disrupting health care facility operations and creating vector-borne disease risk; drought stressing water-dependent functions; air pollution triggering respiratory illness and other conditions. This mapping will build upon UNICEF's Children's Climate Risk Index for Cambodia [15]. Additionally, a CRESHCF-based assessment maps facility-specific vulnerabilities, disease-climate relationships, and community behavioral risks, drawing where feasible on existing regional and global climate and hazard mapping tools previously used in Cambodia to refine analysis and prioritization. This evidence will inform and drive downstream adaptations. More broadly, existing coordination platforms, such as the National Climate Change Technical Working Group will help to foster collaboration and information exchange between key stakeholders across the health and environmental sectors.

Digital Integration (Component 2) extends surveillance and early warning from passive response to anticipatory action. Integrating climate-sensitive disease indicators, climate vulnerability data, and weather forecasts into health information systems enables real-time alerts to health care facilities and staff guidance. Routine behavioral data collection (e.g., care-seeking during heat waves) informs adaptation of protocols and messaging.

Facility-Level Infrastructure and Behavioral Adaptations (Component 3) create the physical and operational foundation for climate resilience. Infrastructure upgrades—including climate resilient WASH systems and installation of rooftop solar systems—directly address facility vulnerability. Behavioral adaptations—revised Standard Operating Procedures and Implementation Guidelines for symptom-based care of climate-sensitive diseases and conditions (including mental health), health worker training on heat stress and respiratory distress management, supply chain pre-positioning—ensure staff competency and service continuity during climate shocks.

Community Engagement and Risk Communication (Component 4) link facility-centric behavior change (e.g., health care workers) to community-centered behavior change (e.g. care-seeking, heat-protective practices, safe use of water and sanitation, infection prevention behaviors). Formative research assesses barriers to protective behaviors (capability gaps in knowing early warning signs, opportunity gaps in accessing safe water, sanitation and hygiene practices, motivation barriers related to trust and perceived risk). Trusted local actors such as Village Support Health Group volunteers, community leaders, and peer groups will be engaged in developing co-created multi-hazard response action plans; as will vulnerable groups using local communication

channels, embed local knowledge and increase ownership. Early warning messages tailored to literacy levels and preferred communications channels increase uptake.

Monitoring and Institutional Integration (Component 5) ensure adaptation becomes routine practice and learning scales. A monitoring framework tracks climate-sensitive disease trends, facility functionality, behavioral adoption, and health system performance. Evidence informs real-time protocol adjustments and feeds into operability and institutionalization of actions—aiming to embed CRESHCF approaches into national health planning, protocols, and guidelines.

Together, these components address the full adaptation logic: evidence-based planning combined with facility infrastructure and staff capacity enable early warning and decision support, thereby supporting community behavioral change, performance monitoring, and institutional embedding. This systems-level approach ensures sustainability beyond project end.

B. Describe how the project/programme provides 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 will avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

Economic Benefits:

- By strengthening the resilience of health facilities and services, the project will help reduce disruptions to the health system during climate-related hazards such as floods, heatwaves and droughts. This in turn can limit emergency expenditures (estimated between USD5,000-15,000 per primary health care facility per year) and reduce productivity losses associated with preventable climate-sensitive diseases.
- Improvements in infrastructure efficiency, particularly in areas such as water management, will help lower the operational costs of health facilities. These savings can allow facilities to reallocate limited operational budgets toward expanding essential health services.
- Strengthening supply chain resilience will improve the storage and management of essential medicines and supplies, reducing wastage and minimizing stockouts that can interrupt service delivery.
- Ensuring continuity of services, including food security and nutrition during climate shocks will help maintain community trust and reliance on public health facilities, which is essential for progress toward universal health coverage and financial protection for vulnerable populations.

Social Benefits:

- The project will improve access to primary health care services during climate hazards, which is particularly important for poor, rural and elderly populations who often have limited alternatives for seeking care.
- Through the introduction of early warning systems and strengthened community awareness, the project will contribute to reducing mortality and morbidity linked to climate-sensitive diseases and extreme weather events.
- Gender equity considerations are integrated throughout the project. Activities will include targeted engagement with pregnant women and lactating mothers, households with the children under the age of five, who face heightened vulnerability to thermal stress and climate-related health risks, as well as broader efforts to address gender-specific climate-

health vulnerabilities.

- Community resilience will be strengthened through participatory adaptation planning. Communities will work with health authorities to co-develop local action plans, helping to build social cohesion while strengthening collective capacity to anticipate and respond to climate-related health risks.

Environmental Benefits:

- The project will introduce climate resilient WASH systems in health facilities to support more sustainable water use, reduce water losses, improve wastewater and sanitation management, and limit contamination of soil and water sources. By reducing exposure pathways for water- and soil-borne diseases, these systems will protect environmental health.
- The solarization of HCFs, in addition to improving service continuity and energy support for heat stress management, will help to reduce greenhouse gas emissions and reliance on diesel generators, improving energy efficiency, and lowering the carbon footprint of essential health services.

Vulnerable Groups Focus:

The project places particular emphasis on populations that are most exposed or sensitive to climate-related health risks:

- Children under 5 years and older persons, who are especially susceptible to heat-related illness, will benefit from household-level heat-health action plans and improved community alert systems.
- Pregnant women and lactating mothers, who face higher vulnerability to both heat stress and infectious diseases, will receive targeted risk communication and strengthened facility-based care protocols.
- Outdoor workers, including agricultural workers and construction workers exposed to occupational heat stress, will be supported through engagement with employers and the promotion of workplace adaptation measures.
- Low-income and rural households, which face compounded access barriers during extreme weather and heightened exposure to climate-related health risks, will benefit from stronger community engagement in identifying and implementing behavioral adaptations.

Environmental and Social Policy Compliance:

The project has been designed to fully comply with the Adaptation Fund Environmental and Social Policy. This includes ensuring that communities are meaningfully engaged throughout the project cycle and that their informed consent is obtained for activities that affect them. Stakeholder consultations will be inclusive, with particular efforts made to ensure the participation of vulnerable groups.

Infrastructural improvements to health care facilities, including climate-resilient WASH upgrades and solarization, will entail only minor rehabilitation, retrofitting and installation works within existing facility premises. No greenfield construction, land acquisition or physical displacement is envisaged. The project will comply with the Adaptation Fund Environmental and Social Policy and Gender Policy and will be implemented in accordance with the UN's Environmental and Social Standards Framework and applicable national environmental, social, health and safety regulations. [16] All proposed works will be subject to site-specific

environmental and social screening, and any potential risks related to construction impacts, water-source protection, wastewater and sanitation management, occupational and community health and safety, infection prevention, waste management, and solar equipment or battery disposal will be managed through proportionate mitigation measures, including site-specific Environmental and Social Management Plans where required, prior to and during implementation.

Gender considerations are integrated into the project design, including specific targets to support women's participation in training activities and decision-making processes. In addition, all procurement and infrastructure-related activities will adhere to recognized labor standards to ensure safe and fair working conditions throughout project implementation.

C. Describe or provide an analysis of the cost-effectiveness of the proposed project/programme.

The proposed project is designed to be highly cost-effective by maximizing health and adaptation benefits per dollar invested. The selection of at least 100 health care facilities across at least three provinces, serving an estimated 500,000 people, yields a cost-effectiveness ratio of less than 10 USD per capita, which compares favourably with the avoided health burden and economic losses associated with climate-related illnesses and disruptions to essential services. The integrated design—combining facility-level resilience, climate-informed service delivery, community engagement, and systems strengthening—reduces the risk of costly health outcomes and prevents redundant, siloed investments (e.g. stand-alone infrastructure or communication projects that do not address underlying system gaps).

Cost-effectiveness is further enhanced by building on existing health system structures, including primary health care facilities, provincial and district health authorities, health information systems, and community health networks, rather than establishing parallel delivery mechanisms. Using a single investment package to deliver multiple adaptation benefits—reducing physical vulnerability of facilities, improving continuity of essential services during floods, droughts, heatwaves and other hazards, strengthening early warning and anticipatory action, and improving community-level protective behaviours—optimizes resource use. Over time, institutionalized CRESHCF standards, climate-health protocols, training modules, and monitoring tools within Ministry of Health systems will reduce the need for repeated small-scale retrofits, lower unit costs for replication, and decrease emergency response expenditures. As a result, the project provides strong value for money both through direct benefits to participating facilities and their catchment populations, and by establishing a scalable adaptation model that government and partners can expand to additional primary health care facilities after project completion.

D. Describe how the project/programme is consistent with national or sub-national sustainable development strategies, including, where appropriate, national adaptation plan (NAP), national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.

The project directly supports:

- ***National Climate Change Action Plan for Public Health 2020-2024 (extended to 2025):***
The project contributes to the plan's objective of strengthening the resilience of Cambodia's health service delivery system to respond to and cope with the impacts of

climate change and disaster risks. In particular, it supports efforts to improve preparedness, strengthen health facility resilience, and enhance surveillance and early warning mechanisms for climate-sensitive health risks. [17]

- ***Cambodia Climate Change Strategic Plan (2024-2033)***: The project aligns with the strategic outcome that calls for expanding compliance with WHO guidance on Climate-Resilient and Environmentally Sustainable Health Care Facilities (CRESHCF). It also supports national efforts to strengthen health-related early warning systems and to better align technologies and data systems with internationally recognized standards for climate-informed health surveillance and response. [18]
- ***Cambodia's Nationally Determined Contribution (NDC) 3.0 (2025)***: The project is consistent with Cambodia's updated national climate commitment, which strengthens adaptation action under human health, WASH, climate risk management, and resilient social services among priority areas for protecting communities from climate impacts. By improving climate resilience of primary health care facilities, strengthening interoperability of climate-informed surveillance and disease-based early warning systems with such systems outside the health sector, and enhancing community-level preparedness and protective behaviors, the project contributes directly to the implementation of NDC 3.0 adaptation priorities in the human health sector. [19]
- ***Cambodia the third National Strategy for Food Security and Nutrition (NSFSN), 2024-2028***: The project will contribute to the strategic outcomes of NSFSN of improving nutrition for children under the age of five years and promoting healthy diets in the country and National Strategic Plan for Rural ASH. Importantly, the CRESHCF will serve as the strategic implementation mechanism to support the Pentagonal Strategy-Phase I of the Royal Government of Cambodia. [20]
- ***Sustainable Development Goals***: The project contributes to several SDGs, including **SDG 3 (Good Health and Well-being)** through strengthening resilient health services; **SDG 5 (Gender Equality)** by addressing gender-specific climate-health vulnerabilities and promoting women's participation in adaptation activities; **SDG 6 (Clean Water and Sanitation)** through improved water management and water security measures; and **SDG 13 (Climate Action)** by enhancing adaptation capacity and resilience of the health sector and communities to climate-related risks.

E. 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 adheres to:

The project has been designed to comply with relevant national technical standards and to fully align with the Environmental and Social Policy of the Adaptation Fund. Compliance with Cambodian environmental regulations will be ensured through the preparation of an Environmental and Social Impact Assessment (ESIA) in accordance with national Environmental Impact Assessment (EIA) guidelines during the project preparation phase. The assessment will identify potential environmental and social risks and inform the integration of appropriate mitigation measures throughout project implementation.

Technical components of the project will follow recognized international standards. Digital systems developed under the project will be designed in line with WHO guidance for health information systems to ensure interoperability, data quality, and long-term usability within the

national health system. Similarly, the early warning components will follow WHO recommendations on climate-sensitive disease surveillance and public health early warning systems, ensuring that the approach is consistent with global best practices while remaining adapted to the Cambodian context.

The project will also fully comply with the Adaptation Fund's Environmental and Social Policy. A gender analysis will be conducted to ensure that project activities address gender-related vulnerabilities and promote equitable access to project benefits. Stakeholder consultations will be undertaken throughout the design and implementation phases to ensure that community perspectives are reflected in project activities. Based on the current assessment, the project is not expected to involve involuntary resettlement or to adversely affect the rights or livelihoods of indigenous peoples.

F. Describe if there is duplication of project/programme with other funding sources, if any.

The project complements but does not duplicate:

- **UNICEF WASH programs:** Addresses water and sanitation in schools and communities; whereas this project addresses health facility water systems for service delivery. WHO and UNICEF collaborate on the Joint Monitoring Programme (JMP) initiative that tracks global progress on WASH in schools, households and health care facilities.
- **UNICEF Children's Climate Risk Index for Cambodia:** Detailed, child-centred data at the commune level, highlighting areas where children are most at risk to climate and environmental hazards (namely drought, flooding, heat, high-speed wind, vector-borne diseases, and air pollution) due to a lack of essential services.
- **ADB's Resilient Health Infrastructure Project:** Focuses on infrastructural upgrading of priority hospitals to be more climate-resilient, whereas this project will focus on behavioral and infrastructural adaptations at primary health care-level.
- **UNDP's "Advancing Early Warning for All" Project (2026–2030):** Focuses on multi-hazard disaster early warning for climate- and weather-related events across four high-risk provinces (Ratanakiri, Kratie, Stung Treng, and Banteay Meanchey). Whereas this project will focus on enabling health early warning systems to integrate with existing hazard monitoring, forecasting, and warning communication infrastructure for a more coherent, whole-of-government approach.
- **World Bank:** Through the Health Equity and Quality Improvement Project, they organized a National Climate and Health Vulnerability Assessment in 2024². The key aspects of capacity and adaptation assessment were not covered, and the vulnerability measures identified helped to inform the development of this proposal. The last comprehensive National Climate Change and National Climate Change Health V&A led by the government took place in 2010.

² <http://documents1.worldbank.org/curated/en/099070324141522773/pdf/P5019931c19b1f03a18eb51ea32a6e3845e.pdf>

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

The project includes a strong learning and knowledge management component designed to capture practical lessons-learned from implementation and support their dissemination across the health system and beyond. Regular learning reviews will be organized on a quarterly basis with health centre staff, district and provincial health managers, other relevant departments as needed, and community representatives. These sessions will provide a structured opportunity to document successes, identify challenges encountered during implementation, and adapt approaches where needed.

Experiences from the project will be translated into a range of knowledge products, including case studies from each participating district, best practice guidance, and practical adaptation toolkits for health facilities. These materials will be shared with national health authorities and relevant regional health networks to support broader learning on climate-resilient health systems.

The project will also promote regional knowledge exchange. Cambodian health teams will participate in regional forums related to Climate-Resilient and Environmentally Sustainable Health Care Facilities (CRESHCF), while opportunities will be explored to host practitioners from other ASEAN countries interested in learning from Cambodia's experience.

In addition, evidence generated through project implementation will be synthesized into summary briefs examining the effectiveness, cost-effectiveness and sustainability of the adaptation measures introduced. These briefs will support the Ministry of Health mainly and concerned ministries in refining policies and strategies related to climate change and health.

Finally, lessons learned will be integrated into national systems to ensure that knowledge generated through the project informs long-term practice. This will include updating relevant national guidelines, strengthening health worker training curricula, and contributing to the development of Ministry of Health protocols on climate and health.

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

Stakeholder consultation conducted during concept development:

The following stakeholders were consulted through consultative meetings:

- Ministry of Health (Preventive Medicine Department and National Institute of Public Health)
- Ministry of Environment
- Council for Agricultural and Rural Development
- Ministry of Education, Youth and Sport

Civil society and technical partners:

- UNICEF Cambodia

Stakeholders which will be consulted in proposal development process:

Civil society and technical partners:

- NGOs working on health, water, and environment
- Academic institutions

Health facility and health worker representatives:

- Consultation with Provincial health departments

Community consultations:

- Consultation with commune representatives

Gender considerations in consultations:

- Health worker and VHSG consultations including women health care staff

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

Cambodia's PHC system is increasingly disrupted by climate hazards—heat waves, floods, droughts, and air pollution—which simultaneously damage facility infrastructure and drive higher burdens of climate-sensitive diseases such as dengue, diarrheal disease, respiratory illnesses, and heat-related conditions. Standard health system investments have not been designed to anticipate or manage these climate-related shocks, and most primary health care facilities currently lack climate-resilient infrastructure, links to multi-hazard early warning systems, and staff trained on climate-health. The project therefore focuses on the incremental measures required for facilities, systems, and communities to cope with climate variability and change; these measures would not be implemented or would be implemented only partially and in a non-climate-informed way, through business-as-usual development spending.

The Adaptation Fund will support adaptation activities addressing the incremental costs of climate change with focus on addressing:

1. Interconnected vulnerabilities:

Because the same climate hazards often damage infrastructure, disrupt supplies, and increase disease burdens simultaneously, it is neither practical nor accurate to fully separate climate-specific from general system-strengthening costs. For example, a climate-resilient water system in a PHC both ensures safe service delivery during drought and improves day-to-day operations; however, its design (storage capacity, protection from flood contamination, redundancy) and siting are driven by climate risk analyses supported by this project. The project therefore adopts a systems approach in which integrating adaptation into routine health service delivery is more cost-effective than implementing isolated, hazard-specific pilot projects in parallel to the health system. The requested budget represents the cost of achieving climate-resilient PHC models that can be maintained and scaled by government after the project, rather than a marginal add-on to existing development projects.

2. Efficiency: Integrating climate adaptation into routine health service delivery is more cost-effective than standalone adaptation projects.

Integrating climate adaptation into routine health service delivery allows Cambodia to strengthen resilience using existing systems, staff, and platforms, rather than creating parallel, standalone adaptation projects. By embedding climate-risk assessments, early warning triggers, and climate-sensitive protocols into primary health care operations, the project reduces duplication of infrastructure, supervision, and training costs. This integrated approach also generates long-term efficiencies: once Climate Resilient and Environmentally Sustainable Health Care Facilities standards, climate-health curricula, and data flows are institutionalized, they can be applied nationally at marginal cost, whereas isolated pilots

would require repeated start-up investments. As a result, each dollar invested delivers both core health benefits and reduced climate-related disruption, improving the value for money of Adaptation Fund resources.

Where project activities resemble “normal” development—such as strengthening WASH in facilities, upgrading storage, or enhancing data systems—they have been designed and budgeted only to the extent that they are necessary for climate resilience. For example, UNICEF WASH programmes focus on schools and communities, whereas this project adapts facility-level water and sanitation systems specifically so that PHCs remain operational and safe during floods and droughts. Similarly, ADB’s resilient hospital infrastructure project targets larger hospitals, while this project addresses both infrastructure and behavioral adaptation in primary-level facilities that would otherwise be left behind. The proposed Adaptation-funded activities are thus justified as the adaptation-relevant share of broader system improvements and are sufficient to deliver the intended adaptation outcomes even in the absence of additional co-financing.

3. National priorities:

The project is fully grounded in Cambodia’s existing national climate and health agenda. Cambodia’s National Climate Change Action Plan for Public Health explicitly positions health system strengthening—including resilient facilities, early warning, and climate-sensitive surveillance—as a core pathway for health adaptation, and this project operationalizes that vision at primary care level. By piloting Climate-Resilient and Environmentally Sustainable Health Care Facilities, integrating climate and disease data into health information systems, and embedding climate-health protocols in routine service delivery, the project translates national priorities into concrete, scalable practice.

Budget Justification by Component:

- **Component 1 (Assessments):** \$980,000

Activities such as CRESHCF-based facility vulnerability assessments, integration of climatic, epidemiological, and socio-economic data into multi-hazard risk maps, and community behavioral risk assessments are required because climate hazards are changing the frequency, intensity, and spatial distribution of health risks. Routine health planning in Cambodia does not currently include systematic analysis of climate-disease linkages or mapping of hazard exposure for PHCs, so this analytical work represents the cost of tailoring service delivery and infrastructure to climate risk rather than to average historical conditions. Without this component, infrastructure adaptations or capacity-building would proceed in a generic way and may fail to protect services during heat waves, floods, or droughts in the highest-risk districts.

- **Component 2 (Digital systems):** \$560,000

The development of frameworks, tools, and tested plans to integrate weather forecasts, climate-sensitive disease indicators, and facility vulnerability data into health information systems is explicitly motivated by the need for early warning and anticipatory action in a changing climate. Current health information systems focus on retrospective reporting and are not configured to receive or act on hazard alerts; the cost here covers system design, interoperability work, and change management so that PHCs receive real-time alerts and actionable guidance. Routine digital health investments would not bear the cost of linking

meteorological, environmental, and behavioral data to operational decisions in PHC facilities.

- **Component 3 (Infrastructure and capacity):** \$1,200,000

Improved backup water systems for droughts, flood-proof storage of medicines and supplies, and climate-responsive sanitation, including hand-washing facilities in health care facilities—are specifically designed to keep PHCs functional during climate extremes that are already disrupting operations using a self-sustaining innovative model tried and tested in Viet Nam most recently. [21] Likewise, technology which reduces exposure of health hazards from health care waste management —such as safer segregation, on-site treatment, and climate-resilient temporary storage and disposal options—will also be explored and, where feasible, integrated into facility upgrade packages

Sensitizing health care staff on climate-sensitive disease management, heat stress protocols, and climate-responsive supply chain strategies, and developing CRESHCF-aligned SOPs and clinical practice guidelines are adaptation-specific capacities that would not be prioritized under routine in-service training. In the absence of climate change, such targeted upgrades and protocols would not be required at this scale to maintain continuity and safety of care.

- **Component 4 (Community engagement):** \$720,000

Formative research on climate-health risk perceptions, co-creation of multi-hazard and heat-health action plans, and design of early-warning social and behavior change messages targeted at groups such as pregnant women, outdoor workers, and older people are all driven by climate-specific vulnerabilities. Standard health promotion activities might address general hygiene or maternal health, but they do not typically include guidance on recognizing when to seek care in response to multi-hazard early warnings. The funding requested allows the project to tailor communication content, channels, and community engagement mechanisms to climate-related risks and to link them to facility-level response protocols.

- **Component 5 (M&E and learning):** \$600,000

The monitoring framework focuses on climate-sensitive disease trends, facility functionality under hazard conditions, and adoption of adaptation behaviors, rather than generic service coverage indicators. Learning events, case studies, and adaptation toolkits are oriented toward scaling CRESHCF and multi-hazard approaches, and the project's work aims to embed these climate-specific standards and practices into the Ministry of Health's protocols, supervision tools, and training curricula. These institutionalization costs are necessary to sustain adaptation beyond the project period; they are not required to maintain routine PHC services under historical climate norms.

- **Execution costs:** \$425,303

Execution and management costs cover coordination across health, water, statistics, and community actors to implement climate-specific interventions at facility and community level, as well as safeguards, Environmental and Social Impact Assessment, and compliance with the Adaptation Fund's Environmental and Social and Gender policies. These are directly related to delivering a multi-sector adaptation project that must manage climate-related risks, not to expanding routine service delivery.

- **Implementing Entity fee:** \$381,250

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

Sustainability has been considered from the outset of the project design to ensure that the results continue beyond the life of the programme. The approach focuses on strengthening existing systems and capacities rather than creating parallel structures, so that the interventions can be maintained and expanded through government systems.

At the institutional level, the project will work closely with the Ministry of Health to ensure that climate-resilient and environmentally sustainable health care facility (CRESHCF) approaches are embedded within national protocols, health worker training curricula and planning frameworks. This will enable the Ministry and subnational health authorities to continue implementing and expanding these approaches after the project ends. District and provincial health offices will integrate climate resilience considerations into their routine supervision of health facilities and performance monitoring processes, ensuring that adaptation measures remain part of regular health system oversight.

Technical sustainability will be supported by building the capacity of the primary health care workforce and local technicians. Health staff will be trained to operate and carry out basic maintenance of installed systems and equipment, while district-level technicians will be able to support more specialized servicing. The digital early warning system introduced through the project will be integrated into existing health information systems so that it becomes part of the routine data and decision-making processes of the health sector. At the community level, village health support groups and facility staff will be equipped to maintain key adaptation practices such as heat-health action plans and safe water practices during floods.

The project also places strong emphasis on social sustainability. Participatory planning with communities will ensure that adaptation measures respond to local needs and that communities feel ownership over the interventions. This participatory approach is expected to encourage continued adoption of protective behaviours and sustained engagement with health facilities. Health worker motivation will also be supported through opportunities for professional development and through recognition of their role in protecting communities from climate-related health risks.

Operational sustainability will be reinforced through a strong monitoring and learning component. The project will generate evidence on which interventions are most effective and cost-efficient, enabling the Ministry of Health to prioritize resources for maintaining the most impactful measures. Lessons learned from the pilot sites will be systematically documented and shared with other health facilities, creating opportunities for replication and scale-up within Cambodia's health system without continued external project support.

K. 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
<i>Compliance with the Law</i>		Potential risk of misalignment with existing laws will be mitigated through compliance assessment as part of planned activities.
<i>Access and Equity</i>		Access and equity measures will be integrated into M&E activities.
<i>Marginalized and Vulnerable Groups</i>		Impact and unintended consequences must be further assessed through planning activities.
<i>Human Rights</i>	√	
<i>Gender Equality and Women's Empowerment</i>	√	
<i>Core Labour Rights</i>	√	
<i>Indigenous Peoples</i>	√	
<i>Involuntary Resettlement</i>	√	
<i>Protection of Natural Habitats</i>	√	
<i>Conservation of Biological Diversity</i>	√	
<i>Climate Change</i>		Climate change resilience is an inherent focus of the proposed project so impact will be assessed further.
<i>Pollution Prevention and Resource Efficiency</i>		Pollution Prevention and Resource Efficiency are also core aspects of the proposed project so impact will be assessed further.
<i>Public Health</i>		Impact on public health will be included in impact assessment of this project.
<i>Physical and Cultural Heritage</i>	√	
<i>Lands and Soil Conservation</i>	√	

PART III: IMPLEMENTATION ARRANGEMENTS

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

Project Objective(s)	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant amount (USD)
Reduce physical vulnerability of PHCs to climate hazards through implementation of CRESHCF and multi-hazard adaptation measures	Percentage of target PHCs with completed multi-hazard risk maps; Proportion of hazards addressed through CRESHCF operationalization among the target PHCs; Number of hazard events where PHCs remain operational	Increased resilience and adaptive capacity of health and social care systems to address the impacts of climate variability and change	Number of health care facilities with improved capacity to cope with climate change impacts; Number of beneficiaries with enhanced adaptive capacity	980,000
Integrate climate-sensitive disease surveillance and multi-hazard early warning systems enabling anticipatory action	Early warning system operational; Number of PHCs receiving timely climate and disease alerts; Percentage of alerts resulting in protective action	Increased adaptation and resilience of health and livelihoods to climate variability and change	Number of devices deployed for early warning; Number of people within catchment area of health care facilities with access to early warning systems	560,000
Strengthen capacity of health workforce for climate-sensitive disease management and adaptation and infrastructural adaptations	Number of health care workers trained in CRESHCF and climate-health integration; Percentage of staff demonstrating competency in symptom-based care for climate-sensitive diseases; Percentage of target PHCs with improved infrastructure resilience	Strengthened adaptive capacity and resilience of provinces to climate change impacts	Number of individuals trained in climate-resilient practices; Percentage of targeted institutions implementing climate-smart practices	1,200,000
Enable community-level protective behaviors during climate hazards	Percentage of target population aware of climate health risks and early warning signals; Percentage adopting protective behaviors (seeking care early, using safe water) during hazard events	Reduced vulnerability and increased resilience of communities to climate change impacts	Number of community members aware of climate risks; Percentage of targeted communities implementing risk reduction measures	720,000
Establish sustainable monitoring and institutional adaptation	Number of MOH policies reviewed and updated to include climate-resilience; Number of knowledge products (case studies, practice briefs) published and disseminated to relevant stakeholders	Strengthened institutional and regulatory frameworks and systems for climate resilience	Number of policies and regulations that reflect climate-resilience targets; Percentage of health care facilities that have integrated at least one climate adaptation	600,000

PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. Record of endorsement on behalf of the government

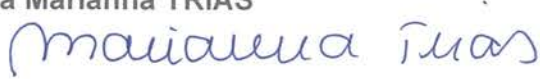
Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:

H.E. CHOUP Paris, Secretary of State, Ministry of Environment	Date: 23 July 2026
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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

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plan (Cambodia Climate Change Strategic Plan (2024-2033), Circular Strategy on Environment (2023-2028), Long-term Strategy for Carbon Neutrality (LTS4CN) and the Nationally Determined Contribution (NDC3.0)) and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy and the Gender 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.

Name & Signature: Dr Jaana Marianna TRIAS 	
Implementing Entity Coordinator	
Date: 03 August-2026	Tel. and email: +855 023216610; wpkhmwr@who.int
Project Contact Person: Dr Ada MOADSIRI	
Tel. And Email: +855012462653; moadsiria@who.int	



KINGDOM OF CAMBODIA
Nation Religion King



Ministry of Environment

N° : 5804 / 0726 MoE

Phnom Penh, 23 July 2026

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

Subject: Endorsement for Building Climate Resilience for Cambodia's Health Facilities and Workforce through Community-Led Multi-Hazard Adaptation

In my capacity as designated authority for the Adaptation Fund in Cambodia, I confirm that the above national project proposal is in accordance with the government's national priorities, especially with the specific commitments to the Cambodia Climate Change Strategic Plan (2024-2033), Circular Strategy on Environment (2023-2028), Long-Term Strategy for Carbon Neutrality (LTS4CN) and Nationally Determined Contribution (NDC 3.0) in implementing adaptation activities to reduce adverse impacts and risks, posed by climate change in Cambodia, while strengthening the long-term resilience of vulnerable communities and primary health care facilities, contributing to sustainable development in Cambodia.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by the World Health Organization and executed by the Ministry of Environment, the Ministry of Health, the Council for Agricultural and Rural Development, and UNICEF Cambodia.

I sincerely hope that this proposal will be considered favorably by the Adaptation Fund. *B.P.*

Yours sincerely,



H.E CHOUP Paris
Secretary of State
Ministry of Environment



Revised PFG Submission Form¹
Project Formulation Grant (PFG)

Submission Date: 03 August 2026

Adaptation Fund Project ID: AF00000588

Country/ies: Cambodia

Title of Project/Programme: Building Climate Resilience for Cambodia's Health Facilities and Workforce through Community-Led Multi-Hazard Adaptation

Type of IE (NIE/RIE/MIE): Multilateral Implementing Entity

Implementing Entity: World Health Organization

Executing Entity/ies: Ministry of Health, Ministry of Environment, Council for Agricultural and Rural Development (CARD), UNICEF Cambodia

A. Project Preparation Timeframe

Start date of PFG	04-JAN-2027
Completion date of PFG	30-JUN-2027

B. Proposed Project Preparation Activities (\$)

List of Proposed Project Preparation Activities	Output of the PFG Activities	US\$ Amount	Budget note²
Local consultations with sub-national governments to validate the problem analysis and proposed activities	A confirmed methodology for multi-hazard mapping in the three selected provinces confirmed with sub-national governments	25,000	To ensure the Adaptation Fund proposal will align national and local priorities and that key stakeholders at sub-national level are meaningfully engaged in project design to maximize operational feasibility and community impact. Validating the problem analysis and draft activities at local level helps identify gaps in data, institutional capacity, and coordination, and allows refinement of the multi-hazard mapping approach so it can

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.

			be applied consistently across the three provinces. Includes consultancy fees for the drafting of multi-hazard mapping methodology, travel and engagement costs.
Preliminary environmental and Social Risk Analysis in line with the Adaptation Fund Environmental and Social Policy	An Environmental and Social Management Plan (ESMP)	30,500	A preliminary risk analysis will help identify potential adverse impacts on vulnerable groups and ecosystems and define appropriate mitigation measures to be incorporated into project design. Includes consultancy fees and associated costs for coordinating the development of an ESMP.
National and subnational workshops, consultations, drafting for the Adaptation Fund Proposal Development and Validation	Detailed proposal including activities and their implementation arrangements, as well as governance structures, risk management measures, and sustainability strategies	36,000	National and subnational workshops with government, technical agencies, and other stakeholders to ensure the development of the project's theory of change, implementation arrangements, roles of executing entities, and coordination mechanisms are consultative. Multi-stakeholder consultation is necessary to validate the proposed interventions, address all review criteria, and ensure consensus among national and sub-national partners. Professional fees for the facilitated drafting and validation processes. Consultative meetings and workshop costs.
Implementing Entity Fee	IE will provide administrative and technical support for carrying out the consultations, risk analyses, workshops, and the development of the full proposal	7,778	
Total Project Formulation Grant		99,278	

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
Dr Jaana Marianna TRIAS		08/03/2026	Dr Ada MOADSIRI	+855 012462653	moadsiria@who.int

References

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