**Terminal Evaluation**

Building resilience of health systems in Asian LDCs to climate change

**Final Report**

**August 2024**

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## **Acronyms and Abbreviations**

ATACH Alliance for Transformative Action on Climate and Health

CO Country Office

COP Conference of the Parties

CU Commissioning Unit

CRESH Climate Resilient and Environmentally Sustainable Healthcare Facilities

DOH Department of Health

DFID Department for International Development (United Kingdon)

GCF Green Climate Fund

GDP Gross Domestic Product

GEF Global Environment Facility

GIZ Deutsche Gesellschaft fur Internationale Zusammenarbeit

HCF Healthcare Facilities

HQ Headquarters

HNAP Health-National Adaptation Plan

LDC Least Developed Country

LDCF Least Developed Countries Fund

MoH Ministry of Health

MOU Memorandum of Understanding

MTR Mid-Term Review

NAP National Adaptation Plan

NAPA National Adaptation Programme of Action

NAP-GSP NAP – Global Support Programme

PAC Project Appraisal Committee

PIF Project Identification Form

PIR Project Implementation Report

PMC Project Management Cost

PMU Project Management Unit

PPG Project Preparation Grant

ProDoc Proposal Document

RO Regional Office

SDG Sustainable Development Goal

SEAR South-East Asia Region

SOP Standard Operating Procedure

TE Terminal Evaluation

TOR Terms of Reference

TWG Technical Working Group

UNDP United Nations Development Programme

UNFCCC United Nations Framework Convention on Climate Change

WASH Water, Sanitation and Hygiene

WASHFIT WASH Facility Improvement Tool

WPR Western Pacific Region

WSP Water Safety Plan

WHO World Health Organization

## **Authors**

The Terminal Evaluation was coordinated and implemented by a multi-disciplinary team of experts with extensive experience across climate change and health programs, and technical expertise in participatory research and evaluation methods, including in diverse cultural, geographic and multi-stakeholder settings.

Core team members and responsibilities included:

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We also extend our appreciation to all stakeholders who provided their time, expertise and input to the evaluation.

## **1. Executive Summary**

### **Project Overview**

|  |  |  |  |
| --- | --- | --- | --- |
| **Project title** | Building resilience of health systems in Asian LDCs to climate change | | |
| **UNDP Project ID (PIMS #)** | 5400 | **PIF Approval Date** | 2 March 2016 |
| **GEF Project ID (PIMS #):**  Quantum ID**:** | 6984 | **CEO Endorsement Date:**  **Project Document (ProDoc) Signature Date:** | 10 January 2018 |
| 00106651 | 22 February 2019 |
| **Country(ies)** | Bangladesh, Cambodia, Timor Leste, Lao PDR, Myanmar, Nepal | **Date project manager hired** | February 2019 (HQ). Regional PMs also in place |
| **Region** | Asia-Pacific | **Inception Workshop date** | 11 – 13 June 2019 |
| **Focal Area** | Climate Change Adaptation | **Midterm (MTR) Review completion data:** | 10 July 2021 (draft)  13 August 2021 (final) |
| **Terminal Evaluation commencement date:** | 30 May 2024 |
| **Terminal Evaluation completion date:** | 19 July 2024 (draft)  31 July 2024 (final) |
| **GEF Focal Area Strategic Objective:** | Accelerate Structural Transformation for Sustainable Development | **Planned project closing date** | 21 February 2023 |
| **Trust Fund [indicate GEF, TF, LDCF, SCCF, NPIF]: Executing Agency/Implementing Partner:** | LDCF | **Revised project closing date:** | 22 August 2024 |
| United Nations Development Programme | | |
| **Other execution partners** | World Health Organisation  Government of Bangladesh (Ministry of Health)  Government of Cambodia (Ministry of Health)  Government of Lao PDR (Ministry of Health)  Government of Nepal (Ministry of Health and Population)  Government of Myanmar (Ministry of Health)  Government of Timor Leste (Ministry of Health | | |

|  |  |  |  |
| --- | --- | --- | --- |
| Project Financing | *At CEO endorsement (USD)* | *At Midterm Review (USD - as of 30 June 2021)* | *At Terminal Evaluation (USD as of 30 Jun 2023)\** |
| [1] GEF Financing: | 9,000,000 | Approx. $2,506,258 (30 June 2021) | $4,604,247 (30 June 2023) |
| [2] UNDP contribution: | 0 | 0 | 0 |
| [3] Government: | 17,985,200 | 7,553,784 | 11,639,916 |
| [4] Other partners: | 9,076,400 | 3,812,088 | 7,035,613 |
| [5] Total co-financing [2 + 3 + 4]: | 27,061,600 | 11,365,872 | 18,675,529 |
| PROJECT TOTAL COSTS [1 + 5] | 36,061,600 | 13,872,130 | 23,279,776 |
| \*The Terminal Evaluation overlapped with the final reporting period (2023/2024 Financial Year) and hence acquittal information for the final 12-month implementation period was not available for inclusion in this report. Multi-year project budget is reported to be on-track for full acquittal by project end (see **section 5.3**). | | | |

### **Project Description**

Climate change and climate change impacts have serious impacts on health, including but not limited to dehydration, increased incidence of water and vector-borne diseases, malnutrition related to reduced crop yields, and physical and psychological effects of extreme events. In vulnerable countries where health systems are not able to plan, prepare for or respond to these challenges, the impacts can be particularly devastating.

Asian least developed countries (LDCs) have limited health care system and technical capacity to effectively integrate climate-related risks into policy, planning, and regulatory frames, and into interventions to effectively manage the burden of climate-sensitive health outcomes. Existing weather/climate early warning systems managed by national hydro-meteorological organizations lack systematic data from regions and areas of the countries with high risks of climate-sensitive health outcomes. Climate information services are not adequately tailored to the needs of public health professionals. And primary health care facilities are ill-equipped to prepare for and respond to extreme weather events and climate-related disease outbreaks, lacking information, resources and cost-effective methods and technologies to provide adequate water and sanitation services during extreme events.

Recognizing these challenges, the countries prioritized adaptation to the health risks of climate variability and change. In consultation with stakeholders, the United Nations Development Programme (UNDP) Global Environment Facility (GEF) project on ***Building Resilience of Health Systems in Asian LDCs to Climate Change*** was designed to increase the capacity of national health systems and institutions, and sub-level actors, to respond to and manage long-term climate-sensitive health risks in six Asian LDCs, namely, Bangladesh, Cambodia, Lao PDR, Myanmar, Nepal, and Timor-Leste. Activities in Myanmar were suspended by GEF in December 2021, with remaining funds reallocated to other project activities.

The project aimed to progress the following **complimentary outcomes across all six countries**:

* **Outcome 1:** Institutional capacities are strengthened to effectively integrate climate risks and adaptation options in health sector planning and implementation
* **Outcome 2:** Effective decision-making for health interventions is enabled through generation of information and improved surveillance and/or early warning systems
* **Outcome 3:** Climate resilience is enhanced in health service delivery
* **Outcome 4.1:** Enhanced regional cooperation and knowledge exchange for promoting scale-up and replication of interventions
* **Outcome 4.2**: Health-National Adaptation Plans (HNAP) are effectively integrated into ongoing National Adaptation Plan (NAP) processes

### **Evaluation Ratings Table**

The project has achieved or is on track to achieve its overall objective and corresponding end-of-project outcome and output targets. Country level outcome indicators and activities are clearly aligned to overall outcomes and there has been significant progress across several activities, particularly in relation to development of HNAPs, Vulnerability and Adaptation (V&A) Assessments, and capacity building activities for climate resilient health services.

**Summary of key findings and TE Ratings**

| **Measure** | **TE outcome rating[[2]](#footnote-3)** | **Achievement Description** |
| --- | --- | --- |
| **Project Results and Effectiveness** | **Project Objective:** Achieved – HS | HNAPs were completed and endorsed by all countries, with two now being updated (Bangladesh and Nepal). Comprehensiveness and quality of HNAPs was not within scope of this evaluation. National HNAP coordination mechanisms, such as Technical Working Groups (TWG), were established within MOH. Funding and accountability for HNAP implementation was a sustainability challenge, although some countries secured additional funding to mitigate these risks. |
| **Outcome 1.** Achieved - HS | Institutional capacity was enhanced in all countries through the development and finalisation of context-specific guidelines, tools, manuals and standards. Global and regional technical guidelines were adapted to national contexts, with evidence of government ownership through co-branding and rollout in national and sub-national training and capacity-building activities. |
| **Outcome 2**. Achieved – S | Vulnerability and adaptation (V&A) assessments were completed in all countries, with results directly informing HNAP review and updates in project countries. V&A comprehensiveness and quality was not within scope of this evaluation. All countries developed and piloted integrated climate-sensitive disease surveillance systems for select climate-sensitive health outcomes (dengue and diarrhoeal diseases most common), but there was uneven progress on wider rollout and scale-up, reflecting the diverse and varying contexts across countries. Limited availability of historical meteorological and disease data hampered timely development and integration of surveillance systems in Cambodia and Timor-Leste. |
| **Outcome 3.** Achieved – HS | All countries supported activities to enhance climate resilience in health service delivery. These efforts primarily focused on Water, Sanitation and Hygiene (WASH) and waste management. Additional investment may be needed to address other aspects of low-carbon and climate-resilient health service delivery. The flexibility to co-design and tailor activities to local contexts was beneficial, but variation in intervention approaches and unclear beneficiary definitions hindered comparison and indicator measurement. Funding and responsibilities for the ongoing maintenance and operation of interventions remain challenging. |
| **Outcome 4.1**.  Achieved –HS | Regional cooperation and knowledge exchange between WHO and MOH stakeholders were enhanced throughout the project. COVID-19 challenges were addressed through virtual activities. Face-to-face learning, knowledge exchange, and networking opportunities, when possible, were highly valued. Engagement at regional and global climate and health forums, including the WHO-led Alliance for Transformative Action on Climate and Health (ATACH) and UNFCCC conference of the Parties (COP) health networks, were significant enablers of institutional leadership and country ownership. |
| **Outcome 4.2**  On track - MS | All countries engaged with UNDP but there was uneven progress on integration of HNAPs into NAPs. The project generally facilitated stronger intersectoral collaboration and coordination between the health and environment/climate sectors, however formalisation through institutional partnerships and implementation plans varied. UNDP has drafted a method to quantify the direct and indirect costs of climate change on health, to inform adaptation actions, but it was not possible to verify application or relevance to the project. Nepal, Bangladesh and Timor-Leste made significant progress in HNAP-NAP integration, providing a model of best practice. |
| **Evaluation Criteria and Cross-cutting measures** | **Project Implementation and Execution**  Achieved – S | Overall project implementation was successful, with positive achievements at all levels across stakeholder engagement, activity execution, project management, and governance systems. HQ, regional and country teams worked to adapt activities and management processes throughout to respond to external drivers and implement variations where needed, including during the COVID-19 pandemic. The longer implementation period enabled by the no-cost extension was critical for overcoming COVID-19 related delays and establishing effective project implementation systems. Technical support by WHO is likely to continue as climate change is now embedded in WHO workplans at all levels. UNDP/WHO implementation and oversight was enabled by effective governance and reporting systems, and strong implementing partnerships between WHO and MOH in country. A significant underspend had accumulated at commencement of the final year of implementation and there was uneven expenditure across project outcomes and the PMU. |
| **Monitoring & Evaluation**  Achieved – S | M&E systems were generally clear, consistent, and participatory, with some gaps around tracking country-level targets, beneficiary numbers, and measuring intervention impacts, such as through behaviour change or reduction in climate-sensitive health risks. |
| **Sustainability[[3]](#footnote-4)**  ML | Longer-term impact and sustainability of project activities is likely to have mixed success. Several activities achieved substantial country buy-in, particularly from MOH, including for HNAP development. Institutional capacity was strengthened through training and capacity building investments. There was a high degree of country ownership over core policy frameworks, including HNAPs and national guidelines and standards for climate change and health. The project also laid strong foundations through demonstration pilots for integrated surveillance systems and climate-resilient health service interventions (especially WASH and waste management). Overall, sustainability could be hampered by systemic challenges, including staff turnover within key agencies, limited funding within LDC governments and accountability mechanisms for HNAP implementation, and competing priorities across health and broader climate/environment sectors. Countries that identified and/or secured funding to scale-up project activities, including through partnerships with other development and climate funders and integration of health within NAP priorities, may provide learnings for other settings. |

### **Summary of key findings, conclusions and lessons learned**

#### Lessons Learned

**Successes and Strengths:**

1. **Institutional Collaboration and Coordination**: The project effectively integrated climate adaptation strategies within health sector plans, enabled by strong partnerships with Ministries of Health (MOH) and related sectors. This collaboration led to the development of HNAPs and successful piloting of Early Warning and Response Systems (EWARS) and integrated surveillance systems.
2. **Adaptive Management and Strategic Relevance**: Despite COVID-19 related and termination of activities in Myanmar, the project maintained its relevance and alignment with national and international climate and health priorities. Strong governance and stakeholder engagement systems allowed for tailored activities in diverse national contexts, increasing the project's prominence and ongoing strategic relevance as an initiative supporting climate-resilient health systems.
3. **Country Ownership, Flexibility, and Co-Design:** The project fostered strong partnerships and co-designed activities with government ownership over key policy documents like HNAPs and guidelines such as EWARS and WASH SOPs. The flexibility of GEF funds allowed for targeting innovative pilot interventions and tailoring activities to national priorities, enhancing the project's effectiveness.
4. **Evidence Base for Climate and Health**: By investing in updated Vulnerability and Adaptation (V&A) assessments and HNAPs, the project addressed critical knowledge gaps and provided a robust evidence base for future adaptation planning.
5. **Capacity Building and Knowledge Sharing**: The project developed various climate and health guidelines, training manuals and policies, improving knowledge and capacity among healthcare workers and policymakers. This enhanced understanding of climate change as a health issue and enabled design and implementation of local climate-resilient and low-carbon healthcare interventions, informed by regional and global guidance.
6. **Holistic Demonstration Projects**: GEF funds supported innovative interventions that combined national policy commitments with grassroots efforts to improve climate resilience in healthcare facilities. This approach built broad support at multiple levels and established a foundation for future funding.
7. **Leadership and Institutional Champions**: The project gained significant government support by being profiled at major climate and health forums. The Ministry of Health became a driving force for climate change and health initiatives, with the project serving as a model for other countries and regions.

**Challenges and Barriers**

1. **COVID-19 and Inception Delays**: Initial delays due to negotiations and the COVID-19 pandemic impacted project implementation. Despite this, the project adapted and addressed backlogs successfully, benefiting from an 18-month no-cost extension.
2. **Staff Turnover and Technical Capacity**: Staff turnover within key operational partners affected institutional knowledge and continuity. Capacity building and hiring consultants helped mitigate these issues, though short-term engagements posed challenges for knowledge retention.
3. **Ensuring Climate-Informed Interventions**: Interventions under Outcome 3 could have been linked more clearly to V&A and HNAP findings, which are crucial for sustainable climate adaptation. HNAPs are likely to be more sustainable with longer-term gains if local teams are leading their development, and this investment of time and resources in the early stages of the project would help ensure the identification of climate-informed adaptation activities.
4. **Human Resources**: While the project leveraged GEF funding with in-kind support from WHO and MOH, adequate resourcing remained a challenge. Greater funding flexibility during project design could have enhanced capacity to advance beyond pilot phases.
5. **Data Availability and Infrastructure**: Poor baseline data and challenges in data sharing hindered the development of integrated surveillance systems. Clearer roles and responsibilities for implementing these systems could support ongoing progress.
6. **Applied Research**: National stakeholders expressed interest in climate and health research to fill evidence gaps. Collaborating with universities could be a beneficial approach for future projects.
7. **Sustainability and Longer-Term Impact**: Despite ambitious targets under HNAPs, progress in developing transition and implementation plans was uneven. Health is underrepresented in climate finance mechanisms, posing challenges for sustaining pilot activities.
8. **Funding Utilization**: Uneven expenditure rates and significant underspend by the final year highlighted the need for clearer support to maximize fund utilization. Greater clarity and timely variation could benefit future GEF programs.

### **Summary of Recommendations**

Overall, the project achieved significant progress and success, including satisfactory or highly satisfactory completion of most end-of-project outcomes. Project teams at all levels effectively collaborated with key operational stakeholders to strengthen institutional capacity and capabilities to identify and implement prioritised adaptation actions at national and sub-national levels in response to climate-sensitive health risks. Delays associated with COVID-19 were successfully managed, and the longer project timeframe allowed for backlogs to be cleared. While the project is ending in August 2024, there are several learnings that can be incorporated in the design of future programmes or scaling up the work undertaken in this project:

* + - 1. **Ensure clear sustainability and transition plans are developed in the final 6-12 months and as part of final project reporting systems:** given uncertainties for future funding and implementation responsibilities, particularly in relation to HNAPs, greater attention to transition plans could be invested in during the final 6-12 months of programming and following the closure of the project. These explicit plans can extend to co-designed funding proposals to leverage project learnings with key stakeholders, and advocacy to government agencies and climate financing mechanisms (e.g GCF) to allocate resources to address any gaps post-project. All projects should include consideration of how to scale-up and scale-out, which should be revisited through routine M&E and reporting discussions. Clarity on WHO and UNDP’s ongoing technical support for climate change and health integration can also be provided to national and sub-national stakeholders.

1. **Clearly link future project activities and outputs to HNAP and NAP priorities:** It was not possible to determine the extent to which activities and interventions implemented under the program were climate informed and/or represented adaptation priorities as defined in the HNAPs. This is a limitation of the TE, as quality and implementation appraisal of HNAPs and V&A assessments was beyond its scope. Future sequencing to ensure activities are clearly linked to HNAP implementation, with clearly defined and measurable outcomes, would enhance the ability to measure systemic impact and effect of this type of policy and programmatic intervention.
2. **Provide ongoing technical support and guidance to support integration of health in adaptation responses:** Integration of HNAPs in NAPs, for those countries that did not achieve this in the project timeframe, may provide a bridge for leveraging additional climate financing from multilateral and bilateral donors for health. WHO and UNDP may need to strengthen institutional knowledge sharing to support LDCs in navigating and accessing adaptation finance for future health initiatives. Project activities that brought together health and climate officials and experts were highly valued, including at sub-national level, and these institutional ties could be strengthened to enhance integrated adaptation efforts within the project countries and elsewhere.
3. **Maintain and enhance institutional capacity and governance systems:** Continue investments in training and capacity building to sustain and expand the skills of national and sub-national policymakers and practitioners. Incorporate refresher training programs to keep stakeholders updated and enhance their capabilities, and to address neglected areas of implementation under the WHO operational framework and to further guidance for CRESH facilities, including decarbonisation and low-carbon technologies. Ongoing advocacy to ensure that training programs and guidelines developed during the project are permanently integrated into national health curricula and training programs will help institutionalise the knowledge and practices promoted by the project, thus increasing confidence that the project will achieve the impacts desired in terms of resilience and sustainability.
4. **Support ongoing peer-to-peer knowledge sharing, dissemination, and leadership:** Continued peer-to-peer knowledge sharing, dissemination, and leadership are crucial for maintaining and expanding regional networks built during the project. Leveraging the evidence, successes, challenges, and resources generated, these networks should facilitate regular meetings, workshops, and digital engagements to enhance collaboration and shared learning. Promoting national leadership and the emerging expertise in climate and health policy across project countries can catalyse future political will and buy-in. High-level fora like ATACH and COP events are essential platforms to elevate the project's profile and integrate health within broader climate discussions. Empowering grassroots champions within service delivery networks ensures sustained community-level engagement and knowledge dissemination and can also be promoted via national and regional fora.
5. **Integrate and streamline project monitoring and external evaluation processes, using a theory-based methodology.** Future program investment of this nature and scale would be strengthened by an evaluation that runs concurrently to the program. A concurrent evaluation design could include the development of a program theory of change that explains what (activities), how (via which mechanisms), when (in what contexts) and for whom (which countries, policymakers, population groups) change (outcomes) are expected. The theory would encompass and clarify elements of the project found to be not well defined and monitored, including gender mainstreaming activity and outcomes; socio-economic, ecological/environmental and development outcomes; and the target beneficiaries of the program. The theory could also include definitions and measures for ‘climate resilience of health systems’ under the WHO’s global guidelines, which is an identified area of priority for ATACH.

The program theory could then be iteratively tested and refined with data collected by participating countries (monitoring data) and the external evaluators. Such iterative data collection and analysis would enable pre-mid-post analyses, including comparisons within and between counties to understand how context affects implementation and effectiveness. A concurrent and iterative design would also enable rapid learning cycles to inform program refinements along the way. The evaluation would result in an evidence-based, refined theory of change that explains how, when, and for whom the program is effective (and less, or not effective), and nuanced recommendations based on the refined theory.

1. **Ensure adequate funding for core personnel and technical expertise:** The ability to fund MOH directly as an implementing agency was a considerable strength, and downstream partners supporting service delivery activities at provincial and sub-provincial levels benefited from this funding flexibility. However, core staff within key agencies were funded through in-kind contributions, which may have limited the ability to scale-up implementation and address delays. A balance in funds for consultancy and ongoing staff, based on local need and priorities, would be preferable but is acknowledged as a potential limitation of the funding guidelines rather than a project decision. In addition, technical expertise for knowledge gaps, such as accessing climate finance and quantifying the cost-benefits of climate change and health/climate-resilience interventions, could be strengthened as part of central Project Management Unit support.
2. **Develop systems to consistently document and share implementation evidence:** There are substantial learnings from the project that can inform prioritisation and implementation of adaptation efforts within healthcare across other settings. Much of the evidence from the project was documented via informal/grey sources, hence may have limited dissemination via scientific and broader public channels. This limits the ability to recognise and account for these efforts in global scientific review processes, including IPCC reports. Engaging academic and/or research partners to capitalise on opportunities for evidence generation, analysis, and dissemination would add value to the broader climate and health sectors and scientific literature.

## **Introduction**

### **Evaluation Purpose and Objectives**

#### Purpose

This Terminal Evaluation (TE) assessed overall performance and progress towards delivery of the ***Building Resilience of Health Systems in Asian LDCs to Climate Change***(PIMS#5400) end-of-project outcomes. It was intended to capture overall project accomplishments, challenges, good practices and factors that may influence longer-term sustainability and impact of project benefits.

This TE report has been prepared in accordance with relevant guidance, including ‘*Guidance for Conducting Terminal Evaluations of UNDP-Supported, GEF-Financed Projects’[[4]](#footnote-5)* and the ‘*GEF’s Guidelines for Conducting Terminal Evaluations of Full-Size Projects (2023)’*[[5]](#footnote-6).

#### Objectives

This TE aimed to:

1. Determine extent to which the project has achieved its overall objectives and outcomes, in accordance with the GEF UNDP Project Results Framework (**Annex A**);
2. Evaluate decision-making and project implementation measures, identifying key factors contributing to implementation success or failure;
3. Assess the achievement of outcomes against key evaluation criteria and indicators, including for relevance, coherence, effectiveness, efficiency, outcomes, and sustainability; and
4. Identify recommendations and lessons learnt to inform WHO, UNDP and GEF climate change and health programs across the region.

Parameters for each objective and relevant key evaluation questions are outlined in **Appendix 1: Evaluation Criteria Matrix.**

#### Scope

The evaluation covered the entire 66-month implementation period (including 18-month no-cost extension). Files for the desktop review covered the inception period up until end-of December 2023, based on information available at the time of the TE. Additional implementation insights into the final 6-months were gathered through stakeholder interviews.

The TE covered all project countries, including background information in Myanmar. Due to a worsening external security and political environment, the GEF Secretariat notified UNDP in October 2021, that the GEF did not consider that the conditions existed for the execution of GEF projects in Myanmar and activities were subsequently suspended.

As such, Myanmar activities were not included in end-of-project progress assessment or ratings. The evaluation was focussed on whole-of-project results and progress towards overall objective, outcome indicators and final targets, as per the Project Results Framework. Additional information related to country-level outcomes supplemented assessment throughout.

## **Methodology**

### **Conceptual Framework**

The TE was intended to provide evidence-based, credible, reliable and useful information, drawing from multiple sources of information across the global, regional and national scales of the project. A primary focus of the TE was assessing the extent to which the project has achieved its intended outcomes, and lessons learned for sustainability of project benefits.

We used a pragmatic mixed-methods approach, combining qualitative and quantitative data from a variety of sources, to assess overall project results and performance against the key evaluation questions and end-of-project outcomes.

#### Key Evaluation Questions

The TE was guided by the following questions:

1. **Overall progress:** To what extent has the project achieved its expected objectives and outcomes?
2. **Relevance:** How does the project relate to the main objectives of the GEF Focal area, and to the environment and development priorities at the local, regional and national level?
3. **Coherence:** To what extent did the project align with national country context (external coherence) and were project activities aligned with the project’s theory of change, governance, activities and M&E (internal coherence)?
4. **Effectiveness:** To what extent have the expected outcomes and objectives of the project been achieved?
5. **Efficiency:** Was the project implemented efficiently, in line with international and national norms and standards?
6. **Sustainability**: To what extent are there financial, institutional, socio-political, and/or environmental risks to sustaining long-term project results?
7. **Gender equality and women’s empowerment:** How did the project contribute to gender equality and women’s empowerment?
8. **Impact:** Are there indications that the project has contributed to, or enabled progress toward reduced environmental stress and/or improved ecological status and increased resilience of health systems to protect population health in the face of climate change?

Detailed sub-questions, indicators and data collection parameters are available as **Appendix 2: Key Evaluation Questions.**

### **Data Collection Methods**

The TE was implemented through four key phases of work (desktop review, stakeholder interviews, field missions, triangulation and analysis), some of which occurred concurrently due to time constraints. All phases were designed to capture multiple sources of data (primary and secondary) and enable participatory design and engagement throughout. Evaluation activities and were informed by the Terms of Reference and Inception Report (see **Annex B- C** and the Evaluation Matrix (**Appendix 1**). Feedback from WHO and UNDP stakeholders on the data collection plan was incorporated following submission of the inception report on 11 June 2024.

#### Gender responsiveness

The evaluation method employed mixed methods, with the triangulation of desk-based analysis, interviews with key stakeholders, and field trips to key site activities. Specific questions relating to gender and women’s empowerment were included in all aspects of the data collection. We incorporated secondary gender disaggregated data from the desktop review where available, although data was inconsistently disaggregated and characterised.

#### Phase 1: Desktop review

A desktop review of key project documents collated over the 6-year project period was conducted to gather contextual information and review whether the project’s implementation and monitoring activities aligned with the GEF proposal (ProDoc) and variation documents.

Desktop review files were provided by the WHO Commissioning Unit (CU) on 27 May 2024 and were analysed by two reviewers (EM and SM) according to the evaluation matrix and project results framework. Documents covered project design, implementation, monitoring and mid-term review (MTR) phases, and ensured a balance in representation across countries, project outcome areas and cross-cutting priorities. Due to the volume of documentation (>1000 files), the desktop review prioritised highly relevant and key reporting documents following guidance from the WHO CU (see **Table 1** and **Appendix 3: Document Table**).

The GEF Focal area tracking tool was requested by the TE team and updated based on data shared by the WHO CU and following similar methodologies to the MTR where possible.

**Table 1: List of Documents for Desktop review**

|  |
| --- |
| **Documents (n=>150)** |
| 1. Project Proposals (ProDoc and national reports x6 countries) 2. Project Inception report/s 3. Annual Reports (2020-2023) and Q4 cumulative quarterly reports (2020-2023) 4. MTR inception, final report and management response 5. Covid-19 related documents 6. Gender analysis in V&A country reports (x5 countries) 7. International Project Board Meeting reports 8. Multi-year expenditure data (x6 countries) |

#### Phase 2: Stakeholder interviews

Semi-structured interviews with key project stakeholders supplemented the desktop review, to elicit implementation insights and consideration for future program design across all aspects of the project. We invited 42 stakeholders to participate in remote or in-person interviews between the 18th of June and the 12th of July 2024. Interview candidates were a sample of convenience guided by the WHO CU and Project Teams and considering time and resource constraints. The stakeholders' contact details were provided by the WHO CU or Country Office (CO) focal points. All were invited by email (including participant information and consent materials) and if no response, a maximum of two follow-up emails were sent. Participants for whom English is Second Language were invited to request a third-party interpreter if needed, to be arranged by WHO CO focal points.

Thirty-two stakeholders provided consent and were interviewed. Informed consent was obtained in writing or verbally prior to commencing any interviews. Eighteen of the stakeholders were interviewed remotely and 14 were interviewed in-person during field visits to Bangladesh and Lao PDR (see **Phase 3**) over a four-week period between 18 June and 12 July 2024. Some in-person interviews were conducted as focus groups for efficiency.

All interviews were led by an independent member of the TE team (KB, KE, KO, EM) and observed by another member for note taking (EM, SM). Interviews followed a standard semi-structured questionnaire which was aligned with the evaluation matrix and input from the WHO CU during the inception report period (see **Annex D: Interview Guide**). Observational data was recorded in a standard template based on the interview guide.

Interviews included representatives of WHO and UNDP across headquarters (HQ), regional offices (ROs) and COs. Interviews with national stakeholders from Ministries of Health (MOH), other Government agencies, academic, Non-Government Organisation (NGO) and Healthcare Facility (HCF) partners were coordinated by WHO CO focal points and are summarised in **Table 2**. National WHO and MOH representatives in all countries (excluding Myanmar) were represented.

**Table 2: List of stakeholders interviewed**

|  |  |
| --- | --- |
| **Country/Agency** | **Interviewees (n=32)** |
| WHO | HQ (1)  RO (3) |
| UNDP | HQ (3) |
| Bangladesh | WHO CO (1)  MOH (3)  Other government (1)  NGO (4)  HCF (1) |
| Cambodia | WHO CO (1)  MOH (1) |
| Lao PDR | WHO (1)  MOH (2)  Other government (1)  Academic (1)  HCF (2) |
| Nepal | WHO CO (1)  MOH (1) |
| Timor-Leste | WHO CO (3)  MOH (1) |

#### Phase 3: Field Missions

Site visits to two countries (Bangladesh and Lao PDR), one for each WHO project region (Western Pacific [WPR] and South-East Asia [SEAR]) by one TE member (EM) were conducted between 8-12 July 2024 to supplement the desktop review and provide richer implementation insights into the project’s context, in-country activities, and real-world impacts. The country selection was guided by the WHO CU and feasibility. Stakeholder interviews (as per **Phase 2**) with relevant participants from the selected countries was undertaken in-person to coincide with Field Missions where possible. Additional remote interviews with field mission country stakeholders were conducted when required.

#### Phase 4: Analysis and Report preparation

Analysis and findings from Phases 1-3 were compiled progressively according to the TE report outline. Upon completion of all interviews and the field missions, a draft report and findings were shared with the WHO CU and Project Teams, including country counterparts, for at least one round of formal feedback. Pending further revisions, the CU and Project Team prepared a formal management response to the TE findings. The TE team participated in a final dissemination workshop or presentation with relevant stakeholders, which was coordinated by the Project Team.

### **Data Extraction**

We extracted data from the desktop review and stakeholder interviews with an Excel spreadsheet including quantitative and descriptive data related to the i) key evaluation questions and evaluation matrix; ii) project results framework, including core project objective and outcome indicators; and available financial information. Observational data from field visits were inputted into the extraction spreadsheet, with additional information recorded as case studies in the final report.

### **Data Analysis and Synthesis**

Findings were synthesised inductively from the data extraction spreadsheet by two evaluators (EM, SM). Analysis and write-up were guided by the evaluation matrix, report template and GEF ratings table (see **Appendix 4: TE Rating Scale**). Two triangulation meetings were held to discuss and validate findings with technical advisors (KB, KE, KO). The draft was shared with the WHO CU and feedback from relevant stakeholders incorporated in the final version via one round of formal written comments and a mission wrap-up meeting with WHO project teams (see **Figure 1: TE timeline**.)

|  |
| --- |
| **Figure 1: TE Timeline** |

### **Ethics**

This evaluation was conducted in accordance with the principles outlined in the UNDP ‘Ethical Guidelines for Evaluation’. Due to the condensed timeframe, independent review by the University’s Human Research Ethics Committee was not feasible. While the project was deemed low risk by the expert TE team given participants included WHO, UNDP and government-affiliated stakeholders (i.e. no vulnerable or community participants), the evaluators followed standard protocols to safeguard the rights and confidentiality of information providers, interviewees and stakeholders. This included obtaining informed consent (written or verbal) prior to commencement of any interviews and ensuring all participants had access to a plain language statement (PLS) outlining data use, storage and contact details for the TE team and the WHO Office of Compliance, Risk Management and Ethics (see **Annex E: Consent form** and **Annex F: PLS**). Ethics considerations were also discussed with the WHO CU prior to commencing primary data collection.

The evaluators ensured all data, including desktop review files, audio or video recordings, observational notes and participant consent forms, were stored in encrypted files on the University of Melbourne’s secure server. File access was restricted to members of the TE team.

All raw identifiable data (for example, consent forms, recordings and observational notes) will be destroyed 3 years after the TE project has concluded, no later than June 2026, unless otherwise instructed by the WHO CU. The information knowledge and data gathered in the evaluation process was solely used for the evaluation and not for other uses without the express authorisation of UNDP and partners.

### **Limitations**

**Timeline:** The TE was initially planned for completion over a 4-month period but was ultimately conducted over 2-months due to tender appraisal and contracting delays. While the TE team endeavoured to complete the same scope of work within this reduced timeframe, it has ultimately reduced the depth and extent of analysis and stakeholder consultation. Overlapping data collection and analysis activities also impacted ability to identify data gaps, query, clarify, and iteratively build knowledge; and sense-check findings with the WHO CU and Project teams.

**Data limitations:** Given the TE timeline, a comprehensive analysis of all program report data (>1000 files) was not feasible. Documents were prioritised based on initial discussion with the WHO CU. Desktop review data were only available up until Q4 2023 and hence the final analysis may not reflect all activities in the final 8 months of the project.

**Stakeholder interviews:** While the TE team aimed to interview up to six stakeholders per country, the final selection was a sample of convenience according to stakeholder availability, time zone windows or responsiveness to interview invitations. Due to timing and logistical constraints, field visits were only possible in two project countries, which were subsequently over-represented in stakeholder interviews due to face-to-face engagements. The TE team were also unable to confirm interviews with any UNDP CO representatives. Language barriers and reliance on third-party language interpretation for some countries may have impacted accuracy of analysis and interpretation. Despite assurances of the TE team’s independence, participants may have withheld some information, affecting data accuracy.

**Subjectivity and Participant bias:** Personal bias and subjectivity of the evaluations may also have influenced interpretation of data, although this was mitigated by ensuring key issues were discussed and resolved collectively; and feedback from the WHO CU and Project Teams was incorporated at multiple stages during inception, implementation and TE report preparation.

## **Project Background**

### **Global context**

#### Development context

Over the past 25 years, Asia has seen rapid declines in mortality and morbidity rates. There has been a notable shift from communicable diseases like respiratory infections and diarrhea to non-communicable diseases such as cancer, cardiovascular, and respiratory diseases. Health indicators have improved, with increased life expectancy and decreased infant mortality rates. Consequently, the proportion of the population aged over 65 is expected to surpass 25% by 2050. Despite these advancements, progress is jeopardised by the region's sensitivity to climate variability and change, and limited capacity to address these challenges.

Health systems in Asian Least Developed Countries (LDCs) such as Bangladesh, Cambodia, Lao PDR, Myanmar, Nepal, and Timor-Leste struggle with current health risks and lack the capacity to adapt to climate-related health threats. Projections show a rise in temperatures by 1.0 to 1.6°C under a low emissions scenario and 3.6 to 6.0°C under a high emissions scenario by 2100, leading to more frequent heatwaves and increased risks of floods and droughts impacting vulnerable agricultural, low-lying and small island areas across Asia (see **Figure 2**).

**Figure 2: Global Climate Vulnerability**

A map of the world with different colored circles and a few different colored circles

Description automatically generated

*Note: TS.7 Vulnerability is a global map of vulnerability based on two comprehensive global indicator systems (INFORM Risk Index and WorldRiskIndex (2019). Hazards and exposure are not included in this image. From IPCC Sixth Assessment Report – Impacts, Adaptation and Vulnerability.*

These climatic changes increase health risks through direct impacts, such as deaths and injuries from heatwaves, storms, and floods, and indirect impacts, including higher risks of infectious diseases (waterborne, foodborne, and vector-borne infections), food insecurity, malnutrition, loss of livelihoods, conflicts over resources, and migration-related health issues.

### **Project Design**

#### Strategy

To effectively address climate change impacts on health in Asian LDCs, governments need to strengthen national health systems and institutions. This includes developing the capacity to prepare for climate impacts faced by vulnerable populations, implementing early warning measures for prevention, and ensuring health systems have the technical capacity to respond to climate-related health issues.

#### Problem statement

Despite different country contexts (see **section 4.3**), common challenges include:

1. Insufficient capacity for climate change adaptation within government agencies.
2. Limited surveillance data hindering epidemic prevention and response.
3. Inadequate ability to prevent and treat climate-sensitive diseases and maintain operations during extreme weather events.
4. Insufficient regional knowledge sharing and scaling up of successful pilot projects.

Countries need technical assistance in utilizing modern methodologies, such as diagnostic tools, data collection, reporting, and training, to improve their capacity to cope with climate variability and change.

#### Project Objectives and Outcomes

The project sought to address these needs and enhance the adaptive capacity of the health sector to climate variation and change in Bangladesh, Cambodia, Lao PDR, Myanmar, Nepal, and Timor-Leste. It adopts a multi-country approach to respond to climate change-induced health risks in these Asian LDCs, targeting four outcomes with tailored activities for each participating country. Activities in Myanmar were suspended by GEF in December 2021, with remaining funds reallocated to other project activities.

The project aimed to progress the following complimentary outcomes across all six countries:

* **Outcome 1:** Institutional capacities are strengthened to effectively integrate climate risks and adaptation options in health sector planning and implementation
* **Outcome 2:** Effective decision-making for health interventions is enabled through generation of information and improved surveillance and/or early warning systems
* **Outcome 3:** Climate resilience is enhanced in health service delivery
* **Outcome 4.1:** Enhanced regional cooperation and knowledge exchange for promoting scale-up and replication of interventions
* **Outcome 4.2:** HNAP are effectively integrated into ongoing NAP processes

The project emphasises a regional approach to support cross-country learning, partnerships, and regional-level dissemination of best practices, including through technical resources to support replication and scale-up regionally and across global LDCs.

#### Project timeline

|  |  |
| --- | --- |
| Project duration | 48 months (original); 66 months (actual) |
| PIF Approval Date | Mar 2, 2016 |
| CEO Endorsement Date | Jan 10, 2018 |
| Project Document Signature Date (project start date): | Feb 22, 2019 |
| Date of Inception Workshop | Jun 11, 2019 |
| First Disbursement Date | Mar 31, 2019 |
| Expected Date of Mid-term Review | Jul 10, 2021 |
| Actual Date of Mid-term Review | Oct 1, 2021 |
| Expected Date of Terminal Evaluation | Aug 22, 2024 |
| Actual Date of Terminal Evaluation | Aug 1, 2024 |
| Original Planned Closing Date | Feb 22, 2023 |
| Revised Planned Closing Date | Aug 22, 2024 |

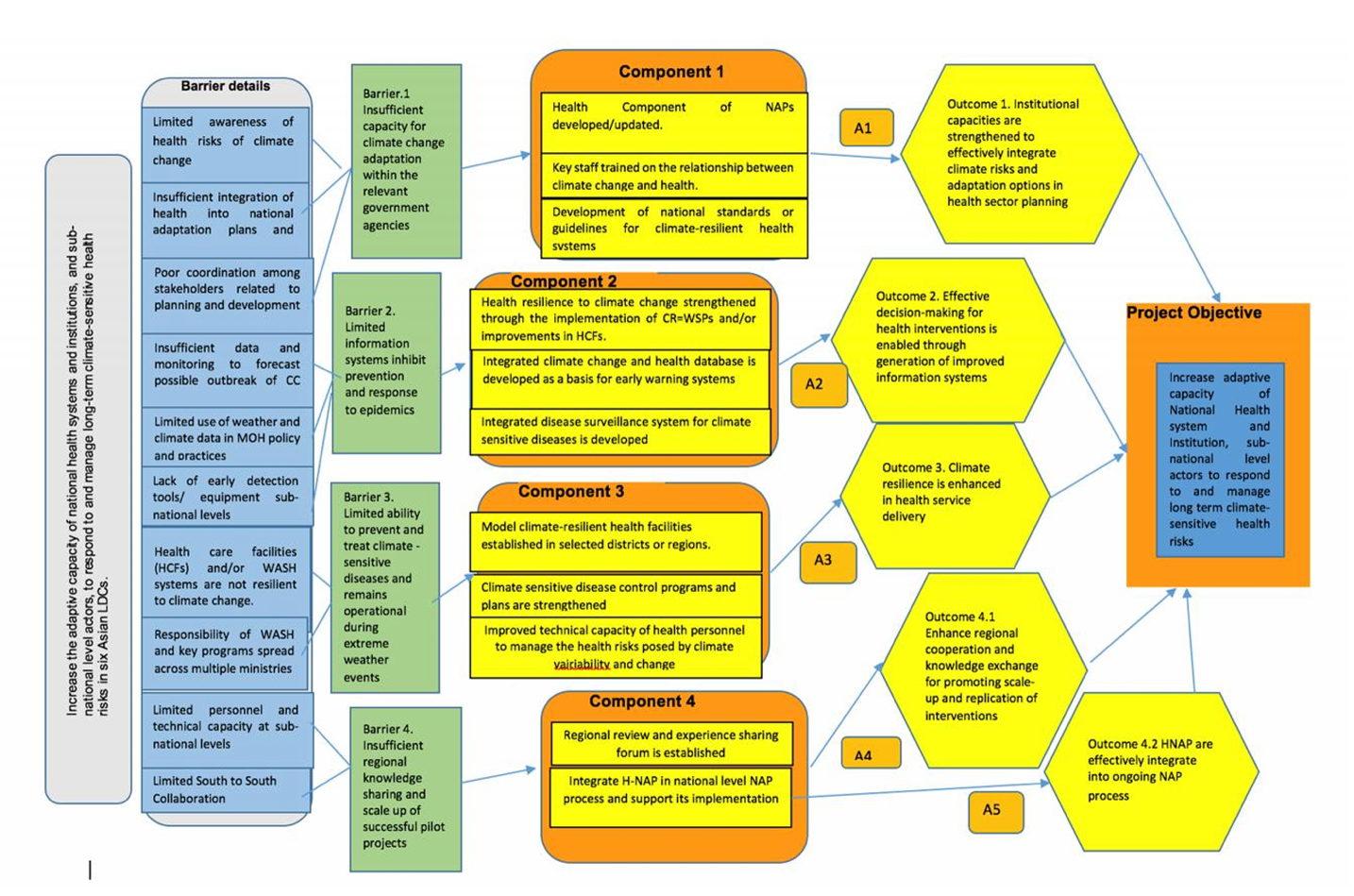
#### Theory of Change

The project was designed to increase the capacity of national health systems and institutions, and sub-level actors, to respond to and manage long-term climate-sensitive health risks in six Asian LDCs.

Key elements outlined in the Theory of Change diagram (**Figure 3**) include:

1. **Innovative and integrative approach**: The project builds on existing health sector experience in managing climate-sensitive health outcomes without prior climate change considerations. It also aims to integrate climate change adaptation activities into existing portfolios, such as in disaster risk management, avoiding parallel/vertical interventions and ‘mainstreaming’ climate adaptation and risks into climate-sensitive health programs.
2. **Strengthening institutional capacity:** By prioritising climate change in strategic health plans and modifying relevant standards, the MOH will incorporate managing climate-related health risks into their core activities. This institutionalisation ensures the initiative's longevity and influence on health norms.
3. **Regional collaboration and community of practice:** A regional approach will foster catalytic partnerships and systematise lessons and best practices across countries. This will involve developing technical guidelines, manuals, and toolkits that can be replicated and scaled up regionally. Training, knowledge exchange and networking activities within and between countries will foster a network of skilled adaptation professionals and practitioners, able to support climate resilience in their ongoing work and future programmes.

**Figure 3: Theory of Change – Building Resilience of Health Systems in Asian LDCs to Climate Change**



#### Expected Results

The expected project final targets are:

* 1. All countries should have developed HNAPs, preferably with links to ongoing NAP processes.
  2. All countries should have developed National Standards or guidelines for climate change and health systems.
  3. All countries should have supported capacity development activities for Ministry staff and for community members on climate change and health.
  4. All countries should have conducted vulnerability and adaptation (V&A) assessments for current and future health risks
  5. Climate sensitive disease surveillance and early warning systems should have been piloted in most countries for a range of climate-sensitive diseases. Climate resilience in health service delivery enhanced, including through improved and more sustainable healthcare waste management practices, access to drinkable water in healthcare facilities, among others and disease control and prevention programmes strengthened to account of the effects of climate variability and change.
  6. At the regional level, knowledge sharing, and exchange should have been promoted through regional meetings and training workshops.

#### Main stakeholders: summary list

|  |
| --- |
| Ministry of Health (Vector borne diseases, WASH, and Communicable Disease Departments) |
| Ministry of Environment and/or Climate |
| Selected provincial health departments |
| UNDP (HQ, CO) |
| WHO (HQ, WPR, SEAR, CO) |
| Healthcare service providers (Hospitals and healthcare facilities [HCF]) |
| Communities |
| Non-government and civil society organisations |
| Research institutions / academia |
| Other relevant ministries and departments (e.g. agriculture, transportation, urban planning, rural development, water supply) |

### **National contexts**

#### **Bangladesh**

Bangladesh, with its high population density, spans the deltaic plains of the Ganges, Brahmaputra, and Meghna rivers. The country has a subtropical monsoon climate with significant seasonal variations in rainfall, high temperatures, and humidity. Bangladesh is already experiencing climate change impacts such as temperature extremes, intensified rainfall, floods, cyclones, and droughts. Climate change is likely to cause increased malnutrition and poor child growth, more diarrheal disease, higher mortality and morbidity from natural disasters, more frequent cardiorespiratory diseases, psychosocial issues from population displacement, and altered distribution of infectious diseases like dengue, chikungunya, and malaria.

Climate and health policy context

The Government of Bangladesh has taken steps to address the issue of climate change vulnerability by developing three key policy documents: the National Adaptation Programme of Action (NAPA), The National Adaptation Plan (NAP) and the Bangladesh Climate Change Strategy and Action. The current priorities outlined in these documents include water resource management, disaster risk reduction and management, agricultural management, and coastal zone management. Additionally, Bangladesh has developed the following plans related to climate change: Bangladesh Climate Change Strategy and Action plan (2009), Climate Change Trust Fund Policy (2009) and Act (2010), Perspective Plan and Five-Year Plan, and Annual Development Plan.

Key stakeholders

|  |
| --- |
| * Ministry of Health and Family Welfare * Bangladesh Meteorological Department , Ministry of Defence * Directorate General of Health Services * National Institute of Preventative and Social Medicine * Bureau of Health Education * Institute of Epidemiology, Disease Control and Research and Health Emergency Programme (IEDCR, Directorate General of Health Serivces), * Ministry of Local Government, Rural Development and Cooperatives (Department of Public Health Engineering) * Department of Environment, Ministry of Environment, Forest and Climate Change * Department of Disaster Management, Ministry of Disaster Management and Relief * WHO (Bangladesh Country Office) * Nongovernmental organisations, civil society organisations, communities and health facility management committees |

#### **Cambodia**

Due to vulnerability factors including but not limited to high rates of poverty, high burden of disease, rapid urbanisation, poor WASH coverage and access to health-care services and a population that largely resides in flood and drought-prone areas, Cambodia is highly susceptible to the health impacts of climate change. The health effects that are of high concern include dengue fever and malaria, water-borne diseases (diarrhoeal disease, leptospirosis, melioidosis, hepatitis E, schistosomiasis and arsenicosis), food insecurity and increased mortality and morbidity caused by extreme weather events.

Climate and health policy context

Cambodia has developed several national commitments, strategies and action plans to guide health sector planning and climate change adaptation. The plans specific to the health sector are the Climate Change Strategic Plan for Public Health 2012 and the National Climate Change Action Plan for Public Health 2014–2018. Additionally, the National Strategy for Climate Change Adaptation and Disaster Risk Reduction in Public Health is currently under development; this plan will align the strategies for disaster risk reduction with the climate change adaptation plans.

Key stakeholders

|  |
| --- |
| * Various departments and agencies within and outside Ministry of Health * WHO, Cambodia country office * Climate Change Technical Working Group * Ministry of Education * Ministry of Water Resources and Meteorology * Ministry of Agriculture, Forestry and Fisheries * Communicable Diseases Control Department, Maternal and Child Health Departments, and other departments that perform surveillance * Ministry of Rural Development * National Centre for Parasitology, Entomology and Malaria Control * Department of Hospital Services * Provincial health departments * District and commune councils * Local communities |

#### **Lao PDR**

The Lao People's Democratic Republic (PDR) is a landlocked country in Southeast Asia with a population of 6.8 million. It is divided into 17 provinces and a prefecture that includes the capital city, Vientiane. Approximately 80% of the population relies on agriculture for their livelihoods.

Flooding and drought are significant climate-related risks, threatening livelihoods almost annually. Health challenges in Laos, such as poor water quality, limited access to sanitation and hygiene, and indoor air pollution, are closely linked to environmental factors. Climate change is expected to exacerbate health risks, increasing the prevalence of dengue fever, severe diarrhea, dysentery, food poisoning, hepatitis (in the northern region), typhoid fever (in the northern and central regions), and morbidity and mortality from extreme weather events.

Climate and health policy context

The government of Lao PDR has set a long-term goal for national development, outlined in the 8th Five-Year National Socio-economic Plan (2016–2020), with a vision to become a middle-income country by 2030. The National Strategy on Climate Change, approved in early 2010, provides a vision for addressing climate change, emphasizing health. Furthermore, the Ministry of Natural Resources and Environment developed the Climate Change Action Plan of the Lao PDR for 2013–2020.

Key stakeholders

|  |
| --- |
| * Ministry of Health (DHHP, DCDC/CMPE, Cabinet) * Ministry of Public Works and Transport * National Centre for Environmental Health and Water Supply * Two selected provincial health departments, district health offices, provincial hospitals and divisions for environmental health and water supply * Nongovernmental (local and international) organizations and community representatives * Communities |

#### **Nepal**

Nepal is divided into three ecological regions: Terai, hill, and mountain. These diverse regions contribute to the country's rich biological diversity. Over the past three decades, the impacts of climate change are evident through changes in average temperature, precipitation, and extreme weather conditions.

Nepal has identified public health as highly vulnerable to climate change. Potential health effects include water-, vector-, air-, and foodborne diseases (especially in mountain areas previously considered non-endemic), malnutrition from reduced food production, increased mortality and morbidity from more intense heatwaves, cold waves, and wildfires, and impacts on mental health.

Climate and health policy context

In 2015, Nepal began developing and implementing a National Adaptation Plan to address its medium- and long-term adaptation needs and reduce climate vulnerabilities. This plan outlines climate change adaptation actions for the medium term (2018–2030) and long term (up to 2050).

Previously, Nepal created the NAPA 2010, which focused on public health and prioritised activities for adapting to climate challenges in the health sector. The 2019 National Health Policy aimed to improve the quality of health services for all Nepalese without discrimination. The Nepal Health Sector Strategic Plan (2023–2030) served as the guiding strategy for the health sector, which recognised climate change as an issue impacting public health and included a multi-sectoral response to mitigate its adverse effects.

Key stakeholders

|  |
| --- |
| * Ministry of Health and Population * Department of Hydrology and Meteorology * Ministry of Forests and Environment * Nepal Health Research Council * National Health Education, Information and Communication Centre * Epidemiology and Disease Control Division * National Health Training Center * Management Division under Department of Health Services * Ministry of Water Supply * Department of Water Supply and Sewerage Management * University * WHO * Non-governmental organisations, civil society organisations * Communities and health facility management committees |

#### **Timor-Leste**

Timor-Leste experiences high variability in rainfall from year to year, which is greatly influenced by the El Niño Southern Oscillation. As a result, the country is particularly susceptible to drought. In the northern region, there is a single rainy season lasting 4-6 months starting in December, followed by a dry season. The southern region has two rainy seasons, with a longer one lasting 7-9 months and two peaks in rainfall in December and May.

The projected impact of climate change on Timor Leste's population includes heavy rainfall, flooding, drought, and increased temperatures. This is likely to lead to an increase in water-borne diseases such as diarrheal diseases, as well as vector-borne diseases like malaria and dengue. Additionally, heat-related mortality is expected to rise. Climate change is also likely to affect long-term food security and contribute to malnutrition, further amplifying existing risks to food security in the country.

Climate and health policy context

Timor-Leste completed its National Adaptation Programme of Action (NAPA) in 2010 and submitted its Initial National Communication (INC) as a non-Annex 1 party to the UNFCCC in 2014. The Timor-Leste Strategic Development Plan 2011-2030 expands on the 2002 National Development Plan and aims to elevate Timor-Leste from a low-income to an upper middle-income country with a healthy, well-educated, and safe population by 2030. Additional plans and policies implemented by Timor-Leste include the Environmental Policy, the National Health Sector Strategic Plan 2011-2020 (which covers environmental health including sanitation, food safety, vector-borne disease, waste management, and air pollution), the National Action Plan for a Hunger and Malnutrition Free Timor-Leste (2014) with a focus on food system sustainability and climate change, and The National Disaster Risk Management Policy (2008) which outlines disaster risk management programs across all sectors (an updated policy was submitted in 2017 to the Council of Ministers for discussion and approval).

Key stakeholders

|  |
| --- |
| * MOH * Ministry of Commerce, Industry and Environment (MCIE) * Adaptation Thematic Working Group * Ministry of Public Works (MPW) * Instituto Nacional de Saude De Timor-Leste (INS) * Municipal health departments * Provincial hospitals * Divisions for environmental health and water supply |

## **Findings**

### **Summary of Key Findings and TE ratings**

Results, including key achievements and successes, were synthesised according to whole-of-project/overall progress (Table 3), with additional detail provided of country-level outcomes and selected activities under overall project results and effectiveness findings (**Section 5.2**).

**Table 3. Summary of key findings and TE Ratings**

| **Measure** | **TE outcome rating[[6]](#footnote-7)** | **Achievement Description** |
| --- | --- | --- |
| **Project Results and Effectiveness** | **Project Objective:** Achieved – HS | HNAPs were completed and endorsed by all countries, with two now being updated (Bangladesh and Nepal). Comprehensiveness and quality of HNAPs was not within scope of this evaluation. National HNAP coordination mechanisms, such as Technical Working Groups (TWG), were established within MOH. Funding and accountability for HNAP implementation was a sustainability challenge, although some countries secured additional funding to mitigate these risks. |
| **Outcome 1.** Achieved - HS | Institutional capacity was enhanced in all countries through the development and finalisation of context-specific guidelines, tools, manuals and standards. Global and regional technical guidelines were adapted to national contexts, with evidence of government ownership through co-branding and rollout in national and sub-national training and capacity-building activities. |
| **Outcome 2**. Achieved – S | Vulnerability and adaptation (V&A) assessments were completed in all countries, with results directly informing HNAP review and updates in project countries. V&A comprehensiveness and quality was not within scope of this evaluation. All countries developed and piloted integrated climate-sensitive disease surveillance systems for select climate-sensitive health outcomes (dengue and diarrhoeal diseases most common), but there was uneven progress on wider rollout and scale-up, reflecting the diverse and varying contexts across countries. Limited availability of historical meteorological and disease data hampered timely development and integration of surveillance systems in Cambodia and Timor-Leste. |
| **Outcome 3.** Achieved – HS | All countries supported activities to enhance climate resilience in health service delivery. These efforts primarily focused on Water, Sanitation and Hygiene (WASH) and waste management. Additional investment may be needed to address other aspects of low-carbon and climate-resilient health service delivery. The flexibility to co-design and tailor activities to local contexts was beneficial, but variation in intervention approaches and unclear beneficiary definitions hindered comparison and indicator measurement. Funding and responsibilities for the ongoing maintenance and operation of interventions remain challenging. |
| **Outcome 4.1**.  Achieved –HS | Regional cooperation and knowledge exchange between WHO and MOH stakeholders were enhanced throughout the project. COVID-19 challenges were addressed through virtual activities. Face-to-face learning, knowledge exchange, and networking opportunities, when possible, were highly valued. Engagement at regional and global climate and health forums, including the WHO-led Alliance for Transformative Action on Climate and Health (ATACH) and UNFCCC conference of the Parties (COP) health networks, were significant enablers of institutional leadership and country ownership. |
| **Outcome 4.2**  On track - MS | All countries engaged with UNDP but there was uneven progress on integration of HNAPs into NAPs. The project generally facilitated stronger intersectoral collaboration and coordination between the health and environment/climate sectors, however formalisation through institutional partnerships and implementation plans varied. UNDP has drafted a method to quantify the direct and indirect costs of climate change on health, to inform adaptation actions, but it was not possible to verify application or relevance to the project. Nepal, Bangladesh and Timor-Leste made significant progress in HNAP-NAP integration, providing a model of best practice. |
| **Evaluation Criteria and Cross-cutting measures** | **Project Implementation and Execution**  Achieved – S | Overall project implementation was successful, with positive achievements at all levels across stakeholder engagement, activity execution, project management, and governance systems. HQ, regional and country teams worked to adapt activities and management processes throughout to respond to external drivers and implement variations where needed, including during the COVID-19 pandemic. The longer implementation period enabled by the no-cost extension was critical for overcoming COVID-19 related delays and establishing effective project implementation systems. Technical support by WHO is likely to continue as climate change is now embedded in WHO workplans at all levels. UNDP/WHO implementation and oversight was enabled by effective governance and reporting systems, and strong implementing partnerships between WHO and MOH in country. A significant underspend had accumulated at commencement of the final year of implementation and there was uneven expenditure across project outcomes and the PMU. |
| **Monitoring & Evaluation**  Achieved – S | M&E systems were generally clear, consistent, and participatory, with some gaps around tracking country-level targets, beneficiary numbers, and measuring intervention impacts, such as through behaviour change or reduction in climate-sensitive health risks. |
| **Sustainability[[7]](#footnote-8)**  ML | Longer-term impact and sustainability of project activities is likely to have mixed success. Several activities achieved substantial country buy-in, particularly from MOH, including for HNAP development. Institutional capacity was strengthened through training and capacity building investments. There was a high degree of country ownership over core policy frameworks, including HNAPs and national guidelines and standards for climate change and health. The project also laid strong foundations through demonstration pilots for integrated surveillance systems and climate-resilient health service interventions (especially WASH and waste management). Overall, sustainability could be hampered by systemic challenges, including staff turnover within key agencies, limited funding within LDC governments and accountability mechanisms for HNAP implementation, and competing priorities across health and broader climate/environment sectors. Countries that identified and/or secured funding to scale-up project activities, including through partnerships with other development and climate funders and integration of health within NAP priorities, may provide learnings for other settings. |

### **Overall Project Results and Effectiveness**

The project has achieved or is on track to achieve its overall objective and corresponding end-of-project outcome and output targets. Country level outcome indicators and activities are clearly aligned to overall outcomes and there has been significant progress across several activities, particularly in relation to development of HNAPs, V&A Assessments, and capacity building activities for climate resilient health services.

#### End of Project Results

|  |  |  |
| --- | --- | --- |
| **Overall Objective:** Increase the adaptive capacity of national health systems and institutions, and sub-national level actors, to respond to and manage long-term climate-sensitive health risks in six Asian LDCs. | | |
| **Indicator** | **End of Project level and assessment** | **Achievement rating** |
| **Indicator 1:** National HNAP for long term planning and capacity development is created and budgeted. | HNAP is finalized/updated in 6 countries as the long-term plan for health adaptation to climate change and MOH is part of TWG with mandate to address cross-cutting climate change adaptation. | **Achieved - HS** |

The overall project objective has been achieved to a high degree of satisfaction. HNAPs have been finalised and endorsed in Bangladesh, Cambodia, Lao PDR, Nepal (updated and endorsed) and Timor-Leste. Nepal’s HNAP was updated and approved in 2023, and Bangladesh is undertaking a HNAP update which is expected to be endorsed by the Ministry of Health in 2024. Myanmar has an advanced draft HNAP, however activities have been suspended in Myanmar since December 2021 and current status of the HNAP is unclear (Myanmar has not been assessed towards overall progress or outcome achievement).

National HNAP coordination mechanisms, such as Technical Working Groups (TWGs), have been established with MOH representation, fostering good intersectoral collaboration with ministries responsible for broader environmental and climate portfolios. While these mechanisms are expected to continue supporting HNAP activities, progress may be limited without dedicated implementation funding after the project's conclusion.

Some countries have integrated climate considerations into national health policy frameworks, such as the Nepal Health Sector-Strategic Plan (NHSSP) and the Operational Plan of the Ministry of Health and Family Welfare (MHFW) in Bangladesh. This reflects an increased prioritisation of climate change and health as a direct result of the project. Several stakeholders from WHO and MOH recognized the value of HNAPs as a core policy document for identifying and prioritising adaptation actions to address climate-related health risks and impacts: “*developing the HNAP is essentially the first step to doing any work on climate change and health*”. The process requires ongoing coordination within and between ministries, and the GEF funding has been critical for securing government buy-in and ownership.

As highlighted above, HNAPs lay the foundation for future work on - and accessing finance for - climate change and health, however long-term workplans and funding for HNAP implementation remain a challenge across all countries. It is unclear to what extent national health budgets have been aligned with HNAP commitments, and ultimately, implementation is a MOH responsibility. Increasing the availability of climate finance for health globally should be prioritised to ensure the successful implementation of HNAPs across project countries. Countries that have secured additional development finance could provide valuable insights for others. Notably, Lao PDR has leveraged the project to secure additional GCF funding, enabling ongoing coordination and scale-up.

***Country-level Outcomes***

|  |  |
| --- | --- |
| **Bangladesh** | HNAP finalised in 2018 with UK government funding in 2018. The Ministry of Environment, Forests and Climate Change published an NAP in 2023 which includes health sector adaptation options. An HNAP update is underway and will be informed by the 2022 V&A assessment and is on-track for completion by project end. |
| **Cambodia** | HNAP finalised and endorsed in 2020. |
| **Lao PDR** | HNAP finalised and endorsed in 2022. |
| **Myanmar** | Activities have been suspended in Myanmar at the direction of GEF since December 2021. At the time of the suspension, a draft HNAP and V&A methodology had been developed. |
| **Nepal** | Updated HNAP finalised and endorsed in 2023. Significant progress in integrating with NAP, which includes health, water, and sanitation as key areas, with costing of adaptation programs. |
| **Timor-Leste** | HNAP finalised and endorsed in 2022. |

#### Outcome 1

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| **Outcome 1:** Institutional capacities are strengthened to effectively integrate climate risks and adaptation options in health sector planning and implementation | | |
| **Indicator** | **End of Project level and assessment** | **Achievement rating** |
| **Indicator 2:** Development of National Standards or guidelines for climate change and health systems. | Final standards and guidelines are developed | **Achieved - HS** |

The end of project target has been achieved. Various Standard Operating Procedures (SOPs) and guidelines related to climate change and health have been developed at regional and country levels, with several that were drafted in the final implementation year now complete. Overall, a total of 43 national standards, guidelines and SOPs for climate resilient health systems have been created and translated into local languages where necessary (see **Appendix 5**). Several of these have been adapted from global and regional technical guidelines and tools, including for early warning, alert and response systems (EWARS), WASH-Facility Improvement Tool (WASH-FIT), water safety plans (WSP), and healthcare waste management. Regional workshops on topics such as developing SOPs for climate sensitive diseases have also been held, which have strengthened technical capacity of country-level stakeholders to adapt and implement best practice guidelines in national contexts.

There is strong evidence of government ownership of these tools and processes across all countries, strengthening likelihood of ongoing roll-out through national and sub-national sensitisation, training and dissemination activities. Multiple stakeholders highlighted activities that resulted in practical, contextually relevant outputs as particularly valuable. For example, the MOH in Bangladesh has published and launched National WASH standards and the MOH in Cambodia plan to publish SOPs for rapid diagnostic tests and dengue surveillance on their website. Additionally, in Timor-Leste, SOPs have been developed for the National Health Laboratory for Water Quality testing as well as for Health Care Waste Management in Health Facilities. In Lao PDR, stakeholders reported the MOH now sees several products, such as the ‘Safe Clean Green Climate Resilient (SCHCR) Hospital toolkit’ as a government document, rather than a WHO resource, which is important for local ownership and sustainability. Several countries have also integrated climate change and health education into postgraduate curriculum with academic partners, to embed climate-informed health workforce education programs. Academic partners expressed interest in partnering with WHO and MOH to undertake further research on climate-sensitive diseases, in support of HNAP, but this would be contingent upon funding.

***Country-level Activities***

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| **Country** | **Country-level outcome indicators[[8]](#footnote-9)** | **Example Achievements** |
| **Bangladesh** | Four programmes include climate change and health (climate risk and adaptation options) in health sector plans (2022–2026) | Climate change included in MoH operational plan. MOUs finalised between MoH and key agencies, supporting integration of climate change and data sharing across key programmes. This includes MoU’s with:   1. Bangladesh Meteorological Department (BMD); 2. Department of Environment (for environmental data); and 3. Department of Disaster Management. |
| Number of trained staff using guidelines for monitoring climate change and health policy implementation, including monitoring framework | Multiple training workshops were held for health professionals to enhance knowledge and capacity in climate-sensitive health issues. A total of 162 medical professionals received training, including through ‘train the trainer’ activities. Stakeholders reported up to 500 receiving training covering 100 HCFs. |
| **Cambodia** | Percentage of key staff trained on relationship between climate change and health and climate-sensitive diseases. | SOPs for Dengue and Surveillance and Rapid Diagnostic Test (RDT) were developed in year 1 and used to train 120 health professional staff, doctors and nurses from high-risk provinces. During 2022, three climate change and health training modules were run in Kampong Cham for provincial and national level MoH staff (total of 82 participants). |
| Updated National Strategy for Climate Change Adaptation (CCA) and Disaster Risk Reduction (DRR) for long-term capacity-building is developed. | In Year 1, a strategic partnership was established through an MoU with CNM/ PMD (MoH), to coordinate surveillance activities.    An agreement was signed between MOWRAM and MOH for sharing of meteorological data during Q2 2020, however, there are challenges with this arrangement because realistically data can only be requested annually, and because there are limitations in historical data availability/quality. |
| **Laos PDR** | Nationally approved H-NAP for long term capacity building is developed. | The English version of the Lao PDR HNAP was finalised and endorsed in 2022. |
| Percentage of Health decision-makers who have received awareness training to integrate CC into health sector plans/ | Climate change and health training program with 9 modules developed and institutionalised in academic training programs. A total of 429 workers have received training against Outcome 1. |
| **Nepal** | Annual planning and budgeting for health sector adjusted for addressing climate change. | HNAP developed. Unable to verify allocation of health sector budgets to climate change activities. |
| Generation of evidence on climate resilient health systems developed in Nepal | Training manuals (a total of 7) on climate change and health, environmental health, WASH and HCWM in healthcare facilities were organised (see **appendix 5**) |
| **Timor-Leste** | Creation of H-NAP for long-term capacity building. | The final version of the HNAP was endorsed and launched in 2022. |
| Training package on climate change and health is developed and delivered | A total of 13 trainings (some of which also related to outcome 2 and 3) (see **appendix 6**) with a total of approximately 225 participants across all trainings have been conducted in Timor-Leste in relation to outcome 1. |

#### Outcome 2

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| **Outcome 2:** Effective decision-making for health interventions is enabled through generation of information and improved surveillance and/or early warning systems | | |
| **Indicator** | **End of Project level and assessment** | **Achievement rating** |
| **Indicator 3**:Vulnerability and adaptation assessments (V+A) conducted for current and future health risks.  (AMAT 2.1 Indicator 6) | Gender- disaggregated health vulnerability and adaptation assessments completed or updated in 5 countries. | **Achieved - S** |
| **Indicator 4:** Integrated disease surveillance system for climate sensitive disease is strengthened | Tailored products to inform decision making based on surveillance system which incorporates climate/weather data (5 countries). |

End-of-project targets for outcome 2 have been achieved. Vulnerability and adaptation (V&A) assessments have been completed in all countries, with results directly informing HNAP revisions in project countries. Several regional and country stakeholders emphasised the value of V&As in addressing critical data gaps within LDCs and establishing an evidence base on climate-sensitive health risks and needs for advocacy and planning. Without GEF Funds, it is highly likely that these country-level assessments may not have occurred.

Gender-related V&A data was collected in all countries, however the extent and type of data varied. Several countries reported sex-disaggregated V&A data for some climate-sensitive diseases, including in Bangladesh, Cambodia, Nepal and Timor-Leste. Qualitative data regarding gender impacts was also described in Lao PDR and Nepal. WHO supported a consultant to develop a gender analysis toolkit for V&A assessments and provided country-specific recommendations which were both shared with COs for information and feedback. However it was not possible to verify the extent to which these recommendations have been addressed and the toolkit was not included in the TE review. Gender considerations are discussed further under **Section 5.5: Cross-Cutting issues**.

All countries have developed and piloted integrated climate-sensitive disease surveillance systems, leveraging guidance and tools such as for EWARS and DHIS2, but there has been uneven progress on wider rollout and scale-up, reflecting the diverse and varying contexts across countries. Sentinel surveillance sites have been piloted in all countries for climate-sensitive communicable diseases, with variability in terms of disease focus dependent on country context (dengue and diarrhoeal diseases most common). All countries have participated in regular EWARS training organised by regional and HQ offices, and national training materials and workshops have been co-designed and disseminated with health sector implementing partners (mostly MOH) in Bangladesh, Cambodia, Lao PDR and Nepal.

Availability of high-quality historical data (meteorological and for some diseases) and data sharing negotiations hampered timely development and integration of surveillance systems in some settings. Many countries have overcome these initial challenges by establishing governance arrangements between relevant Ministries, such as MOUs, creating strong foundations for future integration. Many integrated surveillance activities are still in early pilot/proof-of-concept phases, and additional funding is needed by most of the countries to scale-up or address future gaps. However, the GEF project has made initial headway in strengthening integrated disease surveillance systems and has supported tailored products for national decision-making, and set the groundwork for future investment. Additionally, WHO HQ will provide ongoing support for the integration of surveillance systems via direct calls with technical experts, along with an expert meeting being organised by HQ in September 2024, to ensure successful implementation.

***Country-level Activities***

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| **Country** | **Country-level outcome indicators** | **Example Achievements** |
| **Bangladesh** | Number of health facilities using health emergency plans using information from integrated disease surveillance system dis-aggregated for gender sensitivity | EWARS tool has been developed and piloted in 10 sites for dengue, cholera, rotavirus, and other diarrhoeal diseases. IEDCR within the MHFP has established systems for ongoing data management and integration, including an MoU with the BDM for meteorological data. There is strong commitment to data sharing from relevant stakeholders and infrastructure is now in place for expansion, including server equipment.  Guidelines for EWARS and emergency plans have also been developed and have been applied for recent climate events in some sub-districts (see **Case study 1**). |
| Percentage of stakeholders participated in coordination and use of early-warning systems |
| **Cambodia** | Number of new hospitals performing active dengue surveillance in addition to existing seven. | At the beginning of the project, five dengue sentinel sites were operational (Siem Reap, Takeo, Kampong Cham, Battambang, and Kampot). During the first two years of the project, an additional five dengue sites were added (Kampong Thom, Kampong Chhnang, Kratie, Tboung Khmum, and Prey Veng) and during 2022, five new dengue sites were added (Kampong Speu, Banteay Meanchey, Ratanakiri, Preah Vihear, and Svay Rieng). Additionally, the five dengue sentinel sites that were added in 2021 were provided with training on standard reporting procedures where a total of 160 dengue supervisors and health professional staffs from Operational Districts (ODs) or Provincial Hospitals participated. |
| Improvements in diarrhoeal disease surveillance | A new diarrheal disease surveillance system (CAMEWARN) was implemented in the first year of the project alongside a diarrheal disease surveillance workshop. In 2021, additional diarrhea surveillance training and monitoring (and COVID-19 prevention and control measures) was conducted and a total number of 60 participants attended. |
| **Lao PDR** | Vulnerability assessment conducted for current and future health burdens, considering development and climate change, as indicated by: The updated 2010 WHO/Ministry of Health climate change and health vulnerability assessment | A V&A for the health sector was conducted in 2018 supported by ADB. In 2019, WHO collected additional data on water-related diseases, vector-borne diseases, impacts on WASH, mental health, malnutrition, injury and disability and sudden increase of health services use during the flood season in 2018-19 to enhance the existing V&A. Climate change and health outcome data have been integrated into DHIS2 and gender disaggregated health outcome data is also available for regular update and monitoring. |
| Establish basis for early warning system which is integrated with weather and climate data and CC&H database | Data sharing mechanisms have been achieved and EWARS tool is being piloted in 10 sites for dengue and diarrhoeal diseases. Interview data also highlights that work is being conducted on air quality and health (e.g. providing air quality monitors to all provinces and capitals). Information is currently being collected to increase the awareness of the impacts of poor air quality on health. Additionally, guidelines are being implemented to support heatwave early warning systems. |
| **Nepal** | Develop policies and strategies for prevention, control and management of climate-sensitive health risks and diseases developed for scrub typhus and chikungunya fever. | EWARS tool has been piloted in four sentinel sites from all three ecological regions which considers six climate sensitive diseases. There is an MoU between DHM and DoHS for sharing of health and climate data for strengthening existing disease surveillance from climate perspective. Due to potential adjusted priorities during the implementation period, there was insufficient data related to policies and strategies explicitly referring to scrub typhus fever and chikungunya specifically (aside from their inclusion within the updated 2015 VAA data which has a focus on a) emerging climate sensitive diseases and health risks in the country e.g. dengue, scrub typhus, chikungunya and zika virus). However, The Vector Borne Diseases and Research Training Centre (VBDRTC) in collaboration with BPKHIS completed an entomological survey titled Entomological survey of major vector-borne diseases in geo-ecological and climatic variances in Koshi Province, Nepal. |
| Integrated diseases surveillance and alert system in place for early detection and prevention of climate-sensitive diseases and risks in piloted district. | Based on the training reporting table (see **Appendix 6**), over 100 staff have been trained against this outcome. |
| **Timor-Leste** | Vulnerability and adaptation assessment conducted for current and future health risks | A general Vulnerability and Adaptation Assessment (V&A) was completed in 2019 to inform the current HNAP. Timor-Leste is currently working on a comprehensive V&A for the country and all municipalities. |
| Feasibility assessment of developing climate-health early warning system | Pilot hampered by lack of historical and current meteorological data. At this stage, the EWARS tool is being piloted at the municipal level for dengue with a MOH EWARS working group in place and health workforces have received EWARS training. There is insufficient data and resources to undertake pilots for other diseases. |

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| **Case study 1: Piloting EWARS in Bangladesh**  In a bid to strengthen the surveillance of climate-sensitive diseases, Bangladesh has embarked on a pilot program using the Early Warning, Alert, and Response System (EWARS) tool developed by WHO. The pilot is being conducted across 10 sites focusing on diseases such as Dengue, Cholera, Diarrhoea, and Rotavirus.  **Building a Collaborative Framework**  The project was supported by strong collaboration between key stakeholders, including the Institute of Epidemiology Disease Control and Research (IEDCR), Department of Disaster Management (DDM), and WHO. Memoranda of Understanding (MoUs) were negotiated with key cross-sectoral agencies, including with DDM and the Bangladesh Meteorological Department (BMD), establishing the foundation for data sharing and integrated health and climate data analysis.  Workshops with the Department of Environment, BMD, and the Department of Public Health Engineering, building off regional WHO EWARS guidance, led to the development of a climate-informed disease surveillance protocol. These sessions culminated in a comprehensive understanding of how climate data could inform disease tracking and response, aimed at providing timely outbreak alerts. Data sharing agreements and GEF-funded infrastructure, including a high-powered server for real-time data sharing based at IEDCR, has established conditions for successful design, implementation and rollout of the EWARS tool, with regular training sessions enhancing the capabilities of the IEDCR surveillance team.  **Capacity Building and Training Initiatives**  The success of the EWARS tool pilot relied heavily on the capacity building of surveillance staff. The journey began with mapping relevant health and climate surveillance activities and identifying key stakeholders. A significant achievement was the creation of a national guideline and training manual on “Climate-sensitive Disease Surveillance and EWARS”, which is an IEDCR/MOH branded resource. The official launch of the EWARS tool pilot was accompanied by continuous training programs focused on enhancing the skills of surveillance staff. These programs emphasised data collection, processing, and integrating climate data with health surveillance.  Training efforts were further strengthened through regular one-on-one sessions with WHO HQ experts, which bolstered the capabilities of the IEDCR team and laid the groundwork for developing institutional and professional capacity in climate-informed disease surveillance.    **A Path Forward**  The pilot of the EWARS tool in Bangladesh represents a significant advancement in integrating climate data with health surveillance. This initiative not only aims to predict and respond to disease outbreaks more effectively but also sets a precedent for other regions facing similar challenges. With ongoing training, strategic data-sharing, and strong collaboration among stakeholders, Bangladesh is on the path to establishing a resilient health system capable of managing the impacts of climate change on public health. |

#### Outcome 3

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| **Outcome 3: Climate resilience is enhanced in health service delivery** | | |
| **Indicator** | **End of Project level and assessment** | **Achievement rating** |
| **Indicator 5:** Disease control and prevention programmes are strengthened to account of the effects of climate variability and change. | Disease control and prevention programmes strengthened in 5 countries. | **Achieved - HS** |
| **Indicator 6:** Number of direct beneficiaries from enhanced health service delivery.  (AMAT 1.1 Indicator 1: number of direct beneficiaries) | 100,000 |

All countries have supported activities to enhance climate resilience in health service delivery, with innovative demonstration pilots and clear application of national guidelines, tools, standards and training materials (outcome 1) in sub-national and local settings. Significant investments in training and capacity building activities across all countries have strengthened national and sub-national institutional capacity across key agencies, predominantly within MOH departments. Climate change considerations have been mainstreamed and embedded throughout, for example in the development of climate-resilient WSPs in selected provinces across all countries. ‘Train the trainer’ models were particularly useful, allowing for increased capacity at MOH level to deliver and implement ongoing capacity building activities. Although the project did not include formal pre/post assessments on changes in behaviours, knowledge, and attitudes resulting from capacity building activities, several country stakeholders have reported anecdotal improvements in understanding and acceptance of climate change as a critical health issue among participants.

Climate-resilient health service delivery interventions have mostly focussed on mainstreaming climate change into WASH, water safety and waste management plans. GEF funds were used to supplement and scale-up existing programs with implementing partners, including through MOH and NGOs (see **Case Study 2**). While some stakeholders felt the lack of parameters around intervention activities under Outcome 3 made it hard to measure and compare progress across countries, the flexibility to co-design and tailor activities to national context was seen as beneficial by in-country partners. The prominence of WASH activities across all countries may reflect its perception as a *“low hanging fruit” (KS#1)* with potential for clear health outcomes, and hence an easy area for initial targeting.

Additional guidance and investments may be needed to implement activities towards other domains of the WHO Guidance for Climate Resilient and Environmentally Sustainable Healthcare facilities (CRESH), such as energy and low-carbon infrastructure. While the project had a clear emphasis on building climate-resilient health systems, there were activities and interventions linked to low-carbon and decarbonisation (i.e. mitigation) efforts. Several participants noted knowledge gaps on cost-effectiveness and feasibility of integrating low-carbon technologies, especially when gaps are identified through implementation of assessment tools (e.g. WASHFIT). Nepal completed baseline assessment of GHG emissions from health sector operations in line with country commitments at COP26, the findings of which will be used to develop national action plan on low carbon health system. Bangladesh supported a consultant using GEF funding to model healthcare greenhouse gas emissions, but further data is required to measure an accurate baseline and inform healthcare decarbonisation plans. And Timor-Leste has developed a national CRESH policy and strategy building on WHO guidance.

Funding and responsibilities for the ongoing maintenance and operation of interventions remain challenging both during and beyond the project life. Interventions were piloted in government/public healthcare facilities, but gaps in existing resources and opaque distribution of funding through centralised systems were identified as barriers to future implementation. For example, some district level facilities in Bangladesh had limited budget for cleaning and janitorial staff; and healthcare staff in Lao PDR were tasked with multiple responsibilities beyond their typical role, for example to maintain infrastructure such as safe water drinking systems. Local champions (Hospital Directors, Provincial Health managers) have played a critical role in implementing CRESH interventions, creating an enabling environment and supportive culture around ‘clean green’ hospitals and healthcare facilities. Additional support and incentives to maintain standards, for example for safe drinking water and hospital waste management systems, may be required.

The end-of-project target for direct beneficiaries has been met. However, beneficiaries ranged from participants in training activities, communities in pilot project catchment areas, and healthcare personnel. Direct beneficiary definitions were unclear and do not appear to have been revised following recommendations under the MTR. Despite this, the project has likely surpassed the target of 100,000 beneficiaries given the substantial population coverage of some activities.

***Country-level Activities***

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| **Country** | **Country-level outcome indicators** | **Example Achievements** |
| **Bangladesh** | Three model climate-resilient health-care centres (Green Hospitals) developed and implemented in selected project areas by 2021 | Building resilient HCFs in this project was completed in Year 3. In 2022, a climate-informed health emergency preparedness and response plan was developed and in 2023, preparations for a baseline assessment of GHG emissions in healthcare facilities were undertaken. |
| Percentage of health-care staff trained in treatment and emergency protocols for climate-sensitive diseases within project service area | In 2023, 120 participants (health managers, doctors, nurses, and allied staff) were involved in a training on *Climate Informed Hospital Emergency Preparedness and Response Plan*. |
| **Cambodia** | Number of communes reaching target levels in the rural water safety planning recognition system | Community training and behaviour change programs were implemented in Years 1, 2 and 3, including for dengue and diarrhoeal diseases; and WASH awareness in multiple villages across 3 districts in Rantanakiri. |
| Number of health-care facilities with climate-proofed improved water and sanitation facilities | During Q1 and Q2 2021, CRWSP WASH infrastructure improvement was carried out in 20 HC in three districts. In Year 3, CR-WASH infrastructure improvement was carried out in a further 5 HCF (in addition to the provision of filter replacements). In Year 2, climate resilient water safety plans (CRWSP) for community implementation were developed for 10 health centres in Ratanakiri and have been disseminated to stakeholders and TWGWASH. |
| **Lao PDR** | Technical capacity and number of health personnel increased to cope with climate-sensitive health outcomes in selected target sites as indicated by: (The pilot of the Climate-Resilience Water Safety Plan in selected 2 provinces) | A CR WSP was developed and implemented in 2 provinces and 8 district levels (Year 1). WHO provided on site water quality monitoring and surveillance training for the CR WSP teams (Year 2). In 2021, CR WSPs were expanded to 3 southern and 3 northern provinces. |
| Climate-sensitive management and response plans developed in selected provinces as indicated by: (The finalization of the Disaster Risk Management Plan, WASH FIT, risk assessment and management tool will be introduced in 2 target provincial hospitals.) | CR-WASH FIT was implemented in 9 district hospitals and one provincial hospital as of 2023. Safe, clean and green hospital interventions implemented in 14 district hospitals in six southern provinces and expanded to central and northern provinces (62 hospitals) with complementary funding support. |
| **Nepal** | Number of model climate-resilient health facilities established in selected districts | The concept of climate resilience and environmental sustainability of HCFs has been piloted in three HCFs, each one from hill, mountain and terai ecological region. Procurement of supplies for improvement works especially related with healthcare waste management and WASH in three HCFs was carried out. Technical support from WHO on integrating climate resilience and environmental sustainability; and autoclaves have been provided to three HCF in target districts. |
| Number of climate-resilient water safety plans in place focused on reduction in incidence of diarrhoeal diseases in selected districts of Nepal | A local agency completed an audit of CR WSP covering 12 water supply projects (representing all seven provinces). More than 30 water supply projects have been trained on developing CR-WSP with supply of water quality test kits to enhance water quality monitoring. |
| **Timor-Leste** | Disaster management and response plans for health facilities | Trainings, workshops and advocacy activities have been conducted on early dengue management in the wet season, water quality testing and CCH awareness. Three water treatment system have been installed in three municipalities and a solar PV system has been installed in Baucau. In 2023, over 45 officials were trained in the National Training on CRESH led by SEARO. |
| Develop a climate-resilient water safety plan | The Climate Resilient and Environmentally Sustainable Policy and Strategy and the National Health Care Waste Management Policy have been developed. Additionally, the CR-WSP training was conducted with health staff and materials translated into local languages (Year 1-2). Plans were in place to conduct additional training with 30 beneficiaries in 2023, but it is unclear if the WSP was developed and its geographic scope. |

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| **Case study 2: Safe, clean, green climate-resilient hospitals in Lao PDR**  Lao PDR integrated Climate Resilient Water Safety Plans (CR-WSP) into its existing water safety training programs, and adapted the WHO WASH-FIT tool and autoclave training into a comprehensive and integrated climate resilient and low-carbon healthcare toolkit. 190 provincial and district-level water supply staff underwent specialised CR-WSP training. Implementation of CR-WSP then began in two provinces and eight districts, targeting improvements in water quality testing, emergency water treatment, and disease prevention. Despite the constraints imposed by COVID-19 travel restrictions, the program expanded in 2021 to include three southern and three northern provinces, demonstrating resilience and adaptability. A manual was developed with local experts, and water quality toolkits funded by GEF made available to provincial health departments in 18 provinces, ensuring widespread implementation and impact.  In parallel, the healthcare sector saw improvements with the procurement of four autoclaves for district hospitals, replacing outdated GHG-intensive incinerators. A training program and national curricula on autoclave use was developed with the Ministry of Health and academic partners. Comprehensive training and technical support have been provided to health facilities in Vientiane Capital, Xiengkhuang, and Sekong provinces. Certified training was also extended to autoclave operators and healthcare waste management staff in Champasak, Sekong, and Attapeu provinces.  Lao PDR's concerted efforts to integrate climate resilience into water safety, healthcare facilities, and waste management reflect a forward-thinking and comprehensive approach to climate resilient and low-carbon health care facilities, and were packaged together as the ‘safe, clean, green and climate-resilient’ hospital toolkit, translated into local languages. These initiatives not only address current environmental and health challenges but also pave the way for a more sustainable and healthier future for the population. |

#### Outcome 4.1

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| **Outcome 4.1 - Enhanced regional cooperation and knowledge exchange for promoting scale-up and replication of interventions** | | |
| **Indicator** | **End of Project level and assessment** | **Achievement rating** |
| **Indicator 7:** Three regional trainings/meetings organized (Percentage of government stakeholders participated in national review meeting on CC&H) | This target has been achieved and exceeded with multiple regional meetings on climate change and health (building on country experiences) for international south-south collaboration focused on climate change and health. Training and meetings reached an estimated 3,489 participants including MOH and WHO representatives. | **Achieved - HS** |

The project successfully achieved its end-of-project target, with ongoing work in this area until project completion. Three virtual project board meetings (2020-2022), one face-to-face (F2F, 2023) meeting with regional and CO representatives were held, with a final project board meeting scheduled for 06 August 2024. Training on specific technical activities, including EWARS, autoclaves and WSPs, catalysed implementation and rollout of national-level pilots and interventions (see **Appendix 6-7** for full list of trainings and webinars). In addition to this there were a number of regional trainings and meetings. For example, in 2023 WPRO held a Member States consultation on climate resilient and environmentally sustainable health care facilities as well as a Member States consultation on climate resilience WASH in HCFs. The two project countries were able to share their project experiences to broader audiences at these meetings. Similarly, SEARO held multiple regional meetings and activities such as training on WASH and Climate-Resilient Healthcare Facilities and hosted climate change and health days linking to World Health Day and International Women’s Day.

Beyond formal training and workshop activities, indirect learnings were accessible via the combined quarterly and annual project reports. Country stakeholders valued the numerous training, networking and knowledge sharing activities and highlighted *“very good support from HQ and regional offices” (KS#2)*, including through technical advice and guidance documents. Some noted difficulties in participating in all training and knowledge sharing activities due to competing priorities. In addition, while *“climate change has no boundaries” (KS#3)*, several stakeholders highlighted the different country contexts, including environmental aspects. Hence, it is important to consider the context-specificity of learnings and intervention approaches to ensure they are fit-for-purpose in any future scaling efforts.

Participation of MOH stakeholders was sometimes limited by language barriers, but there were numerous additional trainings and workshops held at the national level in local languages (see **Outcome 1**). Importantly, national stakeholder engagement, ownership and leadership was enabled through participation in regional and global climate and health networks, including the WHO-led Alliance for Transformative Action on Climate and Health (ATACH) and UNFCCC Conference of the Parties (COP) meetings. Several stakeholders noted increased engagement and government support following participation of MOH at high-level events. Most project countries are members of ATACH, and case studies developed from project activities were noted as particularly valuable for informing climate-resilience and adaptation interventions in other settings.

#### Outcome 4.2

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| **Outcome 4.2 - HNAP are effectively integrated into ongoing NAP processes** | | |
| **Indicator** | **End of Project level and assessment** | **Achievement rating** |
| **Indicator 8:** HNAP informed by economic analyses to support integration into the NAP. | 5 countries received support to develop climate change and health economic analyses. | **On track - MS** |

The responsibility for delivering this outcome lay with UNDP under the ProDoc and project governance arrangements. All countries have engaged with UNDP but there has been uneven progress on integrating health across adaptation actions, namely through integration of health into NAPs. This may reflect institutional barriers and differing status of NAP activities and coordination mechanisms across countries. For example, in countries where the HNAP and NAP overlapped, there were significant efforts and opportunities to strengthen intersectoral collaboration and coordination (see **Case Study 3**). In Nepal, the NAP preceded the HNAP and strong synergies were established between the two through intersectoral partnerships. In Bangladesh, the updated HNAP has involved consultation with the Ministry of Environment, Forest and Climate Change, and the MOH was invited to run a stall at the UNFCCC 2024 NAP expo (an annual event for LDCs to facilitate learning and knowledge exchange on NAP formulation and implementation), representing the only health-focussed initiative. In other settings, such as Lao PDR, the HNAP is more advanced than NAP processes, but provides a strong foundation for future integration. In Cambodia and Timor-Leste, the project facilitated participation of health sector actors within national climate change working groups. WHO has acted as a key conduit in all countries for strengthening links with Ministries of Environment/Climate

In relation to economic analyses for HNAPs (Indicator 8), a method has been drafted by UNDP to quantify the direct and indirect costs of climate change on health, as well as an Institutional Context Analysis. UNDP is currently working with Bangladesh to test these methods and they will be finalised by UNDP in the next six months. It was, however, not possible to verify application or relevance of this to the project. Responsibility for this work largely fell with the UNDP and activities were not sufficiently detailed in reporting documents to be able to evaluate impact. While there was generally good collaboration and coordination between WHO and UNDP at HQ level, staff turnover within COs and unclear in-country implementation plans may have limited progress on this outcome within countries.

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| **Case study 3: H-NAP and NAP integration in Nepal**  Nepal is taking significant steps to address the health impacts of climate change. The country’s Health National Adaptation Plan (HNAP) has been integrated into the National Adaptation Plan (NAP) through collaboration with the Ministry of Forests and Environment (MoFE). This integration involved consultative meetings, workshops, and the formation of a technical working group. Published in 2022, the NAP includes health, drinking water, and sanitation as key areas. It outlines seven priority adaptation programs for this sector, with a budget of 4.75 billion dollars through 2050.  MoFE also released a report titled ‘Vulnerability and Risk Assessment and Identifying Adaptation Options: Summary for Policy Makers,’ which focuses on health and water, sanitation, and hygiene (WASH). Sectoral reports on health, drinking water, and sanitation have also been finalized. In February 2023, the Ministry of Health and Population (MoHP) released an updated Vulnerability and Adaptation Assessment (VAA) for climate-sensitive diseases and health risks. The HNAP is now being updated in line with Nepal’s commitments at COP26 to build climate-resilient health systems.  Climate change issues are included in the Nepal Health Sector-Strategic Plan (NHSSP) 2023-2030, which emphasizes a multi-sectoral response to health impacts of climate change. Key objectives include:   * Addressing health impacts of climate change through adaptation plans and standards. * Institutionalizing systems to manage health impacts of development projects and industrial operations.   With support from WHO, the Ministry of Health and Population has released the updated HNAP for 2024-2030, reaffirming Nepal’s COP26 commitment to building a climate-resilient health system. |

### **Project Implementation and Execution**

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| **Implementing and executing agency** | |
| Quality of UNDP/WHO implementation oversight | S |
| Quality of implementing partner execution |
| Overall quality of implementation/execution |

#### Adaptive Management and Implementation

Project implementation has been successful, with positive achievements at all levels across stakeholder engagement, activity execution, project management and governance systems. HQ, regional and country teams worked to adapt activities and management processes throughout to respond to external drivers and implement variations where needed, including during the COVID-19 pandemic.

#### Execution and stakeholder engagement

**National:** The project established effective stakeholder engagement, coordination and partnership systems in national contexts. The broad flexibility to tailor and co-design country-level activities under Outcomes 1-3 enabled alignment with national and sub-national stakeholder needs and priorities. Project steering committees/TWGs were established in all countries with strong MOH representation and participation. Initially, these groups were focussed on project activities but the findings from the evaluation indicate that there has been a successful evolution of responsibilities for broader HNAP/climate and health activities. One national stakeholder highlighted the climate leadership and advocacy this has facilitated within MOH, having worked hard to “*influence areas of government that are usually beyond their remit of sphere of influence*” *(KS#4).* Longer-term implementation under these groups requires continued support for project activities and, although not guaranteed or budgeted in all countries, the GEF project outcomes provide a solid foundation for funding proposals and advocacy for the increased availability of international climate finance of health.

The project was described as encouraging *"multi-sectoral engagement" (KS#5)* within countries between MOH and other Ministries, which is an important foundation for future efforts to integrate health and climate adaptation actions. Governance structures such as MOUs for data sharing and collaboration towards integrated surveillance systems have been established and will continue beyond the life of the project, enabling sustainability and ongoing impact.

**Implementing partner execution**: The WHO CO have leveraged their well-established institutional networks with MOH to support successful implementation of project activities. Multiple MOH stakeholders highlighted strong partnerships with WHO and appreciation that GEF funds could be targeted towards locally-driven priorities and activities under country-level outcomes through Direct Financial Contributions (DFC).

**UNDP/WHO engagement and oversight:** Overall coordination between UNDP and WHO was supported by annual project board meetings and reporting cycles which enabled joint learning and implementation monitoring. COs were supported by RO and HQ teams to manage implementation challenges and reporting needs. The evaluation found that there was inconsistent engagement with UNDP within countries, beyond general input and invitations to relevant consultation meetings, potentially reflecting UNDP CO staff turnover (which was identified as a challenge during the MTR). Some countries described good coordination with UNDP COs but there was a general lack of clarity about implementation priorities, particularly under Outcome 4.2. This may have limited progress on integration of HNAPs with NAP processes, especially given Outcome 4 was not otherwise embedded in country-level results frameworks or activities.

#### Project Finance and Co-finance

Based on available expenditure data, the project appears to have underspent across all budget components (see **Table 4**). The TE overlapped with the final reporting period (23/24 Financial Year) and hence acquittal information for the final 12-month implementation period was not available for inclusion in the TE report.

Regardless of final acquittal status, the project had accrued a significant underspend at commencement of the final year (>45% as of July 2023). Expenditure rate also appears to have varied across outcome and project management activities, with Project Management Unit (PMU) fund utilisation rate the lowest overall. This may partly reflect initial commencement and COVID-19 related implementation delays and significant in-kind investments (**Table 5**). The most recent annual report and stakeholder interviews indicate significant acceleration was planned for the final year of implementation and that the multi-year project budget is on-track for full acquittal, but this was not possible to verify independently.

**Table 4. Project Finance**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Budget amount (USD) (total for 4 years)** | **Expenditure (USD) (As 30 June 2021) - MTR** | **Expenditure (USD) (As 30 June 2023)** | **Budget spent (%) (as of 30 June 2023)** |
| Outcome 1 | 1,907,403 | 690,301 | 1,227,838 | 64.37% |
| Outcome 2 | 2,032,893 | 425,911 | 700,635 | 34.46% |
| Outcome 3 | 3,039,704 | 817,894 | 1,458,681 | 47.99% |
| Outcome 4.1 | 1,200,000 | 496,116 | 742,533 | 61.88% |
| Outcome 4.2 | 51,504 |
| PMU | 416,000 | 24,253 | 131,324 | 31.57% |
| PSC | - | 67,492 | 343,236 |  |
| **Project Total** | **8,596,000** | **2,506,258** | **4,604,247** | **53.56%** |

**Table 5. Project Co-Finance**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sources of co-financing** | **Name of co-financer** | **Type of Co-financer** | **Amount committed at commencement** | **Actual amount contributed at MTR** | **How much was spent as of June 2023** | **% spent of amount committed** |
| Recipient  country | Bangladesh National Government | In-kind | 5,300,000 | 2,226,000 | 3,710,000 | 70% |
| Recipient country | Cambodia National Government | Grant | 2,500,000 | 1,050,000 | 2,500,000 | 100% |
| Recipient country | Lao PDR National Government | In-kind | 2,385,200 | 1,001,784 | 1,640,284 | 68.77% |
| Recipient country | Myanmar National Government | In-kind | 3,000,000 | 1,260,000 | NA | NA |
| Recipient country | Nepal National Government | In-kind | 3,300,000 | 1,386,000 | 2,669,000 | 80.88% |
| Recipient country | Timor-Leste | In-kind | 1,500,000 | 630,000 | 1,120,632 | 74.71% |
| Other | Bangladesh WHO Country Office | In-kind | 700,000 | 294,000 | 608,825 | 86.97% |
| Other | Lao PDR WHO Country Office | In-kind | 1,036,400 | 435,288 | 849,400 | 81.96% |
| Other | Nepal WHO Country Office | In-kind | 700,000 | 294,000 | 630,000 | 90% |
| Other | Timor-Leste WHO Country Office | In-kind | 240,000 | 100,800 | 210,000 | 87.50% |
| Other | WHO HQ and Regional Offices | In-kind | 6,400,000 | 2,688,000 | 4,737,378 | 74% |
| TOTAL | | | 27,061,600 |  | 18,675,519 | 69.01% |

While project stakeholders generally viewed the project activities as being sufficiently well-resourced financially, there was a perceived imbalance between budget for project staff within health service delivery agencies (namely MOH, WHO and healthcare partners), compared to short-term consultancies, which was similarly recognised in the MTR. This may reflect GEF funding restrictions, which we understand excluded ongoing human resource funding for dedicated positions within Government agencies, and given the original project design included substantial co-financing commitments often to support staff within government agencies. While consultancies were necessary to address technical gaps, implementation was often driven by core/ongoing staff (e.g. in MOH or sub-national government agencies), who may have benefitted from greater and more sustainable investment in human resources. Furthermore, the funds did enable several implementation activities for initial demonstration pilots, but expansion and replication of successful activities was limited by the project timeframe. Some countries have leveraged the project for additional funding proposals, but progress in securing additional finance has been uneven. These issues are described further in **Section 5.6: Sustainability**.

### **Monitoring, Evaluation and Risk Management**

|  |  |
| --- | --- |
| **Monitoring and Evaluation systems** | |
| Design at entry | S |
| Implementation |
| Overall assessment |

Given that the GEF reporting structure only required reporting on the project level indicators, country-level outcome indicators and targets defined in national results frameworks at project outset were tracked inconsistently and were not reflected in quarterly/annual reports. Although this reporting structure is understandable given the diversity of activities and heterogenous interventions at national level, it made it difficult to determine the extent to which country-level indicators/targets were feasible and appropriate to national contexts.

Furthermore, inconsistent beneficiary definitions and potential deficiencies with monitoring gender mainstreaming do not appear to have been adequately addressed following the MTR. The Project Teams disaggregated participant data by gender where possible, and technical support was provided to improve gender V&A analysis. But it was not possible to assess the extent to which these activities resulted in ‘gender mainstreaming’, which may reflect unclear focus within the broader project design. M&E indicators for environmental sustainability and community engagement activities were also unclear, and hence reporting systems may not have adequately captured these impacts.

Finally, the project did not include measurement of pre/post intervention data, for example on knowledge, attitudes and practices of target stakeholders in relation to climate change and health training and capacity building activities; or impacts of health service and integrated surveillance interventions on climate-sensitive health issues. These were likely beyond scope of the program design but could have contributed useful validation and implementation evidence to support advocacy and replication.

#### Knowledge Management and Learning

The project emphasised platforms for knowledge exchange and networking among stakeholders. This included regional workshops, conferences, and forums where participants could share experiences, discuss challenges, and develop collaborative solutions. Good communication channels and existing institutional knowledge supported project management and implementation and helped address continuity and staff turnover challenges that were identified as gaps during the MTR.

For example, several country stakeholders highlighted the value of regional and global training workshops on EWARS, WSPs and SOPs for climate-sensitive diseases, including follow-up webinars and training, which provided demonstration examples and informed national surveillance system planning and training activities.

#### Risk Management, including Social and Environmental Standards (Safeguards)

Risks were adequately managed through standard reporting and monitoring systems. RO and HQ support was especially valued by CO staff, particularly when staffing arrangements were relatively consistent and teams were able to build trusting relationships and communication channels to address any challenges to traction.

Major external risks, such as political and security instability, were appropriately managed by WHO and UNDP, with structures such as the International Project Board and strong existing governance through WHO CO systems, established and effective throughout the project. No red flags were raised by any stakeholders in relation to risk management.

### **Cross-Cutting criteria and Findings**

#### Relevance, Coherence and Efficiency

|  |  |
| --- | --- |
| **Criteria description** | **Rating** |
| **Relevance:** How does the project relate to the main objectives of the GEF Focal area, and to the environment and development priorities at the local, regional and national level? | S |
| **Coherence:** To what extent did the project align with national country context (external coherence) and were project activities aligned with the project’s theory of change | HS |
| **Efficiency:** Was the project implemented efficiently, in line with international and national norms and standards? | HS |

***National-Level***

The project was clearly aligned with the national health and development priorities of each country, with several MOH stakeholders reporting a positive correlation between the project and national health and climate priorities. For example, in Lao PDR the project was *“very well aligned with national strategy and action plan of the MOH”* *(KS#6)*, which facilitated collaboration and commitment of in-kind resources. In all countries, HNAP development was led by MOH stakeholders, supporting alignment with national priorities and policy frameworks.

While activities were clearly aligned to and informed health/development priorities, it was difficult to ascertain the extent to which broader ‘environment priorities’ were addressed by the project. As discussed in stakeholder engagement (**section 5.3**), the project did facilitate multi-sectoral coordination between health and health determining sectors. And there were illustrative examples of collaboration, particularly in relation to integrated surveillance system pilots. As one stakeholder noted, *“when departments start talking, they can share ideas and identify solutions that benefit all” (KS#7).*

***Regional and International Level***

The initiative demonstrated alignment with regional frameworks such as the Male Declaration on Building Health System Resilience to Climate Change (endorsed by all SEAR member states in Male, Maldives) and WHO Operational Framework for Building Climate resilient and Low Carbon Health Systems. Climate change is also clearly identified as a priority in WHO work plans at regional and HQ levels, increasing relevance and potential for disseminating project achievements. Stakeholders also agreed the project was aligned with climate and health priorities in UNDP’s strategic plan, promoting an integrated approach across ministries and stakeholders.

#### Effectiveness

|  |  |
| --- | --- |
| **Criteria description** | **Rating** |
| **Effectiveness:** To what extent have the expected outcomes and objectives of the project been achieved? | HS |

As described in **section 5.2**, the project has effectively delivered its overarching objectives, and has achieved or is on track to achieve all overarching outcomes.

#### Gender equality and women’s empowerment

Advancing gender equality and women’s empowerment was identified as a significant objective in the project design. Gender issues were considered across project activities by all countries and measured through collection of sex-disaggregated data for climate-sensitive health risks and capacity development activities as much as possible. WHO HQ contracted a gender expert who developed a draft Gender Analysis toolkit for V&A assessments and supported countries in conducting gender analyses. The draft toolkit was circulated to project teams in countries for information and comment, and is expected to be published in 2024. Given the timing, the potential of the toolkit to inform the project is therefore limited, however it should be a helpful resource for future climate and health-related activities.

***Country-Level Activities***

|  |  |
| --- | --- |
| **Bangladesh** | Completed a sex-disaggregated health vulnerability and adaptation assessment in 2022. Female participation was encouraged in meetings, workshops, and trainings. It was noted during interviews that local partners embedded gender and disability inclusion in the program to upgrade WASH and waste management in 8 HCF, including establishing female lavatories and accessibility support. Interview data also highlighted however that throughout the project duration, *"it was difficult to target women's empowerment" (KS#8)* and those in senior MoH roles were occupied by men, which therefore leads to an under-representation of women at senior level. |
| **Cambodia** | Launched an updated sex-disaggregated National and Provincial V&A Assessments report in March 2019. Gender equality was included in the national and sub-national Technical Working Groups. The WASH assessment included gender-specific questions, and water treatment installations aimed to assist female community members responsible for water collection. Female healthcare staff ratio at trainings was provided within the reports and it was noted during interviews that gender awareness is also being raised at the community level. |
| **Lao PDR** | Gender was integrated into WHO's climate change and health training modules and community educational materials. These efforts aimed to increase understanding of gender norms and encourage addressing gender and equity issues. |
| **Nepal** | Emphasised gender balance in all project activities, including participant selection for trainings and meetings. Efforts to maximise women's participation were noted, and recommendations from a gender integration review in V&A assessments were implemented. |
| **Timor-Leste** | Gender considerations were a high priority. All MoH staff in the environmental health division are women, and 50% of workshop and training participants were women. However, most directors were male. A TOR for the V&A consultancy was developed in year 3 of the project and included inputs from the HQ gender expert consultant. The sub-national V&A has now been developed with inclusion of sex-disaggregation for vulnerable populations |

Overall, although gender issues were a focus and considered by all project countries, it was also evident throughout the interviews that more consideration of gender in the project was needed. Additionally, it was highlighted that the gender focus for this project was *"not very clear, specifically on how to target" (KS#9)* and that *"some gender reporting [not just this project], is based on attendance, does not necessarily represent empowerment" (KS#10)* Furthermore, it was suggested that improvements could have been made in the enhancement of the M&E to assess the extent to which activities addressed gender-related outcomes.

Desktop review and stakeholder interviews indicate that gender equality and community empowerment were reasonably considered across project activities by all countries. This aligned with the MTR findings, which highlighted most countries have been successful in integrating gender mainstreaming approaches into project activities, including inclusion of women’s groups at community levels and female leadership for project implementation, as well as incorporating relevant policies (e.g., WHO’s Gender Policy). However, definitions and approaches to advancing and measuring gender mainstreaming across the program were unclear and could be strengthened.

### **Sustainability and Impact**

|  |  |
| --- | --- |
| **Sustainability Criteria** | **Rating** |
| Financial and socioeconomic | ML |
| Institutional framework and governances | ML |
| Environmental | Not assessed |
| Overall likelihood | ML |
| Sustainability is rated on a different 6-point scale: 6=Highly Likely (HL), 5-Likely (L), 4=Moderately Likely (ML), 3=Moderately Unlikely (MU), 2=Unlikely (U), 1=Highly Unlikely (HU) | |

#### Financial, socio-economic and institutional

Evaluation findings indicate that the longer-term impact and financial sustainability of project activities is likely to face mixed success and will vary between countries. Several activities have achieved substantial country buy-in, particularly from key implementing departments within MOH. Institutional capacity has been strengthened through training and capacity building investments and there is a high degree of country ownership over core policy frameworks, including HNAPs and national guidelines and standards for climate change and health. HNAPs were described by key stakeholders as inherently sustainable as they are MOH owned policy frameworks that provide clear identification and prioritisation of climate-related health adaptation actions. All project countries, with the exception of Cambodia and Myanmar, committed at Ministry of Health level to the CO26 health commitments on climate resilient and low carbon sustainable health systems. This country-level ownership is fundamental to sustained efforts, but there are many other factors to consider, including capacity and continued financial support.

The focus on building institutional capacity at national and regional levels is crucial for sustained impact, as a cohort of national and sub-national policymakers and practitioners have now received training and guidance to implement climate-resilient health system interventions. Several MOH stakeholders noted that training and guidelines have been integrated within national curricula and training programmes, hence will continue beyond the project. Refresher training to update and expand skills will be needed in future, particularly for new staff and to keep up-to-date with the latest methods and guidance for climate and health activities. The impact of these capacity development activities is important to monitor and evaluate, particularly to inform future priorities, target audiences and investments.

The project has laid strong foundations through demonstration pilots for integrated surveillance systems and climate-resilient health service interventions (especially WASH and waste management). Ongoing technical support from WHO HQ will also be provided for some activities, including integrated surveillance systems. However, sustainability in some countries may be at greater risk due to lack of clear transition plans or alternate funding sources: *“where there is funding and political will, projects will continue” (KS#11).* Ongoing advocacy and support may be needed to promote the evidence and resources generated by the GEF project. If there is a substantial gap between the project ending and additional funding – either from government or external sources – resumption and scale-up will likely be challenging: *“With a project in place, it’s a lot easier to advocate for government support” (KS#12)*.

The evaluation findings indicate that overall sustainability may be hampered by systemic challenges, including staff turnover within key agencies, limited funding and accountability mechanisms for HNAP implementation, and competing priorities across both health and broader climate/environment sectors. In some countries, there was a lack of clarity about transition plan responsibilities and whether additional support from WHO will be provided for resource mobilisation efforts. It is reasonable to expect that one logical subsequent step from this project is the development of further funding proposals, including to the Green Climate Fund (GCF). Some countries have begun drafting proposals, such as GCF concept notes, but the evaluation findings indicate that technical guidance is needed to navigate such complex climate finance systems. Some technical resources and funding are being allocated via other WHO mechanisms and there is a strong foundation for further funding proposals based on the project outputs, given their strategic alignment with global initiatives such as ATACH and the COP28 health declaration. But it is unclear to what extent these will link and potentially extend this GEF program of work. Learnings from countries that have successfully leveraged the project for additional funding could be documented and promoted to inform proposals elsewhere.

#### Environmental

It was not possible to assess the extent to which the project contributed to reducing environmental stress and/or improved ecological status. This may reflect the project activities not fitting neatly within standard GEF environmental indicators, or due to the health-focussed nature of several activities. There are likely indirect, downstream benefits from interventions that focussed on environmental determinants of health, such as improving water quality and supply, and healthcare waste management, but these were not measured or tracked consistently.

#### GEF Additionality and Catalytic/Replication Effect

The evaluation findings indicate that GEF funding was critical to catalysing progress on climate-related health adaptation actions in the project countries. Several national stakeholders indicated that HNAPs and V&A assessments would likely not have progressed in the project countries without GEF funds, as MOH otherwise have limited operational funds and many competing priorities. GEF further catalysed leadership, national ownership and political buy-in within MOH, including enabling participation at high-level events such as the COPs and commitment to COP26 health commitments. UNDP stakeholders reported that lessons from the project had been useful for the inception of a similar GEF LDCF initiative being delivered in the Pacific. It was reported that the project had enhanced UNDP’s understanding of climate links for future health initiatives, thereby supporting scale up in different geographical contexts. As such, the project can be considered as successful in supporting socio-economic and institutional additionality, and catalytic for other funding proposals in project countries.

However, the added value of integrating climate/environmental considerations into some project activities, such as WASH and waste management, was not well articulated or evidenced in the outcomes. While these domains are represented in the WHO Operational Framework and CRESH Guidelines, links to specific GEF/UNDP environmental benefits could have been more clearly defined. This may reflect institutional and design constraints and the need for greater knowledge sharing, particularly in relation to climate adaptation and finance, between UNDP and WHO.

## **Key Findings and Conclusions**

### **Overall progress**

**Objective:** All countries have successfully implemented activities to increase the adaptive capacity of national health systems, institutions and sub-national actors to respond to climate-sensitive health risks. HNAPs have been completed and endorsed in all countries, with some now undergoing review and update. National HNAP coordination mechanisms, such as Technical Working Groups (TWG), have been established with MOH representation but longer-term workplans or responsibilities of these groups beyond the life of the project are unclear. Funding and accountability for HNAP implementation is a sustainability challenge, although some countries have secured additional funding to mitigate these risks and it is likely that further funding proposals will be submitted by other countries.

**Outcome 1:** Institutional capacity has been enhanced in all countries through the development and finalisation of context-specific guidelines, tools, and standards. Global and regional technical guidelines have been effectively adapted to national contexts, with significant government ownership and rollout through national and sub-national training and capacity-building activities. While long-term sustainability and implementation may depend on funding, several countries have successfully integrated climate change considerations into higher education and the continuation of education curriculum along with key policy frameworks, such as national health plans, which enables ongoing advocacy and accountability.

**Outcome 2:** V&A assessments have been completed in all countries, with results directly informing HNAP review and updates in project countries. All countries have developed and piloted integrated climate-sensitive disease surveillance systems, but there has been uneven progress on wider rollout and scale-up, reflecting the diverse and varying contexts across countries. Availability of high-quality data hampered timely development and integration of surveillance systems in some settings.

**Outcome 3:** All countries have supported activities to enhance climate resilience in health service delivery, with innovative demonstration pilots and clear application of national guidelines, tools, standards and training materials (outcome 1) in sub-national and local settings. These efforts primarily focus on WASH and waste management, and additional investment may be needed to address other aspects of low-carbon and climate-resilient health service delivery. The flexibility to co-design and tailor activities to local contexts has been beneficial, but variation in intervention approaches and unclear beneficiary definitions hinder comparison and indicator measurement. Funding and responsibilities for the ongoing maintenance and operation of interventions remain challenging.

**Outcome 4.1:** The project significantly enhanced regional cooperation and knowledge exchange between WHO and MOH stakeholders by leveraging virtual activities during the COVID-19 pandemic and organising face-to-face learning opportunities when safe and feasible. These interactions, highly valued for their depth and engagement, facilitated continuous communication and the dissemination of best practices despite global challenges. Participation in regional and global climate and health forums, such as ATACH and COP health networks, further bolstered institutional leadership and country ownership. These forums provided platforms for sharing insights, engaging in policy dialogue, and fostering collaborative solutions, thereby strengthening the capacity of countries to address public health challenges effectively and sustainably.

**Outcome 4.2:** All countries have shown varying degrees of progress in integrating health into climate adaptation actions. The project has generally facilitated stronger intersectoral collaboration and coordination between the health and environment/climate sectors, however formalisation through institutional partnerships and implementation plans have varied. A methodology is being developed to quantify the direct and indirect costs of climate change on health to inform adaptation actions. However, its application and relevance to the project could not be verified at this stage. Notably, some countries have made significant strides in integrating health components into NAPs, serving as a model of good practice which may provide valuable lessons and frameworks that other countries can emulate.

### **Lessons Learned**

#### Successes and Strengths

**Institutional collaboration and coordination:** The project successfully integrated and embedded climate adaptation within health sector plans across target countries. Notably, effective partnerships with MOH and health-determining sectors informed HNAPs in all countries, with some progressing the integration of health priorities across broader climate and adaptation plans (NAPs). Several stakeholders reported stronger ties with relevant Ministries, particularly in Environment/Climate and Meteorology sectors, with piloting of EWARS and integrated surveillance systems a strong achievement.

**Adaptive management and strategic relevance:** Project teams successfully navigated external volatility, notably the COVID-19 pandemic and the decision to terminate activities in Myanmar. The project was supported by strong governance and stakeholder engagement systems that enabled activities to be tailored to diverse national contexts following common overall outcomes. Several stakeholders noted the continued value, relevance, and alignment of the project with national and international climate and health priorities. The prominence and value of the project only increased with growing awareness and evidence of climate-related health risks and impacts globally.

**Country ownership, flexibility and co-design:** Strong partnerships between WHO and implementing agencies and the flexibility of GEF funds enabled participatory co-design of project activities and outputs. There was good evidence of government ownership over core policy documents (HNAPs) and related tools, guidelines and standards (E.g. EWARS, WASH and waste management SOPs). Flexibility to target GEF funds (through Direct Financial Contributions and co-designed workplans) to supplement existing activities and/or target innovative pilot interventions and ability to tailor activities under each outcome to national priorities were highlighted as strengths.

**Evidence base for climate and health:** The project addressed critical knowledge gaps by investing in updated V&A assessments and HNAPs for all countries. Results directly informed HNAP updates in several countries and provided a critical evidence base for future adaptation planning.

**Capacity building and knowledge sharing:** Various climate and health guidelines and policies were developed, including for healthcare workers and policymakers. Stakeholders observed improved knowledge, attitudes, and capacity within implementing agencies to address climate-related health risks and impacts through training and developing national-level guidelines, standards, and tools. The project deepened the understanding and recognition of climate change as a driver of health issues across all countries, and enabled identification of practical interventions and responses by leveraging regional and global guidance (see Outcome 1).

**Holistic demonstration projects:** GEF funds were critical for enabling proof-of-concept and innovative interventions that supported HNAP implementation. Several of these interventions (mostly under Outcome 3) were ‘holistic’ approaches, combining top-down national guidance and policy commitment (often aligned with regional and international best practice, such as EWARS and WSP), with grassroots interventions to improve climate-resilience of healthcare facilities. The combination of policy standards and technical guidelines with implementation on the ground was critical for building broad support at national and sub-national levels, and strong foundations were established on successful intervention approaches that can be leveraged for future funding.

**Leadership and institutional champions:** Profiling the project at major national, regional, and global climate and health forums catalysed government buy-in and support. MOH is now viewed as a driving engine for climate change and health across several project countries, and representations at ATACH and COP meetings elevated the project as an exemplar for other countries and regions. The project successfully leveraged growing global momentum to address the nexus of climate change and health, highlighting increased relevance and value of integrated adaptation responses and practical intervention examples.

#### Challenges and Barriers

**COVID 19 and inception delays:** Project commencement was delayed by negotiations and establishment of project governance structures between WHO and UNDP. As documented in the MTR, the project then faced additional implementation challenges due to the increasing impact of the COVID-19 pandemic and re-deployment of several MOH teams to emergency pandemic response efforts. Despite this, the project teams successfully navigated these challenges and demonstrated a high degree of adaptive capacity, for example by pivoting to virtual activities and prioritising HCF interventions that promoted COVID-19 infection prevention and control, such as hand-washing facilities. An 18-month no-cost extension helped compensate for initial delays, enabling the successful delivery of most project outcomes and output indicators.

**Staff turnover and technical capacity:** Several countries faced set-backs due to staff turnover within key operational partners, which impacted institutional knowledge, continuity, and ability to progress key initiatives. These changes, influenced by external factors like government restructures and COVID-19 redeployments, were mitigated through capacity building in various domains via training and development of national tools and guidelines. While hiring consultants addressed some capability gaps, it posed challenges for knowledge retention and sustainability due to short-term engagements and reliance on international experts. Robust reporting systems for general and regular monitoring (e.g. quarterly reports) coordinated by WHO ROs and HQ helped retain institutional knowledge, yet more targeted support was needed for project teams in specific climate and environmental aspects, such as accessing climate finance and quantifying cost/benefits of climate change and health interventions, which was part of Outcome 4.2.

**Ensuring that interventions are climate-informed:** Given that HNAPs are a critical step in identifying priority climate adaptation activities, project activities implemented under Outcome 3 could have been more clearly linked to the HNAP in each country. HNAPs are likely to be more sustainable with longer-term gains if local teams are leading their development, and this investment of time and resources in the early stages of the project would help ensure the identification of climate-informed adaptation activities. Sustainable HNAP development processes incorporate a strong focus on capacity development – in a variety of areas – e.g. data collection, program design, understanding of weather and climate data and projections, as well as the setting up of crucial cross-government partnerships. These activities can occur in parallel to the formal processes of the HNAP, so as to ensure that the project maintains momentum. In addition, the review of key outputs from the project, including HNAPs and V&As, for comprehensiveness, quality and consistency was beyond the scope of this TE. Some stakeholders described activities and interventions such as WASH, particularly under Outcome 3, which may have been more appropriately funded from other sources, and are a risk for funding displacement of basic health services. As such, it is difficult to measure and compare the extent to which interventions were climate-informed and/or reflected climate adaptation priorities identified through V&A and HNAP processes.

**Human resources:** The project successfully leveraged GEF funding with in-kind support from WHO and MOH in all countries. However, adequate resourcing was a challenge for project staff within government agencies and WHO COs to support stakeholder coordination and implementation. Focal points across government institutions were often balancing competing priorities and project management pressures, while greater funding flexibility established at the project design phase may have increased their capacity to advance project activities beyond pilot and demonstration phases.

**Data availability and infrastructure:** As to be expected,several countries were operating with poor baseline data and faced challenges in negotiating data sharing arrangements, which inhibited development and rollout of integrated surveillance and monitoring systems. These complexities resulted in uneven progress towards EWARS and meant that many countries were still in initial pilot phases at project end. While ongoing technical support will be provided for integrated surveillance systems, without additional funding, it is unclear whether demonstration pilots will be expanded to address other climate-sensitive diseases and/or increase coverage. In addition, roles and responsibilities for implementing and/or acting upon information generated by these systems could be clarified during design and planning stages, to support ongoing implementation.

**Sustainability and longer-term impact**: All countries set ambitious targets under their HNAPs, but there was uneven progress in developing transition and implementation plans. MOH have overarching responsibilities for HNAP implementation, but face challenges in prioritising and allocating resources amidst broader health sector needs. In addition, it is not always possible for health and climate focal points to be cognisant of the proportion of the health budget that is allocated to climate change activities. Although further funding proposals for the continuation of pilot activities are in progress, increased funding to health by international climate finance providers would be advantageous to support the ongoing implementation of work commenced under this project.

**Funding utilisation:** While up-to-date multi-year expenditure data for the entire project period was not available for this evaluation, there was a significant amount of underspend accrued at commencement of the final year of implementation and an uneven rate of expenditure across the different outcomes. Notably, PMU fund utilisation was very low (31.57% as of July 2023). Although up to 10% of funds could be transferred between outcomes without prior approval, greater clarity and support to maximise fund utilisation and enable timely variation may be beneficial for future GEF programmes.

**Applied research:** Several national stakeholders expressed a desire to undertake climate and health research to address evidence gaps identified during the V&A and HNAP processes. Dedicated funding for health and climate research with local academic partners, informed by V&A and HNAP priorities, could be a constructive investment for future projects of this nature.

### **Recommendations**

Overall, the project achieved significant progress and success, including satisfactory or highly satisfactory completion of most end-of-project outcomes. Project teams at all levels effectively collaborated with key operational stakeholders to strengthen institutional capacity and capabilities to identify and implement prioritised adaptation actions at national and sub-national levels in response to climate-sensitive health risks. Delays associated with COVID-19 were successfully managed, and the longer project timeframe allowed for backlogs to be cleared. While the project is ending in August 2024, there are several learnings that can be incorporated in the design of future programmes or scaling up the work undertaken in this project. Interpretation and implementation of recommendations, including responsible parties and timeframes, should be led by WHO and UNDP Project teams, in close collaboration with country teams:

1. **Ensure clear sustainability and transition plans are developed in the final 6-12 months and as part of final project reporting systems:** given uncertainties for future funding and implementation responsibilities, particularly in relation to HNAPs, greater attention to transition plans could be invested in during the final 6-12 months of programming and following the closure of the project. These explicit plans can extend to co-designed funding proposals to leverage project learnings with key stakeholders, and advocacy to government agencies and climate financing mechanisms (e.g. GCF) to allocate resources to address any gaps post-project. All projects should include consideration of how to scale-up and scale-out, which should be revisited through routine M&E and reporting discussions. Clarity on WHO and UNDP’s ongoing technical support for climate change and health integration can also be provided to national and sub-national stakeholders.
2. **Clearly link project activities and outputs to HNAP and NAP priorities:** It was not possible to determine the extent to which activities and interventions implemented under the program were climate informed and/or represented adaptation priorities as defined in the HNAPs. This is a limitation of the TE, as quality and implementation appraisal of HNAPs and V&A assessments was beyond its scope. Future sequencing to ensure activities are clearly linked to HNAP implementation, with clearly defined and measurable outcomes, would enhance the ability to measure systemic impact and effect of this type of policy and programmatic intervention.
3. **Provide ongoing technical support and guidance to support integration of health in adaptation responses:** Integration of HNAPs in NAPs, for those countries that did not achieve this in the project timeframe, may provide a bridge for leveraging additional climate financing from multilateral and bilateral donors for health. WHO and UNDP may need to strengthen institutional knowledge sharing to support LDCs in navigating and accessing adaptation finance for future health initiatives. Project activities that brought together health and climate officials and experts were highly valued, including at sub-national level, and these institutional ties could be strengthened to enhance integrated adaptation efforts within the project countries and elsewhere.
4. **Maintain and enhance institutional capacity and governance systems:** Continue investments in training and capacity building to sustain and expand the skills of national and sub-national policymakers and practitioners. Incorporate refresher training programs to keep stakeholders updated and enhance their capabilities, and to address neglected areas of implementation under the WHO operational framework and to further guidance for CRESH facilities, including decarbonisation and low-carbon technologies. Ongoing advocacy to ensure that training programs and guidelines developed during the project are permanently integrated into national health curricula and training programs will help institutionalise the knowledge and practices promoted by the project, thus increasing confidence that the project will achieve the impacts desired in terms of resilience and sustainability.
5. **Support ongoing peer-to-peer knowledge sharing, dissemination, and leadership:** Continued peer-to-peer knowledge sharing, dissemination, and leadership are crucial for maintaining and expanding regional networks built during the project. Leveraging the evidence, successes, challenges, and resources generated, these networks should facilitate regular meetings, workshops, and digital engagements to enhance collaboration and shared learning. Promoting national leadership and the emerging expertise in climate and health policy across project countries can catalyse future political will and buy-in. High-level fora like ATACH and COP events are essential platforms to elevate the project's profile and integrate health within broader climate discussions. Empowering grassroots champions within service delivery networks ensures sustained community-level engagement and knowledge dissemination and can also be promoted via national and regional fora.
6. **Integrate and streamline project monitoring and external evaluation, using a theory-based methodology.** Future program investment of this nature and scale would be strengthened by an evaluation that runs concurrently to the program. A concurrent evaluation design could include the development of a program theory of change that explains what (activities), how (via which mechanisms), when (in what contexts) and for whom (which countries, policymakers, population groups) change (outcomes) are expected. The theory would encompass and clarify elements of the project found to be not well defined and monitored, including gender mainstreaming activity and outcomes; socio-economic, ecological/environmental and development outcomes; and the target beneficiaries of the program. The theory could also include definitions and measures for ‘climate resilience of health systems’ under the WHO’s global guidelines, which is an identified area of priority for ATACH.

The program theory could then be iteratively tested and refined with data collected by participating countries (monitoring data) and the external evaluators. Such iterative data collection and analysis would enable pre-mid-post analyses, including comparisons within and between counties to understand how context affects implementation and effectiveness. A concurrent and iterative design would also enable rapid learning cycles to inform program refinements along the way. The evaluation would result in an evidence-based, refined theory of change that explains how, when, and for whom the program is effective (and less, or not effective), and nuanced recommendations based on the refined theory.

1. **Ensure adequate funding for core personnel and technical expertise:** The ability to fund MOH directly as an implementing agency was a considerable strength, and downstream partners supporting service delivery activities at provincial and sub-provincial levels benefited from this funding flexibility. However, core staff within key agencies were funded through in-kind contributions, which may have limited the ability to scale-up implementation and address delays. A balance in funds for consultancy and ongoing staff, based on local need and priorities, would be preferable but is acknowledged as a potential limitation of the funding guidelines rather than a project decision. In addition, technical expertise for knowledge gaps, such as accessing climate finance and quantifying the cost-benefits of climate change and health/climate-resilience interventions, could be strengthened as part of central Project Management Unit support.
2. **Develop systems to consistently document and share implementation evidence:** There are substantial learnings from the project that can inform prioritisation and implementation of adaptation efforts within healthcare across other settings. Much of the evidence from the project was documented via informal/grey sources, hence may have limited dissemination via scientific and broader public channels. This limits the ability to recognise and account for these efforts in global scientific review processes, including IPCC reports. Engaging academic and/or research partners to capitalise on opportunities for evidence generation, analysis, and dissemination would add value to the broader climate and health sectors and scientific literature.

# Appendices

## Appendix 1: Evaluation Criteria Matrix

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Outcome | Objective and outcome indicators | Baseline | Mid-term level achievement rating | End of project target | End of project level and assessment (rating) |
| Project Objective: Increase the adaptive capacity of national health systems and institutions, and sub-national level actors, to respond to and manage long-term climate-sensitive | Indicator 1: National H-NAP for long term planning and capacity development is created and budgeted. (AMAT 3.2 Indicator 12). (Output 2.1 – UNDP Strategic Plan) | H-NAP has not been developed and/or implemented. (Note: Cambodia and Nepal have approved H-NAP – funding and implementation planning has not yet been incorporated. Bangladesh has DFID HNAP development project – early stages). | HS | H-NAP is finalized/updated in 6 countries as the long-term plan for health adaptation to climate change and MOH is part of TWG with mandate to address cross-cutting climate change adaptation. | Achieved - HS |
| Outcome 1: Institutional Capacities are strengthened to effectively integrate climate risks and adaptation options in health sector planning and implementation. | Indicator 2: Development of National Standards or guidelines for climate change and health systems. | National standard, guidelines and SOPs are not available relating CC and Health | S | Final standards and guidelines are developed. | Achieved - HS |
| Outcome 2: Effective decision making for health interventions is enabled through generation of information and improved surveillance and/or early warning systems | Indicator 3: Vulnerability and adaptation assessments (V+A) conducted for current and future health risks. (AMAT 2.1 Indicator 6) | V+A has not been completed, or existing V+A is outdated or not comprehensive | S | Gender- disaggregated health vulnerability and adaptation assessments completed or updated in 6 countries. | Achieved - S |
| Indicator 4: Integrated disease surveillance system for climate sensitive disease is strengthened. | Disease surveillance system does not consider climate/weather data | S | Tailored products to inform decision making based on surveillance system which incorporates climate/weather data (5 countries). |
| Outcome 3: Climate resilience is enhanced in health service delivery | Indicator 5: Disease control and prevention programmes are strengthened to account of the effects of climate variability and change. | Specific programmes and plans of climate-sensitive diseases don't include climate/weather considerations | S | Disease control and prevention programmes strengthened in 6 countries. | Achieved - HS |
| Indicator 6: Number of direct beneficiaries from enhanced health service delivery. (AMAT 1.1 Indicator 1: number of direct beneficiaries) | Health service responds to vulnerability to climate change and health | S | 100,000 | Achieved - HS |
| Outcome 4.1: Enhanced regional cooperation and knowledge exchange for promoting scale-up and replication of interventions | Indicator 7: Three regional trainings/meetings organized (Percentage of government stakeholders participated in national review meeting on CC&H). | No regional exchange of experiences on climate change and health | S | 3 Regional Meetings on climate change and health (building on National experiences) for International South- South collaboration focused on CCH. Reports on Improvements and Challenges will be generated and shared within the meeting. | Achieved - HS |
| Outcome 4.2 HNAP are effectively integrated into ongoing NAP processes | Indicator 8: HNAP informed by economic analyses to support integration into the NAP. | Economic analyses on climate change and health not available | MS | 6 countries receive support to develop  climate change and health economic analyses. | On track - MS |
|  | Green = achieved | Yellow = On target to be achieved | Red = not on target to be achieved |  |  |

## Appendix 2: Key Evaluation Questions and Evaluation Matrix

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Evaluative Criteria Questions** | **Indicators** | **Verification Sources** | **Methods** |  | |
| **Overall progress:** To what extent has the project achieved its expected objectives and outcomes? | | | | |
| To what extent has the project achieved its overall objectives and outcomes at regional and national levels? | Completion of project activities versus milestones and targets ( outcomes achieved or on-track to be achieved) against Program Results Rating Scale (Appendix 2) | Project documentation  Project results/output data | Desktop document review and analysis  Stakeholder interviews |  | |
| What were the main barriers affecting the project’s ability to achieve its end-of-project results (outcomes and outputs)? | Identified implementation barriers or obstacles | Project documentation  Interviews with project team  MTR | Desktop document review and analysis  Stakeholder interviews |  | |
| What were the main successes and achievements of the project against its end-of-project results (outcomes and outputs)? | Completion of project activities (overall results)  Identified implementation successes or achievements | Project documentation  MTR  National stakeholders | Desktop document review and analysis  Stakeholder interviews |  | |
| **Relevance**: How does the project relate to the main objectives of the GEF Focal area, and to the environment and development priorities at the local, regional and national level? | | | |  | |
| To what extent does the project address the needs, priorities and expectations of its beneficiaries, partners, and stakeholders? | Records of stakeholder engagement and feedback in project design and implementation  Baseline environment and health priorities of stakeholders in project design documents | Project documentation and meeting reports  Interviews with national and project stakeholders  MTR | Desktop document review and analysis  Stakeholder interviews  Field trip data |  | |
| **Coherence:** To what extent did the project align with national country context (external coherence) and were project activities aligned with the project’s theory of change, governance, activities and M&E (internal coherence)? | | | | |
| To what extent did the project align with local, regional and national environment and development priorities and plans? | Alignment with national policies, standards and guidelines | Project documentation  Interviews with national and project stakeholders  Field trip data | Desktop document review and analysis  Stakeholder interviews |  | |
| Were project activities, including adjustments, clearly aligned to the theory of change? | Project activities explicitly linked to theory of change and project outcomes | Project documentation  MTR data | Desktop document review and analysis |  | |
| Did the project employ consistent, clear and participatory M&E and governance practices throughout its implementation? | Consistent and well documents monitoring and reporting processes  Quality and availability of M&E data throughout project’s life course  Stakeholders engaged in routine M&E | Project documentation  MTR data  Interviews with project team | Desktop document review and analysis  Stakeholder interviews |  | |
| **Effectiveness:** To what extent have the expected outcomes and objectives of the project been achieved? | | | | |
| Has a national HNAP for long term planning and capacity development Been created and budgeted? | H-NAP is finalized/updated in 6 countries as the long-term plan for health adaptation to climate change and MOH is part of TWG with mandate to address cross-cutting climate change adaptation. | HNAP documents and/or Quarterly reports  Interviews with national and project stakeholders | Desktop document review and analysis  Review of HNAP publications  Stakeholder interviews |  | |
| Have institutional capacities been strengthened to effectively integrate climate risks and adaptation options in health sector planning and implementation? | National Standards or guidelines for climate change and health systems developed  Health workforce trained on climate change and health | Availability of final standards and guidelines  Training reports on national trainings conducted on climate change and health  Availability of teaching materials, training packages/ manuals, climate change and health included in the national curriculum, etc | Desktop document review and analysis |  | |
| Has effective decision making for health interventions been enabled through generation of information and Improved surveillance and/or early warning systems? | Vulnerability and adaptation assessments (V+A) conducted for current and future health risks.  Integrated disease surveillance and early warning systems for climate sensitive disease piloted and strengthened. | Gender disaggregated health vulnerability and adaptation assessments reports  Project documentation related to integrated disease surveillance and climate/weather data systems | Desktop document review and analysis  Stakeholder interviews |  | |
| Is climate resilience enhanced in health service delivery? | Disease control and prevention programmes are strengthened to account of the effects of climate variability and change. | Project documentation related to strengthening climate resilience and environmental sustainability of health care facilities  Project documentation related to integrated disease control and surveillance programs (including water and sanitation | Desktop document review and analysis  Stakeholder interviews  Field trip data |  | |
| Have initiatives been taken up to enhance regional cooperation and knowledge exchange for promoting scale-up and replication of interventions? | At least 3 Regional Meetings conducted on climate change and health for International South-South collaboration. | Regional meeting reports, recordings, photographs, participant list, etc.  Feedback from project and regional stakeholders on knowledge sharing activities. | Desktop document review and analysis  Stakeholder interviews |  | |
| **Efficiency:** Was the project implemented efficiently, in line with international and national norms and standards? | | | | |
| Is there strong evidence that program approaches have been effectively and efficiently adopted by governments? | Government commitment to meet project objectives (showcased through establishment of relevant administrative structures, signing of MoUs, co-financing, etc.), availability of new and modified policies, guidelines, roadmaps, tools and monitoring mechanisms. | Project documentation, including documentation of implementation of activities by MoH (quarterly reports, interviews, financial reports)  Existence of formal partnership agreements (e.g. MoUs)  Co-financing commitments and utilisation | Desktop document review and analysis  Stakeholder interviews |  | |
| How, where and for whom was change achieved most effectively? | Capacity strengthening activities with government staff and partners were undertaken, training targeted appropriately and well received, engagement with relevant partners for the achievement and scale up of project objectives | Availability of training reports, including disaggregated participant data  Interviews with national and project stakeholders | Desktop document review and analysis of training data  Stakeholder interviews |  | |
| What are the key enablers and barriers for programme efficiency, including replication and scale-up at the country level? | Strong partner engagement, inter-ministerial engagement, sustainable financing, national and sub-national leadership; capacity for program delivery challenges posed by COVID- 19 leveraged for raising attention to climate change and health | Interviews with national and project stakeholders  MTR data | Document review of quarterly reports  Stakeholder interviews |  | |
| **Sustainability**: To what extent are there financial, institutional, socio-political, and/or environmental risks to sustaining long-term project results? | | | | |
| To what extent do approaches used in the project address sustainability from a systems perspective? | Alignment of project outcomes with WHO Operational Framework for climate resilient and low carbon health systems (2023) | Project documentation (annual reports)  Interviews with project team | Desktop document review  Stakeholder interviews |  | |
| What is the likelihood that the results and impacts of a project will continue beyond its completion? | Availability of resources, strategy/action plans, institutional capacity, stakeholder ownership, etc. and evidence of integration in MoH/government systems | Project documentation (final project reports)  Interviews with national and project stakeholders | Project documentation (annual reports)  Stakeholder interviews  Field trip data |  | |
| Has evidence and learning from the project been used to leverage future program design and implementation at the country level? | Evidence of integration of project learnings/evidence in MoH/Government systems, policies and implementation plans (including HNAPs) | Evidence of national policies, guidelines and plans developed  Interviews with national and project stakeholders | Desktop document review  Stakeholder interviews |  | |
| How will project activities be sustained financially after the end of the project? | Availability and sources of finance to sustain and scale-up project activities  Plans/strategies for securing future finance | Interviews with national and project stakeholders | Stakeholder interviews  Field trip data |  | |
| **Gender equality and women’s empowerment:** How did the project contribute to gender equality and women’s empowerment? | | | | |
| To what extent has gender equality and women’s empowerment been considered in programming, monitoring, funding and decision making? | No. of women trained on climate change and health  • Gender equality adopted in project design and implementation  • Gender disaggregated data collected as part of vulnerability assessments and other monitoring activities | Project documentation (gender reports, annual reports)  Gender disaggregated V&A assessments completed or updated  Capacity building activity data | Desktop document review  Stakeholder interviews |  | |
| **Impact:** Are there indications that the project has contributed to, or enabled progress toward reduced environmental stress and/or improved ecological status and increased resilience of health systems to protect population health in the face of climate change? | | | | |
| How has the project results contributed to reducing environmental stress and/or improving ecological status (e.g. through emission reductions, water, energy savings, proper management of health care waste, etc.) | Environmental performance indicators  Progress towards climate resilience of health systems | Project documentation (annual and quarterly reports)  Interviews with project stakeholders  Environmental/ecological data  Alignment with *WHO Operational Framework for Climate Resilience and Low-Carbon Health Systems* (10 components) | Desktop document review  Stakeholder interviews |  | |
| Are lessons and impacts from the project being adapted for other applicable WHO/GEF/UNDP interventions? | Potential for disseminating and embedding project strategies in other WHO/GEF/UNDP interventions | Interviews with project stakeholders  Quarterly reports  Annual reports (communication and knowledge sharing sections) | Desktop document review  Stakeholder interviews |  | |

## Appendix 3: Document Table

|  |  |
| --- | --- |
| Document | Country |
| Project inception Report | |
| GEF-UNDP Inception Report\_WHO-Nov\_revised | Whole project |
| National Report | Bangladesh |
| National Report | Cambodia |
| National Report | Laos PDR |
| National Report | Myanmar |
| National Report | Nepal |
| National Report | Timor Leste |
| Annual Reports (2023) Year 4 | |
| FINAL 2023-GEF-PIR-PIMS5400-GEFID6984 | Whole project |
| Objective HNAPS (Outcome 4.2) | Whole project |
| Lao PDR\_Summary\_HNAP\_ENG | Laos PDR |
| Quarlery Report\_2023\_Q4\_SEAR&WPR | Whole project |
| Quarterly Report \_2023-Q1 FINAL | Whole project |
| GEF Training numbers 2023 | Whole project |
| Project Objective Q4\_22\_PMD\_Technical Report | Cambodia |
| Proj Obj Q4\_22 PMD\_Tech report TWG 4th Meeting 18th Nov22- Cambodia | Cambodia |
| Annual UNDPGEF IPB\_Full Meeting Report\_Draft\_15Oct23 | Whole project |
| Outcome 1 | |
| Outcome 1 - Training materials Health Professional Field (BAN) | Bangladesh |
| Outcome 1 Climate change and health national trainings summary table | Whole project |
| Outcome 1 Q2 23 HCWM SOP for District Hospitals | Laos PDR |
| Outcome 1 Q2 23 HCWM SOP for Health Centres and outreach activities | Laos PDR |
| Outcome 1 Q2 23 HCWM SOP for Provincial Hospitals | Laos PDR |
| Outcome 1 Q3\_22 CNM-Technical Report for Dengue Data analysis training | Cambodia |
| Outcome 1 Q4 22 CC&H textbok proposal | Laos PDR |
| Outcome 1 Q4 22 DFC for developing a CC&H textbook | Laos PDR |
| Outcome 1 Training materials Health Professional (BAN) | Bangladesh |
| Outcome 1 Training modules | Whole project |
| Outcome 1 Training Report on PIC and HCWM | Bangladesh |
| Outcome 1 Final-ENGLISH EH Strategy | Timor Leste |
| Outcome 1 HNAP-FINAL ENGLISH-23 October 2019 | Timor Leste |
| Outcome 1\_Training Module CCH 2019 | Timor Leste |
| Outcome 1\_WHO-TOT CCH REPORT\_Bangladesh | Bangladesh |
| Outcome 2 - Surveillance | |
| Outcome 2 EWARS Meeting Records Year 4 | Whole project? |
| Outcome 2 Q1 23 Particpant list for EWS\_data sharing discussion | Laos PDR |
| Outcome 2 Q2 23 EWARS - DHIS2 data exchange functionality coding in R | Laos PDR |
| Outcome 2 Q3\_22 tech report\_on\_improvement\_of\_diarrhoeal\_disease | Cambodia |
| Outcome 2 Q4\_22 CNM\_Tech rep\_Awareness\_Dengue\_Diarrhea\_Sep-Nov22 | Cambodia |
| Outcome 2 Q4\_22 NCHP rep-Diarhea\_Dengue Awareness\_Oct-Dec22 | Cambodia |
| Outcome 2 Procurement of Air Pollution Monitoring system\_Timor leste | Timor Leste |
| Outcome 2 - VAA |  |
| Outcome 2 VA Assessment Report-MoHP-202\_Nepal2 | Nepal |
| Outcome 2 VAA Assessing-Trends-of-Health-Waves-CTP Nepal | Nepal |
| Outcome 2 VAA Climate-change-and-Diarrhea-report-1-1 Nepal | Nepal |
| Outcome 2\_V and A Report TLS Edited final Jan 2019 | Timor Leste |
| Outcome 2\_Terms of Reference\_V & A\_TLS | Timor Leste |
| Outcome 3 | |
| Outcome 3 Event Report GHG Training May 2023 | Nepal |
| Outcome 3 Final Inception Report Apr2023 | Timor Leste |
| Outcome 3 helopscope\_simulation\_11234217\_summary Timor Leste | Timor Leste |
| Outcome 3 HEN\_Techincal Report on WQ monitoring training DFC | Laos PDR |
| Outcome 3 Q1 23 Xayabouly and Vangvieng 12-16 March 2023 travel report | Laos PDR |
| Outcome 3 Q3\_22 Report\_of\_WASH\_Awareness\_Raising phase 2 | Cambodia |
| Outcome 3 Q3\_22 Report\_of\_WASH\_Awareness\_Raising phase 3 | Cambodia |
| Outcome 3 Q4\_22 Report on CRWSP ToT & 2-day consultation (Dec 22) | Laos PDR |
| Outcome 3 Q4\_22 Travel Authorisation for CRWSP ToT & consultation (Dec 22) | Laos PDR |
| Outcome 3 Solar Feasibility Report Baucau Simulation Centre | Timor Leste |
| Outcome 3\_Inception Report Hospital Emergency Preparedness and Response Plan | Bangladesh |
| Outcome 3 RFP-LMS water treatment installation 2 municipalities | Timor Leste |
| Outcome 4.1 / 4.2 | |
| Outcome 4.1 WPRO- LAO Safe Clean Green Hospitals draft indicators 16 Nov22 | Laos PDR |
| Outcome 4.1 WPRO Project Manager Cambodia Mission Report Nov 22 | Cambodia |
| Outcome 4.2 WPRO Project Manager LAO PDR Mission Report Nov 22 | Laos PDR |
| Outcome 4.1 SEARO\_Knowledge exchange on WASH, climate resilience and environmental sustainability | Bangladesh |
| Outcome 4.1\_Support to Nepal in developing ToR\_Baseline assessment GHG emissions from HCFs\_CICTool\_Nepal | Nepal |
| Outcome 4.1 Report on CR WSP Support Bangladesh | Bangladesh |
| Outcome 4.1\_SEARO\_Pilot testing Report of the web based CRESHCF Scorecard |  |
| Outcome 4.1 SERO Regional Meeting on Climate Resilient Water and Sanitation Safety Planning and Audit | Nepal |
| Co-financing | |
| Co-financing evidence letter PMD Cambodia GEF | Cambodia |
| Co-financing evidence letter WHO WCO Bangladesh | Bangladesh |
| Co-financing letter 2023\_MoHP Nepal | Nepal |
| WHO country office TL co-financing support 2023 | Timor Leste |
| WHO LAO Co cofinance-implementation @ July 2023 | Laos PDR |
| Lao PDR Government evidence of in-kind expenditure | Laos PDR |
| Copy of 23 10 09 UNDP GEF Cofinancing SEARO+WPRO+HQ contribution V1 | Whole project |
| MoH\_IEDCR\_Co\_financing letter\_2023 | Whole project |
| UNDP GEF Cofinancing SEARO+WPRO+HQ contribution\_v1 | Whole project |
| Multi-year budget acquittals | Whole project |
| UNDP-GEF Compiled report Year 1 to Year 5 as at 30 June 2023 | Whole project |
| GEF Training numbers 2023 | Whole project |
| Risk register\_PIMS 5400\_2023 | Whole project |
| Annual Reports (2021) | |
| 2021-GEF-PIR-PIMS5400-GEFID6984 | Whole project |
| Annual Reports (2020) | |
| 5400 PIR draft v.1 31 July 2020 AS | Whole project |
| Mid-term review inception and final report | Whole project |
| MTR GEF-UNDP 23SEP21 FINAL UNDP (002) clean-final-signedev | Whole project |
| MTR Inception Report-FINAL | Whole project |
| Covid-19 related documents | |
| COVID-19 Survey\_GEF\_WHO final | Whole project |
| COVID\_19 revisions\_UNDP | Whole project |
| Summary of COVID\_19 project implementation impacts | Whole project |
| Gender and country reports | |
| Action Points\_Country meetings | Whole project |
| Bangladesh Country report | Bangladesh |
| Cambodia Country report | Cambodia |
| Lao PDR Country Report | Lao PDR |
| Nepal Country Report | Nepal |
| Timor Leste Country Report | Timor Leste |
| x 10 FGD checklists | Whole project |
| x 2 Toolkits | Whole project |
| International Project Board Meeting notes | Whole project |
| GEF Project Board TORs | Whole project |
| PB Members GEF UNDP project | Whole project |
| Quarterly reports | |
| Quarterly Report\_2022\_Q1\_Aggregated WPREAR-28June22 | Whole project |
| Quarterly Report\_2022\_Q2 | Whole project |
| Quarterly Report\_2022\_Q3\_SEARO\_WPRO\_FINAL clear | Whole project |
| Quarterly Report\_2022\_Q4 template | Whole project |
| Aggregated GEF UNDP Quarterly Report\_2021 Q1 | Whole project |
| Aggregated Quarterly Report\_2021\_Q4\_FINAL | Whole project |
| GEF Quarterly Report\_2021 Q3\_aggregated\_FINAL\_clean | Whole project |
| GEF UNDP Quarterly Report\_2021 Q2 | Whole project |
| Aggregated GEF UNDP Quarterly Report\_2020 Q1 | Whole project |
| Aggregated GEF UNDP Quarterly Report\_2020 Q2 | Whole project |
| Aggregated GEF UNDP Quarterly Report\_2020 Q3 | Whole project |
| Aggregated GEF UNDP Quarterly Report\_2020 Q4 FINAL \_clean | Whole project |
| GEF UNDP Quarterly Report Q1\_aggregated 2019 | Whole project |
| GEF UNDP Quarterly Report Q3\_2019 | Whole project |
| Aggregated Q4\_GEF UNDP report 2019 | Whole project |
| Other reporting documents | |
| 051017 5400 Regional Health LDC Adaptation\_tracking\_tool | Nepal + Timor Leste |
| ABD LAO\_FINAL REPORT\_ EN | Lao PDR |
| Mid-term Review MTR | Whole project |
| GEF Cambodia - Project Detail | Cambodia |
| CAMBODIA VA FINAL REPORT\_EN | Cambodia |
| GEF-multi-year workplan with funding | Cambodia |
| GEF Project Technical Report Timor Leste final | Timor Leste |

## Appendix 4: TE Rating Scale

|  |  |
| --- | --- |
| Program results rating scale | |
| Ratings for Outcomes, Effectiveness, Efficiency, M&E, Implementation/Oversight, Execution, Relevance, Coherence | Sustainability ratings |
| 6 = Highly Satisfactory (HS): exceeds expectations and/or no shortcomings | 6 = Highly Likely (HL): There is negligible risk to continuation of benefits and based on the progress made so far it is expected that the long-term objectives of the project will be achieved. |
| 5 = Satisfactory (S): meets expectations and/or no or minor shortcomings | 5 = Likely (L): Either there is negligible risk to continuation of benefits or there are some risks, but the magnitude of their effect is too small and/or the probability that they will materialize is too small. Overall, it is likely that the net benefits of the project will continue. |
| 4 = Moderately Satisfactory (MS): more or less meets expectation and/or some shortcomings | 4 = Moderately Likely (ML): There are some risks to sustainability, and they may have some effect on continuation of benefits if they materialize. However, probability of materialization of these risks is low. Net benefits are more likely to continue that abate. |
| 3 = Moderately Unsatisfactory (MU): somewhat below expectations and/or some shortcomings | 3 = Moderately Unlikely (MU): There are significant risks to sustainability. The effect on continuation of benefits would be substantial if these risks materialise and the probability of materialization of these risks is significant. Overall, net benefits of the project are likely to abate. |
| 2 = Unsatisfactory (U): substantially below expectations and/or major shortcomings | 2 = Unlikely (U): Because of the high risks it is unlikely that net benefits of the project will continue to accrue, and the progress made so far is likely to be lost. It is unlikely that the project will achieve its long-term objectives |
| 1 = Highly Unsatisfactory (HU): severe shortcomings | 1 = Highly Unlikely (HU): It is expected that the project will not achieve its long-term objectives. Major risks have either already materialized and halted accrual of net benefits or have high probability of materializing soon and will halt accrual of net benefits when they materialize. |
| Unable to Assess (U/A): available information does not allow an assessment | Unable to Assess (U/A): Unable to assess the expected incidence and magnitude of risks to sustainability |

## Appendix 5: National standards and guidelines for climate-resilient health systems developed

|  |  |  |  |
| --- | --- | --- | --- |
|  | **National standards/guidelines/SOPs for climate-resilient health systems** | **Status (Draft/Final)** | **If draft, timelines for completion** |
| **Bangladesh** | National WASH standards towards climate resilient health care facilities | Final (published) | NA |
|  | Guidelines for building climate resilient healthcare facilities through effective WASH and Health care waste management facilities | Final draft | December 2022 |
|  | Detailed guidelines on Early Warning and Response System and Risk Mapping dashboard | Final | NA |
|  | SOP for biological sample collection, transportation, storage, and testing. | Draft | December 2023 |
|  | Standard Operating Procedure (SOP) for Outbreak Investigation of Climate sensitive Diseases | Final | NA |
| **Cambodia** | SOP for Rapid Diagnostic Test (RDT) for dengue | Final |  |
|  | SOP for Dengue Surveillance | Final |  |
|  | Health Education Textbooks on Climate Change and Health Environment for teachers and student grades 2, 5, 8, 10 and 11 | Final |  |
|  | 10,000 BCC information, education and communication (BCC IEC) material products (Khmer language) including dengue and diarrhoeal diseases,(ii) posters on the importance of boiling drinking water, (iii) posters on food hygiene, and (iv) posters on mosquito elimination. Final | Final |  |
| **Lao PDR** | SOPs for cleaning and disinfecting boreholes and wells | Final |  |
|  | SOPs for testing residual chlorine, E. coli, pH and turbidity and action for disaster/flood response and preparedness | Final |  |
|  | SOPs for prevention and control of water-related diseases and water quality surveillance including climate/weather considerations | Final |  |
|  | SOPs on operation, regular check-up and maintenance of new autoclaves purchased as green technology for waste treatment (translated into Lao language) | Final |  |
|  | WASH FIT guide, and training presentations been translated and customized for the country context and climate smart green hospitals included in the technical module. | Final |  |
|  | Guide for campaigns on climate change and health risks | Draft | Planned for completion in Q2 2022 |
|  | Incorporation of Climate Resilient Water Safety Plans (CR WSP) into existing WSP training course package. | Final |  |
|  | Tool guide for climate smart green hospital was customized for use of central and provincial hospitals | Draft | Tentative complétion date: Q3-Q4 2022 |
|  | Glossary of 156 climate change terms developed and translated into Lao language | Final | Dissemination workshop planned for Q1 2022 |
|  | A consultation meeting within health sector conducted on 19 August 2022 to discuss on standard operating procedure (SOPs/or guidance document) for accepting international assistance for health during natural disasters/emergencies. During the meeting ideas and comments were gathered from relevant departments and centers. A final draft of the guidance document has been circulated to all relevant ministries. It has been agreed that a multisectoral meeting will be held in December 2022 to endorse the document. | Draft | Endorsement planned for Q4 2022 |
|  | HNAP in Lao language | Final draft | 2023 |
|  | Textbook on climate change and health for public health, medical and postgraduate students (attached - see verification document 04. LAO Q1 23) | Final | 2023 |
| **Myanmar** | Standards for early detection and surveillance systems that include weather/climate data for Malaria, Dengue, Hemorrhagic Fever, Japanese Encephalitis |  |  |
|  | National guidelines on minimal requirements for WASH in HCF | Draft | Early 2022 |
|  | National Rural Sanitation and Hygiene Policy (incorporating Climate Change) | Draft | 2022 |
|  | National Malaria Control Programme Strategy (2021-2025) includes a dedicated section on climate change and malaria. | Final |  |
| **Nepal** | Baseline Assessment of the Ministry of Health and Population and other Key Ministerial Staff’s Knowledge on the Relationship between Climate Change and Health and Climate Sensitive Diseases and Risks | Final |  |
|  | Guidelines on water quality surveillance and water quality standards. | Final |  |
|  | Environmental health related technical guidelines in the COVID-19 context mainly in relation to water, sanitation and hygiene (includes strengthening WASH services by enhancing preparedness and response during extreme weather events) | Final |  |
|  | Revised standards on drinking water quality | Final |  |
|  | Operational manual for climate sensitive disease surveillance | Draft | 2023 |
|  | Learning resource package (LRP) on climate resilient water safety plan (CR-WSP) | Final | 2023 |
|  | Training manual on climate change and health at local level | Final | 2023 |
| **Timor-Leste** | National Strategy for Environmental Health and Climate Change 2020-2024 drafted. | Final draft |  |
|  | National Strategy for Environmental Health | Launched | WHD, 7 April 2022 |
|  | Health National Adaptation Plan for Climate Change (H-NAP) | Launched | WHD, 7 April 2022 |
|  | National Guidelines for Health Care Waste Management | Launched | WHD, 7 April 2022 |
|  | Health V&A assessment for climate change | Launched | WHD, 7 April 2022 |
|  | National Standards/Guidelines for Climate Change and Health Systems | Draft | 2022 |
|  | National Assessment of Opportunities for Transition to Clean Household Energy in Timor-Leste. | Final draft |  |
|  | Inclusion of climate/weather considerations in the Dengue Prevention and Control Strategy and National Malaria Strategy | Inputs provided for dengue and malaria strategy and guidelines. |  |
|  | Climate Resilient and Environmentally Sustainable Health Care Facilities Policy and Strategy | final | 2023 |
|  | National Health Care Waste Management Policy and Strategy including climate considerations. | Final | 2023 |
|  | Standard Operational Procedures (SOP) for Toxicology Water Environment Lab Analysis | Final |  |
|  | Standard Operational Procedures (SOPs) for medical waste segregation, internal waste collection and transportation, and infectious waste storage, incorporating climate dimensions | Final | 2023 |

## Appendix 6: Country training data

Climate change and health national trainings summary table

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Training** | **Date** | **# Participants** **(Gender disaggregated data included where available)** | | | **Organized By** | **Related to which outcome (1, 2, or 3)** |
| **Bangladesh** |  | **Male** | **Female** | **TOTAL** |  |  |
| EWARS (Global) | 6 - 7 Jul 2020 |  |  | 5 | HQ | 2 |
| EWARS monthly session | 17 Aug 2020 |  |  | 8 | HQ | 2 |
| EWARS monthly session | 24 Sep 2020 |  |  | 10 | HQ | 2 |
| EWARS monthly session | Oct 19 2020 |  |  | 7 | HQ | 2 |
| DHIS Dashboard App Demo | 21 Oct 2020 |  |  | 4 | HQ | 2 |
| Risk Mapping Training I (EWARS) | 16 Nov 2020 |  |  | 6 | HQ | 2 |
| Bi-regional water safety audit training | 9 - 13 Nov 20 |  |  | 2 | SEARO | 3 |
| Risk Mapping Training II (EWARS) | 19 Jan 2021 |  |  | 5 | HQ | 2 |
| EWARS: regional risk mapping training | 15 Feb 2021 |  |  | 5 | HQ | 2 |
| EWARS monthly session | 23 March 2021 |  |  | 5 | HQ | 2 |
| EWARS monthly session | 3 May 2021 |  |  | 5 | HQ | 2 |
| EWARS Dashboard Training HQ | 19 July 2021 |  |  | 5 | HQ | 2 |
| Regional training on advancing health-climate action through improved vulnerability and adaptation assessment and planning Virtual | 17-19 and 25 August 2021 |  |  | 5 | SEARO | 1 |
| EWARS Dashboard Training HQ | 1 September 2021 |  |  | 6 | HQ | 2 |
| Regional training on ‘Climate Resilient Water Safety Planning (CR-WSP) Virtual | 13-16 September 2021 |  |  | 6 | SEARO | 3 |
| Risk mapping on EWARS dashboard | 1 October 2021 |  |  | 4 | HQ | 2 |
| Training on WASH, IPC and waste management for developing climate-resilient health care facilities for doctors, nurses and hospital staffs | 2021 |  |  | 670 | CO | 3 |
| EWARS+ Training | 23 February 2022 |  |  | 4 | HQ | 2 |
| EWARS+ Training | 30 June 2022 |  |  | 5 | HQ | 2 |
|  |  |  |  |  |  |  |
| EWARS+ Training | 19 September 2022 |  |  | 5 | HQ | 2 |
| Training on climate change and health (2 Batches of medical professionals) | 25-29 September 2022 |  |  | 41 | CO | 1 |
| EWARS+ Training | 24 November 2022 |  |  | 4 | HQ | 2 |
| EWARS+ Training | 28-29 November 2022 |  |  | 20 | CO | 2 |
| Climate informed Disease surveillance for Central level medical professionals | 1-2 February 2023 |  |  | 21 | CO | 2 |
| Training on Integrated disease surveillance and EWARS for Cholera Sentinel site’s professionals | 16 April 2023 |  |  | 23 | CO | 2 |
| Training on disease surveillance early warning for Rota Sentinel site’s professionals/staffs | 17 April 2023 |  |  | 22 | CO | 2 |
| Training on Climate Change and health for health professionals in Mymensingh region (Health impact of climate change, Adaptation, resilience etc.) | 1 June 2023 |  |  | 13 | CO | 1 |
| Training on Climate Change and health for health professionals in Dhaka Division (Health impact of climate change, Adaptation, resilience etc.) | 6 June 2023 |  |  | 17 | CO | 1 |
| TOT on climate informed hospital emergency preparedness and response plan | 3-5 Oct 2023 |  |  | 21 | CO | 3 |
| Training on "Climate Informed Hospital Emergency Preparedness and Response Plan" for health managers, doctors, nurses and allied staffs of primary secondary and tertiary level hospitals at divisional district towns (8 batches) | 8 Oct - 2 Nov 2023 |  |  | 120 | CO | 3 |
| **TOTAL** |  |  |  | **1,074** |  |  |
| **Nepal** |  |  |  |  |  |  |
| EWARS monthly session | 18 Aug 2020 |  |  | 6 | HQ | 2 |
| EWARS monthly session | 24 Sep 2020 |  |  | 1 | HQ | 2 |
| EWARS monthly session | 19 Oct 2020 |  |  | 1 | HQ | 2 |
| DHIS Dashboard App Demo | 21 Oct 2020 |  |  | 6 | HQ | 2 |
| Risk Mapping Training I (EWARS) | 16 Nov 2020 |  |  | 1 | HQ | 2 |
| Bi-regional water safety audit training | 9 - 13 Nov 2020 |  |  | 2 | SEARO | 3 |
| Risk Mapping Training II (EWARS) | 19 Jan 2021 |  |  | 2 | HQ | 2 |
| EWARS: regional risk mapping training | 15 Feb 2021 |  |  | 5 | HQ | 2 |
| EWARS introductory & piloting discussion | 23 Feb 2021 |  |  | 11 | HQ | 2 |
| EWARS monthly session | 26 Mar 2021 |  |  | 2 | HQ | 2 |
| Training on Climate Change and Health Impacts at provincial level | 13-15 March 2021 |  |  | 22 |  | 1 |
| EWARS monthly session | 22 Jun 2021 |  |  | 4 | HQ | 2 |
| Workshop on Integration of Health in National Adaptation Plan (NAP) preparation | 29-30 July 2021 |  |  | 20 | CO | 1 |
| EWARS monthly session | 04 August 2021 |  |  | 5 | HQ | 2 |
| Advocacy programme on climate change and health at Gandaki province | 08 August 2021 |  |  | 27 | CO | 1 |
| Advocacy programme on climate change and health at Lumbini province | 15 August 2021 |  |  | 25 | CO | 1 |
| WHO SEARO Regional training on Advancing health-climate action through improved vulnerability and adaptation assessment and planning | 17-19, 25 August 2021 |  |  | 9 | SEARO | 1 |
| EWARS monthly session | 01 September 2021 |  |  | 5 | HQ | 2 |
| Training on climate change and health at Province 1 | 20-23 September 2021 |  |  | 30 | CO | 1 |
| Advocacy programme on climate change and health at Province 1 | 24 September 2021 |  |  | 25 | CO | 1 |
| Training on climate change and health at Province 2 | Oct. 5-8, 2021 |  |  | 19 | CO | 1 |
| Training on climate change and health at Gandaki Province | Oct. 24-27, 2021 |  |  | 27 | CO | 1 |
| Training on climate change and health at Lumbini Province | Oct. 31 – Nov. 3, 2021 |  |  | 23 | CO | 1 |
| Training on climate change and health at Sudurpaschim Province | Nov. 22 – 25, 2021 |  |  | 24 | CO | 1 |
| Onsite technical orientation on climate sensitive disease surveillance tool in BPKHIS | Dec. 1, 2021 |  |  | 12 | CO | 2 |
| Onsite technical orientation on climate sensitive disease surveillance tool in Bharatpur hospital | Dec. 3, 2021 |  |  | 13 | CO | 2 |
| Training on climate change and health at Karnali Province | Dec. 22-25, 2021 |  |  | 25 | CO | 1 |
| EWARS monthly session | 1 October 2021 |  |  | 2 | HQ | 2 |
| EWARS monthly session | 2 November 2021 |  |  | 3 | HQ | 2 |
| EWARS monthly session | 18 January 2022 |  |  | 3 | HQ | 2 |
| EWARSplus training | 23 February 2022 |  |  | 2 | HQ | 2 |
| EWARS monthly session | 02 March 2022 |  |  | 2 | HQ | 2 |
| Plenary session of Climate Change and Health in the Eighth National Summit of Health and Population Scientists of Nepal | 12 April 2022 |  |  | 800 | CO | 1 |
| EWARS monthly session | 26 April 2022 |  |  | 3 | HQ | 2 |
| Training workshop on operational research on climate resilient health systems in Nepal | 3-8 May 2022 |  |  | 50 | CO | 3 |
| Workshop to enhance climate sensitive disease surveillance (CSDS) at national and sub-national levels. | 30-31 May 2022 |  |  | 23 | CO | 2 |
| EWARS monthly session | 30 June 2022 |  |  | 3 | CO | 2 |
| EWARS monthly session | 20 Sept. 2022 |  |  | 6 | HQ | 2 |
| EWARS monthly session | 24 Nov 2022 |  |  | 3 | HQ | 2 |
| On-site data verification at BPKIHS | 20-21 Dec. 2022 |  |  | 31 | CO | 2 |
| Local Level Sensitization at Dharan | 22 Dec. 2022 |  |  | 29 | CO | 2 |
| On-site data verification at KAHS | 29-30 Dec. 2022 |  |  | 44 | CO | 2 |
| Local Level Sensitization at Jumla | 31 Dec. 2022 |  |  | 17 | CO | 2 |
| CR-WSP Audit training | Nov. 28 – Dec. 1 2022 |  |  | 30 | RO | 3 |
| Local level sensitization at PAHS-Kaski | 9 Jan 2023 |  |  | 29 | CO | 2 |
| Onsite data verification at PAHS-Kaski | 10-11 Jan 2023 |  |  | 49 | CO | 2 |
| EWARS monthly session | 8 Feb. 2023 |  |  | 3 | CO | 2 |
| Local level sensitization at Bharatpur hospital | 6 Feb. 2023 |  |  | 25 | CO | 2 |
| Onsite data verification at Bharatpur hospital | 7-8 Feb. 2023 |  |  | 32 | CO | 2 |
| Onsite training on Climate Resilience and Environmentally Sustainable Healthcare facilities (CRESHCF) for medical staffs at KAHS | 21-22 Feb. 2023 |  |  | 46 | CO | 3 |
| Orientation on CRESHCF for doctors and admin staff at KAHS | 22 Feb 2023 |  |  | 15 | CO | 3 |
| Orientation on WASH facilities and infrastructure at KAHS | 22 Feb 2023 |  |  | 5 | CO | 3 |
| Orientation on CRESHCF and role of public health professionals on climate and health for academic faculty and students at KAHS | 23 Feb 2023 |  |  | 30 | CO | 3 |
| Onsite training on CRESHCF for support staff at KAHS | 23-24 Feb. 2023 |  |  | 47 | CO | 3 |
| Orientation on CRESHCF to doctors and admin staff at Gaur hospital | 26 Feb 2023 |  |  | 21 | CO | 3 |
| Onsite training on CRESHCF for medical staffs at Gaur hospital | 27-28 Feb 2023 |  |  | 23 | CO | 3 |
| Onsite training on CRESHCF for support staffs at Gaur hospital | 1 March 2023 |  |  | 18 | CO | 3 |
| Orientation on CRESHCF for doctors and admin at Dhaulagiri hospital | 1 March 2023 |  |  | 19 | CO | 3 |
| Meeting on extreme weather and monsoon preparedness | 21 April 2023 |  |  | 9 | CO | 2 |
| Training on baseline assessment of GHG emissions from health sector operations in Nepal | 2-5 May 2023 |  |  | 34 | CO | 3 |
| EWARS monthly session | 9 May 2023 |  |  | 3 | HQ | 2 |
| Advocacy program on climate change and its impacts on health | 19 June 2023 |  |  | 25 | CO | 1 |
| EWARS monthly session | 9 August 2023 |  |  | 5 | HQ | 2 |
| Training on climate change and health local level in Dolakha (Mountain region) | 5-7 October 2023 |  |  | 21 | CO | 1 |
| Training on climate change and health at local level in Rasuwa (Hilly region) | 12-14 October 2023 |  |  | 20 | CO | 1 |
| Training on climate change and health at local level in Rupandehi (Terai region) | 17-19 October 2023 |  |  | 20 | CO | 1 |
| EWARS monthly session | 26 October 2023 |  |  | 2 | HQ | 2 |
| Training on climate resilient water safety plan (CR-WSP) for health professionals | 27-30 Nov., 2023 |  |  | 20 | CO | 3 |
| **TOTAL** |  |  |  | **4,399** |  |  |
| **Myanmar** |  |  |  |  |  |  |
| EWARS monthly session | 18 Aug 2020 |  |  | 8 | HQ | 2 |
| EWARS monthly session | 24 Sep 2020 |  |  | 17 | HQ | 2 |
| EWARS monthly session | 19 Oct 2020 |  |  | 8 | HQ | 2 |
| DHIS Dashboard App Demo | 21 Oct 2020 |  |  | **7** | HQ | 2 |
| Bi-regional water safety audit training | 29 Oct; 9 - 13 Nov 2020 |  |  | **5** | SEARO | 2 |
| Risk Mapping Training I (EWARS) | 16 Nov 2020 |  |  | 14 | HQ | 2 |
| Risk Mapping Training II (EWARS) | 19 Jan 2021 |  |  | 17 | HQ | 2 |
| EWARS: regional risk mapping training | 15 Feb 2021 |  |  | 5 | HQ | 2 |
| EWARS monthly session | 30 Mar 2021 |  |  | 4 | HQ | 2 |
| EWARS monthly session | 03 May 21 |  |  | 5 | HQ | 2 |
| EWARS monthly session | 22 Jun 21 |  |  | 6 | HQ | 2 |
| EWARS risk mapping session | 4 August 21 |  |  | 6 | HQ | 2 |
| EWARS risk mapping session | 2 September 21 |  |  | 6 | HQ | 2 |
| EWARS risk mapping session | 22 October |  |  | 5 | HQ | 2 |
| EWARS risk mapping session | 8 November 2021 |  |  | 7 | HQ | 2 |
| TOT on Management of Highly infectious diseases (3 Batches) | August, September 2021 |  |  | 95 | DMS, MoH | 3 |
| Multiplier training on management of Highly infectious diseases (17 S/R) | September 2021 |  |  |  |  | **3** |
| Dengue web-based surveillance training (Rakhine state) (2 trainings) | November, December 2021 |  |  | 34 | MoH | 2 |
| **TOTAL** |  |  |  | **215** |  |  |
| **Timor-Leste** |  |  |  |  |  |  |
| EWARS monthly session | 17 Aug 20 |  |  | 2 | HQ | 2 |
| EWARS monthly session | 24 Sep 20 |  |  | 20 | HQ | 2 |
| EWARS monthly session | 19 Oct 2020 |  |  | 11 | HQ | 2 |
| DHIS Dashboard App Demo | 21 Oct 2020 |  |  | 2 | HQ | 2 |
| GCF Readiness Training/meeting | 07 Oct 2020 |  |  | 2 | HQ | 1 |
| Bi-regional water safety audit training | 9 - 13 Nov 20 |  |  | 10 | SEARO | 3 |
| Training on dengue prevention and control | 12 Oct 2020 |  |  | 205 | CO | 3 |
| Training of community water management groups in three municipalities | 14-19 Sep 2020 |  |  | 100 | CO | 3 |
| Risk Mapping Training I (EWARS) | 16 Nov 2020 |  |  | 2 | HQ | 2 |
| Risk Mapping Training II (EWARS) | 19 Jan 2021 |  |  | 13 | HQ | 2 |
| Support the National Health Laboratory in conducting 2-day Refreshing training on Water Quality Testing and Evaluation of Water Safety Plan programme was conducted by the National Health Laboratory, Ministry of Health. | 15-16 Feb 2021 |  |  | 65 | CO | 3 |
| EWARS monthly session | 15 Feb 2021 |  |  | 2 | HQ | 2 |
| Online Regional training on ‘Advancing health-climate action through improved vulnerability and adaptation assessment and planning’, 17-19 August and 25 August 2021 | 17-19 August and 25 August 2021 |  |  | 12 | SEARO | 1 |
| Regional training on Climate Resilient Water Safety Plan | 13-16 September 2021 |  |  | 6 | SEARO | 3 |
| Support MoH delegation to attend COP26 meeting | 22 Oct-12 Nov 2021 |  |  | 2 | UN | 1 |
| Virtual training/workshop on Enabling Sectoral Intervention for Clean Air in cities | 8-9 December 2021 |  |  | 5 | SEARO | 1 |
| Evidence & Policy Lecture on Air Pollution & Health: how climate change is increasing both acute and chronic disease risk Confirmation | 7 Dec 2021 |  |  | 2 | The George Institute for Global Health, India | 1 |
| Webinar Building back better for clean air: “Lessons from Asian Cities” | 29 Nov 2021 |  |  | 4 | Asia Pacific Clean Air Partnership | 1 |
| Training on Dengue Case Management for health professional |  |  |  |  | WCO-TLS | 3 |
| Orientation of web internet access on Air Quality Data Monitoring for the staff of department of Centre for Environment, Secretary of State for Environment | 30 June-1 July 2022 |  |  | 2 | Facilitated by Local company (Klinik Moris Foun) | 1 and 2 |
| National Training on Climate-Resilient and Environmentally Sustainable Health Care Facilities (CRESH) and Climate Sensitive Disease Surveillance (CSD) | 16-17 February 2023 |  |  | 25 | SEARO/WCO-TLS | 1,2,3 |
| WASH and climate change partnership meeting with RA-WSC, WHO-SEARO | 13-14 February 2023 |  |  | 25 | SEARO/WCO-TLS | 1,2 |
| In collaboration with the National Authority of Water and Sanitation and INGOs, NNGOs and other UN agencies celebrated World Water Day- Advocacy and awareness raising session on climate impact and resilience of water supply in Timor-Leste | 22 March 2023 |  |  | 100 | ANAS I.P and WASH partners (WASH forum) | 1, 3 |
| Training on Web-based Climate Resilience and Environmental Sustainability scorecard for Healthcare Facilities followed by field visit to 3 health care facilities (Hospital Referral of Maubessi, Community Health Centre of Liquica and National Hospital of Guido Valadares). | 17-21 April 2023 |  |  | 30 | SEARO/WCO-TLS | 1,2, 3 |
| First Meeting of SEA Expert Group on Environment Determinants of Health and Climate Change, New Delhi, India | 13 March 2023 |  |  | 4 | SEARO | 1,2, 3 |
| Regional Meeting on Health Impacts of Pollution, with specific focus on Air Pollution and Marine Pollution and Health | 14-16 March 2023 |  |  | 4 | SEARO | 1,3 |
| Water Quality testing training (AAS and HPLC) This includes use of mobile water quality test kits and application of chlorine in flood water. Changes in rainfall and runoff timing, coupled with higher temperatures due to climate change, thereby increasing capacity of health professionals and promoting the most appropriate new technologies to respond to waterborne diseases. | 6 month |  |  | 10 | WCO, NHL and international consultant | 1,2,3 |
| To provide technical support to the Ministry of Health in conducting Vulnerability, capacity and Adaptation assessment (VCA) for all municipalities of Timor-Leste including development of Climate and Health Risk profile of each municipality and publication of scientific papers | 1 month (8 November – 3 December 2023 |  |  | 6 | WCO, Environmental Health Department/MoH, UNTL, INSPTL, James Cook University, Menzies research schools |  |
| Inception workshop on Healthcare Waste Management (HCWM) policy development | 1 day |  |  | 40 | WCO and Environmental Health Department, MoH |  |
| Inception workshop on V&A assessment and Climate and Health Risk profile development for Timor-Leste | 1 |  |  | 40 | WCO, Environmental Health Department, MoH |  |
| Briefing meeting with environmental health department team, MoH and DG of Public Health to provide technical support to develop the national policy for Health Care Waste management, CRESH Policy and Strategy Development for Timor-Leste | 1 day |  |  | 15 | WCO and Environmental Health Department, MoH |  |
| Debriefing meeting with WR and EHD, MoH on health care waste management | Half day |  |  | 15 | WCO |  |
| Meeting with Prof. Dr. Rufus (University of California Irvine) and Environmental Health Department team, MoH   on air pollution and health | Half day |  |  | 10 | WCO |  |
| **TOTAL** |  |  |  | **791** |  |  |
| **Cambodia** |  |  |  |  |  |  |
| EWARS monthly session | 17 Aug 2020 |  |  | 8 | HQ | 2 |
| EWARS monthly session | 24 Sep 2020 |  |  | 5 | HQ | 2 |
| EWARS monthly session | 20 Oct 2020 |  |  | 5 | HQ | 2 |
| Training workshops for healthcare providers on surveillance indicators reporting for diarrheal diseases and COVID-19 prevention | 27-28 Aug 2020 |  |  | 90 |  |  |
| Workshop to launch curriculum on CCH for postgraduate course | 29 Dec 2020 |  |  | 30 |  |  |
| EWARS: regional risk mapping training | 15 Feb 2021 |  |  | 2 | HQ | 2 |
| Training of Trainers on Dengue/CHIKV Case Management (TOT) Siem Riep and Battambang provinces | 1 -2 Mar and 4-5 Mar 2021 |  |  | 120 |  |  |
| EWARS monthly session | 26 Mar 2021 |  |  | 6 | HQ | 2 |
| EWARS monthly session | 21 Jun 2021 |  |  | 2 | HQ | 2 |
| EWARS monthly session | 19 July 2021 |  |  | 5 | HQ | 2 |
| EWARS monthly session | 25 August 2021 |  |  | 5 | HQ | 2 |
| EWARS: Country Risk Mapping Training | 01-09-21 |  |  | 2 | HQ | 2 |
| Standard procedures training (dengue database)   * Kampong Thom * Takeo * Svay Rieng * Battambang * Siem Reap * Kampong Cham | 11-12 Oct 2021  14-15 Oct 2021  25-26 Oct 2021  25-27 Nov 2021  21-24 Nov 2021  07-08 Dec 2021 |  |  | 160 | CO | 1 |
| Improving diarrhoeal disease surveillance and COVID-19 prevention and control   * Kampong Chhnang * Takeo | 11-12 Nov 2021  15-16 Nov 2021 |  |  | 60 | CO | 3 |
| First CC&H capacity building training at Kampong Cham Province for provincial and national MoH staff. (see more detail and photos in technical report number 1: “01. Capacity Building Trainings on CC&H Feb-Mar 22.docx” | 17 – 18 Feb 2022 | 26 | 4 | 30   (4 female) | CO | 1 |
| EWARS monthly session | 19 Sept 2022 |  |  | 4 | HQ | 2 |
| Second capacity building training at Kampong Cham Province for provincial and national MoH staff. | 22 – 23 Feb 2022 | 18 | 9 | 27   (9 female) | CO | 1 |
| Third capacity building training at Kampong Cham Province for provincial and national MoH staff. | 09 – 10 Mar 2022 | 21 | 4 | 25   (4 female) | CO | 1 |
| 5 x full day sessions of WASH awareness raising in communities and villages (chiefs, vice-chiefs, commune councils and VHSGs), 25 participants per session | During March 2022 | 97 | 28 | 125  (28 female) | CO   (PMD team) | 3 |
| 5 x full day sessions of WASH awareness raising in communities and villages (villagers and community members), 40 participants per session lead by PHD Ratanakiri | During March 2022 | 79 | 121 | 200  (121 female) | CO   (PMD team) | 3 |
| Climate Change and Health (CC&H) capacity building training on the publication guidelines for climate sensitive diseases for health staff and TWG members | 15 – 16 Mar 2022 | 29 | 6 | 35   (6 female) | CO | 3 |
| EWARS monthly session | 4 April 2022 | 6 | 0 | 6  (0 female) | HQ | 2 |
| EWARS monthly session | 26 April 2022 | 6 | 1 | 7  (1 female) | HQ | 2 |
| Capacity building training workshops on managing and analysing dengue data, incorporating climate attributes, for effective program intervention and response – Siem Reap Province | 14-16 June 2022 | 21 | 26 | 47  (26 female) | CNM |  |
| Capacity building training workshops on managing and analysing dengue data, incorporating climate attributes, for effective program intervention and response – Pursat Province | 21-23 June 2022 | 36 | 16 | 52  (16 female) | CNM |  |
| Refresher trainings for Dengue Sentinel Surveillance including Dengue-RDT integrated COVID-19 prevention and control conducted in Kampot. Focus on reporting at new sentinel sites and SOPs for the rapid response plan integrated with the dengue surveillance and early warning system | 26-27 April 2022 | 24 | 29 | 53  (29 female) | CNM |  |
| Refresher trainings for Dengue Sentinel Surveillance conducted in Takeo on Capacity building on dengue rapid test usage | 19-20 April 2022 | 27 | 15 | 42  (15 female) | CNM |  |
| Capacity building on CRWSP infrastructure improvement for 25 health Centers with WASH Ratanakiri Technical Working Group (TWG) (1st batch) | 29-30 June 2022 | 45 | 5 | 50  (5 female) | PMD | 3 |
| Capacity building on CRWSP infrastructure improvement for 25 health Centers with WASH Ratanakiri Technical Working Group (TWG) (2nd batch) | 8-9 August 2022 | 42 | 7 | 50  (7 female) | PMD | 3 |
| Capacity building on CRWSP infrastructure improvement for 25 health Centers with WASH Ratanakiri Technical Working Group (TWG) (3rd batch) | 30-31 September 2022 | 34 | 15 | 49  (15 female) | PMD | 3 |
| WASH awareness raising in villages and communities (village chief, commune council and VHSGs -1st Phase) | 21 March – 22 April 2022 | 305 | 70 | 375  (70 female) | PMD | 3 |
| WASH awareness raising in villages and communities (villages and communities -1st Phase) | 25 March – 27 April 2022 | 231 | 369 | 600  (369 female) | PMD | 3 |
| Climate Change and Health (CC&H) and Water Sanitation and Hygiene (WASH) awareness raising in villages and communities (village chief, commune council and VHSGs -2nd Phase) | 6 -10 June 2022  20-24 June 2022  8-12 July 2022 | 304 | 71 | 375  (71 female) | PMD | 3 |
| Climate Change and Health (CC&H) and Water Sanitation and Hygiene (WASH) awareness raising in villages and communities (villages and communities -2nd Phase) | 11-15 June 2022  25-29 June 2022  13-17 July 2022 | 254 | 346 | 600  (346 female) | PMD | 3 |
| Climate Change and Health (CC&H) and Water Sanitation and Hygiene (WASH) awareness raising in villages and communities (village chief, commune council and VHSGs -3rd Phase) | 1 -5 August 2022  15-19 August 2022  5-9 Sept 2022 | 320 | 55 | 375  (55 female) | PMD | 3 |
| Climate Change and Health (CC&H) and Water Sanitation and Hygiene (WASH)  awareness raising in villages and communities (villages and communities -3rd Phase) | 6-10 August 2022 20-24 August 2022  5-9 Sept 2022 | 263 | 337 | 600  (337 female) | PMD | 3 |
| Orientation training (ToT) on Phom sart and Ptak komrou (behaviour change) |  | 32 | 10 | 42  (10 female) |  |  |
| Within the context of climate change impacts on water-borne diseases, refresher training on improvement of diarrhoeal disease surveillance for provincial health staff, in Kampot province. | 20-21 September 2022 | 32 | 6 | 38 (6 female) | CDC/MoH & WHO | 2 |
| Within the context of climate change impacts on water-borne diseases, refresher training on improvement of diarrhoeal disease surveillance for provincial health staff, in Battambang province. | 28-29 September 2022 | 37 | 1 | 38 (1 female) | CDC/MoH & WHO | 2 |
| “phom sart and Pkak komrou” behaviour change trainings in 8 villages | March – April 2022 | 573 | 883 | 1456 participants (883 female) | VHSGs / village chiefs |  |
| Awareness raising on prevention and control of Diarrhea and Dengue in villages and communities in Koun Mom, Veun Sai and Bor Keo districts of Ratanakiri province (VHSGs and community) (see detailed information in supporting document number 2) | Sep – Nov 2022 | 388 | 392 | 780 participants (392 female) | CNM | 2 |
| Awareness raising on dengue and diarrhea related to climate change in villages and communities in Lumphat, Ou Chum, and Banlung districts of Ratanakiri province (VHSGs and community) (See detail and photos in technical report supporting document number 3) | Oct – Dec 2022 | 350 | 430 | 780 participants (430 female) | NCHP | 2 |
| **TOTAL** |  | **3,396** | **3,251** | **7,361** |  |  |
| **Lao PDR** |  |  |  |  |  |  |
| WASHFIT refresher training | 18 Aug 2020 |  |  | 40 | WCO MOH | 1 |
| Onsite training for water quality monitoring and surveillance | Q3 2020 |  |  | 20 |  | 3 |
| CR-WSP training | Aug - Sep 2020 |  |  | 80 | Master trainer, MOPWT | 3 |
| Climate Resilient WASH FIT implementation and monitoring | Q3 2020 |  |  | 150+ |  | 3 |
| DHIS2 dashboard demo | 21 Oct 2020 |  |  | 3 | HQ | 2 |
| Climate resilient water safety plan training | Oct - Dec 2020 |  |  | 110 | MOPWT | 3 |
| Training on the use of the guideline for dengue vector management | Nov - Dec 2020 |  |  | 30 | MOH | 1 |
| Training on health care waste management | March 2021 |  |  | 40 | WCO MOH | 1 |
| EWARS: regional risk mapping training | 06 Oct 2021 |  |  | 4 | HQ | 2 |
| EWARS monthly session | 26 Aug, 02 Sep 2021, 22 Nov 2021, 20 Jan 2022,   25 Feb 2022,  27 Apr 2022,  May 2022  June 2022  01 July 2022  August 2022  20 September 2022 |  |  | 6  4  3  3  8  8  8  8  8  8 | HQ | 2 |
| CR WSP for water safety plan team of urban water suppliers in Phongsalay, Sasomboune provinces | Mid- Dec 2021 |  |  | 30 | MOPWT WCO | 3 |
| Training to prepare lecturers to teach CR WSP training in School of Medical technology and laboratory  conducted | Last week of Jan 2022 |  |  | 20 | WCO | 3 |
| Training of trainers (TOT) for climate change and health training -  9 modules for public health specialists at national and subnational level | 21-23 July |  |  | 21 | WCO MOH | 1 |
| Community awareness raising activities on climate resilient water and sanitation safety planning in selected communities | Planned for Nov 2022 |  |  | 156 | WCO MOH | 3 |
| Technical support for safe clean green hospital initiative (in VTE Capital Region, Xiengkhuang province and Sekong province) included hands-on training on how to use autoclave to treat infectious waste and sharp waste. | 22 Jul 2022  10 Aug 2022  1 Sep 2022  20 Oct 2022 |  |  | 5  5  6  3 | WCO  WCO  WCO  WCO | 3 |
| Training and monitoring support on the use of guidance for dengue vector control for subnational dengue teams. | 14-20 August 2022 Attapeu    21-27 August 2022 in Saravan and Sekong provinces. |  |  | 4      3 | WCO  Center for malariology, parasitology and entomology (CMPE) | 2 |
| 3-day TOT (for Master Trainers) workshop on CR WSPing   2 day consultation workshop to revise and prepare guidance for further development of SOPs for some key CR water safety operations | 19 – 21 Dec 22    22 – 23 Dec 22 |  |  | 8 Master Trainers  14 | MoPW&T | 3 |
| Climate resilient WASH-FIT (including healthcare waste management) Master Trainer Refresher Training | 16 – 17 Mar 23 |  |  | 19 | WHO | 1 |
| Refresher training on water quality monitoring in northern Lao PDR (poor water quality appears to link to raised diarrhoea incidence in dry season) | 21 – 23 February 2023 |  |  | 24 | Nam Saat | 1 |
| Refresher training on water quality monitoring in northern Lao PDR (poor water quality appears to link to raised diarrhoea incidence in dry season, and possible dry season links to raised arsenic in water) | 20 – 22 March 2023 |  |  | 25 | Nam Saat | 1 |
| Water quality surveillance and monitoring training (for working professionals) | 4-6 Jan 2023 | 15 | 20 | 35  (20 Female) | Nam Papa | 3 |
| Climate resilient water safety planning and surveillance training for lecturers, students and researchers | 29-30 March |  |  |  |  | 3 |
| Water quality surveillance and monitoring, including use of rapid testing equipment (for postgraduate and graduate students) | June 2023 |  |  | 22 | School of Medical Technology | 3 |
| Climate Change and health training modules for public health specialists (HNAP implementers) | 18-19 July, 2023 | 30 | 36 | 66 (36 or  54.6%   female) | DHHP | 1 |
| ‍Health National Adaptation Plan High Level Advocacy Meeting | 3rd August 2023 | 30 | 36 | 69 (36 female = 52.2% female) | DHHP | 1 |
| ‍Regional workshop f(southern region) or Climate Change and Health Adaptation Planning | 18 – 20 September | 27 | 17 | 44 (17 female = 38.6% female) | DHHP | 1 |
| ‍Regional workshop (northern region) for Climate Change and Health Adaptation Planning | 6 -8 September |  |  | 51 (20 female = 39.2% female) | DHHP | 1 |
| Certified training for autoclave operators and health care waste management for health staff from selected provinces (3 provinces: Champasack-4 staff, Sekong-2 staff, Attapeu-3 staff).~~‍~~ | 27 Aug-28 Oct | 4 | 5 | 9 (5 females = 56% female) | School of Medical Technology | 3 |
| TOT on WASH FIT for three regions (Northern, Central, Southern) under the Safe Clean Green and Climate Resilient Health Care Facility Initiative.~~‍~~ | North: 6-8 December; Central: 19-21 December; Sothern: 26-28 December | 94 | 78 | 172(78 females = 45% female) | DHHP | 3 |
| **TOTAL** |  | **137** | **212** | **1,352** |  |  |
| **Regional & Global trainings** | **Date** |  |  | **# Participants** |  |  |
| Country Training Workshop on EWARS | 6-7 Jul 2020 |  |  | 70 | HQ |  |
| Launch - Climate Resilient and Environmentally Friendly Healthcare Facilities | 13 Oct 2020 |  |  | 279 | HQ |  |
| DHIS2 Dashboard App Demo | 21 Oct 2020 |  |  | 50 | HQ |  |
| Risk mapping Training I (EWARS) | 16 Nov 2020 |  |  | 49 | HQ | 2 |
| Bi-regional water safety audit training | 9 - 13 Nov 2020 |  |  | 60 | SEARO | 3 |
| Risk Mapping Training II (EWARS) | 19 Jan 2021 |  |  | 64 | HQ | 2 |
| EWARS: regional risk mapping training (Joined from Bangladesh, Nepal, Myanmar, Timor-Leste, South Korea, Sweden, Germany, USA, Swiss, and India) | 15 Feb 2021 |  |  | 32 | HQ | 2 |
| WHO SEARO Regional training on Advancing health-climate action through improved vulnerability and adaptation assessment and planning | 17-19, 25 August 2021 |  |  | 100 | SEARO | 2 |
| Regional training on Climate Resilient Water Safety Planning | 13-16 September 2021 |  |  | 61 | SEARO | 3 |
| Webinar: Accessing Green Climate Fund Readiness Programme funding for Climate Change and Health | 28 September 2021 |  |  | 39 (12 countries) | SEARO & HQ | 1 |
| Global webinars on COP26 Health Programme | 29 September 2021 – 2 sessions |  |  | 245 (81 countries) | HQ | 2 & 3 |
| MTR workshop | 14 October 2022 |  |  | All project countries | HQ | All |
| EWARS plus Training | 23 February 2022 |  |  | 2 project countries | HQ | 2 |
| Expert meeting on advancing low carbon sustainable health systems | 4 May |  |  | 57 | HQ | 3 |
| Capacity Building and knowledge exchange on WASH and Climate Resilience and environmental sustainability in health care facilities | 10-13 October 2022 |  |  | 63 | SEARO | 3 |
| First Meeting of SEA Expert Group on Environment Determinants of Health and Climate Change’, New Delhi, India | 13 March 2023 |  |  | 70 | SEARO | 1,2,3 |
| Training and pilot of the ‘Web-based Climate Resilience and Environmental Sustainability Scorecard for Healthcare Facilities in Timor-Leste’ | 17-20 April 2023 |  |  | 30 | SEARO | 3 |
| Regional meeting on climate resilient water and sanitation safety planning and audit in Kathmandu, Nepal | 24-27 April 2023 |  |  | 60 | SEARO | 3 |
| National Training on Climate-Resilient and Environmentally Sustainable Health Care Facilities (CRESH) and Climate Sensitive Disease Surveillance ( CSD) in Timor Leste | 16-17 February |  |  | 25 | SEARO | 2,3 |
| Regional meeting on Health care waste  management in the WHO South East Asia Region | 24-27 July 2023 |  |  | 40 | SEARO | 3 |
| **TOTAL** |  |  |  | 1,394 |  |  |

## Appendix 7: Updates on training modules/course materials developed

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Training Modules/Course Materials | Status (Draft/Final) | If draft, expected completion date | Related to which outcome (1, 2, or 3) |
| Bangladesh | Training package for Health Professionals (National and Facility level) on Climate Change and Health (Health impact, WBD, VBD, Multisectoral coordination and Financing) | Final | NA | 1 |
|  | Training manual on climate informed hospital emergency preparedness and response plan | Final | NA | 3 |
|  | Handbook on climate change and its linkages with relevant issues within the MBBS course including acute emergency healthcare | Final | NA | 1 |
|  | Operational manual for MBBS curriculum- 2021 | Final | NA | 1 |
| Cambodia | Climate Change and Health (CC&H) in MSc program at Royal University of Phnom Penh- three subjects (courses) that have been integrated with CC& H and key aspects on health sections | Final |  | 1 |
|  | The Royal University of Phnom Penh on Monitoring and follow-up of implementation of the postgraduate curriculum on climate change and health (CC&H) for MSc in Climate Change Program (MCC) at the Royal University of Phnom Penh from April to June 2022. | Final for the product and ongoing for the integrated three teaching courses on CC&H. | June 2022 | 1 |
|  | Training modules on basic science of climate change, and climate change vulnerability and adaptation | Final |  | 1 |
| Lao PDR | Climate Change and Health Training 9 modules for public health specialists at national and subnational level. Additionally, it is to be used for Master of Public health and Master of environmental health training | Final (translation completed Q2 2022, first training session was completed in July 2022). |  | 1 |
|  | Climate Resilient WSP developed using WHO HQ manual of CR WSP for use of urban water suppliers (Nam papa system) | Final used for CR WSP training at water supply/team |  | 3 |
|  | CR WASH with focus on climate resilient water safety plan for community manage water suppliers – with 7 modules for provincial, district climate and WASH staff and community health care workers at health centres | PPT finalized  translation finalized in August 2022 | N/A | 3 |
| Myanmar | Manual for Dengue web-based surveillance system. | Final |  | 2 |
|  | Malaria elimination field Implementation Manual | Final |  | 3 |
| Nepal | Training manuals on climate change and vector borne diseases (VBDs)- consisting of Facilitators Handbook, Participants Workbook and Reference Book | Final |  | 3 |
|  | Training manuals on climate change and health | Final | 2023 | 1 |
|  | Training manual on climate change and health research for Nepal | Final | 2023 | 1 |
|  | Learning Resource Package (LRP) on climate resilient water safety plan (CR-WSP) | Final Draft | 2023 | 3 |
|  | Training Manual on climate change and health for officials working at local level | Final Draft | 2023 | 1 |
| Timor-Leste | Climate Change and health training modules and curriculum for the Environmental Health training programme at the National Institute of Health | Draft under finalization | 2022 | 1 |
|  | Training modules and curriculum for water and climate resilience for health | Final draft for approval | 2022 | 3 |
|  | CR-WSP training manual. | Final | 2022 | 3 |
|  | Climate Resilient and Environmentally Sustainable Health Care Facilities Policy and Strategy for Timor-Leste | Final draft in place and stakeholder consultation completed | 2023 | 1,2,3 |
|  | National Health Care Waste Management Policy, National Health Care Waste Management Strategy and reviewing existing National Guidelines of HCWM | Drafted and final stakeholder consultation completed | 2023 | 1,3 |
|  | Standard Operational Procedures (SOP) for Toxicology Water Environment Lab Analysis | Final | 2022-2023 | 1,3 |
|  | SOP for climate resilient health care waste management - Waste segregation, internal waste collection and transport and waste storage | Final | July 2023 | 3 |

# List of Annexes

## Annex A: GEF UNDP Project Results Framework

## Annex B: UNDP GEF TE Terms of Reference

## Annex C: Inception Report

## Annex D: Interview Guide and note taking template

## Annex E: Consent Form

## Annex F: Plain Language Statement

1. Professor Ebi was a member of the mid-term review team. In her participation in this Terminal Evaluation, she retains her objectivity as an independent technical advisor and is not affiliated with the project or any of its funding and implementing partners. [↑](#footnote-ref-2)
2. Rating system: 6=Highly Satisfactory (HS), 5=Satisfactory (S), 4=Moderately Satisfactory (MS), 3=Moderately Unsatisfactory (MU), 2=Unsatisfactory (U), 1=Highly Unsatisfactory (HU). [↑](#footnote-ref-3)
3. Sustainability is rated on a different 6-point scale: 6=Highly Likely (HL), 5-Likely (L), 4=Moderately Likely (ML), 3=Moderately Unlikely (MU), 2=Unlikely (U), 1=Highly Unlikely (HU) [↑](#footnote-ref-4)
4. UNDP, 2020, *Guidance for Conducting Terminal Evaluations of UNDP-Supported, GEF-Financed Projects,* [available online](https://erc.undp.org/pdf/TE_GuidanceforUNDP-supportedGEF-financedProjects.pdf). [↑](#footnote-ref-5)
5. GEF, 2023, *Guidelines for Conducting Terminal Evaluations of Full-Size Projects*, [available online](https://www.gefieo.org/sites/default/files/documents/evaluations/terminal-evaluations-2023.pdf). [↑](#footnote-ref-6)
6. Rating system: 6=Highly Satisfactory (HS), 5=Satisfactory (S), 4=Moderately Satisfactory (MS), 3=Moderately Unsatisfactory (MU), 2=Unsatisfactory (U), 1=Highly Unsatisfactory (HU). [↑](#footnote-ref-7)
7. Sustainability is rated on a different 6-point scale: 6=Highly Likely (HL), 5-Likely (L), 4=Moderately Likely (ML), 3=Moderately Unlikely (MU), 2=Unlikely (U), 1=Highly Unlikely (HU) [↑](#footnote-ref-8)
8. Country-level outcome indicators have been extracted from national results frameworks included with the ProDoc files. A selection of relevant achievements in each country has been included to showcase diverse interventions and impacts. [↑](#footnote-ref-9)