

Funding Proposal

SAP030: Strengthening Climate Resilience of the Lao People's Democratic Republic (PDR) Health System

The Lao People's Democratic Republic | Save the Children Australia | Decision B.37/12

24 November 2023



Contents

Section A PROJECT / PROGRAMME SUMMARY

This section highlights some of the project's or programme's information for ease of access and concise explanation of the funding proposal.

Section B PROJECT / PROGRAMME DETAILS

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Section D EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA

This section provides an overview of the expected alignment of the projects/programme with the GCF investment criteria: impact potential, paradigm shift, sustainable development, needs of recipients, country ownership, and efficiency and effectiveness.

Section E ANNEXES

This section provides a list of mandatory documents that should be submitted with the funding proposal as well as optional documents and references as deemed necessary to supplement the information provided in the funding proposal.

Notes to accredited entities on the use of the SAP funding proposal template

- The Simplified Approval Process Pilot Scheme (SAP) supports projects and programmes with a GCF contribution of up to USD 10 million with minimal to no environmental and social risks. Projects and programmes are eligible for SAP if they are ready for scaling up and have the potential for transformation, promoting a paradigm shift to low-emission and climate-resilient development.
- This template is for the SAP funding proposals and is different from the funding proposal template under the standard project and programme cycle. Distinctive features of the SAP funding proposal template are:
 - *Simpler documents*: key documents have been simplified, and presented in a single, up-front list;
 - *Fewer pages*: A shorter form with significantly fewer pages. The total length of funding proposals should **not exceed 20 pages**, annexes can be used to provide details as necessary;
 - *Easier form-filling*: fewer questions and clearer guidance allows more concise and succinct responses for each sub-section, avoiding duplication of information.
- Accredited entities can either directly incorporate information into this proposal, or provide summary information in the proposal with cross-reference to other funding proposal documents such as project appraisal document, pre-feasibility studies, term sheet, legal due diligence report, etc.
- Submitted SAP Pilot Scheme funding proposals will be disclosed simultaneously with submission to the Board, subject to the redaction of any information which may not be disclosed pursuant to the [GCF Information Disclosure Policy](#).

Please submit the completed form to:

fundingproposal@gcfund.org

Please use the following name convention for the file name:

"SAP-FP-[Accredited Entity Short Name]-[yyymmdd]"

LIST OF ACRONYMS

AE	Accredited Entity
AMA	Approved Master Agreement
AR6	Sixth Assessment Report
COP	Conference of the Parties
CORDEX	Coordinated Regional Downscaling Experiment
DHO	District Health Office
EE	Executing Entity
ENSO	El Niño–Southern Oscillation
ESAP	Environmental and Social Action Plan
EWE	Extreme Weather Event
FMCA	Financial Management and Capacity Assessment
GCF	Green Climate Fund
GESI	Gender Equality and Social Inclusion
GHG	Greenhouse Gas
GoL	Government of Lao PDR
HNAP	Health National Adaptation Plan
IPCC	Intergovernmental Panel on Climate Change
Lao PDR	Lao People's Democratic Republic
MIYCAN	Maternal, Infant, Young Child, and Adolescent Nutrition
LDC	Least Developed Country
MoH	Ministry of Health
MoNRE	Ministry of Natural Resources and Environment
NDA	National Designated Authority
NDC	Nationally Determined Contribution
NGO	Non-governmental Organization
PHO	Provincial Health Office
PIU	Project Implementation Unit
PSC	Project Steering Committee
RCP	Representative Concentration Pathway
RHIMS	Routine Health Information Management System
REDD+	Reducing Emissions from Deforestation and Forest Degradation
SAP	Simplified Approval Process
SBC	Social and Behavior Change
SC	Save the Children
SCA	SC Australia
SDG	Sustainable Development Goals
SOP	Standard Operating Procedure
SSP	Shared Socioeconomic Pathway
ToC	Theory of Change
UNFCCC	United Nations Framework Convention on Climate Change
USAID	U.S. Agency for International Development
USD	United States Dollar
VHV	Village Health Volunteer
WASH	Water, Sanitation, and Hygiene
WHO	World Health Organization

A. PROJECT/PROGRAMME SUMMARY

A.1. Has this FP been submitted as a SAP CN before?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>							
A.2. Is the Environmental and Social Safeguards Category C or I-3?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>							
A.3. Project or programme	<i>Indicate whether this FP refers to a combination of several projects (programme) or one project.</i> <input checked="" type="checkbox"/> Project <input type="checkbox"/> Programme	A.4. Public or private sector	<input checked="" type="checkbox"/> Public sector <input type="checkbox"/> Private sector	A.5. RfP	Not applicable				
				GCF Contribution	Co-financers' contribution¹				
	Mitigation total			<u>Enter number</u> %	<u>Enter number</u> %				
	<input type="checkbox"/> Energy generation and access			<u>Enter number</u> %	<u>Enter number</u> %				
	<input type="checkbox"/> Low emission transport			<u>Enter number</u> %	<u>Enter number</u> %				
	<input type="checkbox"/> Buildings, cities and industries and appliances			<u>Enter number</u> %	<u>Enter number</u> %				
	<input type="checkbox"/> Forestry and land use			<u>Enter number</u> %	<u>Enter number</u> %				
	Adaptation total			<u>Enter number</u> %	<u>Enter number</u> %				
	<input checked="" type="checkbox"/> Most vulnerable people and communities			30 %	25 %				
	<input checked="" type="checkbox"/> Health and well-being, and food and water security			50 %	60 %				
	<input checked="" type="checkbox"/> Infrastructure and built environment			20 %	15 %				
<input type="checkbox"/> Ecosystem and ecosystem services			<u>Enter number</u> %	<u>Enter number</u> %					
A.7.1. Expected mitigation outcome (Core indicator 1: GHG emissions reduced, avoided or removed / sequestered)	Not applicable		A.7.2 Expected adaptation outcome (Core indicator 2: direct and indirect beneficiaries reached)	Total number of direct and indirect beneficiaries: 2,322,593 <table border="1"> <tr> <td>Direct beneficiaries: 1,852,291</td> <td>Indirect beneficiaries: 470,302</td> </tr> <tr> <td>% of direct beneficiaries vis-à-vis total population: 25.7%</td> <td>% of indirect beneficiaries vis-à-vis total population: 6.5%</td> </tr> </table>		Direct beneficiaries: 1,852,291	Indirect beneficiaries: 470,302	% of direct beneficiaries vis-à-vis total population: 25.7%	% of indirect beneficiaries vis-à-vis total population: 6.5%
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¹ Co-financer's contribution means the financial resources required, whether Public Finance or Private Finance, in addition to the GCF contribution (i.e. GCF financial resources requested by the Accredited Entity) to implement the project or programme described in the funding proposal.

A.8.1. Total investment (GCF + co-finance²)	Amount: \$28,174,178 USD	A.8.2 Total GCF funding request ed (max USD 25M)	Amount: \$24,978,084 USD
A.9. Type of financial instrument requested for the GCF funding	<i>Mark all that apply.</i> <input checked="" type="checkbox"/> Grant <input type="checkbox"/> Loan ³ <input type="checkbox"/> Equity <input type="checkbox"/> Guarantees <input type="checkbox"/> Others:		
A.10. Implementation period (months)	60 Months		
A.11. Total project/ programme lifespan (years)	15 Years	A.12. Expected date of internal approval	4/4/2023
A.13. Executing Entity information	<p><i>Entity: Government of Lao PDR acting through its Ministry of Health (MoH)</i> <i>Country of Registration: Lao PDR</i> <i>Type of Organization: Government</i></p> <p><i>Entity: Save the Children International (SCI) Laos</i> <i>Country of Registration: Lao PDR</i> <i>Type of organization: Not-for-profit</i></p> <p><i>Save the Children Federation Inc (USA)</i> <i>Country of Registration: United States</i> <i>Type of organization: Not-for-profit</i></p>		
A.14. Scalability and potential for transformation (Eligibility for SAP, max. 100 words)			
<p>1. While the health and climate change nexus is an area of growing focus globally, it remains underfunded by governments, the private sector, and donors, including the GCF.⁴ In Lao PDR, the lack of resources available for addressing climate and health together has perpetuated knowledge and capacity barriers and has hindered action on the Government of Lao PDR's (GoL's) health and climate change commitments. The Strengthening Climate Resilience of the Lao PDR Health System project will contribute to a paradigm shift to facilitate climate-informed advisory and risk management services and community action, particularly for some of the rural Laotian communities most vulnerable to the health impacts of climate change. The project will work directly with the Laotian health system and these communities to address knowledge, capacity, and resource barriers, so Laotians can transform their own health and work toward climate-resilient development.</p> <p>2. The project's approach includes pairing national-level efforts to increase the climate resilience of the health system with intensified support in 25 districts that are highly or extremely vulnerable to the impacts of climate change. This approach was developed using proven regional and globally relevant guidelines, publications, and best practices. The project's subnational level activities are designed to provide the GoL with a demonstrated model that can be scaled nationwide. Project activities will also contribute to advancing regional and global learning and best practices, as elements of the approach will be replicable in other low-income country contexts.</p>			
A.15. Project/Programme rationale, objectives and approach (max. 300 words)			
<p>3. Climate rationale: Lao PDR is a landlocked least developed country (LDC) in the Mekong region of Southeast Asia. The country experiences two distinct seasons driven by the southeast monsoon: a rainy season from May to mid-October and a dry season from mid-October to April, during which the lowest average monthly precipitation occurs. Precipitation in Lao PDR is largely influenced by the relationship between the Southeast</p>			

² Refer to the Policy on Co-financing of the GCF.

³ Senior loans and subordinated loans.

⁴ To date, the "health and well-being, food and water security" result area has attracted around 17% of total GCF financing (document GCF/B.35/Inf.03), making it the second highest results area by requested funding. However, at time of submission, there were no active projects in the GCF portfolio that focus solely on the health sector.

Asian climate and the El Niño–Southern Oscillation (ENSO). Recent precipitation trends show increased variability, and there are indications that the rainfall season is shifting, with delays in the monsoon season becoming evident. Climate models suggest that by 2040, Lao PDR will experience an increase in average annual precipitation, with some provinces and cities more affected. Data also show temperatures across Lao PDR are increasing, including by as much as 0.05°C per year between 1970 and 2010, with the most pronounced changes in the country's southern regions. The mean annual minimum and maximum temperatures across the country are expected to increase more rapidly than the global average temperature increase. Lao PDR's location, geography, and weather patterns already make it susceptible to natural disasters and extreme weather events (EWEs), particularly flooding and droughts. In combination with the country's socioeconomic conditions, these factors make Lao PDR highly vulnerable to the impacts of climate change.

4. The projected changes in climate in Lao PDR are expected to impact the health sector directly (through more frequent and intense EWEs that damage health facility infrastructure, including for water, sanitation, and hygiene [WASH] services) and indirectly (by creating conditions that increase the incidence of certain diseases, including dengue and diarrheal disease), which will ultimately place new demands on the health system. The GoL recognizes the importance of preparing the health system and communities to anticipate, prepare for, and respond to the shifting and additional burden caused by climate change and has aligned its national health and climate change priorities in response. However, more work is needed to realize these priorities and to enable the health system and communities to manage the anticipated additional climate change-related impacts on health.
5. **Purpose, activities, and climate results:** This project will support the GoL to advance progress on its national climate change and health priorities and commitments by increasing the climate resilience of the health system and strengthening community capacity to manage the current and anticipated health impacts of climate change. To achieve this, the project will work at national and subnational levels using multiple, interrelated approaches. It will strengthen leadership and governance within the health system so it is climate resilient; expand access to and use of climate information and key WASH indicators so the health system can track, prepare for, and manage climate-related risks to health; and strengthen health system capacity in 25 climate-vulnerable rural districts to better manage climate-related disease burdens, including by engaging 100 health facilities in those districts to better prepare for the health impacts of climate change and upgrading the infrastructure in 79 of those facilities to increase climate resilience. Finally, through risk communication and community engagement approaches, the project will enable 250 communities to better respond to early warnings, manage and mitigate climate-related risks to health, and seek care appropriately. Through these activities, the project is also expected to achieve mitigation, health, and gender co-benefits, as health facility infrastructure upgrades will reduce greenhouse gas (GHG) emissions from the target facilities (mitigation); health worker capacity strengthening activities and health facility infrastructure upgrades are expected to improve the quality of care health facilities and health workers provide (health) and climate-related health policies, strategies, and coordination mechanisms will become more inclusive (gender).
6. The project's approach of working to strengthen climate resilience at the national level while intensively investing in a subset of districts, health facilities, and communities is designed to maximize impact. The project's community- and facility-focused activities, which will be implemented in Salavane, Khammouane, Sekong, Luang Prabang, Oudomxay, Phongsaly, and Luang Namtha provinces, will directly benefit the approximately 1.85 million people in the target provinces. Policy-focused activities are expected to indirectly benefit an additional 470,302 people. See Annex 2a – Appendix 1 for detailed beneficiary calculations by component.
7. Through district, provincial and national validation workshops and stakeholder consultations half (50%) of the 250 target communities were selected. The remaining communities will be determined during the Government of Laos required Memorandum of Understanding preparation process. Target communities, health facilities and districts can be adjusted both before and during implementation based on routine GoL needs assessments and on the ground situational changes. Community based programming within the project requires the selection of 173 communities (out of the 250 target communities) to receive project financial support to implement community health and resilience action plans (13,000 USD per community dispersed in two annual allotments of 6,500USD/year). The project will establish district-level community health and climate resilience action plan review committees composed of reviewers from District Offices of Natural Resources and Environment, DHOs, MoLSW and SC. The committees will review and provide input into community plans, approve activities from the menu of options for funding, and monitor progress as the plans are implemented.
8. Within the prioritized, climate-vulnerable districts selected, 79 HCFs were selected for infrastructure support based on those most in need of climate-related infrastructure upgrades as assessed by district and provincial MOH officials. All 100 target health facilities (79 of which will receive infrastructure support) have experienced disruptions or impacts to facility infrastructure resulting from an EWE in the past decade; have not received infrastructure or climate-related funding previously; are in remote, rural areas disproportionately impacted by

climate-related health burdens; serve a large proportion of the rural population; and meet WHO's need-based WASH facility assessment criteria indicator.

9. The Three Executing Entities (EEs) are the GoL acting through its Ministry of Health (MoH), Save the Children International (SCI) Laos and Save the Children USA (SCUS). The project includes the World Health Organization (WHO) as an implementing partner. Laotian provincial and district government authorities will also engage in implementation.
10. The project is designed to be implemented in two phases. This Funding Proposal describes Phase 1. EE SC and the GoL acting through its MoH will engage with Lao PDR's Ministry of Natural Resources and Environment (MoNRE), which is the GoL's National Designated Authority (NDA), to seek separate GCF Board approval for Phase 2. In Phase 2, we expect to scale the project's subnational activities nationwide and will explore the feasibility of expanding the project's national-level activities.
11. **Rationale for the use of GCF funding:** This funding from GCF will help Lao PDR to address a critical area of climate change vulnerability that has no domestic financing source and is not a focus for other donors. As an LDC with very limited public resources, Lao PDR's ability to invest in its health sector is restricted and the country is unable to address health system's adaptation needs without diverting obligated resources and compromising the government's ability to deliver on its commitments for other essential public goods and services. Similarly, while water is a significant focus for public adaptation funding and several bilateral donors have committed resources to strengthen health service delivery in Lao PDR, there is currently no funding available to address health system strengthening priorities in conjunction with climate change. With a lack of national financing capacity, a shortage of available resources from bilateral donors, and a clear climate rationale, the GCF is a natural partner.
12. **Financing instrument justification:** As this project is focused on strengthening public sector services and community capacity in an LDC, both public goods with the potential for broad impact but negligible direct financial return on investment, a grant is the appropriate financing instrument.

B. PROJECT/PROGRAMME DETAILS

B.1. Context and baseline (max. 500 words)

Country Context

13. Lao PDR is a landlocked country in the Mekong region of Southeast Asia. Eighty percent of the country is mountainous and sparsely inhabited with little arable land. The remaining 20% is made up of lowland plains and floodplains situated along the Mekong River and its main tributaries. The majority of the country's provinces and districts are considered rural. More than 65% of the population of 7.2 million lives in rural areas, though the urban population is increasing. Some rural provinces, including Phongsaly and Sekong, have population densities of 11–15 people/km², well below the country's average of 27 people/km² and significantly lower than the most densely populated urban province of Vientiane (209 people/km²). Following years of rapid population growth, Lao PDR is transitioning from high to low fertility and the population growth rate is declining.⁵
14. World Bank data classifies Lao PDR as a lower-middle income country, with a gross national income of USD 2,520 per capita.⁶ Prior to the COVID-19 pandemic, yearly gross domestic product growth averaged 7% for more than two decades.⁷ This growth was largely dependent on use of the country's natural resources, especially mining, timber, and hydropower. Strong economic performance has contributed to improvements in some health and development outcomes in recent years (e.g., life expectancy at birth increased from 48 years in 1980 to 68 years in 2020⁸, while the proportion of the population living below the national poverty line decreased from 46% in 1993 to 18% in 2019).⁹ The United Nations expects to graduate Lao PDR from LDC status in 2026 due to significant progress toward reaching some of its development goals.¹⁰
15. Despite these achievements, severe poverty and inequities persist in Lao PDR. Nearly half of all Laotians are classified as "working poor" (surviving on USD 3.10 PPP per day).¹¹ Approximately 70% of the employed population works in agriculture, with many at subsistence level.¹² Three quarters of those working outside the agriculture sector are in the informal sector. More than 80% of employed women are considered to be in "vulnerable employment."¹³ Poverty remains particularly high in the country's remote and highland areas, where access by road or river is difficult. Rural areas continue to have poorer access to sanitation and electricity.¹⁴
16. Many health outcomes in Lao PDR also remain poor. Rates of maternal mortality (151 per 1,000) and under 5 mortality (46 per 1,000 live births) are the highest of any Southeast Asian country. Nearly one fifth of the overall population consumes less than the minimum dietary energy requirements, and chronic malnutrition affects over 40% of children under 5 years of age.¹⁵ These suboptimal health outcomes are largely the result of persistent challenges within the health system that impact the delivery of equitable and high-quality health services, including limited funding and weak financial management in the health sector; varying capacities for management and leadership among health officials at the national, provincial, and district levels; gaps in quality and availability of health service delivery data, which hinders evidence-based planning and decision-making; a shortage of qualified health staff; limited utilization of health services, including due to geographic, cultural, and language barriers that are common in diverse ethnic minority areas; and limited adoption of optimal health behaviors by the Laotian population.¹⁶ Several parallel and sequential donor-funded programs are working with the GoL and Laotian communities to address these challenges and improve health outcomes.
17. Lao PDR is one of the most ethnically diverse countries in mainland Southeast Asia. The GoL uses the term "ethnic group" to refer to indigenous people and recognizes 49 ethnic groups and 240 sub-groups, which make up about 34% of the population. While all ethnic groups have equal status, ethnic groups besides the Lao Tai

⁶ United Nations. "Country Analysis Report Lao PDR: Analysis to inform the Lao People's Democratic Republic–United Nations Partnership Framework (2017-2021)," United Nations, Vientiane, 2015.

⁶ World Bank (2020). Indicator Data: Laos. Available [here](#).

⁷ Ibid

⁸ Ibid

⁹ World Bank. "Poverty Profile in Lao PDR and Poverty Assessment 2020: Catching Up and Falling Behind." Available [here](#).

¹⁰ United Nations Committee for Development Policy. (2021). February 26th announcement. Available [here](#).

¹¹ United Nations. "Country Analysis Report Lao PDR: Analysis to inform the Lao People's Democratic Republic–United Nations Partnership Framework (2017-2021)," United Nations, Vientiane, 2015.

¹² Moody's Analytics (2023). Laos – Economic Indicators. Available [here](#).

¹³ World Bank (2019). Indicator Data: Laos. Available [here](#).

¹⁴ WHO & UNICEF (2021). Progress on Household Drinking Water, Sanitation & Hygiene: 2000-2020. Five Years into the SDGs. Joint Monitoring Programme. Available [here](#).

¹⁵ USAID. Laos Health Strategy 2019-2023. Available [here](#).

¹⁶ Ibid

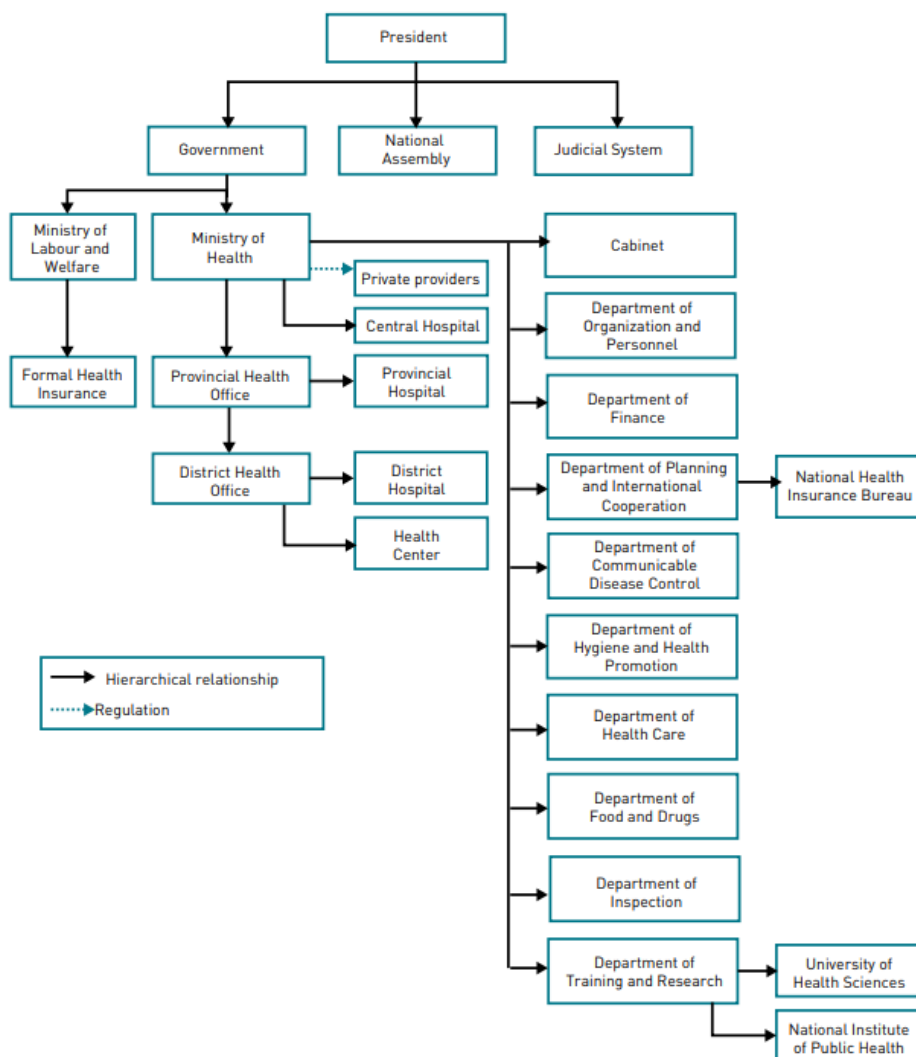
majority predominately reside in rural, rugged mountain locations and are considered marginalized due to their lower access to education, health care, and economic opportunities.¹⁷

18. Laotian society is patriarchal, with men having more authority, power, and control over resources within households, communities, and the health system. Women and girls bear a heavy burden of work in and around the home. This is especially true for women and girls from minority ethnic groups, who are among the most disadvantaged in Laotian society.¹⁸ Because of their domestic responsibilities, women and girls are less likely to attend activities outside the home, including school, village meetings, trainings, and information sessions. Prevalent gender norms also mean they are also significantly less likely than men to hold sub-national level leadership positions. These circumstances mean women and girls are less likely to have access to climate information and rarely play a meaningful role in developing adaptation or disaster risk reduction planning, despite their domestic responsibilities including ensuring the safety of the home and assets during EWEs.

Lao PDR's Health System

19. In Lao PDR, public sector health facilities provide health services to most of the population. The public health system has three administrative levels: 1) central, which includes hospitals led directly by the MoH; 2) provincial, which includes provincial health offices (PHOs) that manage provincial hospitals; and 3) district, which includes district health offices (DHOs) that manage district hospitals, community-level health centers, and village-based health outreach services. Figure 1 presents the health system structure and hierarchy. The roles and responsibilities of each administrative level are further detailed below.

Figure 1. Structure and Hierarchy of Lao PDR's Health System



¹⁷ Lao PDR MoH. "Indigenous Peoples Planning Framework: Ethnic Group Development Plan, 2015." Available [here](#).

¹⁸ Khampoui, P., 2012, Scoping study on women's leadership in the agriculture sector in Lao PDR, Vientiane. Available [here](#).

20. **Central level:** As the national health authority in Lao PDR, the MoH manages, organizes, and oversees all public preventive, promotive, curative, and rehabilitative health services. The MoH manages health information, human resources for health, health financing, and international health cooperation. It regulates the growing private sector, as well as traditional medicine, food and drug safety, and pharmaceutical and medical supplies. The MoH includes seven technical agencies: the Department of Planning and Cooperation; the Department of Communication and Disease Control; the Department of Hygiene and Health Promotion; the Department of Healthcare and Rehabilitation; the Food and Drugs Department; the National Center for Laboratory and Epidemiology; and the National Center for Communication and Education in Health. These departments work in close cooperation with PHOs and DHOs to implement health sector activities and priorities.
21. **Provincial level:** PHOs advise the provincial government and governor on health affairs; allocate budget for provision of health services; oversee the technical direction, monitoring, and supervision for DHOs; and perform other tasks as assigned by the provincial governor. PHOs are made up of a cabinet, technical and professional divisions, and health facilities (i.e., provincial hospitals). While the provincial government oversees the management, operation, and funding of PHOs, the MoH is responsible for providing them with technical direction, monitoring, and supervision. In Lao PDR, there are currently 16 PHOs and 16 provincial hospitals, plus one Capital Health Office in Vientiane.
22. **District level, including health centers and village-based health services:** DHOs supervise district hospitals; district units for preventive medicine, such as mother and child health, immunization, hygiene, and disease prevention units; community-level health centers; and village-based outreach activities. District hospitals, which have a catchment area of 30,000–80,000 people, provide treatment for common illnesses and emergencies. They are divided into two categories: type A, which has the capacity to provide surgery requiring anaesthesia, though lack of staff often limits provision of these services; and type B, which offers only minor surgery. District mayors provide DHOs with organizational and operational oversight that complements the technical direction PHOs provide.
23. As the first level of government health facilities, health centers provide primary care services (e.g., prevention, diagnosis, and treatment of common diseases; health promotion). This network of facilities covers all districts and communities. It continues to grow annually due to the need to provide coverage for newly established groups of villages. Under the oversight of the DHO, health centers supervise and monitor the Village Health Volunteers (VHVs) who provide community-level outreach services, coordinating these services between the village and district levels. Each village has two or three VHVs who provide basic curative care and promote good hygiene and sanitation. Village Health Committees select and oversee VHVs, who receive three months of training.
24. Although the number of health facilities in Lao PDR has increased in recent decades, inequality in access to services persists, with rural populations and those in the lowest wealth quintile most impacted. Inadequate transportation infrastructure, particularly during the wet season, remains a major barrier to access to and use of health services in rural areas. Other substantial factors include ethno-linguistic barriers, cultural barriers, and supply-side challenges, such as health facility and health worker readiness to provide high-quality care. Many district and community health facilities also have degraded infrastructure and lack medical equipment and supplies, including medicine. As a result of these challenges, clients often perceive that district and community-based health services are poor quality and prefer to access care at central and provincial hospitals. Health services and facilities in remote areas also struggle to provide needed care for climate-related diseases, particularly in ethnic minority communities. This creates an excessive patient load at the higher-level facilities, while district and community-level facilities are underutilized. Underutilization of district and community-level facilities can exacerbate challenges by contributing to low productivity and low clinical ability among the health providers based in them.

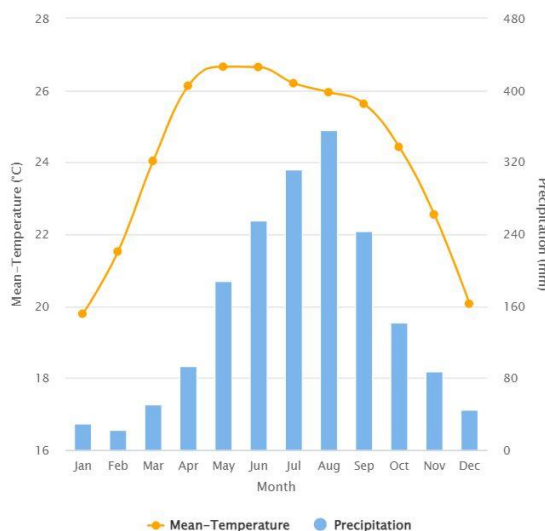
Climate Vulnerabilities and Impacts

25. Lao PDR has two main climate zones: 1) a mostly tropical zone, which is partly influenced by the monsoon pattern in the Indian Ocean and includes the land along the Mekong River and its tributaries, and 2) a temperate zone in the mountainous areas along the borders with Vietnam and the People's Republic of China. The country experiences two distinct seasons driven by the southeast monsoon: a rainy season from May to mid-October and a dry season from mid-October to April, during which the lowest average monthly precipitation occurs (see Figure 2).¹⁹ The average annual precipitation is 1,826.87 mm. Monsoon rainfall is modulated by the El Niño-Southern

¹⁹ World Bank and Asian Development Bank (2021). Climate Risk Country Profile, Lao PDR. Available [here](#).

Oscillation (ENSO) over multi-year timescales.²⁰ The country's mean annual temperature is 24.14°C, with the highest mean monthly temperatures occurring from April through September. Lao PDR's location, geography, and weather patterns have long made it susceptible to natural disasters and EWEs, particularly flooding and drought. These factors, in combination with the socioeconomic conditions described above, also make the country highly vulnerable to the impacts of climate change.

Figure 2. Monthly Mean Temperatures and Precipitation for Lao PDR from 1991 to 2020²¹



26. **Observed climate change (national level):** Most recent data suggest that average temperatures across the country are increasing, including by as much as 0.05°C per year between 1970 and 2010.²² The number of days in which temperatures exceed 35°C have increased notably since 1991 compared to earlier decades.²³ The most pronounced changes have been in the country's southern regions.²⁴
27. Precipitation trends in Lao PDR remain largely influenced by the relationship between the Southeast Asian climate and the ENSO.²⁵ Since 1951, precipitation trends have shown increased variability with historic data, suggesting mean annual rainfall has decreased to below 2,000 mm. Despite average annual rainfall decreasing, the volumes of precipitation in one day (in mm) have shown an increasing trend between 1991 and 2020.²⁶ Monthly rainfall volumes of 600 mm and above have been recorded between 1954 and 2006. There have also been indications that the rainfall season is shifting, with delays in the monsoon season becoming evident.²⁷
28. **Observed climate change (provincial level):** Data indicates that minimum average temperatures in Lao PDR's central and southern regions have historically ranged from 21 to 24°C. The maximum temperatures in most of the project's target provinces have ranged from 26 to 29°C annually, but the target provinces of Khammouane, Sekong, and Salavane have historically experienced higher annual average temperatures, with maximum temperatures in Salvane and Khammouane ranging from 31 to 32°C.²⁸
29. Historical climate data suggest the project's northern target provinces (Phongsaly, Luang Prabang, Luang Namtha, and Oudomxay) have experienced reduced average annual rainfall compared to the southern target provinces. Mean annual precipitation ranges from 1,500 mm in the northern provinces, compared to 2,750 mm across the southern provinces.²⁹

²⁰ ENSO is the most dominant mode of variability on interannual time scales and also the dominant source of seasonal climate predictability. IPCC (2021). The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the IPCC. Available [here](#).

²¹ World Bank Climate Change and Knowledge Portal. Data on Lao PDR. Available [here](#).

²² Ibid

²³ World Bank Climate Change and Knowledge Portal. Data on Lao PDR. Available [here](#).

²⁴ Lao People's Democratic Republic. National Communication (NC). NC 2. Available [here](#).

²⁵ World Bank and Asian Development Bank (2021). Climate Risk Country Profile, Lao PDR. Available [here](#).

²⁶ World Bank Climate Change and Knowledge Portal. Data on Lao PDR. Available [here](#).

²⁷ Lao People's Democratic Republic. National Communication 2. Available [here](#).

²⁸ MoNRE Department of Climate Change Management (2021). Presentation on National Climate Change Vulnerability Assessment.

²⁹ Climate Change Vulnerability Assessment

30. **Projected climate change (national level):** There is high confidence that average annual, minimum, and maximum temperatures and extreme heat events will increase across Southeast Asia and Lao PDR by 2050. Climate change is expected to intensify the number and magnitude of weather events, with flooding, extreme heat, and erratic rainfall increasing in frequency in Lao PDR in the future.
31. The mean annual minimum and maximum temperatures across Lao PDR are expected to increase more rapidly than the global average temperature increase, and monthly minimum temperatures are expected to rise at a 10–20% faster rate than the global average. According to the Intergovernmental Panel on Climate Change's (IPCC's) Sixth Assessment Report (AR6), the mean annual temperature across Lao PDR is expected to increase by 0.8°C by 2040 under a mid-emission scenario (Shared Socioeconomic Pathway [SSP] 2-4.5), for the baseline period 1981 to 2010, with no regional variation foreseen. The number of days with temperatures exceeding 35°C is also expected to increase. Under a mid-emissions scenario (SSP2-4.5), near term (2021–2040) the number of days where maximum temperatures exceed 35°C is expected to increase by 1.6 days, relative to a baseline period of 1981 to 2010, as modelled for the IPCC's AR6.³⁰ There is uncertainty in the seasonal variation in temperature increase; however, models suggest temperature increases could be more pronounced during April and May.³¹ Average temperature increases across Lao PDR from June to August are expected to be more pronounced (1.5°C) compared to December to February (1.4°C) by 2050 under a Representative Concentration Pathway (RCP) 4.5 scenario.³² Regional variations in projected temperature increases exist depending on the data source as well as the emissions scenario. Certain sources suggest that the northern regions of the country will experience more extreme mean temperatures between 2040 and 2090 under an RCP 8.5 scenario (see Annex 2 - Feasibility Study).
32. According to the mid-emission scenario (SSP2-4.5), there is high confidence that the annual rainfall intensity, frequency, and quantity will increase across Southeast Asia and Lao PDR by 2050. In addition, greater amounts of rainfall are expected to occur over shorter periods, with an increased number of dry days interspersed.³³ According to the IPCC's AR6, the mean annual precipitation across Lao PDR is expected to increase by 0.8% by 2040 under a mid-emission scenario (SSP2-4.5), against the baseline period 1981 to 2010 (Figure 29, Annex 2).³⁴ Unlike the more uniform expected temperature changes, precipitation increases will be most prominent in the central and southern regions of the country. Annual mean precipitation is likely to further increase by 2100 across Lao PDR compared to 2040. The maximum one-day precipitation as well as the number of consecutive dry days are also expected to increase. Under a mid-emissions scenario (SSP2-4.5), near-term (2021–2040) maximum one-day precipitation is expected to increase by 4% relative to a baseline period of 1981 to 2010, as modeled for the IPCC's AR6.³⁵ CMIP6 models project an increase in the extent of ENSO precipitation variability throughout the 21st century for all four SSPs. However, the same models show no consensus on the extent of ENSO sea-surface temperature (SST) variability, even under SSPs3-7.0 and 5-8.5. It is likely that the extent of ENSO rainfall variability will intensify in response to global warming over the 21st century, regardless of changes in SST variability.³⁶ This is significant to Lao PDR given the role of ENSO in modulating the monsoonal rainfall over the country.
33. In addition to intensified rainfall, climate projections suggest the monsoon season may shift. Precipitation during the start of the monsoon season in May will likely decrease while also increasing toward the end of the wet season in October. This will impact both seasonal and spatial variability of rainfall across Lao PDR.³⁷ Specifically, there is high confidence that extreme rainfall events are also likely to intensify across Lao PDR in the future.³⁸
34. **Projected climate change (provincial level):** Projections according to the Coordinated Regional Downscaling Experiment (CORDEX)³⁹ South Asia model suggest the mean annual temperature across all target provinces will increase by 1°C by 2040 (RCP 4.5) relative to a baseline period of 1981 to 2010.⁴⁰ An increase in the average minimum temperatures is likely to be more pronounced across the Phongsaly region (8–8.75%), followed by Luang Prabang, Luang Namtha, and Oudomxay (7–8%). The average minimum temperature across Sekong, Salavane, and Khammouane is expected to increase by between 5–6%.⁴¹ Across districts, average minimum

³⁰ Ibid

³¹ World Bank Climate Change and Knowledge Portal. Data on Lao PDR. Available [here](#).

³² Ibid

³³ World Bank and Asian Development Bank (2021). Climate Risk Country Profile, Lao PDR. Available [here](#).

³⁴ IPCC WGI Sixth Assessment Report Interactive Atlas, available [here](#).

³⁵ Ibid

³⁶ Ibid

³⁷ Lao People's Democratic Republic. National Communication (NC). NC 2. Available [here](#).

³⁸ World Bank and Asian Development Bank (2021). Climate Risk Country Profile, Lao PDR. Available [here](#).

³⁹ WCRP Coordinated Regional Downscaling Experiment (CORDEX)

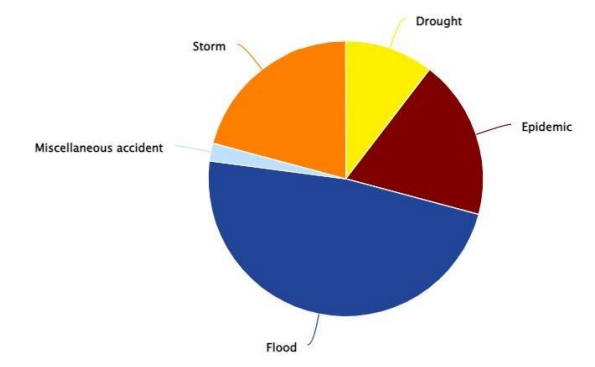
⁴⁰ Climate Information. Site-Specific Reports. Report for 19.10, 102.67. Available [here](#).

⁴¹ Department of Climate Change Management. Presentation on National Climate Change Vulnerability Assessment. MoNRE. 2021

temperatures are likely to show a greater increase (5–8.75%) compared to mean maximum temperatures (3.51–5.07%).

35. The same model projections suggest all target provinces will experience an increase in average annual precipitation by 2040 (RCP 4.5). Increases vary according to city and province, with greater increases in average annual rainfall expected in Xekong city (Sekong) and Salavane city (Salavane) compared to the other provinces. Phongsaly city is likely to experience the lowest increase.⁴² Depending on the climate model utilized, differences in projected annual average rainfall according to region are evident. However, modeled climate change projections agree that under an RCP 4.5 emissions scenario, mean annual precipitation across all target provinces will increase by 1.6 to 5.12%, but that increase will be least pronounced in Luang Prabang, Phongsaly, Oudomxay, and Luang Namtha compared to target provinces in the central and southern regions of the country.⁴³
36. **Climate change impacts (nationally):** Flooding, epidemics, tropical storms, and droughts are the main natural hazards that impact Lao PDR (see Figure 3). From 1970–2010, Lao DPR experienced 33 floods, droughts, and other natural hazard events that affected approximately 9 million people and caused over USD 400 million in damages. In the last two decades alone, tropical storms, cyclones, and the impacts from monsoon rains have affected more than 1.5 million people and caused damages of over USD 400,000.

Figure 3. Overview of Natural Hazard Frequency from 1980 to 2020 for Lao PDR.⁴⁴



37. According to the CORDEX South Asia Ensemble Model, for the RCP 4.5 emissions scenario (relative to a baseline of 1981 to 2010),⁴⁵ the impacts of flooding, variable precipitation, and extreme heat are likely to intensify by 2040. Due to changes in precipitation and rainfall intensity, water runoff and water discharge are also likely to increase by 2040. The mean annual values of the ratio between actual evapotranspiration and precipitation over 30 years indicate that aridity across the country will decrease by 2040, except for in the northern regions, where it is likely to increase.⁴⁶
38. **Climate change impacts (provincial level):** Numerous provinces are considered at high risk for tropical storms, landslides, and flooding. Most provinces are at high or medium risk for river flooding events, and all except Phongsaly and Sekong are also at high risk of urban flooding. Projections suggest that by 2032, damaging winds, landslides, and flooding will cause extensive damage to infrastructure, including health facility infrastructure.⁴⁷

Direct and Indirect Health Risks and Impacts of Climate Change in Lao PDR

39. The changing profile of temperature and precipitation in Lao PDR is expected to impact the health system directly (through more frequent and intense EWEs that damage health facility infrastructure) and indirectly (by creating conditions that increase the incidence of certain diseases, including dengue and diarrheal disease, which will place new demands on the health system). The health of the Laotian people will be adversely affected, with varying health-specific risks due to the nature of the hazard (e.g., extreme heat, drought, floods), the extent of the hazard, and the population's underlying vulnerability.⁴⁸ People experiencing poverty, those who already have the greatest challenges in accessing health services (e.g., rural populations), those with poor access to improved

⁴² Site-Specific Reports. How will the climate change in your region? Available [here](#).

⁴³ Ibid

⁴⁴ World Bank Climate Change and Knowledge Portal. Data on Lao PDR. Available [here](#).

⁴⁵ Site-Specific Reports. How will the climate change in your region? Available [here](#).

⁴⁶ Site-Specific Reports. How will the climate change in your region? Available [here](#).

⁴⁷ The World Bank Global Facility for Disaster Reduction and Recovery *ThinkHazard!* Portal. Available [here](#).

⁴⁸ IPCC. (2014). Field, Christopher B., et al. "Summary for policymakers." Climate change 2014: impacts, adaptation, and vulnerability. Part A: global and sectoral aspects. Contribution of Working Group II to the Fifth Assessment Report of the IPCC. Cambridge University Press.

drinking water sources, and people with existing health conditions (e.g., children experiencing stunting and wasting) are likely to be most impacted.^{49,50,51,52}

40. **Health facility infrastructure, including WASH services.** Most health facilities in Lao PDR currently do not have climate-resilient infrastructure or disaster risk mitigation plans in place. The results of a 2021 WHO-led survey of 1,225 health facilities in Lao PDR showed none had staff trained on climate-related health outcomes, adaptation measures, or response protocols; only 1% had measures in place to reduce vulnerability to EWEs; and only 5% had developed electrical supply and water disruption plans. Despite this, many of these health facilities are already experiencing the impacts of climate change. In the same survey, more than 50% of health facilities reported experiencing severe damage from EWEs in the past 20 years, and of those, 70% also sustained significant losses to non-structural commodities (e.g., medical equipment, medicines). These impacts can be costly and affect the population's access to health services. For example, the July 2018 tropical depression Son-Tinh resulted in more than USD 2.73 million in damages and losses in the health sector, including damaging the physical infrastructure of 35 health facilities and two district hospitals. Of those, six facilities were destroyed.²²
41. The impacts of climate change on infrastructure and equipment in health facilities also affects the sustainability of the facilities' WASH services. WASH services in health facilities—defined as installations providing safe water for consumption and cleaning, hygiene stations for medical practitioners and disinfection of medical equipment, sanitation facilities for patient and staff use, and infrastructure for the treatment and safe disposal of effluents – are prerequisites for infection prevention and control and for providing quality health services for climate-related diseases. In the aforementioned survey of Laotian health facilities, only 2% reported having access to a basic sanitation service, 16% to a basic hygiene service, and 19% to a basic health waste management service. While 80% of facilities reported having access to a basic water service, many cited poor water quality, scarcity, and unpredictability as challenges. Twenty-six percent also reported water shortages, which are frequently caused by low water resources in the water catchment area or damage to the water source or facility WASH infrastructure during a flood, and some already rely on bottled water year-round. More frequent and intense dry spells, droughts, and flooding, driven by increasing climate change impacts, are expected to exacerbate these already challenging conditions within health facilities.⁵³
42. **Specific indirect health impacts identified through historical and recent reports.** In its Vulnerability and Adaptation Assessment and forthcoming Health National Adaptation Plan (HNAP), the GoL identifies dengue, diarrheal disease, malnutrition, and heat-related illnesses as among the most important climate-related illnesses for the country to address. Historical reports and recent assessments suggest incidence of each of these diseases is likely to increase due to climate change. Existing health data can already link some increases in cases of these diseases in specific groups and locations to changing climatological patterns (see Annex 2 - Feasibility Study). The relationship between these diseases and climate change in the Lao PDR context is summarized below, along with tools and treatment methods for each disease. To provide these treatment methods effectively, health workers and facilities must have consistent access to safe drinking water, adequate energy sources to sterilize and disinfect equipment and supplies, and in the case of dengue, protective structural measures in place (e.g., mosquito screens, removal of standing water) so other patients and health facility staff do not also contract the disease.
 - **Dengue:** A major health problem in Lao PDR, dengue transmission follows a seasonal pattern strongly correlated with temperature and precipitation. Epidemics occur during the wet season with lower incidence during the dry and cooler months. Rising temperatures enable more rapid viral reproduction in the mosquito vector and shorter incubation periods, resulting in faster transmission to people. Higher precipitation provides more breeding sites for mosquitoes and is associated with an increase in their population. Under a high-emissions scenario, the risk of dengue (as measured by relative vectorial capacity) is projected to increase from the baseline of 0.55 to about 0.62 by 2070.⁵⁴ Highly vulnerable groups include infants, children, pregnant women, people living in poverty, and migrants. Dengue is treated by managing symptoms, which requires access to safe drinking water to keep patients hydrated, and for severe cases, medical equipment, supplies, and facility-based care to manage symptoms of shock, vomiting, bleeding, and pain. Tools to prevent dengue

⁴⁹ Lao PDR Statistics Bureau. Poverty in Lao PDR, Key Findings from the Lao Expenditure and Consumption Survey 2018-2109. Available [here](#).

⁵⁰ Lao PDR Ministry of Health, Lao PDR Statistics Bureau. Lao Social Indicator Survey 2011-2012. Available [here](#).

⁵¹ Ibid

⁵² World Food Program (2017). Fill the Nutrient Gap Lao PDR, Full Report. Available [here](#).

⁵³ Site-Specific Reports. How will the climate change in your region? Available [here](#).

⁵⁴ WHO, UNFCCC. Climate and Health Country Profile (2015). Lao PDR.

include developing or enhancing early warnings of outbreaks. Early warnings are based on linking data on dengue cases and related climate variables. Early warnings can equip health workers and communities in these areas with the knowledge and resources to take dengue prevention measures during high-risk periods.

- **Diarrheal disease:** Diarrheal disease accounts for 11% of deaths in children under 5 in Lao PDR. While poor hygiene and sanitation practices contribute to outbreaks, diarrhea cases also follow seasonal variations, with greater incidence in the dry season. Data already show a growing incidence of diarrhea cases in Lao PDR between 2014 and 2018 commensurate with an increase in the mean number of dry days per year during this period. Similarly, a 2019 vulnerability assessment conducted by Lao Health Science University found climate change was likely to result in increased incidence of severe diarrhea and dysentery through more frequent cycles of rainfall and drought, longer dry seasons, and inadequate access to safe water. Treatment for diarrheal disease includes oral rehydration, which can occur at home or in health facilities depending on the severity of symptoms. Tools to prevent diarrheal disease include providing access to safe and climate-resilient water and sanitation services and developing an early warning system that includes climate information, so health workers and communities are equipped with knowledge and resources to take prevention measures during high-risk periods.
- **Malnutrition:** The Laotian population's heavy reliance on subsistence agriculture means EWEs that reduce local food production and supply are likely to lead to food insecurity and malnutrition, particularly among the one-fifth of the population that already consumes less than the minimum dietary energy requirements. Malnutrition is treated by providing high-energy/high-nutrient foods, fortified foods, and vitamin and nutrient supplements in combination with ongoing nutritional status monitoring for young children and education/counseling services for caregivers. Tools to prevent malnutrition include using early warning systems to anticipate and reduce the risk factors for undernutrition associated with EWEs and increasingly variable weather (e.g., food, water, and nutrition insecurity), especially in children; incorporating training and capacity strengthening on climate risks to nutrition for health workers who provide maternal and child health services; and ongoing nutritional status monitoring for children in vulnerable areas.
- **Heat-related illnesses:** Children, the elderly, outdoor workers, and people with underlying health conditions are at increased risk of heat-related illness during periods of extreme heat. Under a high-emissions scenario in Lao PDR, heat-related deaths among elderly people are expected to increase to approximately 72 per 100,000 by 2080, compared with three per 100,000 during the baseline period of 1961 to 1990. Methods to treat and prevent heat-related illness include establishing cooling centers during extreme heat events, training health workers on management of heat-related conditions, increasing capacity to forecast heatwaves, and public awareness-raising.

Root Causes and Barriers

43. Root causes are factors which contribute to the climate-related health challenge in Lao PDR context. Some root causes cannot be addressed during the project period. These include "climate drivers" which are already underway due to cumulative greenhouse gas emissions. The root causes "Socioeconomic factors that restrict adaptive capacities" and "challenges of rural areas inequitable access" are factors which exacerbate the health impacts of climate change. These two factors were considered in the design of the project's context-specific interventions to achieve the project outputs with health and gender co-benefits.

Barriers are factors which need to be overcome to achieve the paradigm shift "*facilitate climate-informed advisory and risk management services and community action*" (see Narrative Section D.2 for details). The barriers which the proposed project is addressing include "lack of information (Component 2), "limited capacity to proactively anticipate, prepare for, prevent and manage adverse climate impacts on health" (Components 1-4), "fragmented policy sectors (including coordination)" (Components 1-2), and "lack of awareness of solutions at scale" (Components 1-4).

The following are the root causes and barriers that limit health system resilience to the impacts of climate change:

- **Climate-drivers,** through increased climate-related events like extreme heat and more intense and variable rainfall that will increase drought and flooding events and expand the seasonal and/or geographic presence of certain water-related pathogens, resulting in increased risk of climate-related illnesses. Simultaneously, these climatic changes will strain the health system's ability to provide quality health services (through higher patient volumes, by impacting WASH services through reduced access to water, and by damaging health facility infrastructure, including WASH and electrical infrastructure). They will also reduce health system and community capacity to prepare for, respond to, and recover from EWEs and outbreaks or incidences of climate-related illnesses.

- **Lack of information**, including on likely distribution of vectors, infectious disease distribution, drought, and water resources.
 - **Limited capacity** at all levels to proactively anticipate, prepare for, prevent, and manage climate change impacts on health.
 - **Socioeconomic factors that restrict adaptive capacities**, including high levels of poverty, low education levels, high reliance on natural resources, limited health service accessibility, and limited access to WASH in communities and health facilities.
 - **Challenges of rural areas**, with the inaccessibility and remoteness of rural communities exacerbating other barriers.
 - **Lack of awareness of solutions at scale in the public and private sector**, as public investments in infrastructure for climate resilience do not consider health outcomes, which leads to limited public and private investment in health facilities.
 - **Fragmented policy sectors** which do not enable information sharing and policy coordination on cross-sectoral climate and health challenges.
44. Lao PDR's forthcoming HNAP expands on several of the factors above. It identifies a shortage of funding and staff with capacity, knowledge, and experience in climate change adaptation (e.g., in monitoring, surveillance, early warning, prevention, diagnosis, and management of climate-sensitive diseases and associated risk factors) and limited capacity at national, provincial, and district levels to manage programs that address climate change risks and to monitor health outcomes as key gaps. It also states that within health facilities located in climate impacted and/or EWE-prone areas, there is a lack of alignment between human resource distribution, capacity strengthening activities, and priority areas identified in national health sector policies.
45. These root causes and barriers constrain the health system's ability to anticipate the impacts of climate change and adapt to climate-related disease risks, such as by providing high-quality health services that are responsive to climate-influenced shifts in disease burden, promoting community risk awareness, and engaging communities in developing and implementing adaptation strategies.
46. This project includes specific activities and approaches to address many of these barriers, including improving access to data and information on climate-related health challenges, increasing knowledge and capacity on climate adaptation from national to community levels, and promoting awareness of the need to invest in climate-resilient infrastructure for health facilities at scale. Through these activities, the project will make a substantial contribution to addressing these underlying barriers, helping to ensure the Lao PDR health system is more resilient in the face of escalating climate change impacts and that targeted communities are better able to manage the health risks associated with climate change.

Alignment With Lao PDR Climate Change and Health Priorities and Commitments

47. The GoL has prioritized pro-poor economic growth as a strategy to build climate resilience and has articulated specific priorities for adaptation in highly vulnerable sectors and locations. Climate resilience was included as a national priority in the country's 8th five-year National Socio-Economic Development Plan (2016–2020).
48. The 2009 National Adaptation Programme of Action identified the public health, water, agriculture, and forestry sectors as those with the greatest immediate adaptation needs and prioritized improving drinking water and sanitation, including through better engineering, improved public awareness, and providing responsive health services for action. The country's [National Strategy on Climate Change](#) (2010), [Second National Communication to the United Nations Framework Convention on Climate Change \(UNFCCC\)](#) (2013), and Nationally Determined Contribution (NDC) to the UNFCCC (2021) reconfirmed these priorities.
49. The MoH has developed a Strategy on Climate Change and Health Adaptation and Action Plan (2018) that aligns health priorities with national climate change priorities and underscores the importance of ensuring the health system is prepared to anticipate and respond to the shifting and additional burden caused by climate change. This strategy's overarching vision is to ensure "people are healthy and strong." The vision is to be met via six strategic directions that will promote "the capacity of the public health and community sectors to prevent and protect the health of people from unstable and changing climate conditions." Its goal is to save energy and water and reduce waste. The strategy largely adopts WHO's 2020 guidance, *Climate and Resilient and Environmentally Sustainable Health Facilities*, which includes four action areas: 1) health workforce; 2) WASH and waste management; 3) energy; and 4) infrastructure, technologies, and products.

50. Lao PDR's 2021 NDC underscores the importance of creating an enabling environment for health-focused climate adaptation and calls for the following to advance adaptation actions:
- **Technical support** to downscale global and regional climate impact and vulnerability assessments for the national and local levels in a way that can support local and sector planning, including identifying practical adaptation measures.
 - **Investment in systems and tools** to support monitoring, forecasting, analysis, early warning, and preparedness to natural hazards, integrated within regional decision-support systems and platforms.
 - **Improved cross-sectoral governance and coordination structures**, drawing on international best practices and lessons learned.
 - **Investment in education and technical skills** development to support planning and management of adaptation measures within broader sectoral objectives and plans.
51. The GoL has also made a formal commitment to its people to develop a sustainable, low-carbon health system and an accompanying mitigation plan. On 08 October 2021, the government shared this commitment 26th Conference of the Parties to the UNFCCC (COP26). The commitment includes:
- Completing a baseline assessment of greenhouse gas emissions of the country's health system, inclusive of supply chains.
 - Expanding the scope of the Safe Clean Climate Resilient Green Hospital Initiative, which is being implemented in four provincial hospitals and 46 district hospitals across six provinces, and strengthening the role of the health sector in addressing air pollution through its activities and its actions.
 - Reducing the health sector's emissions by half, including by reducing emissions from health facilities; enhancing low carbon, environmentally sustainable technology; promoting energy-efficient, green procurement, supply, and equipment; and phasing out small temperature incinerators and mercury use.
52. Lao PDR's HNAP is available in draft form and is expected to be published in 2023. Guided by the National Strategy on Climate Change and Health Adaptation and Action Plan, it recognizes the need to integrate climate/weather and environment data with the country's existing Routine Health Information Management System (RHIMS) to enable climate-sensitive disease surveillance and prediction. This data integration will facilitate vulnerability assessments, regular risk monitoring, and refining early warnings in a changing climate, allowing climate-related information to inform health decision-making.

Relevant Ongoing and Recent Projects

53. Several donor-funded efforts to strengthen Lao PDR's health system and/or address climate change are underway, in the planning stages, or recently completed (see Annex 2 – Feasibility Study). This project is designed to complement and build on many of those efforts, including the Safe Clean Climate Resilient Green Hospital Initiative and two efforts by the WHO and GoL to strengthen health system capacity to adapt to the impacts of climate change: 1) the Enhancing Lao PDR National Capacity and Coordination in Health and Climate Change project (referred to as the GCF Readiness Project), which began in December 2021, and the Global Environment Facility (GEF)-supported Building Resilience of Health Systems in Asian LDCs to Climate Change project, which is in its final year of implementation. Both the Readiness Project and GEF-supported effort are working on elements of establishing a centralized early warning system linked to Lao PDR's existing RHIMS, which is DHIS2-based and houses data reported from within the health system. While the GEF project will end soon, the Readiness Project is ongoing and is expected to produce standard operating procedures for the integration of climate change and health data. This project will build on those efforts by improving how health facilities use early warnings and integrated data from this system for improved detection, reporting, and treatment of dengue and diarrheal disease and to improve health promotion activities. Details of how the project will collaborate with the Readiness Project and the Safe Clean Climate Resilient Green Hospital Initiative are presented in the descriptions the Project Components, Outputs, and Activities portion of Section B.2.1.

B.2.1. Project/Programme description (max. 1,000 words)

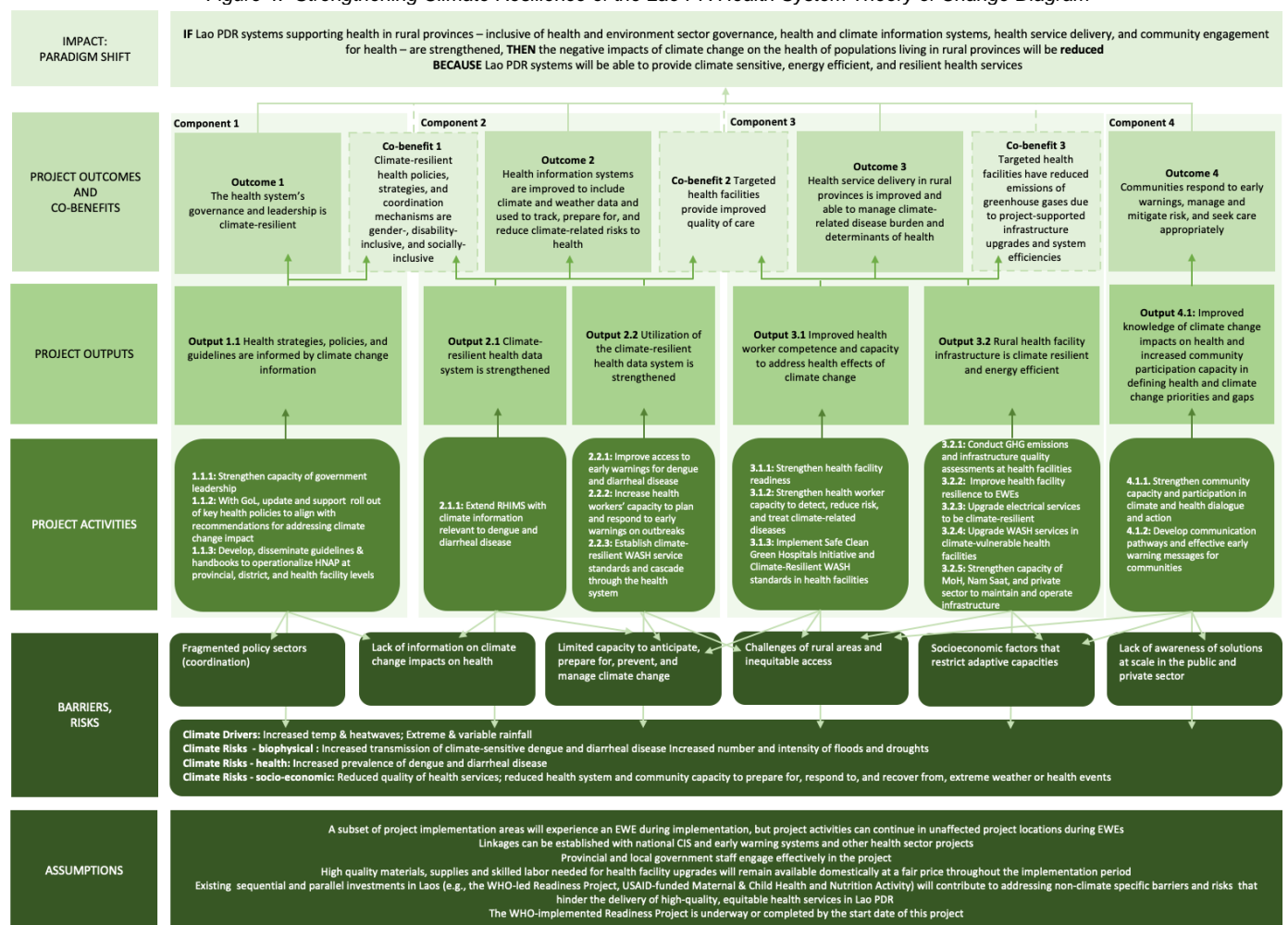
54. The Strengthening Climate Resilience of the Lao PDR Health System project aims to support the GoL to advance progress on its national climate change priorities and commitments, as described above, and enable the health system and communities in Lao PDR to anticipate, prepare for, and manage the additional burdens and negative impacts on health that are expected to result from climate change. To achieve this, the project will pair national-level efforts to increase the climate resilience of the health system with intensified support in 25 districts that are highly or extremely vulnerable to the impacts of climate change. The GoL and SC envision this project will be implemented in two phases. This Funding Proposal describes Phase 1. EEs SC and the GoL acting through its

MoH will engage with Lao PDR's Ministry of Natural Resources and Environment (MoNRE), which is the GoL's National Designated Authority (NDA), to seek separate GCF Board approval for Phase 2. In Phase 2 we expect to scale the project's subnational approach nationwide and will explore the feasibility of expanding national-level activities. Health facilities that receive support in Phase 1 will serve as learning sites for MoH officials and development partners to replicate the model in additional provinces and districts in the project's anticipated Phase 2.

Theory of Change

55. The project's Theory of Change (ToC), outlined in Figure 4, details the causal links and pathways from activities to outputs and programmatic-level outcomes. Together, these activities, outputs, and programmatic-level outcomes are designed to generate measurable adaptation results for the health system and communities in Lao PDR, so the Laotian people can remain "healthy and strong" despite unstable and changing climate conditions, in line with the vision the GoL has articulated in its Strategy on Climate Change and Health Adaptation and Action Plan. The project will contribute to a paradigm shift to facilitate climate-informed advisory and risk management services and community action, particularly for some of the rural Laotian communities most vulnerable to the health impacts of climate change. The project will work directly with the Laotian health system and these communities to address knowledge, capacity, and resource barriers so Laotians can transform their own health and work toward climate-resilient development.

Figure 4. Strengthening Climate Resilience of the Lao PR Health System Theory of Change Diagram



56. The ToC is premised on the principle that equitably improving health outcomes, including for the most vulnerable communities in Lao PDR, requires addressing climate and health challenges together and that communities and health systems that have the knowledge and capacities needed to adapt to a changing environment will experience better health outcomes in the long term. Understanding the links between climate change and health impacts, monitoring key performance indicators and implementing anticipatory actions, establishing climate-resilient health facilities, and ensuring the health workforce and broader population are climate-informed are key

actions that will enhance health system and community resilience to health-related climate change impacts and will contribute to a healthier, more economically prosperous Lao PDR.

57. The ToC hypothesizes that:

IF the Lao PDR systems supporting health in rural provinces—inclusive of health and environment sector governance, health and climate information systems, health service delivery, and community engagement for health—are strengthened

THEN the negative impacts of climate change on the health of populations living in rural provinces will be reduced

BECAUSE Lao PDR systems will be able to provide climate sensitive, energy efficient, and resilient health services.

58. The project aims to achieve impact via four interlinked outcomes, each representing one project component, with mitigation, health, and gender co-benefits anticipated. The outcomes correspond to the three infrastructure levels of resilient health systems: institutional, built, and social infrastructure.⁵⁵ and align with key components of the WHO's Operational Framework for Building Climate Resilient Health Systems and GoL priorities. Each outcome is summarized below.

- **Outcome 1: The health system's governance and leadership is climate resilient** – To strengthen governance and leadership of climate-resilient health systems, the project will work with GoL to develop health strategies and policies that incorporate the threats presented by climate change and increase climate resilience, along with training materials, guidelines, and handbooks to operationalize them. The strategies and policies will be aligned between central and subnational levels. As the country's updated HNAP is finalized, the project will also support subnational level rollout.
- **Outcome 2: Health Information Systems are improved to include climate and weather data and used to track, prepare for, and reduce climate-related risks to health** – In conjunction with the WHO-led Readiness Project, the project will use data from the country's meteorological system, key WASH indicators, and reported health outcomes to enable the health system to use climate data in conjunction with health data for planning and decision-making. This will enable the health system to use early warning system information for planning in the near-term and, over time, to develop a clearer picture of the direct impacts of climate change on WASH sustainability and the health system more broadly. These efforts will contribute to improved prevention, diagnosis, and management of some climate-sensitive diseases and their associated risk factors.
- **Outcome 3: Health service delivery in rural provinces is improved and able to manage climate-related disease burden and determinants of health** – The project will use relevant WHO guidance on vulnerability assessment and building resilience of health systems to strengthen health service delivery, so it effectively contributes to reducing the health impacts of climate change on the population. This component will include strengthening the capacity of health workers from 100 health facilities to plan for, monitor, detect, and treat some climate-related diseases. It will also include conducting small-scale upgrades to the infrastructure in 79 of those facilities, including their WASH infrastructure, so it is climate resilient and energy efficient. This will enable staff at the targeted facilities to provide high-quality and uninterrupted health services despite climate stressors, including EWEs.
- **Outcome 4: Communities respond to early warnings, manage and mitigate risk, and seek care appropriately** – The project will introduce risk communication and community engagement activities that will increase community knowledge on the impacts of climate change on health; guide community stakeholders in developing and implementing community health and climate resilience action plans; and provide 50 target communities located within the five districts classified as highly vulnerable to climate change with resources to implement approved priority activities from their plans.
- **Co-benefits** – The project is expected to achieve mitigation, health, and gender co-benefits. Health facility infrastructure upgrades will reduce GHG emissions from target facilities, resulting in a mitigation co-benefit. Health worker capacity strengthening activities and health facility infrastructure upgrades are expected to improve the quality of care health facilities and health workers provide, resulting in health co-benefits. Increasing the inclusiveness of climate-related health policies, strategies, and coordination mechanisms will result in gender co-benefits.

⁵⁵ Curtis et al. "Impact of extreme weather events and climate change for health and social care systems", Environmental Health 2017, 16(Suppl 1):128. DOI 10.1186/s12940-017-0324-3

59. The outcomes are designed to contribute to specific health system building blocks, which provide a framework for supporting and strengthening a health system. Developed by WHO, the building blocks are mutually reinforcing and widely recognized as a catalyst for achieving global health targets such as the Sustainable Development Goals.⁵⁶ Project outcomes align with relevant building blocks as described below. The project outcomes and their associated activities are collectively required to improve access to responsive, climate-related healthcare and prevention services at facility and community levels.
- Outcome 1 activities will contribute to strengthening the Health System Leadership and Governance building block through strengthened national policies, strategies, government capacity, and coordination mechanisms. This building block is foundational and required to strengthen the other building blocks.
 - Outcomes 2, 3, and 4 contribute to enhanced access to and use of Information, another key health system building block. Outcome 2 enhances climate and health information systems that can be applied to improve strategic decision-making and resourcing allocation at all levels of the health system. Outcome 3 will generate information about the energy efficiency and climate adaptation capacity of the health system to inform efficiency and resilience improvements. Outcome 4 strengthens community and individual capacity to access and use climate and health information to prevent climate-related diseases, seek more timely treatment and adapt to the impacts of climate that affect human health.
 - Outcome 3 activities also strengthen the Service Delivery and Medical Products and Technologies building blocks by providing the supplies, equipment, and infrastructure that are prerequisites for the health workforce to provide high-quality health services. As with the Leadership and Governance building block, Service Delivery and Medical Products and equipment are essential for a functional health system but are independently insufficient to improve access to health services and their quality and use.
 - The quality of service delivery is also dependent on the Capacity of the Health Workforce, which Outcomes 2 and 3 also address through improved training, coaching, and monitoring activities that will be delivered alongside MoH officials. These activities will equip health workers at provincial and health facility levels with the skills and knowledge to apply the information, products, technologies, and infrastructure made available through the project's other components effectively. Collectively, these mutually reinforcing and interlinking efforts provide the basis to sustain climate-resilient health services beyond the life of the project.
60. Activities that reduce people's vulnerability to current health-related climate change impacts, such as strengthening health worker and community capacity to understand and respond to climate-related health challenges, will lead to immediate benefits. The project will achieve medium-term impact by working with government, health facilities, and communities to improve their access to and ability to use climate information for decision-making while simultaneously strengthening health facility resilience to anticipated climate change impacts and enabling community-designed and led actions. These activities are expected to result in measurable outcomes within the project period and continued impact beyond implementation. The project will achieve long-term impacts by working at district, provincial, and national levels to establish a strong policy framework and roadmap for action that will use data and evidence to guide the health system's current and future response to climate change.
61. Integrated within the strategic approach are efforts to address underlying social norms and behaviors associated with gender-defined, age-defined, mobility-defined and ethnic-defined roles and how they affect workloads, leadership, and engagement in climate adaptation and resilience efforts in order to contribute to power dynamic shifts through elevating voices of women and youth, changing negative attitudes among men/boys around the capacity and role of women, youth and other marginalized groups and by provide opportunities for all populations segments to meaningfully participate in planning, implementation and evaluation of project activities – whether they be government staff, health workers or community members.
62. The project's design considered the below list of regionally relevant guidance and publications on global best practices when developing activities and will also use these resources to guide implementation:
- WHO's *Guidance for Climate Resilient and Environmentally Sustainable Health Care Facilities*,⁵⁷ which defines a clear framework for health sector operations

⁵⁶ Manyazewal T. Using the World Health Organization health system building blocks through survey of healthcare professionals to determine the performance of public healthcare facilities. Arch Public Health. 2017;75(1):50.

⁵⁷ Available [here](#).

- WHO's *Checklists to Assess vulnerabilities in Health Care Facilities in the Context of Climate Change*,⁵⁸ which complements the above guidance and supports health care facility managers and other health workers in establishing a baseline for climate change resilience in health care facilities
- The *Smart Hospital Toolkit*,⁵⁹ developed by the Pan American Health Organization, which has demonstrated effectiveness in helping to ensure health facilities remain safe and functional during climate-related disasters in the Caribbean
- The World Bank's *Climate-Smart Healthcare Guidelines*,⁶⁰ which provide strategies to strengthen climate resilience for the health sector, including infrastructure resilience
- USAID's *Integrating Social and Behavior Change in Climate Adaptation*,⁶¹ which provides guidance to understand the behavioral determinants of climate change adaptation among clients and health providers
- NAP Global Network's *Towards Gender-Responsive National Adaptation Plan (NAP) Processes: Progress and Recommendations for the Way Forward*,⁶² which presents an analysis of progress on integrating gender considerations in NAP processes
- Lessons learned from Building Resilience of Health Systems to Climate Change in Asian Least Developed Countries, a WHO-led project that is increasing the adaptive capacity of national health systems and institutions in Bangladesh, Cambodia, Lao PDR, Myanmar, Nepal, and Timor-Leste to respond to and manage climate-sensitive health risks
- WHO's *Guidelines for Climate-Resilient and Environmentally Sustainable Health Care Facilities in Fiji*,⁶³ which are based on WHO's Guidance for Climate Resilient and Environmentally Sustainable Health Care Facilities
- WHO's and UNICEF's *State of the World's Sanitation: An urgent call to transform sanitation for better health, environments, economies and societies*,⁶⁴ which provides evidence on what works to create resilient sanitation services
- World Bank's *Region and context-specific case studies on low-carbon and resilience strategies in "Climate-Smart Healthcare: Low-Carbon and Resilience Strategies for the Health Sector"*⁶⁵
- World Bank's *COVID-19 and Climate Smart Healthcare*,⁶⁶ which provides a framework based on lessons from the global COVID-19 health response to help countries build stronger health systems and leapfrog toward climate-smart universal health coverage

Target Beneficiaries

63. The Strengthening Climate Resilience of the Lao PDR Health System project is designed to maximize impact by combining national-level activities that will improve the enabling environment for climate and health (Outcomes 1 and 2) with targeted investments in 250 communities and 100 health facilities across 25 districts that are highly or extremely vulnerable to climate change (Outcomes 3 and 4). Seventy-nine of the 100 target health facilities will receive infrastructure upgrades to enhance their resilience to climate change. The selected districts, communities, and health facilities are located across seven provinces: Salavane, Khammouane, Sekong, Luang Prabang, Oudomxay, Phongsaly, and Luang Namtha.
64. The project's design team used a rigorous, consultative process to identify the project's target districts, communities, and health facilities. To select the focus districts and communities, SC, MoH, and MoNRE's Department of Climate Change engaged international non-governmental organizations (NGOs) and universities in Lao PDR to develop a shortlist of potential implementation locations, which was then used to select the proposed 25 districts and 250 communities. Districts, along with half of the 250 communities were selected based on: 1) MoNRE's assessment of climate vulnerability, which includes an index of exposure, sensitivity to the impacts of climate change, and adaptive capacity; 2) population coverage; 3) geographical representation. Through district, provincial and national validation workshops and stakeholder consultations half (50%) of the 250 target communities were selected. The remaining communities will be selected using similar criteria during the Government of Laos required Memorandum of Understanding preparation process. SC, the MoH, and MoNRE then worked with PHOs and DHOs to select the target 100 health facilities and identify those most in need of

⁵⁸ Available [here](#).

⁵⁹ Available [here](#).

⁶⁰ Available [here](#).

⁶¹ Available [here](#).

⁶² Available [here](#).

⁶³ Available [here](#).

⁶⁴ Available [here](#).

⁶⁵ Available [here](#).

⁶⁶ Available [here](#).

climate-related infrastructure upgrades, of which there were 79. All 100 identified facilities have experienced disruptions or impacts to facility infrastructure resulting from an EWE in the past decade; have not received infrastructure or climate-related funding previously; are in remote, rural areas disproportionately impacted by climate-related health burdens; serve a large proportion of the rural population; and meet WHO's need-based WASH facility assessment criteria indicators.

65. Community based programming within the project requires the selection of 173 communities (out of the 250 target communities) to receive project financial support to implement community health and climate resilience action plans (13,000 USD per community, dispersed in two annual allotments of 6,500 USD). The project will establish district-level community health and climate resilience action plan review committees composed of reviewers from District Offices of Natural Resources and Environment, DHOs, MoLSW and SC. The committees will review and provide input into community plans, approve activities from the menu of options for funding, and monitor progress as the plans are implemented. They will also select 173 communities to receive two annual tranches of project funds to implement their community health and climate resilience action plans. The 173 communities will be selected by the review committees using the following criteria:

- Communities located in one of the five extremely climate vulnerable districts (vulnerability ranking of "5") supported through the project and validated as an extremely vulnerable community through project baseline and/or formative research studies will be prioritized for funding
- Community is classified as lowest income or poor by GoL authorities
- The community is not receiving other climate resilience support from other donors or implementing partners
- The community's health and climate resilience action plan activities of high quality and are closely aligned with the project objectives as determined by the review committee
- Communities members (including men, women, youth) have completed project-led health and climate resilience action planning trainings

Selected communities and their self-selected representatives will be consulted during the memorandum of understanding process before the start of the project implementation to confirm their interest in participating in project activities. If a community elects to not be included in the project, a new target community will be selected following the criteria above.

66. Should SC secure additional co-financing for this activity throughout the life of project, it will be applied to provide funding for additional communities to finance their community health and climate resilience action plans. In this scenario, the same criteria will be applied to select additional communities from the 250 target communities.
67. The project's approach of working to strengthen climate resilience at national level while intensively investing in a subset of districts, health facilities, and communities is designed to maximize impact. The project's community- and facility-focused activities will directly reach 1,852,291 unique direct beneficiaries. These beneficiaries will also receive indirect benefits from policy-focused activities, which reach a further 470,302 unique indirect beneficiaries. See Annex 2a – Appendix 1 for detailed beneficiary calculations by project component.
68. Recognizing the diversity of ethnic groups in Lao PDR and the varying needs of different populations, the project incorporates strategies and activities that are appropriate across social, cultural, linguistic, age, gender, and disability characteristics. This includes heavily investing in mixed-methods baseline and formative research; actively seeking the inclusion of ethnic minorities, women, youth, and people with disabilities in priority settings and designing project activities, products, and messages; and pre-testing activities, materials, and products across a diverse set of project audiences to ensure appropriateness and representation.

Project Outcomes, Outputs, and Activities

Outcome 1: The health system's governance and leadership is climate resilient

69. Leadership and governance is one of the 10 key components of the WHO's Operational Framework for Building Climate Resilient Health Systems.⁶⁷ In the context of this project, leadership and governance means establishing specific responsibility and accountability mechanisms for climate change and health within the MoH, including by incorporating climate change considerations into health strategies, policies, guidelines, and programs so successful climate and health programs that maximize synergies can be developed and operationalized. Project activities under this component will focus on supporting Lao PDR's MoH and health system to develop new or update existing strategies, policies, and guidelines to incorporate the threats presented by climate change and

⁶⁷ WHO (2015). Operational Framework for Building Climate-Resilient Health Systems. Available [here](#).

increase climate resilience. Activities will align with Lao PDR's National Strategy on Climate Change and Health Adaptation Strategic Direction 1: Leadership and Governance, NDC Health Adaptation Strategy Component 1, and the forthcoming HNAP, which prioritizes developing a coordination mechanism within the MoH for the adaptation of the health sector to climate change.

Output 1.1: Health strategies, policies, and guidelines are informed by climate change information

70. Under this output, the project will work with the GoL to update or develop health strategies and policies that align with the forthcoming HNAP and recommendations of key studies assessing the potential impacts of climate change on health sector policies and programs. The project will also develop guidelines and handbooks to operationalize the policies at provincial and district levels and roll them out via existing platforms, such as the new MoH health facility accreditation system. This accreditation system is linked to facility funding and incorporates elements of infrastructure, financial and human resource management, clinical standards, and patient satisfaction, and will be expanded to include climate-resilience requirements. Under this component, the project will also support the MoH to lead climate-related coordination with other GoL departments and ministries that work with climate data and on climate change, where applicable. The policy elements of other relevant components of this project (e.g., developing and implementing relevant policies and guidelines to strengthen the national health surveillance system and establishing an early warning system for health emergencies, described under Component 2) will be addressed in this output as well.

Activity 1.1.1: Strengthen capacity of senior government leadership to integrate climate-resilient health into policy and operationalize climate resilience policies. This activity will include capacity development on climate change and health for decision-makers in the MoH and MoNRE, with the goal of preparing them to consider and integrate climate change considerations when developing or updating policies, regulations, and investments in health facilities and collaborating effectively to implement them. The project will hold a learning workshop focused on the forthcoming HNAP, which will guide climate-resilient health actions in Lao PDR, for national and provincial MoH and MoNRE officials, ensuring equal representation of men and women from these ministries. The learning workshop will cover the plan's key priorities, implementation strategy, and monitoring, evaluation, and reporting requirements. Representatives from the national Lao Women's Union and the National Lao Youth Union will be included as active participants in workshop discussions. The project will also train national and provincial senior officials as trainers (ensuring at least 50% are women) to cascade this knowledge to district and health facility level staff through formal trainings and in regular interactions. The project will reinforce these capacity strengthening efforts with annual progress reviews and experience-sharing workshops so officials can learn from each other's experiences developing/updating and implementing policies, and the project can identify and develop plans to address any persistent knowledge gaps or support officials to address bottlenecks.

Activity 1.1.2: In collaboration with GoL, update and support the roll out of key health policies to align with recommendations for addressing climate change impacts. With senior health officials from MoH, MoNRE, and other relevant ministries at national and provincial levels, the project will identify relevant existing policies undergoing revision or new policies in development and work together to incorporate key recommendations for addressing climate change impacts before presenting them for adoption or approval. The project will ensure any new or updated documents include social considerations such as gender, people with disabilities, ethnic and marginalized groups, etc.; the project's Gender and Social Inclusion (GESI) Advisor will review all policy and strategy documents. Following adoption of the policies, the project will work with provincial and district health authorities on rollout (see Activity 1.1.3 below), monitoring how the policies are operationalized and assessing their utility. With project support, seven national-level MoH staff will attend international or regional climate and health summits, learning meetings, or trainings to present Lao PDR's experiences developing and operationalizing health policies that incorporate recommendations for addressing climate change so the country's experiences and learnings can benefit other governments, donors, and development partners in Southeast Asia and beyond.

Activity 1.1.3: Develop and disseminate guidelines and handbooks to operationalize the HNAP at provincial, district, and health facility levels. As the HNAP is finalized, the project will work with the MoH to develop an associated training curriculum and materials (e.g.,

guidelines, handbooks) and hold trainings for relevant provincial, district, and health facility staff who hold responsibilities that align with HNAP priorities and can support its implementation. The project will ensure that training curriculum and materials are inclusive of gender, people with disabilities, and other social inclusion considerations and reviewed by the project GESI Advisor before publication and use. We will regularly assess the utility and effectiveness of the trainings and materials, updating them as needed to maximize usefulness and impact. As these activities will increase health worker knowledge on the links between health and climate change, they link to and support those included in Component 4 – Communities respond to early warnings, manage and mitigate risk, and seek care appropriately.

Outcome 2: Health information systems are improved to include climate data and used to track, prepare for, and reduce climate-related risks to health

71. As described above, the GCF Readiness Project and the GEF-supported project are working with the GoL to establish climate-related monitoring systems that will provide the health system and health facilities with systematic access to climate information that would enable them to track, prepare for, and manage climate-related risks to health. This project will contribute to those ongoing efforts through technical assistance to strengthen the health data system and by training and coaching health system actors from national to health facility levels so they can access and understand climate and early warning data in conjunction with other health data and use this information for planning and decision-making. This support will allow health system actors to factor early warnings into their planning and to develop a clearer picture of the direct impacts of climate change on health outcomes and WASH sustainability over time. Outcome 2 will also include activities to translate early warnings into effective risk communication tools and products for communities so they have improved awareness of risk and can practice risk-reduction behaviors at community and individual levels.

Output 2.1 Climate-resilient health data system is strengthened

72. This output will focus on strengthening climate and health data management systems, including by making relevant climate information and key WASH indicators available to health system actors for decision-making and supporting them to use the information effectively. As described above, activities are designed to build on the outcomes of the recently approved Readiness Project, which is expected to produce a Standard Operating Procedure (SOP) for the integration of climate change and health data.

Activity 2.1.1: Extend the RHIMS with climate information relevant to dengue and diarrheal disease. This activity will make climate information relevant to dengue and diarrheal disease available to health system actors by improving data quality and data exchange practices between MoNRE's Department of Meteorology and Hydrology and the MoH, including incorporating National Meteorological Department System data into the RHIMS. With the National Center for Laboratory and Epidemiology, the Department of Climate Change, and the Department of Healthcare and Rehabilitation, the project will systematize the inclusion of health-related climate indicators in RHIMS and with the MoH, develop and roll out a climate-resilient WASH in health facilities monitoring platform within the RHIMS. Any new or revised indicators will include relevant disaggregation for gender, people with disabilities, ethnicity, etc.

Output 2.2: Utilization of the climate-resilient health data system is strengthened

73. Output 2.2 will focus on enabling provincial, district, and health facility actors to access and use the climate data and the improved systems developed under Output 2.1, including strengthening the capacity of health workers to effectively use the systems to respond to early warnings on dengue and diarrheal disease and improve the delivery of facility- and community-based health services and health promotion activities (linked to Component 4).

Activity 2.2.1: Improved access to early warnings for climate-related health risks (dengue and diarrheal disease) among target health facilities. This activity will include working with health system stakeholders from the national to community levels to identify the capacity gaps and challenges (including relevant GESI gaps and challenges) that negatively affect responses to climate-informed early warning alerts. Linked to Outcome 1, it will also focus on incorporating climate-related considerations within the existing National Dengue Action Plan 2019–2023 and National Action Plan for Elimination of Schistosomiasis in Lao PDR 2016–2020.

Activity 2.2.2: Increase health workers' capacity to plan for and respond to climate-related early warnings on outbreaks of dengue and diarrheal disease. The project will provide

consistent data management and use coaching and technical support for the MoH and MoNRE at central level, train and support PHO and DHO staff on access and use of climate change information, and conduct a health data management training that incorporates climate change information for health facility data officers and district and provincial health staff (ensuring 50% of trained staff are female). Based on gaps identified in Activity 2.2.1, the project will develop a training plan to strengthen health worker capacity in supported health facilities so health workers have increased understanding of the links between climate and dengue and diarrheal disease outbreaks and respond to climate-informed early warnings when they are generated.

Activity 2.2.3 Establish climate-resilient WASH service standards within the existing MoH health facility accreditation platform and cascade its use through the health system. Under this activity, the project will hold a national facility accreditation program review in consultation with national stakeholders, to include a focus on integrating climate change, WASH and relevant social considerations (e.g., for gender, people with disabilities, ethnicity) into the existing standards. Participants will develop revised national facility accreditation program indicators as relevant for each health facility level (e.g., provincial, district, health center), and the project will support the MoH to adopt these standards nationally. With the MoH, the project will develop training plans and materials on revised climate-resilient WASH standards and train master trainers, who will cascade the trainings to provincial and district health facilities and health centers.

Outcome 3: Health service delivery in rural provinces is improved and able to manage climate-related disease burden and determinants of health

74. Preventative health services are among the most effective in reducing health impacts of climate change.⁶⁸ Both facility and community-based health workers can monitor, detect, and address climate-related diseases (e.g., dengue, diarrheal disease) and play a role in addressing climate-related determinants of health. Community-based service delivery also offers opportunities to reach rural communities where accessing health facilities is often not possible due to remoteness, adverse travel conditions, or emergencies such as EWEs.

Output 3.1: Improved health worker competence and capacity to address health effects of climate change

75. Under this output, the project will work with the MoH to strengthen facility and community-based health workers' knowledge and capacities so they can contribute to increasing resilience of remote communities before emergencies arise and can plan for, detect, monitor, treat, and refer cases of climate-related illnesses, especially dengue and diarrheal disease. District health officials will manage this component, coordinating closely with national and provincial level health authorities so efforts are fully integrated into existing health service delivery.

Activity 3.1.1: Improve health facility readiness. The project will provide technical assistance to target health facilities to strengthen the capacities of health workers and their supervisors so they can better plan for and consistently access the supplies, commodities, and equipment that enable surveillance, reporting, treatment, and referral of climate-driven health challenges (particularly dengue and diarrheal disease), including during and after EWEs. While technical assistance will focus on climate-related health needs, these forecasting and planning skills are highly transferrable and should contribute to improved stock management within health facilities more broadly. In tandem, the project will work with health facilities and their management structures to establish emergency standard operating protocols for each facility in response to EWEs or climate-driven disease outbreaks, which can be activated quickly when needed. These protocols will also include considerations for gender, people with disabilities and other relevant social considerations as identified.

Activity 3.1.2: Strengthen health worker capacity to detect and treat climate-related diseases. The project will work with district and provincial level health authorities to introduce training for health workers on treatment and referral protocols for dengue and diarrheal disease; response protocols for EWEs; and use of RHIMS information for data-driven planning. The project will ensure that training content includes considerations for gender, age, ethnicity, and disability status. Trained staff will consist equally of men and women. For outreach

⁶⁸ Prüss-Üstün, Annette, Wolf, J., Corvalán, Carlos F., Bos, R. & Neira, Maria Purificación. (2016). Preventing disease through healthy environments: a global assessment of the burden of disease from environmental risks. World Health Organization.

teams or Village Health Volunteers (VHVs), the project will support implementation of community-led climate resilience planning. Through technical assistance and training, the project will ensure supervisors have the knowledge and skills to incorporate these elements into their routine supervision and will facilitate regular supervision visits. As health worker capacity improves, the project will introduce health center exchange visits to enable health workers to learn from each other and share best practices for enhancing climate-resilient health services.

Activity 3.1.3: Implement the National Safe Clean Green Hospitals Initiative and climate-resilient WASH standards within health facilities. The project will use a training-of-trainers model to extend the Safe Clean Green Hospitals Initiative, training provincial and district health officials to cascade trainings to health facility staff. The training will include standard global indicators and recently published global guidance on considering gender and people with limited mobility. It will also orient health facility staff to existing climate-resilient WASH standards for health facilities (once formally endorsed by the MoH under Output 1.1). Semi-annually, the project will conduct monitoring visits to assess compliance with and reinforce use of these standards.

Output 3.2: Rural health facility infrastructure is climate resilient and energy efficient

76. Lao PDR's health facility infrastructure, including WASH infrastructure, is susceptible to the impacts of climate change and is presumed to be a significant source of GHG emissions, though the sector's emissions have not yet been quantified. Health facilities require climate- and energy-efficient infrastructure to provide essential, high-quality prevention and treatment services to patient populations for climate-related diseases. In 79 of the project's 100 targeted health facilities, the project will carry out infrastructure upgrades designed to make the facilities significantly more resilient to the impacts of climate change and to increase their energy efficiency, which will also reduce their GHG emissions (resulting in a mitigation co-benefit). All improvements will fall within the infrastructure activity parameters of SC Australia's (SCA's) GCF ESS category C accreditation status. As described in detail in Annex 14 – Health Facility Infrastructure Action Plan, the project will develop detailed plans for each site following an in-depth needs assessment and environmental, hydrogeological, climate risk, infrastructure quality, and GHG emissions assessments to ensure solutions are feasible, sustainable, cost-efficient, and environmentally safe.

Activity 3.2.1: Conduct GHG emissions and infrastructure quality assessments at climate-vulnerable health facilities. The project will conduct assessments to inform the design of infrastructure upgrades, including a facility infrastructure assessment covering electrical and WASH services and a GHG emissions assessment that will use previously designed and tested tools to establish each facility's emissions baseline. The GHG emissions assessment will be conducted using a tool created and tested by NGO Healthcare Without Harm, which estimates health system emissions from infrastructure and the supply chain. The assessment will inform and support local and national level policy and action planning for a low carbon health system. Trained MoH enumerators will be comprised equally of men and women. Infrastructure assessment results will enable the project to identify the type and combination of infrastructure upgrades each facility needs to improve service delivery for climate-related diseases and sustain climate-resilient WASH services. Emissions assessment results will also inform the development of GHG emissions reduction and energy-saving targets for all 79 facilities by enabling the project to prioritize the upgrades that will reduce health facility emissions. The project will share GHG emissions assessment results with relevant stakeholders (e.g., other development donors and implementing partners) who are already investing in upstream upgrades to MoH systems, process, and storage facilities to inform additional GHG emission-reduction activities. This will contribute to the GoL's ongoing effort to develop a national carbon mitigation plan, in line with their COP26 commitment to developing a sustainable, low-carbon health system by 2030.

Activity 3.2.2: Improve health facility infrastructure resilience to EWEs. Site assessment results will guide refurbishments at each health facility, which will focus on minor improvements such as strengthening structures, raising critical services above flood level, installing insect screening in doors and windows, and improving natural ventilation. Upgrades will be designed using the tenets of climate-responsive architecture, such as utilizing data on local weather patterns and accounting for factors such as seasonality and intensity of the sun, wind, rainfall, and humidity to create designs that are resilient to climate-related shocks and stresses while also

making buildings more energy efficient. Upgrade project designs will also consider standards for incorporating the needs of women and girls and people with disabilities. Project funding is reserved to support 79 target health facilities with infrastructure upgrades (pending site-specific feasibility and needs assessments). Specific building materials and infrastructure approaches will depend on the unique geographic location, type, and design of the current building(s), and the climate-related challenges experienced and projected at the site; however, the project will prioritize developing design solutions that are replicable across target districts.

Activity 3.2.3: Upgrade electrical services to be climate resilient. Improvements will be site-specific based on on-site assessments, though solar powered (or other renewable energy) solutions will be prioritized where appropriate. Refurbishments may also include installing PV power generation and storage systems to secure power supply to health facilities and to support cold storage infrastructure for essential medicines, vaccines, and heat-susceptible materials. The PV installation will cover both the panels and battery storage with an estimated three days of autonomy. The facility upgrades will be sourced from local suppliers where possible, on the national market when not available locally. The project will engage vulnerable populations, including women and youth, across the supply chain where feasible. The project budget includes enough funding to support 79 target health facilities with electrical service upgrades (pending feasibility and needs assessments).

Activity 3.2.4: Upgrade WASH services within climate-vulnerable HCFs to be climate resilient. WASH infrastructure upgrades will ensure health facilities have reliable access to basic water, sanitation, hygiene, and waste management services by installing protective measures against known site-specific, climate-related risks (e.g., drought, flooding) that threaten to disrupt services. Depending on individual site needs, upgrades will strengthen existing WASH infrastructure and/or augment existing WASH services to ensure health facilities have backup systems. Upgrades will also ensure sanitation and wastewater services do not create environmental health or climate risks through quality design and placement standards. Upgrade designs will be turnkey WASH systems will be turnkey, without any additional capital hardware funding required before use. Upgraded designs will also consider standards for incorporating the needs of women and girls and people with disabilities. The detailed menu of upgrade options that will be considered at each site (depending on needs) is outlined in Annex 14 – Health Facility Infrastructure Action Plan. The project will support a range of site-specific actions to increase facility resilience with each facility able to implement actions from the lists provided in the activity descriptions above, depending on their specific needs. Water systems will be end-to-end, and the project will conduct water quality tests to ensure safe water quality prior to handing water systems over to health facility staff. Any infrastructure upgrade designs will include considerations for safe gray water and wastewater disposal. WASH facilities upgrades will be sourced from local suppliers where possible and on the national market when not available locally. The project will engage vulnerable populations, including women and youth, across the supply chain where feasible.

Activity 3.2.5: Strengthen the capacity of MoH, Nam Saat, and private sector partners to effectively operate, maintain, and monitor health facility infrastructure. The project will strengthen the capacity of the MoH, including Nam Saat (the Centre for Environmental Health and Water Supply) at national, provincial, and district levels so officials have the knowledge, resources, and systems necessary to provide oversight, monitoring, and enforcement of climate-resilient health standards and can replicate infrastructure designs in future upgrades to additional health facilities. For private sector infrastructure-related service providers, the project will strengthen their capacity to build, operate, and maintain climate-resilient and energy-efficient infrastructure, including WASH and electrical services. Finally, the project will support hospitals to develop, operationalize, and monitor operational and maintenance plans that will contribute to health facility achievement of the Safe Clean Green Hospitals Initiative.

Outcome 4: Communities respond to early warnings, manage and mitigate risk, and seek care appropriately

77. The effectiveness and sustainability of all project activities will require health workers and the population to develop an enhanced understanding of how climate change impacts health and the health sector. The project will use community engagement and social and behavior change (SBC) approaches, including risk communication

activities, to improve knowledge of climate change impacts on health so 250 communities can respond to early warnings and take effective actions to manage and mitigate risk.

Output 4.1: Improved knowledge of climate change impacts on health and increased community participation capacity in defining health and climate change priorities and gaps

78. Rural communities often lack the knowledge and resources to develop and implement strategies to cope with the impacts of climate change on their health. The project will include a risk communication and community engagement effort that uses existing community platforms to engage communities in designing and rolling out context-appropriate solutions to address climate related risks to health.

Activity 4.1.1: Strengthen community capacity and participation in climate and health dialogue and action. With community stakeholder input, the project will develop a community health and climate resilience action planning guide to enable communities to prepare for and respond to climate-related weather and health events, including EWEs. Training for community leaders and community-based health workers (see Activity 3.1.2) will enable them to engage on the development of community health and climate resilience action plans in target communities; trainees will be comprised of men, women, youth, and people with disabilities.

Once planning is complete, a subset of 173 communities will be prioritized to receive project funds to implement approved action plan activities. These funds will be awarded in two annual allotments of 6,500 USD per community - totally 13,000 USD per community over a two-year period (see Annex 2 – Feasibility Study for an illustrative list of activity options that will be available to communities to implement with project support). The project will establish district-level community health and climate resilience action plan review committees composed of reviewers (including equal representation for women and other marginalized groups) from District Offices of Natural Resources and Environment, DHOs, and SC. The committees will review and provide input into community plans, approve activities from the menu of options for funding, and monitor progress as the plans are implemented. The 173 communities will be selected by the review committees using the following criteria:

- Communities located in one of the five extremely climate vulnerable districts (vulnerability ranking of “5” within Table 5) supported through the project and validated as an extremely vulnerable community through project baseline and/or formative research studies will be prioritized.
- Community is classified as lowest income or poor by GoL authorities
- The community is not receiving other climate resilience support from other donors or implementing partners
- The community’s health and climate resilience action plan activities of high quality and are closely aligned with the project objectives as determined by the review committee
- Communities members (including men, women, youth) have completed project-led health and climate resilience action planning trainings

Consultations with village communities will begin upon the start of project implementation and continue throughout the course of implementation. Self-identified community leadership will be consulted in the memorandum of understanding before the implementation of the project activities to gain community free informed consent to participate. Additionally SC will use a participatory community-based adaptation approach during the development of community health and climate resilience action plans to ensure action plans are community led and involve meaningful participation of women, youth, the elderly and disabled.

Should SC secure additional co-financing for this activity throughout the life of project, it will be applied to provide funding for additional communities to finance their community health and resilience action plans. In this scenario, the same criteria will be applied to select additional communities from the 250 target communities.

The project will work to connect the 77 target communities not prioritized for direct financial action plan support with other donors and partners that may be positioned to fund their climate resilience action plans; SC will also continue to seek co-financing sources. Finally, under this activity, the project will facilitate annual coordination meetings on climate change

risks and resilience with community leaders, the District Office of Natural Resources and Environment, DHOs, and the Department of Agriculture and Forestry.

Activity 4.1.2: Develop communication pathways and effective early warning messages for communities. The project will develop, test, and distribute risk communication messages on health and climate change for communities via a variety of platforms (e.g., existing community platforms, media and social media, WhatsApp groups, push notifications on mobile devices). All messages will include considerations for gender, youth, ethnicity, language and people with disabilities. Messages will be informed by the project's Gender Assessment and Action Plan (Annex 4) and baseline data and will be reviewed by the project GESI Advisor. Culturally appropriate communication materials in key ethnic languages will be developed and disseminated to stakeholders in order to make them aware of the project's goal, scope, developmental benefits and environmental and social safeguards measures, including applicable performance standards as outlined in the Environmental and Social Action Plan. Where appropriate, communication materials will be translated into Lao, Hmong and Khmu – the three most common languages spoken within Lao PDR. Where ethnic groups are present, the project will be sure to capture the cultural uniqueness of dominant ethnic groups, safeguard their socio-economic status and avoid restricting their capacity to assert their access to project-based resources and infrastructure by disseminating knowledge about the project in local dialects. Additionally, project activities – including culturally appropriate communication materials developed – will help promote the dignity, rights, identities and aspirations of ethnic groups. Information or communication materials developed will provide adequate information as well as engage with and seek support of ethnic groups who might be adversely impacted by project activities though this isn't likely to be the case as there aren't any major environmental and social risks envisaged. These materials will be developed following free, prior and informed consent of key representatives from ethnic groups and will take into consideration inputs from women, men and reflect specific measures aimed at addressing equality and equity of services. With telecom companies, the project will develop standard operating procedures to coordinate push notifications linked to the early warning system and will explore methods for delivery messages to populations with visual and hearing disabilities.

Monitoring and Evaluation

79. SC will implement a well-designed, operational, and effective impact monitoring and measurement system that will enable the project to measure progress toward project objectives and project contributions to GCF Investment Criteria and the Results Measurement Framework. This will include implementing a monitoring system to understand efficacy, targeting and verifying the assumptions the project is making, as well as a learning plan so elements emerging from the monitoring system are used to inform planning, refine activities, and improve the quality of implementation and achievement of outcomes. The project's monitoring, evaluation, and learning will be undertaken in compliance with SC's Monitoring, Evaluation, and Learning systems and processes and will align with GoL's monitoring systems and reporting processes. SC will be responsible for developing the project's Monitoring, Evaluation, and Learning system, managing ongoing activity monitoring and data collection, collating reports (including annual reports to GCF), managing the process of developing the project's baseline, and measuring impact via mid-term and final evaluations. These evaluations will apply a mixed methods approach and be participatory in nature, with key stakeholders (inclusive of all ethnic groups, genders and abilities) taking a critical role in the assessment design, data collection, analysis, and dissemination at all levels. The evaluations will include population-based surveys, qualitative interviews, and facility assessments. Additional innovative methodologies will be pursued contingent on stakeholder interest and relevance.

B.2.2. Outcome mapping to GCF results areas and co-benefits categorization

Outcome number	GCF Mitigation Results Area (MRA 1-4)				GCF Adaptation Results Area (ARA 1-4)			
	MRA 1 Energy generation and access	MRA 2 Low-emission transport	MRA 3 Building, cities, industries, appliances	MRA 4 Forestry and land use	ARA 1 Most vulnerable people and communities	ARA 2 Health, well-being, food and water security	ARA 3 Infrastructure and built environment	ARA 4 Ecosystems and ecosystem services
Outcome 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input type="checkbox"/>

Outcome 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input type="checkbox"/>
Outcome 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Outcome 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			<input type="checkbox"/>

Co-benefit number	Co-benefit					
	Environmental	Social	Economic	Gender	Adaptation	Mitigation
Co-benefit 1: Climate-resilient health policies, strategies, and coordination mechanisms are gender-, disability-inclusive, and socially-inclusive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Co-benefit 2: Targeted health facilities provide improved quality of care	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Co-benefit 3: Targeted health facilities have reduced emissions of greenhouse gases due to project-supported infrastructure upgrades and system efficiencies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

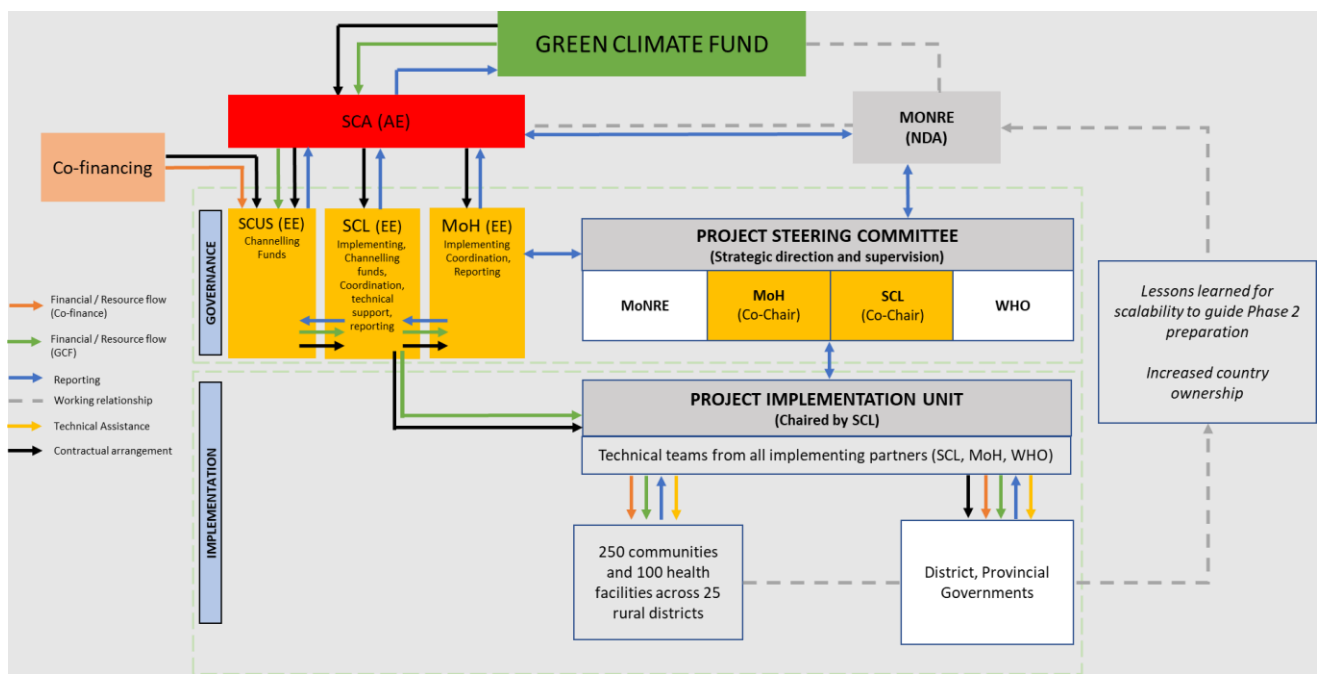
B.3. Implementation/institutional arrangements (max. 750 words)

80. This project will have three EEs: Save the Children USA will serve as an EE responsible for channelling funds internationally. SCI Laos will serve as an EE channelling funds in Laos and will be responsible for implementing alongside the GoL's MoH, acting as an EE on behalf of the GoL. As Implementing EEs, the MoH and SCI Laos will be responsible for execution and supervision of technical activities, including infrastructure activities. The project will be implemented in close consultation with the GoL's MoNRE, which acts as the country's NDA to the GCF. SC Australia (SCA), the Accredited Entity (AE), will maintain reporting channels to the GCF to ensure compliance with the fiduciary, environmental, social, and other relevant standards. SCI Laos will maintain reporting channels to MoNRE to maintain and increase the country's project ownership. Save the Children USA (SCUS) channelling funds EE will provide account management support to SCI Laos in accordance with the account management system employed by the wider Save the Children movement to ensure compliance and high-quality delivery of the project and financial management and reporting.
81. Implementing partner WHO is a sole-sourced procured party for this project, SCI Laos will be the procuring entity, and the procurement will be done in accordance with the requirements under the AMA. WHO has been closely supporting the development of health services and the health system in Lao PDR since the country became a member of the organization in 1950. Lao PDR's MoH and other partners recognize the WHO country office as a valuable source of technical expertise and one of the lead partners in the health sector. WHO is currently supporting MoH efforts to strengthen climate resilience and early warnings within the health system through its Readiness Project, is designing and operationalizing the HNAP, and is collecting data on the climate resilience of health facility WASH infrastructure. To continue and expand these efforts, WHO will lead on implementation of the Strengthening Resilience of the Lao PDR Health System Project's Outcomes 1 and 2. Activities in these Outcomes are designed to complement and advance Readiness Project activities that are focused on strengthening climate-resilient health policies and guidance, enhancing and extending climate and health early warning systems, and strengthening MoH capacity to operationalize policies, guidelines, and information systems.
82. A high-level Project Steering Committee (PSC) will be responsible for the project's strategic direction and oversee activity implementation, including steering activities implemented by the Project Implementation Unit (PIU), which will manage day-to-day operations. Representatives of SCI Laos and the MoH will co-chair the PSC, which will also include representation of senior officials from MoNRE and the WHO office in Lao PDR. No financial flows will take place between SCI Laos and the PSC; the working relationship will be solely based on reporting and consultation. The PSC will also consult with and report to MoNRE as the Lao PDR NDA.
83. Co-managed by the MoH and SCI Laos, the PIU will manage project implementation, support implementing entities, and be supported by a technical supervisory team, including a Team Leader, Deputy Team Leader, Finance Director, Monitoring and Evaluation Advisor, Technical Leads, and support staff. It will work directly with

the technical implementing teams of the MoH and WHO and directly manage the implementation of the project at provincial, district, and community level. The PIU will draw on technical expertise from the broader SC movement (specifically climate and health capacity) as well as from executing and implementing entities.

84. The PIU will monitor and oversee technical and financial implementation, fiduciary processes, auditing, measurement reporting and verification system, and internal evaluation of the project. The PSC will oversee the PIU and provide it with guidance and direction while receiving regular reports on project implementation. The PIU will receive funds (both GCF and co-financing) distributed according to the Subsidiary Agreements with the EEs and procurement contracts for the provision of goods and services.
85. To meet the fiduciary requirements and standards of the GCF, legal and management oversight of the PIU will be held by SCI Laos, which has the legal standing necessary to implement GCF activities in Lao PDR. It is also legally and organizationally bound to SCA, which acts as AE and holds the AMA with the GCF on behalf of the SC movement.
86. Based on the assessment of the Financial Management and Capacity Assessments (FMCAs), as AE, SCA will channel GCF resources to a project-specific bank account managed by the PIU in Laos. The PIU will use these resources and co-financing to manage project governance and implementation and will manage all downstream flows to MoH, implementing partner WHO, and any other procured partners. (Note: Implementing partners will be selected and subcontracted as procured parties in accordance with the AE's procurement guidelines.)
87. The PIU will deliver results through a combination of direct and indirect interactions with the 250 communities and 79 health facilities across 25 districts. While the PIU will deliver technical and project assistance directly to the beneficiary communities, it will rely on the MoH, SCI Laos, WHO, and district and provincial governments for the delivery of specific outputs (as depicted in Figure 5).

Figure 5. Management, Financial, and Coordination Flows



88. All activities will be implemented in line with the project's Gender Assessment and Action Plan (see Annex 4), which is aligned with the GCF's Gender Policy and SC's gender, inclusive development, and child safeguarding policies and Prevention of Sexual Exploitation and Abuse policy and guidelines. Per the Gender Action Plan, all project activities prioritize building the resilience of the most vulnerable community members (e.g., women, children, ethnic minorities). Activities will contribute to gender transformation, ensure community and child participation, and ensure universal access principles are incorporated into health facility upgrades where possible.

89. All activities will be implemented in line with the project's Environmental and Social Action Plan (ESAP), which is aligned with the GCF's safeguards policies and includes a Grievance Redress Mechanism.
90. An FMCA was undertaken by consulting firm Globalfields on SCI Laos and the MoH between November 2022 and January 2023 with the key objective to test the fiduciary and operational strengths and weaknesses of SCI Laos and the MoH. The FMCA found SCI Laos is fully capable of managing this project in line with the GCF and AE standards.
91. See paragraphs 130–133 for further information on SCI Laos' operational history and capacities.

C. FINANCING INFORMATION

C.1. Total financing

(a) Requested GCF funding (i + ii + iii + iv + v + vi)		Total Amount: 24.978084		Currency: million USD (\$)		
GCF Financial Instrument		Amount	Currency	Tenor	Pricing	
(i)	Senior loans	Enter amount	Options	Enter years	Enter %	
(ii)	Subordinated loans	Enter amount	Options	Enter years	Enter %	
(iii)	Equity	Enter amount	Options		Enter % equity return	
(iv)	Guarantees	Enter amount	Options	Enter years		
(v)	Reimbursable grants	Enter amount	Options			
(vi)	Grants	24.978,084	million USD (\$)			
(b) Co-financing information⁶⁹		Total amount		Currency		
		3.196094		million USD (\$)		
Name of institution	Financial instrument	Amount	Currency	Tenor & Grace	Pricing	Seniority
World Health Organization	Grant	1,312,500	USD	Enter years Enter years	Enter %	Options
Individual Donor	Grant	400,000	USD	Enter years Enter years	Enter %	Options
Government of Lao PDR	In kind	1,483,594	USD	Enter years Enter years	Enter %	Options
(c) Total investment (c) = (a)+(b)		Amount		Currency		
		28.174178		million USD (\$)		
(d) Co-financing ratio (d) = (b)/(a)		Total co-financing / total GCF funding amount				

⁶⁹ If the co-financing is provided in different currency other than the GCF requested, please provide detailed financing information and a converted figure in the GCF requested currency in the comment box. Please refer to the date when the currency conversion was performed and the reference source.

(e) Other financing arrangements for the project/programme (max ½ page)

Please explain if any of the financing parties including the AE would benefit from any type of guarantee e.g. sovereign guarantee, MIGA guarantee, etc.

Information on legal due diligence (taxes, insurance, etc.) shall be reported in Annex 9a.

Please also include parallel financing associated with this project or programme (refer to the co-financing policy).

C.2. Financing by component

Please provide an estimate of the cost per component (in line with Components described in Section B.2.1 above) and disaggregate by sources of financing as Annex 3. Also, ensure consistency with the Logical Framework (Annex 2a) and Timetable (Annex 2b) of the project/programme.

Component	Output	Indicative cost (USD)	GCF financing		Co-financing			
			Amount (USD)	Financial Instrument	Type	Amount (USD)	Financial Instrument	Name of Institutions
Component 1	Output 1.1	\$ 1,584,687 \$1,584,687	\$897,006 \$897,006	Grants	Public Source	\$687,681 \$534,375 \$153,306	Grants In kind	WHO GoL
Component 2	Output 2.1	\$5,343,317 \$2,246,114	\$4,413,841 \$2,013,971	Grants	Public Source	\$929,476 \$232,143 \$178,125 54,018	Grants In kind	WHO GoL
	Output 2.2	\$3,097,203	\$2,399,870			\$697,332 \$534,375 \$162,957	Grants In Kind	WHO GoL
Component 3	Output 3.1	\$14,862,190 \$2,695,734	\$13,548,810 \$1,993,538	Grants	Public Source	\$1,313,381 \$702,196 \$380,000 \$322,196	Grants In Kind	Ind. Donor GoL
	Output 3.2	\$12,166,457	\$11,555,272			\$611,185 \$611,185	In Kind	GoL
Component 4	Output 4.1	\$3,854,373 \$3,854,373	\$3,748,373 \$3,748,373	Grants	Public source	\$105,741 \$105,741	In Kind	GoL
M&E	M&E	\$1,240,000 \$1,240,000	\$1,240,000 \$1,240,000	Grants	Public Source	\$0 \$0		
Project Management		\$1,289,610	\$1,129,794	Grants	Public Source	\$159,816 \$74,191 \$20,000 \$65,625	In Kind Grant Grant	GoL Ind. Donor WHO
Indicative total cost (USD)		28,174,178	24,978,084		\$3,196,094			

C.2.1 Financing structure (if applicable, mandatory for private sector proposal (max.300 words))

Not applicable.

C.3 Capacity Building and Technology development/transfer

If the project/programme is envisaged to support capacity building and technology development/transfer, please specify the total requested GCF amount for these activities respectively in this section.

C.3.1 Capacity building

Amount: 12,734,279 USD

C.3.2. Technology development

Amount: 5,628,512 USD

C.4. Justification for GCF funding request (max. 500 words)

92. This funding from GCF will help Lao PDR to address a critical area of climate change vulnerability that has no domestic financing source and is not a focus for other donors. As an LDC with very limited public resources, Lao PDR's ability to invest in its health sector is already restricted (see Annex 2, section 2). Addressing the system's adaptation needs will require diverting obligated resources from other areas, which will compromise the government's ability to deliver on its commitments for other essential public goods and services. Water is a significant focus for public adaptation funding and several bilateral donors have committed funding to strengthen health service delivery in Lao PDR. However, there is no bilateral funding currently available that addresses health systems strengthening priorities in conjunction with climate change. With a lack of national financing capacity, a shortage of interest from bilateral donors, and a clear climate rationale, the GCF is a natural partner. The project focus on public goods and Lao PDR's status as a highly climate-vulnerable LDC justify the maximum level of concessionality. For further information on Lao PDR's macro-economic context see Annex 2 (section 2).
93. Private sector investment in Lao PDR is underdeveloped, with a limited number of banks that prioritize lending to climate-resilient projects. The private sector is reluctant to take policy risks and is concerned about financial and regulatory barriers, which are the main factors that undermine their risk-return profiles. Where such finance is available, it is generally channelled to projects with a more direct financial return—like renewable energy or reducing emissions from deforestation and forest degradation (REDD+). These challenges are further compounded by Lao PDR's status as an LDC and the severe impacts COVID-19 and inflation have had on the country's economy (see Annex 2, section 2). As a result, this project is not expected to crowd out private sector investment. It will create potential to catalyze local-level private sector activity where feasible (e.g., working with micro-, small-, and medium-sized enterprises on facility upgrades).
94. The proposed project will create enabling conditions at the national level through strengthened policies and guidelines and improved tools and systems (e.g., the national RHIMS) that will benefit health facilities throughout the country. The specific investments in health facilities and their WASH services will provide a model for health facilities in other regions to follow. As such, the GCF funding will have important co-benefits that cannot be realized currently due to the lack of resources.
95. The proposed project directly addresses the GCF result area on "health and well-being, and food and water security." It will also build the resilience of the "most vulnerable people and communities" by directly improving the health facilities they rely on and strengthening their knowledge and capacity. Climate change will have significant adverse health effects, and that enhancing the climate resilience of the health system and communities is a key method of reducing these negative health impacts.⁷⁰
96. The requested GCF investment is complemented by three secured sources of co-financing amounting to USD 3,046,094. WHO has committed USD 1,162,500 in labor, supply, and procurement costs to support the achievement of Outcomes 1 and 2. The Lao PDR MoH has committed USD 1,483,594 in in-kind co-financing in the form of meeting venues, office space for program staff, and MoH staff time at national, provincial, and district levels to ensure the achievement of all four project outcomes. Lastly, an individual donor has committed USD 400,000 to contribute to the training and capacity strengthening of health care workers under output 3.1. SC, the GoL, and our partners remain committed to seeking additional, strategic co-financing opportunities throughout the proposal stage and over the course of implementation.

C.5. Exit strategy (max. 300 words)

97. Project strategies and activities include strong focus on sustaining and continuing results and benefits beyond the implementation period; enabling long-term ownership, operations, and maintenance of investments; and supporting MoH to replicate and scale the project's operating model. The key elements of the exit strategy are:
- Designing activities to align with, strengthen, and improve the implementation of relevant national and sectoral policies and strategies, which will contribute to creating a strong operational framework for climate and health in Lao PDR that will extend beyond the project implementation period.
 - Embedding project structures in the MoH to promote ownership and create a foundation for scaling project approaches and best practices nationwide.
 - Including intensive coaching and training for MoH officials at all levels (district, provincial, national) so they are equipped with knowledge, resources, and skills to address the barriers that have inhibited implementation

⁷⁰ Hallegatte et al (2016). Shock Waves: Managing the Impacts of Climate Change on Poverty (World Bank). Available [here](#).

of the country's climate and health agenda and can lead on managing and expanding climate and health early warning systems.

- Including training and coaching for Nam Saat so they have the management skills, planning and assessment tools, site plans, and trained labor force to maintain and scale health facility infrastructure improvements required to provide health services in a changing climate.
- Working with MoH to build facility operations and maintenance requirements into budgeting processes so project-financed infrastructure is maintained and upgrades are sustained over time, which will improve the quality of service delivery upgraded facilities and also highlight the reduced costs to the health system from climate-resilient infrastructure.
- With MoH, developing feasible and realistic plans to roll out the climate-resilient health facility infrastructure approach in additional facilities in future years, which will maximize impact for Lao PDR's population.
- Strengthening community capacity and participation in planning for and responding to the health impacts of climate change and in operating and maintaining health facility infrastructure, so communities can continue these efforts past the project implementation period.
- Providing a climate-resilient infrastructure model for health facilities across the region, further leveraging the GCF investment across an array of contexts and geographies.

98. To ensure project benefits are captured and lessons learned are disseminated, the project will engage with research partners to support target assessments on climate-resilient health facilities and services.

C.6. Financial management/procurement (max. 300 words)

99. The project's financial management and procurement approach follows SCA's approved processes to which they were accredited and hold the AMA with GCF. SCA was accredited to the GCF small size, category C ESS, basic fiduciary standards and project management standards. The approach is further guided by assessments of SC USA and SCI Laos' financial systems that was carried out during the design and by consultations with the MoH during project design. A summary of the due diligence SCA completed for all three EEs and associated mitigations can be found in Annex 7a – Know Your Customer Due Diligence Assessment. The PIU, which SCI Laos will manage in close coordination with the MoH and partners, will receive funds from SCA into a dedicated project bank account. The PIU will directly disburse funds to project implementing partners for specific outputs. Government implementing partners will incorporate project deliverables in their annual plans and will provide quarterly financial reports through the PIU. SCI Laos will manage project implementation and financial reporting in line with our established project management systems and in conformity with the FAA and Subsidiary Agreements (SA) (when developed and agreed), cascading down all compliance requirements and project management requirements. As a channelling funds EE, SCUS will provide account management support to SCI Laos in accordance with the account management system employed by the wider Save the Children movement to ensure compliance and high-quality delivery of the project and financial management and reporting. All project accounts will be audited annually. Each implementing partner's financial acquittals will be required prior to further disbursements to ensure spending and delivery is on track as per the budget and implementation plan. These arrangements will contribute to ensuring project funds are effectively managed and SCA's fiduciary standards are adhered to, which are compliant with all GCF requirements. The limited funding to the MoH directly (limited due to FCMA) will be a building block to help strengthen institutional capacity of the MoH in effective financial management to manage future flows of climate finance.

100. SC's Finance and Procurement manuals, along with WHO's, will apply to the project, depending on the procuring partner (see Annex 8 for both organizations' procurement manuals). GlobalFields completed a financial systems analysis in February 2023 and an initial partnership assessment for the GoL represented by the MoH in January 2023, which assessed the GoL's Accounting Law to determine if it meets fiduciary and compliance requirements. The assessment was undertaken in line with the AE procedures and captured in a Financial System Capacity Analysis report. As part of project capacity strengthening efforts, SC will share our procurement manuals and procedures with GoL and provide recommendations on how to strengthen financial management and procurement systems in anticipation of GoL directly managing future climate investments.

D. EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA

D.1. Impact potential (max. 300 words)

101. The project has a high potential to contribute to the achievement of GCF's adaptation objective to advance climate-resilient sustainable development, particularly in relation to the health and well-being of rural communities vulnerable to the impacts of climate change, noting development of climate-resilient health systems is an area of underinvestment from global climate finance, including from GCF.⁷¹ High impact outcomes of this project include:
- Strengthening the resilience and capacity of the health system, including its workforce, to anticipate and address health-related climate change impacts will help reduce climate-related morbidity and mortality. At the provincial level, climate projections indicate that by the 2030s (within the lifetime of this project's investments), damaging winds, landslides, and flooding will cause extensive and escalating damage to infrastructure, including health facility infrastructure.⁷² As most health facilities in Lao PDR currently do not have climate-resilient infrastructure, the project's investments in increasing the climate resilience of health facilities will help protect these physical assets from the impacts of EWEs
 - Ensuring WASH services are upgraded to be more efficient and adapted to current and future climate risks will increase their resilience and ability to sustain high quality health services to respond to and manage climate-related diseases such as dengue and diarrheal diseases.
 - The project's gender-sensitive approach to community engagement, risk communication, and community health and climate resilience action planning will further contribute to strengthening community climate adaptation capacity to plan for, and respond to, the health risks of climate change. There will be a focus on the most vulnerable groups and communities, captured in the number of direct and indirect beneficiaries, disaggregated by vulnerability status and gender, who are served by more resilient health facilities and covered by early warning systems of disease risks,
102. The project's approach of working to strengthen climate resilience at national level while intensively investing in a sub-set of districts, health facilities, and communities is designed to maximize impact. The project's activities will directly reach 1,852,291 unique direct beneficiaries and 470,302 unique indirect beneficiaries. See Annex 2a – Appendix 1 for detailed beneficiary calculations by project component. GCF investments will contribute to strengthening institutional policy and planning through the development of climate-resilient standards and monitoring frameworks, replicable health facility improvement design solutions, and a carbon mitigation plan for the health system.

D.2. Paradigm shift potential (max. 300 words)

103. As described in the ToC summary (paragraphs 53-58), project activities, outputs, and outcomes will contribute to catalyzing a paradigm shift to facilitate climate-informed advisory and risk management services for dengue and diarrheal diseases to community action in Lao PDR. The model developed by this project—strengthening climate-resilient governance and leadership of the health system, increasing access to and usability of climate and early warning information, strengthening health workforce and community capacity to address climate change impacts, and upgrading health facility infrastructure so it is climate resilient—will have impact beyond the life of the project because it will influence the government's approach to planning for and operationalizing climate and health actions into the future. Existing data on cases of these diseases in specific groups and locations already show links to changing climatological patterns (See Annex 2 - Feasibility Study). This project will support the government to institutionalize tracking of climate-sensitive dengue and diarrheal diseases and plan for deployment of strategies (e.g., mosquito screens, removal of standing water) and treatment methods well ahead of time. GCF investments will contribute to effective knowledge generation (e.g. early warnings) and learning processes (e.g. early warning utilization and sharing of good practice).
104. **Scale up and replication:** While the proposed project's investments in health services are critically important in the project areas, they will also serve as a model for health facilities and districts throughout the country and beyond. Strong emphasis on the national and subnational governance of the health sector and the

⁷¹ To date, the "health and well-being, food and water security" result area has attracted 10% of total GCF financing (document GCF/B.29/Inf.14/Rev.01), but there are no projects in the GCF portfolio that focus on the health sector

⁷² The World Bank Global Facility for Disaster Reduction and Recovery *ThinkHazard!* Portal. Available [here](#).

associated tools (e.g., the RHIMS) will directly benefit health governance in these other regions and enable authorities to make improvements in health services at reduced cost. Climate-informed sectoral strategies, policies, and guidelines are likewise available to all health services throughout the country. The project will share information on this model via global knowledge sharing and learning events, highlighting opportunities for neighboring countries to replicate elements to build resilience in health systems across the region and beyond.

105. **Potential for knowledge and learning:** During early implementation, the project will develop a comprehensive learning plan to support the codification and dissemination of lessons and best practices. This plan will include the production and collation of knowledge products, manuals, case studies, and protocols to ensure project-developed resources are integrated into the MoH and partner systems and made available to support other climate and health initiatives as they emerge.

D.3. Sustainable development (max. 300 words)

106. The project will contribute to Lao PDR's progress toward several Sustainable Development Goals (SDGs): particularly SDG 3: good health and well-being by strengthening the capacity of the health system to address the implications of climate change; SDG 6: clean water and sanitation by ensuring health facilities have resilient and sustainable WASH systems; and SDG 13: climate action by contributing to building healthier, more resilient communities more capable of adapting to a rapidly changing climate.

107. A range of co-benefits will accrue from project activities, including:

- Mitigation, with targeted health facilities having reduced GHG emissions due to project-supported infrastructure upgrades and system efficiencies
- Health, with targeted health facilities having improved quality of care
- Gender, with increased inclusiveness of climate-related health policies, strategies, and coordination mechanisms

108. The project's Gender Assessment and Action Plan (see Annex 4) outlines the challenges Lao PDR faces in operationalizing GESI policies and commitments, particularly at the community level, where entrenched social and gender norms limit the participation of women, young people, ethnic minority groups, people with disabilities, and other populations from participating in decision-making processes and accessing health services. Key findings from the analysis include:

- **Access to education and climate information is not equal for men and women.** Men and boys are more likely to attend school, village meetings, trainings, and information sessions where the impacts of climate change, mitigation and adaptation will be discussed because women and girls are tasked with work in and around the home. Men and youth have more access to telecom and media services through cell phones while adult women and the elderly rely on the use of family smart phones, radio and television and have less opportunity to access data needed to find climate information. As a result, women often receive more limited information through their husbands and children.
- **Women and girls from minority ethnic groups are among the most disadvantaged in Lao PDR's society.** They bear a heavy burden of work, have less decision-making power and more limited mobility than men. Persistent cultural norms limit their roles in society.⁷³ Girls and women reported greater responsibility for ensuring the safety of the home and assets during climate emergencies such as flooding and landslides but expressed less decision-making authority on how to implement this responsibility and in any adaptation actions taken in response to climate change impacts.
- **Women are significantly underrepresented in sub-national level leadership positions, such as in provincial and district ministries and in village administration.** Both men and women believe that women do not possess the skills needed to hold leadership roles, which prevents women from envisioning themselves as leaders and pursuing these roles outside their homes. This impacts their ability to access information and effectively engage in climate change adaptation and disaster risk reduction and response committees.
- **Health services and facilities in remote areas are inadequate in providing needed care for climate-related diseases, particularly in ethnic minority communities.** Women experience climate-related challenges in accessing quality healthcare and perceive that climate-related disease risks are increasing in

⁷³ Khampoui, P., 2012, Scoping study on women's leadership in the agriculture sector in Lao PDR, Vientiane, https://asia.ifad.org/web/1347-wocan/resources/-/resource_library/2644/work-tools.

rural Lao PDR. Women are also the primary caregivers of children, who are most at risk of climate-related disease in Lao PDR, such as diarrheal disease and dengue fever. Women and girls often are more directly impacted by climate impacts on natural resources, such as water availability, as they are responsible for collecting and managing water for household purposes.

- **Women, men, and youth need more knowledge of how vector-borne diseases, such as dengue, are contracted and how they can be prevented.** While stakeholders already perceive an increasing threat of certain climate-related diseases (respiratory and diarrheal disease, dengue), efforts to provide early warning and improve individual and community prevention, treatment and care-seeking strategies need to vary by audience segment and must include targeted messages and media platforms for women (radio, tv, community conversation) and youth (social media).

109. The project has developed programmatic recommendations to address these challenges as part of the Gender Assessment and Action Plan (Annex 4). These include addressing the underlying social norms and behaviors associated with gender- and age-defined roles by providing safe venues for women and youth to voice their priorities, opinions, and concerns about climate risks and adaptation strategies; including women and youth as facilitators in community engagement activities; prioritizing activities that reduce the climate-related risks and burdens for women and youth, particularly girls, in health and climate resilience community action plans (see Objective 4); strengthening the capacity of women in sub-national leadership positions; including women, youth, and people with disabilities in designing health facility upgrades, so their needs and priorities are met; and using targeted messaging and channels so women and you can access SBC messages related to early warnings and prevention, treatment and care-seeking behaviors for climate-related illnesses. See Annex 4 – Gender Assessment and Action Plan for a full description of the recommendations.

D.4. Needs of recipient (max. 300 words)

110. Climate models predict the rising temperatures and changing rainfall patterns associated with climate change will directly and indirectly impact Lao PDR's health sector and the health of Laotian communities, including the project's target populations/beneficiaries. As most provinces in Lao PDR are highly vulnerable to climate change and have a low adaptive capacity, their climate change resilience is limited (see Annex 2 – Feasibility Study).
111. Although Lao PDR is one of the fastest-growing countries in Southeast Asia, the country is still an LDC, one of Asia's poorest nations, and highly reliant on foreign donors. Lao PDR's status as an LDC was recently confirmed in the 2021 triennial review of the Committee for Development Policy Secretariat of the United Nations, though the country is on track to graduate in 2026. External debt accounts for over 54% of the country's nominal gross domestic product (2018). Debt increased from USD 2.8 billion in 2010 to USD 9.8 billion in 2018. Lao PDR has an underdeveloped infrastructure, particularly in rural areas, and over 75% of its labour force relies on agriculture. These existing issues have been exacerbated by the impacts of the COVID-19 pandemic and the country's economy and resource base will be further undermined as climate change impacts escalate.
112. **Barriers to public sector investment.** Lao PDR has very limited public funding resources and the health sector remains substantially under-resourced, with a high proportion of health costs borne by households.⁷⁴ Public expenditure available for climate change adaptation is insufficient to meet needs across all sectors. The government cannot yet support the implementation of health-focused climate change projects using domestic resources.
113. **Barriers to private sector investment.** Private sector investment is limited, as there are few banks that prioritize lending to low-carbon and climate-resilient projects. The private sector is reluctant to take policy risks and concerned about financial and regulatory barriers, which are the main factors that undermine their risk-return profiles. Where such finance is available, it is generally channelled to projects with a more direct financial return—like renewable energy or REDD+.
114. This project will contribute to economic and social development by helping to ensure the health system and population is more resilient to the health impacts of climate change and by spurring progress toward meeting the objectives of the National Climate Change and Health Strategy. It includes activities and strategies to strengthen the capacity, knowledge, and experience of health sector staff, including health workers, in monitoring,

⁷⁴ World Bank (2017). Managing transition: Reaching the vulnerable while pursuing universal health coverage – Health financing system assessment in Lao PDR. Available [here](#).

surveillance, prevention, diagnosis, and management of climate-sensitive diseases and associated risk factors. Once project models for climate-resilient infrastructure in health facilities are established and implemented in target facilities, the MoH can maintain them via infrastructure appropriations and, over time, scale implementation to additional facilities.

D.5. Country ownership (max. 500 words)

115. National policies in Lao PDR are guided by the long-term Vision 2030, which is implemented through five-year national socio-economic development plans. These plans are further detailed into provincial, district, and sectoral five-year plans. Vision 2030 sees Lao PDR as a middle- to high-income country with balanced economic and social development, political stability, and providing social order and social safety nets.
116. Lao PDR has consistently identified the health sector as a key point of climate change vulnerability with great needs for adaptation support. Action to build climate change resilience is also included as a national priority in the country's 8th five-year National Socio-Economic Development Plan (2016–2020) (under Outcome 3). The National Climate Change and Health Strategy outlines priorities for building resilience in the sector, including ensuring WASH services are climate resilient, EWS are developed, and workforce capacity constraints are addressed. Lao PDR also included health as a key priority in its GCF Country Program, and increasing the resilience of the health sector is a key adaptation target of the recent NDC. Despite this focus, Lao PDR continues to struggle in accessing international climate finance that can be utilized in the sector. The NDA recognizes this project could directly tackle this barrier by refocusing climate adaptation finance for health-based interventions.
117. This project idea was initially developed in 2018 by the MoH in collaboration with the WHO, MoNRE, and the Ministry of Public Works and Transport. A consultant engaged by WHO undertook several consultations and WHO held a ToC workshop in July 2019 with key national stakeholders. In late 2019, discussions commenced with SCA to act as the project's AE. SCI Laos, the WHO, and the MoH have worked collaboratively to further develop the project—ensuring it is well-aligned to national priorities, meets local needs, and is driven by the MoH as the key stakeholder and the entity with ongoing responsibility for the health sector.
118. The project design aligns with the revised NDC (2021), which stresses the importance of adaptation in the health sector as a key relevant government strategy. The project directly addresses components 1, 2, 3, 4, 5, 8, 9, and 10 of the health adaptation measures outlined in Annex 2 of the NDC, which is further elaborated in the forthcoming HNAP.
119. Ongoing stakeholder engagement and consultations have significantly contributed to program design (see Annex 13 – Stakeholder Consultations Report). In 2022, SC engaged a Laotian expert to lead a team that conducted focus group discussions in selected villages and health centers in Vientiane Capital and across Sekong, Luang Prabang, and Khammouane provinces. The team gathered feedback from participants, including women, children and adolescents, and members of diverse ethnic groups. SC conducted a mapping exercise and used a government-supplied list of communities to select participants.
120. District-level, provincial, and national validation workshops complemented the stakeholder consultation efforts described above. Attendance in these workshops consisted of representatives from governmental health and natural environment departments, international NGOs, and multilateral organizations and programs.
121. While the format of engagement differed between stakeholder groups, participants engaged on:
 - Awareness and experience of climate change and the impacts on the individual, community, and health center
 - The suitability, shortcomings, and emergency-situation responsiveness of the health center and staff
 - Barriers to implementation of national policies and procedures, participation in decision-making, and possible adaptations and solutions
 - Feedback on health center-proposed interventions and opinion on climate-related programs and policy effectiveness.

During the consultation process target health facilities and districts were preselected in partnership with National, Provincial and District ministry of health stakeholders. Half (50%) of the 250 target communities have also been selected by these pre mentioned stakeholders. The remaining communities will be selected during the

Government of Laos required Memorandum of Understanding preparation process. Target communities, health facilities and districts can be adjusted both before and during implementation based on routine GoL needs assessments and on the ground situational changes.

122. SC continued to validate project design through ongoing communication with the MoH and MoNRE, and further tested it via provincial and district workshops held in November 2022 and national workshops in Vientiane on November 17, 2022, and January 5–6, 2023. In line with the process standards for the multi-stakeholder consultation, stakeholders from the Talieng, Khmu, Lao and Alak communities were included in the consultation and free prior informed consent was solicited before consultations began.

Accredited Entity

123. Save the Children is the world's leading independent organization for children, with 30 national organizations working together to deliver programs in approximately 120 countries via a network of 24,000 professionals. In 2019, Save the Children delivered programs worth over USD 2.2 billion across 117 countries and directly reached over 38.7 million children. The organization currently has a global health portfolio valued at USD 700 million that spans 50 countries. SC International, the implementation structure for the global movement, oversees a portfolio of approximately 700 contracts including a portfolio of 100+ resilience-related projects and programs valued at more than USD 200 million, with explicit objectives to reduce climate and disaster risks as well as increase adaptive capacity and those who seek the social and economic empowerment of women and youth and the amplification of the voices of the most marginalized.
124. SCA was accredited to the GCF in November 2019 on behalf of the global SC movement. SCA was chosen to lead on the GCF for SC due to its longstanding leadership role in climate change and disaster risk reduction and its robust fiduciary and compliance systems and processes. The AMA was made effective in May 2020. SCA currently has one GCF project under implementation FP184 and numerous others at various stages of development with CIC1 and CIC2 endorsement.
125. Save the Children, including SCI, SCUS and SCA, has extensive experience designing, delivering, evaluating, and documenting approaches to community-based adaptation, including in Lao PDR, where SCI has worked for more than 25 years. Our approach is to support governments to deliver against their adaptation policy objectives and needs, bringing a consultative approach to engaging a range of stakeholders, including communities, in the design of climate change interventions. As we work as a confederated movement, our experience in delivering relevant projects in Laos and in the health sector more broadly sits with SCI Laos and SC US. Please see below.

Executing Entities

SCUS

126. SCUS is one of 30 national organizations that implement non-domestic operations through a single program delivery unit, Save the Children International (SCI). With a 2022 annual budget of \$955 million, SCUS oversees a portfolio of approximately 968 awards in 116 countries, financed by corporations, foundations, the private sector and major multi-lateral and bi-lateral institutions, including the U.S. Government. Our network of over 5,000 health professionals offers expertise in reproductive, maternal, newborn, and child health (RMNCH), climate and health, nutrition, WASH, adolescent and youth health, family planning (FP), community capacity strengthening, social and behavior change (SBC), health systems strengthening (HSS), and monitoring and evaluation (M&E). We are a trusted partner to governments, NGOs, the private sector, other local actors, and institutions and regularly collaborate with a wide range of local communities to strengthen capacity and accelerate progress towards development outcomes in the countries where we work. SCUS serves as the lead WASH partner on five global USAID programs, each totalling 200-600m (USD). Save the Children is also a key partner on USAID's 209m (USD) Global Local Health Systems Sustainability Project, which included capacity strengthening support to the Lao PDR health system.

SCI Laos

127. SCI Laos has worked in tandem with the GoL since 1987, driving changes in policy and practice to support the implementation of high-impact, lifesaving interventions at scale. SCI Laos' long presence in Lao PDR, coupled with broad and deep operating platforms, has forged strong relationships with GoL actors and the communities we serve. SCI Laos has a current annual operational budget of 8M, which includes programs in

Health, Education, Climate Resilient/DRR and Child Protection. We work with existing structures while strengthening multi-sectoral teams of national implementers, the MoH, and other line ministry frontline worker capacities to facilitate, monitor, and expand national and community engagement processes and systems for improved health. In addition to national-level engagement, SCI Laos is active in seven provinces working in partnership with the Ministries of Health, Education, Labor and Social Welfare, and Natural Resources and Environment.

128. SCI Laos led USAID's Nurture in two provinces, working to improve maternal, infant, and young child and adolescent nutrition (MIYCAN) and WASH with a special focus on families with children in their first 1,000 days of life. In partnership with the Center of Information and Education for Health, SCI Laos developed and distributed the first Counseling Manual on Nutrition and trained more than 330 health workers and 1,900 village-based community facilitators on behavior change communication for improved nutrition and hygiene. Community facilitators helped over 14,000 households to adopt positive MIYCAN and WASH practices. More than 800 households chose to become model families in their villages, demonstrating positive health and hygiene practices. SCI Laos also developed and promoted the dissemination of the Community-led Total Sanitation Manual on National Sanitation and Hygiene Promotion. Twenty-four private companies participated in USAID Nurture's public-private partnership, which provided communities with better access to quality and affordable WASH products. As a result, 85% of target villages achieved Open Defecation Free status. The program also improved the enabling environment for nutrition and WASH through support to the GoL in developing a National Social and Behavior Change Communication Strategy while aiding in strategy rollout and coordination at provincial and district levels.
129. SCI Laos played a key role in the GoL's COVID-19 response through USAID's Local Health System Sustainability Project. As lead implementing partner in Lao PDR, SCI Laos strengthened nationwide COVID-19 coordination and mobilized community health systems and institutions to respond to the pandemic and improve Lao PDR's preparedness for future shocks. SCI Laos supported MoH activities to create culturally appropriate COVID-19 communication materials and messages for diverse audiences; strengthen GoL skills in conveying official information via social media and designing engaging content; equip organizations and groups to disseminate COVID-19 information to households and communities; develop and print risk reduction communication flyers for nationwide distribution; monitor quarantine centers in border areas to ensure appropriate risk reduction communication and health checks; train private pharmacies on case detection and referral; coach provincial emergency operations committees on quarantine facility readiness, surveillance, and operations; and increase the national COVID-19 hotline's capacity to handle high call volumes.
130. SCI Laos leads the EU-funded SCALING Project, which is working to improve the nutritional status of adolescent girls, pregnant and lactating women, and children across four provinces. SCALING supports the implementation of the GoL's National Nutrition Strategy (2016–2025), working from the national to village level to address normative, service delivery, and governance needs in nutrition through behavior change, health system strengthening, gender equality, WASH, nutrition-sensitive agriculture, and cross-ministry interventions. SCALING trained 1,200 Community Facilitators who reached over 11,000 households with nutrition information for behavior change. A recent summary of longitudinal data suggests positive, statistically significant change in most nutrition-relevant indicators over a three-year period due to project interventions, significant improvements in dietary diversity scores for children and pregnant women, and significant improvements in levels of stunting and underweight prevalence in children under 5.

MoH/Centre for Environmental Health and Water Supply (Nam Saat)

131. MoH consists of seven departments under the leadership of the Minister of Health and his deputy ministers. In 2016, the MoH reported 20,484 people were employed by the Ministry, a ratio of approximately three public health sector employees per 1,000 inhabitants. This number includes 17,666 health facility staff, which is equivalent to just over two staff per 1,000 inhabitants. Formally trained workers including village health volunteers, nurses, midwives, medical assistants, medical doctors, and specialists accounted for 12,904 persons or slightly under two staff per 1,000 inhabitants. According to the National Health Accounts, external funding accounted for around 20% of total health expenditure. Several vertical programs continue to rely heavily on donor funding.

132. The MoH manages and coordinates implementation of the Climate Change and Health Strategy and acts as the public health regulator for water quality. The MoH also acts as a service provider, ensuring public sector health facilities have adequate WASH services and waste management systems. The MoH has adopted WHO's WASH Facility Improvement Tool (WASH-FIT) as a national approach to improve WASH services in health facilities. WASH-FIT is a risk-based management tool for health care facilities, covering key aspects of WASH services: water, sanitation, hand hygiene, environmental cleaning, health care waste management, and selected aspects of energy as well as building and facility management. The MoH sets national targets for WASH services in health facilities, focusing on hospitals where WASH-FIT is needed.
133. Nam Saat, the Centre for Environmental Health and Water Supply, acts as the primary entity responsible to promote and assist in the implementation of rural water supply, sanitation, and hygiene projects and facilitates WASH-FIT training and monitoring at the facility level. Nam Saat also undertakes design and construction activities for small water supply schemes, including gravity-fed systems and point sources. It is further charged with the promotion and development of rural sanitation through provincial and district offices. Nam Saat has 55 staff in four divisions: water and sanitation, laboratory for environmental health and water quality monitoring, health promotion, and administration.

Other Key Partners

WHO

134. The WHO is the directing and coordinating authority on international health within the United Nations' system. WHO has vision to promote health, keep the world safe, and serve the vulnerable. From 2020–2021, WHO's total program budget was USD 4.8 billion. The Western Pacific Region had program budget of USD 309 million during that time.
135. WHO is firmly committed to supporting all Member States to respond to health challenges using innovative approaches. WHO coordinates reviews of scientific evidence on the links between climate change and health and helps shape a global research agenda. Working closely with health ministries and research centers around the world, WHO gathers and analyzes information about climate change health impacts and the level of preparedness of different countries to deal with them. Through a series of health and climate change country profiles, WHO monitors the health impacts of climate change and the progress in building climate-resilient health systems in countries worldwide.
136. WHO works to translate global health initiatives into regional plans that respond to the specific needs and challenges of countries. WHO has been supporting the development of health services and the health system in Lao PDR since the country became a member of the Organization in 1950. A WHO country office was established in 1962, allowing direct support and cooperation with the Government and other actors in the health sector. Climate change and the environment is one of four strategic priorities for WHO's work in the Western Pacific Region, including Lao PDR.
137. WHO is the delivery partner of the readiness activity "Enhancing Lao PDR National Capacity and Coordination in Health and Climate Change," which will be implemented over 18 months in 2022–2024.

MoNRE

138. MoNRE is responsible for natural resources and environmental policies and plans. It developed the country's Strategy on Climate Change, the key strategy that focuses on climate change issues, including adaptation and mitigation. The strategy provides guidance to enable Lao PDR to reduce the negative impacts of climate change and to reduce GHG emissions. The strategy defines national development directions such as low-carbon or green growth economy and climatic resilient development. The Water Resources and Environment Agency under MoNRE serves as the national focal point for the UNFCCC and the GoL's NDA.

D.6. Efficiency and effectiveness

D.6.1. Estimated cost per t CO ₂ eq, defined as total investment cost / expected lifetime emission reductions (Mitigation and Cross-cutting)	(a) Total project financing	US\$_____
	(b) Requested GCF amount	US\$_____
	I Expected lifetime emission reductions	_____
		tCO ₂ eq

	l(e) Estimated GCF cost per tCO ₂ eq removed (e = b / c)	US\$ _____ / tCO ₂ eq
D.6.2. Expected volume of finance to be leveraged by the proposed project/programme and as a result of the Fund's financing, disaggregated by public and private sources (Mitigation and Cross-cutting)	(f) Total finance leveraged	US\$ _____
	(g) Public source finance leveraged	US\$ _____
	(h) Private source finance leveraged	US\$ _____
	(i) Total Leverage ratio (i = f / b)	_____
	(j) Public source leverage ratio (j = g / b)	_____
	(k) Private source leverage ratio (k = h / b)	_____
D.6.3. Describe how the financial structure is adequate and reasonable in order to achieve the proposal's objective(s), including addressing existing bottlenecks and/or barriers; providing the minimum concessionality; and without crowding out private and other public investment.		
<p>139. Financial structure. The project's financial structure draws lessons learned from SCI Laos' decades-long experience as an implementing partner in Lao PDR and is designed to achieve the objectives in the most cost-effective and efficient way. As described above, funds will flow from SCA to SCI Laos, then will be managed through the PIU with disbursements to implementing entities, including the government and WHO. Where SCI Laos directly implements, such as at district and community level, all activities will be carried out in conjunction with government partners to facilitate buy-in, ownership, and experience in achieving all project outputs and outcomes. This structure will allow the project to balance support to national and subnational levels of government and engage appropriate GoL counterparts at the right levels in implementing each activity while minimizing potential financial and procurement risks. While implementation in close partnership with the government can create bottlenecks, the PIU will manage this by coordinating daily with government partners and the project steering committee.</p> <p>140. Concessionality. Section C.4 (paragraphs 87-88) makes the case for maximum concessionality. As an LDC with very limited public resources, Lao PDR's ability to invest in its health sector is already restricted and this lack of resources has contributed to limiting progress on its health and climate agenda to date. Addressing the health system's adaptation needs would require diverting obligated resources from other areas, which would compromise the government's ability to deliver on its commitments for other essential public goods and services. The proposed investments are a public good, and the project's grant will cover the cost of goods and services which in the absence of climate change would be less urgent and less necessary. These circumstances, combined with the country's overall financial position (See Section D.4 – Needs of Recipient), are consistent with the proposed grant-based finance structure described above.</p>		

E. ANNEXES

E.1. Mandatory annexes

- | | | |
|-------------------------------------|----------|---|
| <input checked="" type="checkbox"/> | Annex 1 | NDA No-objection Letter(s) (Template) |
| <input checked="" type="checkbox"/> | Annex 2 | Pre-feasibility (or feasibility) study (Guidance) |
| <input checked="" type="checkbox"/> | Annex 2a | Logical Framework (Template) |
| <input checked="" type="checkbox"/> | Annex 2b | Timetable (Template) |
| <input checked="" type="checkbox"/> | Annex 3 | Budget plan that provides breakdown by type of expense (Template) |
| <input checked="" type="checkbox"/> | Annex 4 | Gender assessment and action plan (Template) |
| <input checked="" type="checkbox"/> | Annex 5 | Co-financing letters |
| <input checked="" type="checkbox"/> | Annex 6 | Term sheet and evidence of internal approval |
| <input checked="" type="checkbox"/> | Annex 7 | Risk assessment and management (Template) |
| <input checked="" type="checkbox"/> | Annex 8 | Procurement plan model (Template) |
| <input checked="" type="checkbox"/> | Annex 9 | Legal Due Diligence (regulation, taxation and insurance) (Template) |
| <input checked="" type="checkbox"/> | ANNEX 10 | Economic and Financial Analysis (Template) |

E.2. Other annexes to be submitted when applicable/requested

- | | | |
|-------------------------------------|----------|--|
| <input checked="" type="checkbox"/> | Annex 12 | Environmental and Social Action Plan (ESAP) (Template) |
| <input checked="" type="checkbox"/> | Annex 13 | Stakeholder Consultations Report |
| <input checked="" type="checkbox"/> | Annex 14 | Health Facility Infrastructure Plan |
| <input checked="" type="checkbox"/> | Annex 15 | Lao PDR Social and Environmental/Climate Legal, Policy and Multilateral Frameworks |
| <input checked="" type="checkbox"/> | Annex 16 | Accredited Entity Fee Budget |
| <input checked="" type="checkbox"/> | Annex 17 | Emissions Reduction Potential of Project Activities |

***** Please note that a funding proposal will be considered complete only upon receipt of all the applicable supporting documents. *****