



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

Annex 13: Stakeholder Consultations Report

Save the Children Australia
Version: Final – 2023/09/22



Table of Contents

Stakeholder Consultation during Project Design.....	3
Summary and Main Findings.....	3
Consultations to Date.....	5
Stakeholder Identification.....	5
National Validation Engagement 17 th of November 2022.....	5
Provincial and District Validation Workshops 23 rd – 25 th of November 2022.....	6
Field Survey.....	7
Figure 1 – Map of Target Provinces and Districts.....	7
Qualitative data.....	8
Focus Group Discussions – General Population Group.....	9
Focus Group Discussions – Women and Vulnerable Persons Group	10
Key Informant Interviews – Village Committees	12
Key Informant Interviews – Health Centre Staff.....	14
Appendix A: National Validation Engagement 17th of November 2022.....	15
Appendix B: Provincial Validation Workshops 23rd – 25th November 2022.....	17
Appendix C: District Stakeholders Validation workshops, 23rd, 24th and 25th of November 2022.....	22
List of Participants.....	28

List of Figures

Figure 1 – Map of Target Provinces and Districts	7
--	---

List of Tables

Table 1 - FGDs distribution matrix (12 FGDs)	8
Table 2 - KII Matrix (14 KIIs)	8
Table 3 - Activities and Discussion National Validation Engagement 17 th of November 2022	15
Table 4 - Detailed feedback on activities from Luangprabang, Khammouane and Sekong Province Workshops, 23 rd , 24 th and 25 th of November 2022	18
Table 5 - Detailed feedback on activities from Phonxay, Nongbok and Dakcheung Workshops 23 rd , 24 th and 25 th of November 2022	23
Table 6 - List of Participants Provincial Validation Workshop 23 rd of November 2022	28
Table 7 - List of Participants National Validation Workshop 24 th of November 2022	28
Table 8 - List of Participants Provincial Validation Workshop 25 th of November 2022	28
Table 9 - List of participants for Nongbok, Phonxay and Dakcheung Workshops 23 rd , 24 th and 25 th of November 2022	28

Stakeholder Consultation during Project Design

1. Stakeholder consultations are a key part of the Lao People's Democratic Republic Climate and Health Project (LPDRCHP) design process. This project is founded on a three-step stakeholder engagement process, with key engagement occurring at the local level at representative villages and health care centres - across three select provinces of Lao PDR - alongside key stakeholder engagement; key stakeholders have been engaged via facilitated national, provincial and district-level validation workshops on the chosen implementation measures.
2. This Stakeholder Consultations Report documents how the relevant project stakeholders have been engaged and define the types of engagement established in the project design. In developing this engagement plan, the goal was to identify all the people and organizations involved in, or potentially affected by, the project.

All input from the stakeholder engagement has been taken into consideration and has informed the menu of proposed activities and associated Feasibility Study (Annex 2), Environmental and Social Management Plan (Annex 12) and GESI Assessment and Plan (Annex 4).

Summary and Main Findings

3. As an integral aspect of the LPDRCHP, the stakeholder engagement process during the design phase consisted of several stages:
 - a. Stakeholder Identification;
 - b. General Stakeholder Consultations;
 - c. Consultations with Health Centre Staff;
 - d. Focus Group Discussions with Women and Vulnerable Persons;
 - e. Consultations with Village Committees;
 - f. Provincial-level Validation Workshops;
 - g. District-level Validation Workshop; and
 - h. National-level Engagement.
4. Overall, the main purpose of the engagement was to gather insights from a range of stakeholders into the vulnerabilities, needs and existing capacities of local-level communities, health centres and the health system to ensure these are factored into the design of the proposed activities and outputs.
5. Reviewing the LPDRCHP proposed activities with a range of stakeholders within the district, provincial and national levels – including heads of government departments, civil society representatives and international non-governmental organisations (INGOs) – ensured validity and allowed the project team to determine areas for improvement, as well as relevance to target areas.
6. Across the range of community-level engagement, stakeholders and representatives noted:
 - Healthcare centres are ill-prepared to handle climate change-related extreme weather events and subsequent disease outbreaks. The centres lack sufficient medicine and resource supplies, and adequately trained and prepared staff and the infrastructure is not climate resilient.
 - All stakeholder groups were aware of climate change impacts, with flooding, increased and persistent rainfall, landslides, droughts and extreme heat. Predominant conceptions of the cause of climate change are linked to human exploitation and the destruction of natural resources, especially deforestation and pollution.
 - As such, an awareness of climate change is evident within all stakeholder groups. Communication strategies vary between communities and across age groups with youth inclined to gain information via social media and share this with the elderly; the latter is prone to receiving information via radio or television channels. Overall, stakeholders maintain that 'traditional' means of communication – brochures, posters and the use of the village loudspeaker

(tannoy) system – is the most popular means of receiving climate-change information and disaster warnings.

- The severity of climate change impacts and extreme weather events have a moderate to severe impact on the individual and community due to damage to households; insecure water, sanitation and hygiene (WASH) and electrical systems; seasonal, vector-borne and communicable disease outbreaks; and damage to agriculture and livestock, with far-reaching consequences for livelihood and food security in villages and prompting involuntary relocation.
- Communities have experienced climate change-related health impacts, through an increase in the spread of respiratory, gastro-intestinal and vector-borne diseases. Many mentioned non-communicable diseases as linked to climate change. That said, the overall consensus is that pregnant women, the elderly and children are considered the most vulnerable to the impacts of climate change, related diseases and during extreme weather events and disasters. In general, women have proactive responses to the impacts of climate change, despite inconsistent involvement in climate-related decision-making.
- Despite those in Sekong provinces, all healthcare centres in the communities surveyed are considered vulnerable to flooding and landslides. In addition, the review of preparedness measures and climate change impacts indicated that stakeholders find healthcare centres to be insufficiently prepared to handle climate change-related extreme weather events and associated disease outbreaks (malaria, dengue fever, diarrhoea and respiratory diseases). Overall, stakeholders consider healthcare centres as lacking sufficient medicine and resource supplies, having inadequately trained and prepared staff, and infrastructure which is not climate resilient.

7. At the district, provincial and national-level engagement:

- Stakeholders at the national, provincial and district levels responded positively to the expansion of an early-warning system (EWS)
- Across the levels, stakeholders stressed the necessity of multi-sector and departmental collaboration and information sharing – this was echoed throughout other feedback on the proposed project activities.
- Stakeholders agreed with the activities and had recommendations across all components and activities.
- In particular, they highlighted the importance of multi-sector and departmental involvement and collaboration in the development of guidelines and handbooks,
- Stakeholders are on board with the improvements planned to the DHIS2 system and the integration of WASH, meteorological, climate and disease data.
- The engagement indicated that rural health service delivery does not have the capacity or resources (medical, human and infrastructure) to handle current and expected climate change impacts and associated EWEs.
- There is minimal awareness of previous projects connecting climate change and health, with the majority being agriculture-based. Nevertheless, stakeholders contributed lessons learnt in the form of governance and leadership, the necessity of accessible and disseminated public health information.
- Stakeholders are aware of climate changes, predominately flooding and increased precipitation, intense seasonal temperatures and droughts. This has a knock-on effect on agriculture, food security and livelihoods.
- Climate change impacts are easily linked to seasonal, respiratory and gastrointestinal diseases (including diarrhoea, dengue fever and skin diseases) with pregnant women, the elderly and children being the most vulnerable.
- Health centres are frequently affected in terms of electricity and water availability and systems during EWEs; in some cases, access is lost due to flooding or landslides. As such, solutions/adaptations include upgrading the infrastructure, developing a disaster warning system, improving accessibility and patient outreach and the installation of backup solar systems. In addition, stakeholders added the necessity of capacity-building for relevant medical staff.
- Where stakeholders are aware of previous projects and contribute lessons learnt, the projects do not entirely correlate health with climate change, and lessons learnt are predominately on the necessity of post-project sustainability and longevity; a lack of budget, preparedness and a lack of community involvement and buy-in.

8. Additional and greater detail can be found in this document, as follows, and the associated Appendices.

Consultations to Date

Stakeholder Identification

9. All relevant stakeholders were identified through a governmentally supplied list of communities deemed appropriate for stakeholder engagement, and a subsequent mapping output. The stakeholder engagement was implemented with a sustainable and local approach in each community visited, and each targeted group was consulted to identify the most appropriate ways for a local-level implementation to take place. The engagement with those involved in previous interventions ensures that the LPDRCHP will build on extensive institutional and contextual knowledge, as well as consolidate results from relevant prior projects.
10. In identifying stakeholders, particular attention has been given to ensuring vulnerable and marginalised groups within society – including women, the elderly and people living with disabilities – are included in the engagement plan. Stakeholder consultations are also an important part of the environmental and social safeguards definitions, hence inputs from vulnerable people derived from engagement processes will be incorporated into the Environmental and Social Action Plan (ESAP) and the Gender and Social Inclusion (GESI) Action Plan.

National Validation Engagement 17th of November 2022

11. On the 17th of November 2022, the Faculty of Public Health from the University of Health Sciences hosted a workshop on the Green Climate Fund proposal to update stakeholders, receive feedback and advice on the suitability of the outputs for the targeted communities, ensure data collection was appropriate, and also where the project should focus and if there were previous successful examples of similar projects.
12. To accommodate the various stakeholders, the engagement – consisting of workshops and in-depth interviews – was hosted in various locations, at the Ministry of Health (MOH) and Ministry of Natural Resources and Environment (MONRE), Lao Red Cross, Ministry of Labour and Social Welfare (MOLSW) and World Health Organisation (WHO) offices in Lao PDR. Participants from the Disaster Committee of Lao Red Cross and MOLSW were interviewed separately due to time constraints. To ensure corporation for future workshops or any other engagements, the participants were provided with Daily Substance Allowance (DSA) for one day.
13. The stakeholders that participated in these workshops and in-depth interviews were 14 people belonging to various governmental health and natural environment departments, INGOs and multilateral organisations and programmes.
14. The workshop was conducted by dividing it into introductions, a presentation from the lead facilitator and activities on different aspects of the projects. The attendees were led through two activities, which were specifically about:
 - a. Review of proposed project activities, divided in turn into the 4 components of the projects.
 - b. Suggestions and feedback based on insight gained from previous similar projects.
15. The workshop outlined four main types of observations:
 - Stakeholders had a general understanding of the project objectives and components; in particular, the activities related to climate resilience in terms of the installation of alternative energy sources and upgrading WASH infrastructure.
 - While stakeholders actively encourage upgrading health care centres, they acknowledge the necessity of pre-upgrade assessments and the prioritisation of facilities according to a climate hazard risk level.
 - There is a general consensus to prioritise developing and updating strategies, relevant and key health policies and guidelines to incorporate recommendations for addressing climate change impacts.
 - Collaboration between the governmental sector is highlighted as pivotal across the projects' components - if coupled with a clear definition of responsibilities and intended outcomes – and especially to integrate climate data into the District Health Information Software (DHIS2), especially between the Department of Hygiene and Health Promotion (DHHP), the Department of Planning and Investment, the MOH, the Department of Meteorology (DMH) and MONRE.
16. The participants' list is included in **Appendix A**, along with the details of the workshop activities.

Provincial and District Validation Workshops 23rd – 25th of November 2022

17. On the 23rd, 24th and 25th of November 2022, the Faculty of Public Health from the University of Health Sciences hosted provincial and district-level validation workshops on the Green Climate Fund proposal to update stakeholders and receive feedback and advice on the suitability of the outputs for the targeted communities, to ensure the data collection was appropriate, and also where the project should focus and if there were previous successful examples of similar projects.
18. The workshops were hosted in Nongbok district in the Khammouane province on the 23rd of November, in Dakcheung district in the Sekong province on the 24th of November, and in the Phonxay district in the Luangprabang province on the 25th of November 2022.
19. The stakeholders that participated in the provincial-level workshop were 31 people in total, belonging to several different groups: government; health sector; hospitals; not-for-profit organizations; national NGOs; multilateral organisations and programmes. Participants belonged to the following ethnic groups: *details have been redacted in accordance with the GCF Information Disclosure Policy, as the portion is confidential under the disclosure policy of the Accredited Entity.*
20. Participants at the provincial workshops were divided into three groups according to their designations and roles in each sector:
 - a. A health sector group,. *details of group participants have been redacted in accordance with the GCF Information Disclosure Policy, as the portion is confidential under the disclosure policy of the Accredited Entity.*
 - b. A natural environment and disaster preparedness and response group *details of group participants have been redacted in accordance with the GCF Information Disclosure Policy, as the portion is confidential under the disclosure policy of the Accredited Entity.*
 - c. A group of women and social welfare representatives *details of group participants have been redacted in accordance with the GCF Information Disclosure Policy, as the portion is confidential under the disclosure policy of the Accredited Entity.*
21. The workshop was conducted by dividing it into introductory speeches, project overviews, presentations, and separate activities on different aspects of the projects. For the participatory activities, the attendees were divided into groups, with a note-taker in each group. The activities were specifically about:
 - a. Review of proposed project activities, divided in turn into the four components of the project;
 - b. Lessons learnt from similar previous projects
 - c. A hybrid format of the General Public stakeholder engagement questionnaire, engaging stakeholders on their experience and understanding of existing climate impacts and a review of the health care centre; possible solutions/adaptations measures to current and future climate and health-related issues and, the barriers to the implementation of national policies and programs.

Main outcomes

- About 95% of the targeted participants were in attendance.
- Participants understood the GCF proposal from the presentation.
- Participants contributed to discussions by pointing out the challenges they are facing as a result of climate change.
- Stakeholders had an opportunity to collaboratively discuss the proposed activities, suggest future joint ventures and contribute their opinion of the state of the health system in Lao PDR.
- Participants recommended adjustments to the wording and suggestions of activities, to follow.

The workshop outlined four main types of observations:

- Participants are aware of climate change impacts and associated extreme weather events.
- The need for training communities, local and rural officials and health care staff - with an emphasis on disaster preparedness and community mobilization and support – was consistent across the stakeholder groups. To achieve this, stakeholders suggest multi-sector collaboration and resource sharing.
- As a whole, stakeholders support the implementation of multiple EWS despite possible issues of data and information sharing between different governmental departments.
- Greater clarity of the content and frequency of senior staff capacity-building is necessary for stakeholders.

22. The participants' list is included in **Appendix B and C**, along with the details of the workshop activities.

Field Survey

23. The field survey was conducted in nine and six selected communities from the three project districts and comprised of 12 focus group discussions (FGDs) and key informant interviews (KII). As depicted in Figure 1, the districts chosen were: Dakcheung, Phonxay and Nongbok with two villages surveyed in each. The main findings are reported through qualitative data below.

Figure 1 –Figure 1 has *been redacted in accordance with the GCF Information Disclosure Policy, as the portion is confidential under the disclosure policy of the Accredited Entity.

Qualitative data

24. Two interrelated approaches for the consultations were used to collect the primary qualitative data as follows:
25. The FGDs were conducted in the villages and the number of participants in each FGD group ranged between 8 to 10 persons to permit well-focused and detailed discussions. **Table 1** shows the number and location of FGDs, broken down by the different groups represented.

Table 1 – Focus Group Distribution Matrix (12 FGDs)

Province	District	Village	Ethnicity	FGDs	
				Women and Vulnerable Persons Groups ¹	General Population Groups ²
Sekong	Dakcheung	Darktrib	Talieng	X	X
		Darktiem	Alak	X	X
Luangprabang	Phonxay	Nangoi	Khmu	X	X
		Phonthong	Khmu, Lao	X	X
Khammouane	Nongbok	Thakhek	Lao	X	X
		Sadee	Lao	X	X

26. Key informant interviews were conducted at the community level. Participants targeted were members of village committees and health centre staff from locations listed in Table 2. All KI interviews were conducted in Lao and transcripts were then translated into English by the local sub-contractors' team.

Table 2 – Key Informant Interview Matrix (14 KIIs)

Province	District	Village	Village Committees	Health Centre Staff	National
Sekong	Dakcheung	Darktrib	X	X	X ³
		Darktiem	X	X	
Luangprabang	Phonxay	Phonthong	X	X	
		Nangoi	X	X	
Khammouane	Nongbok	Thakhek	X	X	
		Sadee	X	X	

¹ Attendance of women, youth, the elderly and people living with disabilities varied within each village.

² The general population group comprised only of men aged between years 18 to 62 years old.

³ KII were conducted with stakeholders from the Disaster Committee of Lao Red Cross and MOLSW.

Focus Group Discussions – General Population Group

27. Between November and December 2022, the local team of sub-contractors and experts conducted research with the general population within three selected provinces of Lao PDR. This research was on their understanding of:
- General perspectives and views about climate change;
 - Observed and experienced impacts of climate change (weather changes) on the individual, community and health care centres;
 - Emergency/disaster situation response;
 - Previous projects and lessons learnt;
 - Possible solutions/adaptation measures and barriers to the implementation of national government policies and procedures;
 - Vulnerability to climate variability and change;
 - Participation in the final decision-making and evaluation of adaptation options
28. The purpose of the consultations was to include the voices, experiences and needs of the general population committees in the stakeholder consultations for the GCF proposal design, and determine whether there were any changes required based on the group's knowledge and perceptions of the proposal. The consultation method used was focus group discussions.
29. The summary of the general population's viewpoints is included below:
- **Terminology awareness and information:** Climate information is received from multiple sources: from the National Meteorological Department, through radio, social media (Facebook and TikTok) and Lao and Thai TV channels; social media notifications are quicker than those from the district. In addition, word-of-mouth and discussions between elders, the village speaker and the village chiefs' WhatsApp are other means of sharing information. Interestingly concerning district-level concerns regarding the accessibility of internet and cell phone-based notifications and early warning systems, Luangprabang communities mentioned the youth as a source of climate change information, especially for the middle-aged and elderly.
 - **Climate change meaning:** Overall, the predominant correlation made was with precipitation patterns, in terms of flooding and droughts. The data indicates that communities are aware of the differences between historical and current climate patterns and the links with agricultural production. They indicated changes in temperatures with the cold seasons becoming shorter and harsher, whilst the rainy season was prolonged and more intense. In the Luangprabang communities, some were unable to provide meaning.
 - **Climate change causes:** Urban expansion, factory and vegetation burning emissions and deforestation are causes of climate change according to communities. Communities in the Khammouane district, communities noted low river levels and pollution - as a result of dam construction – having negatively impacted their food security.
 - **General community impact:** In the Sekong district communities, many recalled an unpredictable natural disaster causing damage to fields, crops and homes, as well as decreasing production yields for the previous 3-4 years. Food insecurity and decreased agricultural production are ongoing issues in the communities and are forcing migration for employment – some mention working on the Paksong and Attapeu coffee plantations. The loss of yield is causing some to conduct slash-and-burn upland to expand their rice cultivation area.
 - **Individual impact:** Damaged and poor crop yield and production – down to half of the yield in some cases – has, according to the data, it is increasingly difficult to maintain livelihood connections to nature. Foraging within forests and for wild vegetables is increasing, as non-timber forest products are fewer than before.
 - **Community health facility impacts:** Thematically, water is the predominant climate change impact on the community and healthcare centre level. This concerns potable water, flooding and landslides. In the Sekong communities, climate change is considered to have only minor impacts on infrastructure, electrical and water systems caused by leaking roofs and storms – while Luangprabang stakeholders noted a loss of electricity as an impact. More significant impacts overall, however, are on the health care services such as medicine, staff, and medical equipment. As linked to the vulnerability and worry concerning the health of the vulnerable, healthcare centre access is precarious post-flooding. During the rainy season, night-time travelling to health facilities is difficult with no available vehicles. All communities highlighted flooding and the lack of capacity and resources within the local healthcare system.

- **Impacts on community health:** There is a trend of communities mentioning an increase in vector-borne disease; cases of climate change-related respiratory diseases (flu, pneumonia and coughing) and gastrointestinal diseases (diarrhoea), especially among children, pregnant women and the elderly. This is acute during the rainy season, with concerns over health centre accessibility for the vulnerable. In a few cases, contagious skin diseases (pimples or rash) have appeared following unusual weather changes or air pollution has led to “red-eyes” and cataracts. Communities mentioned non-communicable diseases as increasing amongst the elderly, especially diabetes and hypertension and, in a few cases, death due to extreme weather events – flooding or landslides – has occurred.
- **Effective communication strategies:** Communities are inclined towards relying on the radio as an effective communication strategy - noting that it was accessible for the elderly – television (the Lao and Thai TV channels) and social media (Facebook, TikTok and WhatsApp groups). In the Sekong communities, most surveyed owned cell phones with some receiving pre-disaster warnings to stay indoors. That said, the data indicates that communities in Khammouane prefer the use of the village speaker.
- **Healthcare facilities disaster/emergency response:** As a whole, the data indicates that the healthcare facilities are unprepared in terms of service facilities, medical personnel, medicine, and emergency medical equipment during disasters. Doctors are unable to provide information and health education for dealing with diseases related to climate change, nor is there public guidance on monitoring diseases or epidemics.
- **Awareness of previous climate-related projects:** Sekong communities are aware of previous projects although they felt excluded in both decision-making and maintenance training. Projects recalled were for public health with the installation of water storage systems with cisterns and wells – in the Khammouane district, communities mentioned the ‘Nam Thurn 2’ project which established 12 underground water stations - or agricultural, with the introduction of rice replacement crops and livelihood-based nut tree planting. Overall, communities found previous projects to be neither climate-resilient nor both social and material sustainable.
- **Barriers to implementation of national policies and procedures:** The data indicate that the barriers are connected to the lessons learnt from previous projects, with communities echoing project inaccessibility, and exclusion from responsibility in terms of monitoring, maintenance and management. To overcome this, communities suggest both early and continued awareness-raising and capacity-building sessions.
- **Actions to address climate change in vulnerable areas:** Communities concentrated on WASH and water systems as vital actions; including measures to ensure climate-resilient water supply systems, build a drainage system in areas prone to landslides and adequate health centres stocks of equipment and medicines. Additionally, communities suggested road quality assurance testing, “pipe-water systems” and ongoing project management and monitoring.
- **Modifications to meet adaptation plan goals:** Communities want greater top-down engagement with improved community awareness of climate change adaptation measures with an emphasis on a quick EWS and compensation for the loss.
- **Final decision-making participation:** Community leaders and village chiefs participate in the final decision-making process in evaluating options, while community members participate in encouraging others to abstain from slash-and-burn cultivation and deforestation. Other activities include building latrines and preparing for the rainy season by digging ditches and wells.
- **Vulnerability:** Areas which are near rivers, mountains and dams are considered vulnerable to climate change in the form of flash floods and landslides due to soil erosion and deforestation. Population-wise, it is children, the elderly and pregnant women who are the most vulnerable to direct health impacts of climate change –communities mentioned in terms health impacts.

Focus Group Discussions – Women and Vulnerable Persons Group

30. Between November and December 2022, the local team of sub-contractors and experts conducted research with women and vulnerable persons within the three selected provinces of Laos PDR. This research was on their understanding of:
- Observed and experienced impacts of climate change (weather changes) generally on women and health;
 - Women’s adaptation and coping strategies, as well as suggested adaptations for health care centres;
 - Climate change and health issue decision-making;
 - Emergency/disaster situation response; and,

- Possible solutions/ adaptations measures and barriers to the implementation of national government policies and procedures.
31. The purpose of the consultations was to include the voices, experiences and needs of women and vulnerable persons in the stakeholder consultations for the GCF proposal design, and determine whether there were any changes required based on the group's knowledge and perceptions of the proposal. The consultation method used was focus group discussions.
32. A summary of the women's viewpoints is included below:
- **Observed changes in climate:** Overall, communities find temperatures to be changing, with increasing temperatures in the summertime. The data indicate that women are aware of an increase in the intensity of summer storms over the past 4-5 years, with never-before-seen typhoons ('Nelu'), and increasingly persistent and intense rainfall. This has had severe impacts on agricultural production, causing food shortages and vulnerabilities. With two-thirds of Luangprabang district participating women identifying as farmers, the impacts are severe on their livelihoods and food security. As a result of climate change, families have begun migrating for employment and there have been a few instances of damage to homes, belongings and livestock.
 - **Impacts of climate change on health:** In terms of climate change impacts on health, the vulnerability of the elderly and children is evident. In particular, respiratory and gastrointestinal diseases (diarrhoea as well as dengue fever) were mentioned as increasing, with women linking child illness to climate change, such as mortality due to pneumonia during abnormally cold weather. In the Khammouane district, communities mentioned skin diseases affecting the hands and feet following flooding.
 - **Adaptations to climate change:** Women are adapting to climate change through disaster preparedness; they are cultivating a greater number of crops and sourcing alternative viable lands for replanting in the case of a disaster. They are also preparing medicines and food (pickled fish and bamboo shoots) for long-term storage. The reduction of agricultural yield is causing some to travel to cities or other provinces – with friends or family members – to seek alternative employment and income. While movement may become restricted for women during flooding, and causing delays in visiting health centres, especially for antenatal care, communities in Khammouane report moving themselves and livestock during flooding.
 - **Decision-making:** The role of women in decision-making is mixed. The data suggest that men are generally the primary decision-makers in terms of climate change and family health issues. While this role is primarily fulfilled either by their husbands or grandparents (if women live with them, they may collaborate) or the local authority, some women mentioned collaboration.
 - **Emergency situation frequency:** The communities suggest that since 2016 climate-related emergencies have increased to 2-3 per year, with those living on slopes and riverbanks at a higher risk. However, the severity and damage of these disasters range from mild-moderate, with communities still somewhat able to manage the repairs.
 - **Coping strategies:** Women are proactive with their coping strategies; some monitor the river levels or move their households and livestock to higher ground as necessary. In recalling a major disaster of 2019, women had been unaware of preparation measures but had stored essential items above water level during the disaster. Afterwards, women focused on checking for damage and restoration. In some cases, alternative sources of employment had to be found due to the severe damage to their livelihoods. Most women did not have a plan in place nor were aware of a strategy.
 - **Effective communication strategies:** The means of effective communication were mixed. In the Sekong district, communities preferred using the home telephone for announcements and noted the necessity of a warning network or signals for those living in remote areas. Social media remains (such as Facebook and WhatsApp) a convenient, accessible and speedy option for spreading information and news – as Luangprabang and Khammouane communities agreed and added using the Lao and Thai television channels and village loudspeakers.
 - **Suggested adaptations:** To successfully adapt to climate impacts, communities suggested installing a durable water system and ensuring the readiness of health centres in terms of quantity and quality. In Luangprabang, communities suggested replanting deforested areas or reducing shifting cultivation, with a few highlighting the necessity of governmental compensation for disaster victims. In terms of communication, communities suggested the village head share disaster warnings.

Key Informant Interviews – Village Committees

33. Between November and December 2022, the local team of sub-contractors and experts conducted research with village committees within the three selected provinces of Laos PDR. This research was on their understanding of:
- Existing climate impacts and a review of health care centres;
 - Responses to emergency/disaster situations;
 - Possible solutions/adaptation measures and barriers to the implementation of national government policies and procedures;
 - Feedback on interventions for the health centre;
 - Previous projects and lessons learnt;
 - Policies and Procedures from provincial/district level priority outcomes.
34. The purpose of the consultations was to include the voices, experiences and needs of the village committees in the stakeholder consultations for the GCF proposal design, and determine whether there were any changes required based on the group's knowledge and perceptions of the proposal. The consultation method used was key informant interviews.
35. The summary of the committee's viewpoints is included below:
- **Observed changes in climate:** Village committees could describe increases in the severity and duration of storms and precipitation – especially in the last 3-4 years – with rain lasting for up to a month. They find that the summer season has also become hotter and drier, to the point of damaging yields.
 - **Impacts of climate change:** Village committees have mixed experiences of climate change impacts on the individual level, being either moderate from damage to damage of crops and livestock or severe in the loss of life and increase disease occurrences. According to various stakeholders, annual household rice stocks are insufficient. On the community level, the impact is severe due to decreased rice production as a result of climate-induced damage to crops, increased pests (grasshoppers and rodents), hunger and possible displacements. The mixed intensity of impacts on the health facility and transportation also varies, with either moderate infrastructure damage or severe inaccessibility of centres and villages due to road damage and flooding.
 - **Impacts of climate change on health:** The village committees noted an increase in seasonal and respiratory diseases (pneumonia and coughs), vector-borne (malaria and rickettsia) and non-communicable diseases (diabetes, hypertension, arthritis and kidney problems). The trending vulnerability of children and the elderly was evident in the data, with cases worst during winter and unseasonably hot summers – including outbreaks of red rashes and diarrhoea. In the Khammouane district, the committees mentioned malnutrition amongst women and children which is tied to agricultural disturbances and loss.
 - **Provincial health care facilities suitability and shortcomings:** With committees in Khammouane mentioning the forced closure of health care centres due to flooding and both Sekong and Luangprabang district participants finding them ideally located, the suitability is variable. However, overarching comments include poor road quality, inadequately trained staff, insufficient medicine stocks, and infrastructure and facilities unable to cope. The water and electricity systems are also considered weak, as there is a lack of water in the well systems during the dry season and frequent power cuts during the rainy season.
 - **Expected healthcare facilities problems:** The incapacity of the healthcare staff to respond to disasters and emergencies is the primary expected climate change problem, as there is a lack of preparedness in terms of refugee centres, and backup water and electrical systems. There are fears of an outbreak of disease which could be overwhelming for these facilities, staff and medical supplies.
 - **Climate-related disasters/emergencies:** health care facilities have endured extreme weather events and natural disasters, such as strong winds, prolonged heavy rains, landslides and flooding which have damaged households and production areas. The facilities have also experienced severe lung disease prevalent in children and elderly people following this extreme weather.
 - **Health centres responsiveness:** Post-disaster responsiveness was mixed between village committees. In Sekong, participants found the staff were ill-prepared and lacked adequate equipment. In one case, the 'Helping the Survival' bag was delayed, as supported in terms of

food, drinking water and subsequent household repairs assistance. However, Khammouane committees identified the opposite in terms of receiving food and water.

- **Preparedness measures:** Committees do not consider themselves prepared for disasters. Across the districts, committees consider a lack of knowledge and protocols/guidelines as a significant barrier to the implementation of national policies and disaster preparedness. Following a disaster, support has been given in the form of rice and other dry foods, albeit delayed and in insufficient quantity.
- **Non-climate extreme events:** Understandably, COVID-19 has had a major impact on the health system and resulted in insufficient quarantine and treatment facilities for all patients. Medicines were prioritised for the elderly and those living with chronic diseases.
- **Possible solutions/adaptations:** The establishment of a reserve of medicine and medical equipment, as well as the adequately prepared and trained staff who can treat and manage epidemics. To encourage community involvement in dealing with climate change, some suggested improved information sharing, offering pieces of training and the mobilisation of communities within adaptation measures. A mobile health team could, as suggested by Luangprabang committees, support disaster management.
- **Local-level barriers to national policy implementation:** Village committees find a lack of information, guidance and resources are preventing national policy implementation. Communities in Sekong found the prevalent issue to be a lack of climate-resilient infrastructure and sufficient medical equipment as barriers to the implementation of national policy, as well as the lack of an asylum centre. Additionally, the lack of a reserve budget for emergencies is a hindrance.
- **Overcoming barriers:** Overall committees consider information sharing, the preparation of guidelines and materials, and multi-sector collaboration as necessary for disaster preparedness, with necessary encouragement for community participation in planning and decision-making.

36. Feedback on health centre interventions

- All suggested health centre interventions are considered 'very useful' with minimal additional comments; some committee members suggested that communities be involved in developing the early warning system; the 'wise use' of the national budget in conducting a review of procurement policies and building regulations and, of the necessity of improving store management to reduce medicine waste.
- Some participants considered "assess the climate vulnerability of health-care facilities throughout the national health system, and prepare, fund and implement corrective measures" as of average importance; "ensure that health-care facilities have contingency plans and/or mutual aid agreements for operations under emergency conditions" as slightly important with a necessity of mutually agreed response plan.
- **Proposed interventions:** Additions include a call for training on climate-resilient agriculture and rice replacement crops and, on processing food for long-term storage. Village committees were not aware of climate-related projects but suggested general lessons learnt in terms of ensuring community involvement and engagement, as well as the provision of training on maintenance and assurance of management.

37. Policies and Procedures from National Government and Application at the Local Level

- None of the village committee members was aware of any current or planned policies and programs, had no experience in risk assessment participation and had no knowledge of priority 'climate-sensitive' health outcomes.
- Lessons learnt include the necessity of regular awareness-raising for communities and the need for long-term sustainability through long-term monitoring and support.

38. Priority 'climate-sensitive' health outcomes of concern nationally

- **For stakeholders, the public and policymakers:** Healthcare is a predominant concern for stakeholders, the public and policymakers. In particular, maternal and child health are highlighted, especially in light of the outbreak of seasonal diseases.
- **In the target provinces:** the data indicates that village committees are not aware of any climate-sensitive health outcomes for stakeholders, the public and policymakers.

39. Efficacy of programs and policies

- The monitoring of the efficacy of policy or programs with increasing temperatures and variable precipitation is considered necessary and 'very useful', especially in supporting follow-up activities, disease monitoring and disaster preparation.
- Stakeholders consider the efficacy of policies or programs in monitoring sea-level rise to be 'moderately useful' as underpinned by the belief that sea-level rises can cause heavy rains, cold weather and livestock damage, despite Lao PDR being landlocked.

Key Informant Interviews – Health Centre Staff

40. Between November and December 2022, the local team of sub-contractors and experts conducted research with health centre staff within the three selected provinces of Laos PDR. This research was on their understanding of:
- Existing climate impacts and a review of health care centres;
 - Responses to emergency/disaster situations response;
 - Possible solutions/ adaptations measures and barriers to the implementation of national government policies and procedures;
 - Feedback on interventions for the health centre;
 - Previous projects and lessons learnt;
 - Policies and procedures from provincial/district level priority outcomes.
41. The purpose of the consultations was to include the voices, experiences and needs of the health centre staff in the stakeholder consultations for the GCF proposal design, and determine whether there were any changes required based on the group's knowledge and perceptions of the proposal. The consultation method used was key informant interviews.
42. The summary of the health centre staff's viewpoints is included below:
- **Observed changes in climate and impacts:** Staff are aware of noticeable weather changes, which are increasingly intense with prolonged storms and rains, whilst dry seasons are becoming hotter. As such, observable severe impacts are evident on both the individual and household levels, with a loss of agricultural production and livestock life. On a community level, these impacts are causing food shortages - prompting forced migration for employment – with further impacts mentioned as the outbreak of dengue fever and mosquitos.
 - **Impacts of climate change on health facilities:** In the Sekong Province, the health centres were slight to moderately impacted as these lacked water systems and, in some instances, roofing. Staff find that communities struggle to travel to these centres following heavy rains and floods due to poor road quality.
 - **General impact on health:** While the data indicates that staff find children and the elderly to be the most vulnerable, a general health impact of climate change is an increased occurrence of respiratory diseases (especially wintertime lung diseases, flu, pneumonia and coughing), and diarrhoea, associated with summertime and rain. Disease outbreak (lung disease and dengue fever) is considered a climate-related emergency/disaster situation, as are blocked transportation routes due to flooding and landslides.
 - **Provincial health care facility suitability and shortcomings:** The data indicate that staff overall find centres to have mixed suitability; staff in Sekong found centres to be moderately suitable due to their ideal location. Nevertheless, they agreed with the staff from Luangprabang and Khammouane that centres lack sufficient medication supplies, equipment, resilient infrastructure (leaking roofs), an effective WASH (as in a working water system and latrines) and electricity systems. These are all considered expected problems, for medical personnel to cope with climate change or disease outbreaks.
 - **Health centre's responsiveness:** While the centres lack the personnel, medicine and medical equipment necessary to respond to disasters, the Department of Health's notification system was delayed in reaching remote villages that are without internet signal.
 - **Preparedness measures:** In Sekong, staff were unaware of any provincial or district-level preparedness measures, meanwhile Khammouane was able to recall announcements from the District Health Office, suggesting that the use of the village speaker in spreading information is popular.

- **Non-climate extreme events:** As expected, staff find that COVID-19 revealed the shortcomings of the health system in handling an epidemic outbreak, with inadequate quarantine spaces and medicine. A limited budget for the mobile outreach team, cramped space, lack of latrines or running water and overworked staff are additionally impacting health centres.
- **Possible solutions/adaptations:** All staff suggested that health care centres be stocked with a sufficient reserve of medicine and medical equipment, as well as information sharing and capacity-building measures within the community.
- **Local-level barriers to national policy implementation:** The primary obstacle in implementing the district's policies and procedures is the absence of a uniform climate change response and preparedness manual, intricately linked to the lack of advocacy, effective communication and engagement with local communities. Other communication difficulties mentioned are the inaccessibility of remote villages which are without cell phones and internet signals. In Khammouane, staff suggested a lack of informed leadership – a continuation of previous mentions.
- **Overcoming barriers:** In considering the barriers, staff suggested training and awareness raising, as well as the dissemination of climate change information through various communication strategies and channels to prepare the public.

43. Feedback on health centre interventions

- While most health centre interventions were considered 'very useful' for the health care centre staff; the assessment of climate vulnerability should be budgeted for immediately.
- **Healthcare facility contingency plans:** Both contingency plans and/or mutual aid agreements are considered 'very useful', but there are concerns over the necessity of community cooperation in financing this, as the community does not have the budget available.
- **Health sector procurement:** The review of the procurement policies is 'very useful' for shortening supply chains, favouring reusable supplies and equipment as well as a wise use of the national budget.
- **Electricity supplier coordination:** A strengthened and climate-resilient electricity supply, as well as backup power, solar cells and a storage device, are 'very useful' for healthcare facilities, which often experience power cuts during storms.
- **Proposed interventions:** In proposing interventions, staff continued the trend of capacity-building, recommending training sessions on alternative crops as particularly beneficial.
- **Climate-related project awareness:** Health care centre staff were only aware of projects related to water and agriculture. From this, lessons learnt echo those of other stakeholders in that unsuccessful projects lack community participation and engagement.

44. Policies and Procedures from National Government and Application at the Local Level

- All health care centre staff surveyed were unaware of any policies and programs from the national level, had no experience of participation in risk assessments and had no knowledge of priority 'climate-sensitive' health outcomes for stakeholders, the public or policymakers including across target provinces.

45. Efficacy of programs and policies

- All mentioned interventions are considered 'very useful'.

Appendix A: National Validation Engagement 17th of November 2022

Table 3 - Activities and Discussion National Validation Engagement 17th of November 2022

Activities	Discussion
Review of proposed project activities	<p>Component 1. Climate-resilient health systems leadership and governance</p> <ul style="list-style-type: none"> • A suggestion was that this component focuses on implementing the upcoming health national adaptation plan (H-NAP) and to drive capacity-building via this. • Stakeholder wanted the remit of included partners to be broadened (Activity 1.1.1). • General agreement with the activities, with alterations suggested in the form of

	<p>broadening the remit of included partners and for greater collaboration between sectors and parties</p> <ul style="list-style-type: none"> • An overall necessity for collaboration between sectors and organisations within implementation, the development of strategies and policies and within the dissemination of guidelines and handbooks • Critical need to develop a “technical standard” of climate-resiliency and within healthcare facilities/centres, as well as and inclusion of climate-change measures within construction standards.
	<p><u>Component 2: Health information systems are improved to include climate and weather data to track, prepare for, and reduce climate-related risks to health</u></p> <ul style="list-style-type: none"> • All participants agree to extend the DHIS2 system and that there was a need to integrate WASH data – as suggested, staff will need to be trained hereon and there are concerns over a lack of collaboration between departments. • Stakeholders were confused as to Activity 2.1.1 as they did not consider the national accreditation of the commodity of health facilities to be linked to the health information system. • Some participants are confused with the integration of diseases into DHIS2 (Activity 2.1.1) and suggested to rather include data on diseases, Particulate Matter (PM) 2.5, rainfall, humidity and heatwaves. • Some participants were confused with Activity 2.1.2, as they did not find it is related to Health Management Information System (HMIS). The WHO representative suggested removing it, and the accreditation could either link to a standard or be integrated into Component 3. • Some stakeholders commented on Activity 2.2.1 as the basis of all components - ideally that an advanced notification or warning system - and that information related to climate change should be included in the data reporting system. • MOLSW suggested linking the DHIS2 system to the Lao Disaster Information (LaoDI). • Several organisations are able to provide climate data (Department of Meteorology, MONROE and World Meteorological Organisation (WMO) and the Department of Planning has an existing Module Map/GIS tool showing climate changes in Lao which could be linked to seasonal diseases. Staff will need to be trained, but no purchases are necessary. • The DMH has climate information available but requires a mechanism to link it with the DHIS2. • MONROE representatives suggested developing a weather warning system. • Participants suggest using SMS notifications to reach communities. • WHO has an EWS under development - which includes diseases surveillance software - and is willing to support the project with more information. They suggest developing this from component 1 and 2.
	<p><u>Component 3. Health service delivery in rural provinces is improved and able to manage climate-related disease burden and determinants of health</u></p> <ul style="list-style-type: none"> • All stakeholders agree on the need for capacity building and training for health workers to diagnose and treat climate-driven health problems. In particular, the Department of Health Care supports Activity 3.1.1 in developing or adapting relevant guidelines. • Both the WHO and MOLSW stakeholders highlighted the responsibility and potential of community-level health workers, with the suggestion to focus on their capacity building and training. • All stakeholders agreed on developing guidelines on reducing the impacts of climate change on health, tailored for health centre, district and provincial levels. • The feedback on conducting assessments to inform and improve infrastructure was positively received, with stakeholders concerns over water quality and waste and a “weakness” due to insufficient water treatment systems. • Health centre mapping, risk assessments and construction standards were again suggested, in relation to Activity 3.2.2 to prioritise improving health care centres

	<p>according to a low-to-high risk grading system.</p> <ul style="list-style-type: none"> • The WHO stakeholder mentioned the isolation communities experience during flooding and suggested an outreach mobile clinic for disaster periods (Activity 3.2.2). • All stakeholders acknowledge the need for an electricity and water supply which is climate change resilient – and associated mapping and prioritisation – and the importance of maintenance. • Specifically, LRC and MOLSW suggested installing backup generators and both electrical and solar power systems. • All stakeholders stressed the necessity of improving the water and sanitation systems of health care facilities, both drinkable and domestic. • Stakeholders consider multi-sector involvement and collaboration necessary to the functionality and quality of health care facilities. • One stakeholder suggested separating the community-led initiative level activities from Component 3, so as to separately have an assessment on the WASH or non-WASH infrastructure. Their suggestions overall are: <ul style="list-style-type: none"> - Component 1 on a national level; - Component 2 on new EWS; - Component 3 on health care facility infrastructure and technical support; - Component 4 on community and health centre level implementation. <p><u>Component 4: Communities are engaged, informed, and motivated to respond to early warnings, manage and mitigate risk, and seek care appropriately</u></p> <ul style="list-style-type: none"> • All participants agreed to increase the knowledge of communities, their ownership and involvement in relation to climate change, its impact on health and to encourage their participation in mitigation measures. To do some, suggested establishing a health education centre. • The recommendation is that health promotion units need capacity building, to produce print media and should conduct a public awareness campaign on the impact of climate change on health.
<p>Lessons Learnt from Previous Projects</p>	<p>While this is the first project connecting climate change to health that participants are aware of, they were aware of small projects related to climate change and health:</p> <ul style="list-style-type: none"> • Project to improve water, sanitation, hygiene and environmental friendliness to improve climate change resilience • Building the capacity of public sector employees to adapt to climate change • WASHfit at the health facilities • Hygiene, sanitation and climate change project • Food safety and climate change • Disease surveillance and climate change • WASH projects supported by UNICEF, ADB and FAO <p>Overall participants agreed that the first priority for them is governance and leadership, followed by public health information and disaster warning systems. Furthermore, they suggested that activities be ranked in line with the policy of the government, MOH and MOLSW.</p>

Appendix B: Provincial Validation Workshops 23rd – 25th November 2022

Representatives were questioned - similarly to the healthcare centre staff and village committees - on their experiences of climate change impacts, the suitability and capabilities of healthcare centres and suggested possible adaptations, solutions and barriers to successful policy implementation. The main findings are found below.

- **Observed changes in climate and impacts:** Irregular and increasingly intense rainfall coincides with prolonged cold and dry seasons, with negative impacts on crops and livestock. As a result of the changing climates, stakeholders have noticed that vulnerable groups – the elderly,

children and mothers – are experiencing regular respiratory diseases, pneumonia and malnutrition. Malnutrition, in the Luangprabang Province, is attributed to lowered crop yield, food shortages (including meat) and droughts.

- **Community-level climate change impacts:** On a community level, representatives are aware of disease outbreaks following natural disasters and climate change affecting economic well-being and livelihoods with a loss in tourism-related income and rice shortages. In some instances, communities are unable to travel to healthcare centres during the rainy season, an issue which is expected to worsen.
- **Healthcare centres:** in terms of healthcare facilities, representatives consider water shortages an impact of climate change and that the centres were often overcrowded – especially during epidemics and following disasters – and had human resources, medicine and medical equipment shortages. In Luangprabang Province, healthcare centres are staffed by contractual or volunteer staff which accounts for poor training and knowledge.
- **Adaptations and solutions:** to improve the competency of healthcare centres, representatives suggest awareness-raising amongst local people, the installation of backup solar power systems, an early disaster warning system, sufficient medical supplies and, in one case, the construction of a reservoir.

Representatives were then presented with the proposed project activities for feedback, commentary and discussion. The main findings and insights are as follows:

Table 4 - Detailed feedback on activities from Luangprabang, Khammouane and Sekong Province Workshops, 23rd, 24th and 25th of November 2022

Luangprabang Province	
Activities	Discussion
Review of proposed project activities	<u>Component 1. Climate-resilient health systems leadership and governance</u> <ul style="list-style-type: none"> • All stakeholders agreed with the Activity 1.1.1 and emphasised the provision of training at the village level, with leaders who could then share information with their community. • In agreeing with Activity 1.1.2, stakeholders commented that the development of sections should be aligned with the relevant government department, other stakeholders and possibly private partners. • Stakeholders mentioned the need to conduct WASH assessments on water sources, such as underground water.
	<u>Component 2. Health information systems are improved to include climate and weather data to track, prepare for, and reduce climate-related risks to health</u> <ul style="list-style-type: none"> • Some stakeholders –from MONRE and the natural resources group – were unaware of the DHIS2 system but agreed to improve access hereto and encouraged cooperation. Some were in favour of the use of traditional methods, such as brochures and village loudspeakers. • Natural resources stakeholders mentioned their plans to build a meteorology station and water measurement system in the Luangprabang districts. • In relation to Activity 2.2.1, stakeholders encouraged including training in commodities management for the district health facilities.
	<u>Component 3. Health service delivery in rural provinces is improved and able to manage climate-related disease burden and determinants of health</u> <ul style="list-style-type: none"> • All stakeholders agreed on the need to provide training for community health staff regarding responding and treating climate change related diseases; Activity 3.1.3 was particular well-responded to, with stakeholders suggested radio advertising, and a collaboration between the Department of Health bi-weekly "Good to listen to health information" show and the Department of Natural Resources and Environment

	<p>"Environment-friendly collaborative program", as well as via local television.</p> <ul style="list-style-type: none"> • MONRE was particularly responsive to this component, recalling previous difficulties with untrained staff in disaster situations. • Most stakeholders agreed with the need to install solar power plants (Activity 3.2.3), especially in rural, remote areas such as Pak Shan District and Phonxay District. Furthermore, they encouraged the expansion of the electricity grid system to reach all regions and some suggested prioritizing the health facilities when installing PV power systems. Stakeholders also mentioned the need for a dedicated installation, maintenance and repair team. • Some stakeholders agreed to establish WASH systems in villages and highlighted the need for this at health service facilities and especially toilets with running water and a water reservoir for use during drought periods.
	<p><u>Component 4: Communities are engaged, informed, and motivated to respond to early warnings, manage and mitigate risk, and seek care appropriately</u></p> <ul style="list-style-type: none"> • Stakeholders are in favour of multiple warning systems, such as WhatsApp, a social network or the use of the village loudspeaker system. • In regard to training (Activity 4.1.1), some suggested encouraging a cascade effect: the training should begin between the central and provincial level, with the provinces training the district, the district the village and finally the village as responsible for dissemination and advertising. This is informed by a previous project, the "Project for Community Participation and Joint Development" which trained and equipped villages to manage advertising, health education and disaster response. • While no cell phone or Internet signal issues were mentioned, stakeholders noted that remote regions can be reached via a village phone and mobile landline number (by dialling 030).
Lessons Learnt	While stakeholders were unaware of previous climate-related projects, they mentioned the burden relief following disasters – hosted by the MOLSW – in which they learnt the value of multi-sectoral collaboration and shared ownership with community participation.
Khammouane Province	
Activities	Discussion
Review of proposed project activities	<p><u>Component 1. Climate-resilient health systems leadership and governance</u></p> <ul style="list-style-type: none"> • All stakeholders agreed with the proposed activities. • Stakeholders concurred with using a cascading effect to apply the standard from the national through to the local health centre level. • The stakeholders from the Department of Natural Resources and Environment commented on the use of "senior" (Activity 1.1.1) as this connotes retirement in-country. • Stakeholders from the health group commented on Activity 1.1.4, that in addition to the standardization of WASH, that Infection, Prevention and Control (IPC) should be implemented to ensure the water quality. • Other stakeholders suggested adding "those who have the highest decision-making power at the national, provincial and district levels" to this component, with a responsible committee of senior leadership from all ministries. While another recommended adjusting it to read "senior officials of provinces and districts".

	<ul style="list-style-type: none"> Stakeholders agreed to apply the mentioned standards in a cascade top-down approach.
	<p><u>Component 2: Health information systems are improved to include climate and weather data to track, prepare for, and reduce climate-related risks to health</u></p> <ul style="list-style-type: none"> The suggestion to expand the DHIS2 system was agreed upon by all stakeholders, with an emphasis on applying this at the local level and encouraging collaboration between, Environment and Climate Change Information Exchange with MOH. There is, according to stakeholders, a lack of medical commodity management as required during disasters and an indicator is required for commodity management and monitoring (Activity 2.1.2). Stakeholders required greater clarity on the indicators to be used. Stakeholders indicated concern regarding information and data sharing between governmental departments.
	<p><u>Component 3: Health service delivery in rural provinces is improved and able to manage climate-related disease burden and determinants of health</u></p> <ul style="list-style-type: none"> All stakeholders agreed on the need to provide training for community health staff regarding responding and treating climate change related diseases; Activity 3.1.3 was particular well-responded to. In installing PV power systems, stakeholders suggested creating a team to be responsible for installation, maintenance and repair. In strengthening the capacity of MOH, Nam Saat, and private sector partners (Activity 3.2.5), they will then have to operate and track the quality of health infrastructure.
	<p><u>Component 4: Communities are engaged, informed, and motivated to respond to early warnings, manage and mitigate risk, and seek care appropriately</u></p> <ul style="list-style-type: none"> All agreed with the suggested activities without commentary on internet or cell phone signal issues or a working technological knowledge. In regard to Activity 4.1.2, stakeholders suggested that the website include Regarding activity 4.1.2, the website should include information relevant to climate change, health and diseases; they mentioned that posters and brochures remain the most popular method for disseminating information in communities.
Lessons Learnt	Stakeholders were not aware of previous health-related projects. They were able to recall provincial "trainings for trainers" sessions in 2001, and in 2011 a disaster warning system training.
Sekong Province	
Activities	Discussion
Review of proposed project activities	<p><u>Component 1: Climate-resilient health systems leadership and governance</u></p> <ul style="list-style-type: none"> All stakeholders found the proposed activities to support the climate-resilient health system leadership and governance very important. Greater clarity was needed on how the capacity building for senior staff would be undertaken and how often. In regard to Activity 1.1.1, stakeholders suggested adding "those who have the highest decision-making power at the national, provincial and district levels", while another recommended adjusting it to read "senior officials of provinces and districts". Stakeholders suggested developing an overseeing committee of senior leadership representing all ministries. Additional edits were recommended to Activity 1.1.2, that "with senior health workers" be changed to "having committees at the

	<p>national (central), provincial and district levels".</p> <ul style="list-style-type: none"> • The proposed dissemination of handbooks in dealing with climate change and health related to climate change. • needs a managing organisation and should develop and emergency situation handbook for employees and communities. <p><u>Component 2: Health information systems are improved to include climate and weather data to track, prepare for, and reduce climate-related risks to health</u></p> <ul style="list-style-type: none"> • The suggestion to expand the DHIS2 system was agreed upon by all stakeholders, with the suggestion for real-time data to compare temperature and rainfall data with seasonal diseases (malaria or diarrhoea) and monthly/quarterly overview summary reports – and quarterly reporting to the Provincial Disaster Committee. • Stakeholder noted an issue of accessibility in regard to extending the DHIS2 system - as it currently requires a user ID generated by the Department of Planning - and suggested open access. • Prior to Activity 2.2.1, stakeholders suggest including an activity related to improving capacity to health staff and related sector on EWS with monitored diseases listed and defined. • Activity 2.2.1 should include ““Survey health care facilities structure” prior to mentioning “develop the certification program for the certification of health service facilities that meet the standards and requirements for the management of materials and facilities according to the standards of the Ministry of Health of Laos” <p><u>Component 3. Health service delivery in rural provinces is improved and able to manage climate-related disease burden and determinants of health</u></p> <ul style="list-style-type: none"> • All stakeholders agreed on the need to provide training for community health staff on responding to and treating climate change related diseases. • Greater detail was required for Activity 3.2.1 with some confusion on what it would achieve. <p><u>Component 4: Communities are engaged, informed, and motivated to respond to early warnings, manage and mitigate risk, and seek care appropriately</u></p> <ul style="list-style-type: none"> • Stakeholders suggested developing multiple warning systems, such as using WhatsApp or social networks, to inform each representative of the sector or core person in the community. • While agreed upon as the best policy for implementation, stakeholders were concerned about community participation in Activity 4.1.1, suggesting incentives, generous remuneration and regular training along with monitoring and encouragement from the district and provincial levels could encourage engagement. • Overall stakeholders were supportive of Activity 4.1.2 but were concerned about the lack of internet signal, access to and ability to use a cell phone or smartphone. The recommendation is that this should be implemented at a district and provincial level with the relevant staff, before being expanded to the community level with a training unit.
Lessons Learnt	<p>Stakeholders mentioned a previous project which was not directly related to climate change, but to health and food security; a MOH project focused on agriculture and nutrition and, a Strength Based Community Change (SBCC) program for the integration of social behaviour change and nutrition.</p>

Appendix C: District Stakeholders Validation workshops, 23rd, 24th and 25th of November 2022

Main findings from Phonxay workshop

- **Observed changes in climate:** Participants have observed increased flooding and drought in the previous 2-3 years, with recurring flooding during July and August in Paknga, Huaijia, Huaman and Thapho areas. Conversely, droughts occur in April and May and landslides are more frequent, both of which damage the community economically via damage to crops, infrastructure and livestock. During this season water resources are limited and of poor quality - especially in the Phonxay District which relies on the river – and rural areas are especially affected, with subsequent high cases of gastro-intestinal illness and problems.
- **Individual and community climate change impacts:** As indicated through the data, women, children, and the elderly are considered most vulnerable to seasonal and climate change-related diseases, especially pneumonia, colds, diarrhoea, various allergies, dengue fever and skin disorders. A few participants noted the destruction and damage to households and livestock, with reverberating socio-economic impacts due to the loss of natural resources, livelihood resources and agricultural production.
- **Healthcare centres suitability:** While most participants found the location of the healthcare centres to be moderately suitable, it is during EWEs that patients have been cut-off from local health centres; during the rainy season and as a result of landslides, these centres lose electricity (and do not own generators). Some have low water quality following disasters and experience a sharp increase in epidemic outbreaks. This contributes to the inability of centres to respond to disaster situations and related disease outbreaks, as does a personnel and medical supply shortage. Representatives were able to recall an infant fatality, in 2021, during a flood.
- **Possible solutions/adaptations for provincial health care facilities in handling climate-related impacts:** Considering infant mortality and the general vulnerability of pregnant women and babies, representatives suggested a rainy season maternity plan be introduced, upgrading the infrastructure, the use of backup solar system installation at healthcare centres, development of a warning system and establishment of a village disaster fund.

Main Findings from Dakcheung workshop

- **Observed changes in climate:** Participants are aware of increasingly intense storms, prolonged precipitation and rising summer temperatures, the latter of which has a particularly negative impact on both households and human life. Participants can trace changes in historical weather patterns, with mixed comments on the season-ending between September – November (as opposed to July and August).
- **Climate change impacts:** Participants can link changes in weather patterns with highlighted an increased occurrence of respiratory disease (pneumonia and cold), allergies (apparently due to increased dust) and a novel outbreak of both dengue fever and malaria, all acute amongst the elderly and children. Other associated and obvious impacts are on food security and livelihoods (selling of rice, potatoes and pineapples), with EWEs (flooding in particular) linked to decreased agricultural production and yield as well as damage to livestock. As a result, communities are increasingly foraging in nearby forests and reducing the stocks of natural resources. On a community level, damage to households and the water system (irrigation and wells). Participants can recall a storm in September 2022, 'Nolu', which caused extensive damage across the community, with an outbreak of communicable diseases and damage to the water system.
- **Healthcare centres suitability:** While participants consider the impacts of climate change on healthcare facilities to be small to moderate, the impact on the electrical and water systems is found to be severe. Although participants consider the locations of the centres to be suitable – in that these are not near rivers – accessibility is an issue due to landslides. Furthermore, neither the electrical nor water system is considered climate resilient as both are lost during EWEs, with complications for sterilisation. Participants additionally highlighted the necessity of adequately trained and prepared staff, medical supplies and equipment. As such, participants suggest updating the MOH standards for centres to be more climate resilient.
- **Expected climate change problems:** Participants anticipate that healthcare centres will experience an increase in the outbreak and occurrence of infectious diseases (such as dengue fever) and think that neither the staff, medical resources nor infrastructure to handle such outbreaks.

- **Possible solutions/adaptations for provincial health care facilities in handling climate-related impacts:** Participants were in favour of developing a “health and disaster” early warning system, updating infrastructure to be more climate-resilient and durable (water, electrical and patient transportation systems) with a suggested implementation of renewable energy and paved roads. Another suggested adaptation is to extend the telephone and internet networks to cover all villages.

Main Findings from Nongbok workshop

- **Observed changes in climate:** All participants are aware of increasing global temperatures and can equate this to local experiences of prolonged droughts, heavy rains and flooding, frequent occurrence of strong winds and tropical cyclones.
- **Health impact of climate change:** The primary impact of climate change is on health, according to the participants; all highlighted increased outbreaks of vector and food-borne diseases (dengue fever, diarrhoea and dysentery); respiratory diseases (coughs and colds) and skin rashes and infections. In addition, the health sector contributed that there has been an increase in non-communicable diseases (kidney issues, hypertension, diabetes and arthritis) amongst the elderly. As expected, the health sector concurred that this group, pregnant women and children are most vulnerable to these health impacts. In addition, all participants mentioned the impacts on animal health, with contagious diseases spreading amongst chickens, ducks and cattle.
- **Individual and community-level impacts of climate change:** Participants find associated impacts on behaviour, livelihoods and health as significant. This is directly related to the impacts of climate change on agriculture, with poor production of rice and sugar cane. Women are particularly impacted, in terms of food security with fewer natural resources available for harvest. Overall, in communities, there is a socio-economic impact, as all groups suggested that the individual has an increased cost of living, whether due to the costs of health treatments or electrical bills. This is also observable in terms of unemployment, which is increasing especially among immigrant workers in rural areas. Across the board, all participants mentioned extensive infrastructure impacts as landslides, flooding, storms, heavy rains and earthquakes are increasing. As a result, community health is deteriorating.
- **Healthcare centres suitability:** The health sector group consider the locations of the provincial hospital as suitable but echo the necessity of upgrading the medical equipment (especially the CT scanners and MRIs). The participants noted that the provincial hospital is preferred to the district hospital (considered *Category B* in having limited-service options) – despite the proximity between the two – as it has a greater range of services and medical equipment available and upgraded infrastructure. Nevertheless, this group noted a lack of sufficient medical equipment and supplies and human resources - in particular, surgeons and psychiatrists. All participants commented on the necessity of training for all healthcare staff, especially in terms of disaster preparedness. As a result, the health sector group would like to see district hospitals shifted to *Category A* - by implementing climate-resilient renovations and upgrades – although they acknowledge a lack of funding. Both groups have observed a loss of accessibility to health centres during flooding and heavy rains and a lack of appropriate vehicles, thus suggesting upgrading all roads to be climate-resilient roads with adequate drainage systems.
- **Expected climate change problems:** All participants expect that the issues of insufficient medical resources and supplies, a lack of adequately trained and prepared staff and flooding causing closures will be exacerbated by ongoing climate change.
- **Possible solutions/adaptations for provincial healthcare facilities in handling climate-related impacts:** Participants stress the necessity of strengthening the capacity of healthcare staff in responding to climate-change-induced health issues, linked to the suggestion of establishing a managing committee. Meanwhile, the natural environment and disaster group participants suggested relocating health centres to avoid flooding risks.

Detailed feedback on the activities is presented in Table 5 below

Table 5 - Detailed feedback on activities from Phonxay, Nongbok and Dakcheung Workshops 23rd, 24th and 25th of November 2022

Phonxay District	
Activities	Discussion
Review of proposed	Component 1. Climate-resilient health systems leadership and governance

project activities	<ul style="list-style-type: none"> • All participants found those activities which support climate-resilient health system leadership and governance to be very important – and the especial need for the involvement of senior officials on a local-level. • All stakeholders agree with Activity 1.1.1 and commented that the public health policy must bring climate change into it by including the comments of local people at the district and village group levels, the authorities at each village level. • Stakeholders emphasized the need to set up a local official unit for climate change and disasters, for multi- stakeholders collaboration and to ensure continuous service access, especially to maternal health access. In addition, any policy adjustments (including health policy) requires the participation of multiple relevant sectors. • Regarding improving the water system (Activity 1.1.4), stakeholders also suggested using vehicles to provide drinking water services for the villages, and to continue advertising the need to drink safe or boiled water.
	<p><u>Component 2: Health information systems are improved to include climate and weather data to track, prepare for, and reduce climate-related risks to health</u></p> <ul style="list-style-type: none"> • Stakeholders were not aware of DHIS2 (Activity 2.1.1) – especially the MONRE representatives – and commented on the need to integrate climate change data. Stakeholders suggested coordination between sectors and highlighted plans for a meteorological and hydrological station behind the district resource office building and to build a water level measuring instrument the at the fishing area in Pak Nga Village and the Sopchia area. • In regards the expanding the system, one stakeholder suggested including alerts for power outages, water supply systems and landslides. Stakeholders were in favour of a daily top-down notification system, with a focus on advanced notifications of heavy rains and flooding. • In relation to Activity 2.1.2, some stakeholders mentioned developing a national accreditation program, including regulations of utilization of medical commodities, starting from procurement of good quality medical commodity and instruction for use. • Stakeholders suggested installing external PV solar lighting around the health care facilities.
	<p><u>Component 3. Health service delivery in rural provinces is improved and able to manage climate-related disease burden and determinants of health</u></p> <ul style="list-style-type: none"> • All stakeholders agreed on strengthening the preventative community health services among staff (Activity 3.1.1). In particular, training should be to provide treatments and counselling to those vulnerable groups who are especially climate-sensitive, such as the elderly, children, those with disabilities and those unable to travel to the health facilities. • The guidelines should be easily understandable, short and relevant staff should be trained and then could disseminate information to the community. • Stakeholders responded positively to suggestions for assessments (Activity 3.2.1), with particular attention required for the water waste and waste disposal systems. This involves water treatment and proper waste disposal. • The natural resource sector agreed to have an environmental impact assessment (EIA) conducted on the health facilities, using their guidelines and advice. • Stakeholders were agreeable on improving infrastructure, and to consider expanding the health centre building to meet the high patient demand when there is a disease outbreak. • All participants agreed to install a solar power generation system at the health centres, both as a main and backup system (Activity 3.2.3). They would like to suggest offering to buy an oil-powered generator for the health centres as a backup, due to concerns over the capabilities of a solar energy system after a dark day with heavy rain. • Stakeholders were inclined to improving the clean water system at the health centres and other health service facilities both during before and during disasters.
	<p><u>Component 4: Communities are engaged, informed, and motivated to respond to early</u></p>

	<p>warnings, manage and mitigate risk, and seek care appropriately</p> <ul style="list-style-type: none"> All stakeholders agreed on promoting and strengthening the community participation for climate change and health (Activity 4.1.1). They mentioned a previous similar activity, the 2018 Children's Aid Program disaster risk reduction project. Health centre experts trained the province on creating a disaster risk diagram and mapping the villages resources through locating the water source, protected forest area, safe and meeting areas using a colour coding system (red, yellow and green). Stakeholders also suggested that multiple sectors be involved in spreading climate change information and raising awareness among villagers. While stakeholders agreed to create a phone app for climate change alerts, they raised the issue of some villages lacking no internet and phone signal. For these villages, the stakeholders requested that telecommunications companies facilitate expanding the signal to all regions.
Lessons Learnt	<ul style="list-style-type: none"> The natural resources sector shared their experience of previous project in 2019 wherein smartphones were provided with internet to 10 village groups to report the incidents of disasters on an installed system. This project and system is no longer operational. This lesson learnt could be applied in the health sector. A 2016 – 2017 Japanese trial project using tablets – between 7 or 10 tablets – for online warnings with local MONRE staff. This was unsustainable and the tablets have broken. The previous promotion of novel agriculture plant grass species for commerce use with negative impacts such as loss of trees and soil erosion. The trees are now being replanted. MONRE mentioning trying to conserve the zone for agriculture and forests.
Nongbok District	
Activities	Discussion
Review of proposed project activities	<p><u>Component 1. Climate-resilient health systems leadership and governance</u></p> <ul style="list-style-type: none"> Both the health and the natural resource and environment group agreed with all activities of the component, claiming the importance of strengthening the capabilities of senior officials to support more effective and convenient implementation for the technical team. All participants agreed with Activity 1.1.1 and added that an updated public health regulation should follow suggestions for mitigating the effects of climate change and will be used as reference for the implementation stage. All components of each stage - including the quarterly public health lessons learns - must be taken into consideration in coherence with climate health issue to revise the guidelines for climate change resilient adaptation. All participants agreed on Activity 1.1.4 and the natural environment and disaster sectors added a recommendation of a construction material standard and monitoring while before, during and after building. The health sector group noted previous experiences during the Nam Thun Dam 2 project which had offered 12 filtration wells for the Sadeu community but lacked maintenance and monitoring post-construction. As a result, few of used due to dirty or toxic chemical water. <p><u>Component 2: Health information systems are improved to include climate and weather data to track, prepare for, and reduce climate-related risks to health</u></p> <ul style="list-style-type: none"> All participants agreed with the expansion of the DHIS2 system (Activity 2.1.1). However, the health sector highlighted the main purpose of establishing the system as in preparation to manage disease outbreaks. The natural environment and disaster group commented that coverage should include non-health sectors. Stakeholders consider training vital to Activity 2.1.1, and there is a need to increase the efficiency of communication and monitoring of climate change and health.

	<p>Currently, the Nongbok meteorological unit reports daily weather and rainfall, which its reported to the Ministry of Natural Environment and Disaster daily via a WhatsApp group.</p> <ul style="list-style-type: none"> • While all stakeholders agreed with Activity 2.1.2, there were comments on the approval and verification of the development plan and management of materials and health facilities. Concerns were raised on the impact of smell, sound, etc, on communities. Stakeholders were confused as the activity referred to the construction materials, not the accreditation program's commodity management. • In terms of Activity 2.2.1, all participants agreed on improving access to the DHIS2 system at each level of public health, especially the disaster warning system. Currently, health surveillance monitors infectious diseases and covid in 18 national programs. However, there is no EWS for information on diseases related to climate change. The natural environment and disaster group commented on the need for improved access at the lower level for training workshops for health and non-health sectors. All participants believed that this system will be useful for surveillance diseases occurrence relation to climate change in early stage.
	<p><u>Component 3. Health service delivery in rural provinces is improved and able to manage climate-related disease burden and determinants of health</u></p> <ul style="list-style-type: none"> • All stakeholders highlighted the need for disease management training, in particular climate-related diseases such as hand-foot and mouth diseases, diabetes and hypertension (Activity 3.1.2). • Stakeholders suggested that ongoing quality assessments of infrastructure and supply chains would be beneficial. • A greater explanation of specific activities is required for Activity 3.2.1.
	<p><u>Component 4: Communities are engaged, informed, and motivated to respond to early warnings, manage and mitigate risk, and seek care appropriately</u></p> <ul style="list-style-type: none"> • Stakeholders agreed with Activity 4.1.1 and added that the non-health group recommended that the district committees should have a mandatory command for implementation at village level, such as disseminating information via a local announcements 1-2 times per week or daily. • Activity 4.1.2 was agreed upon, if under the management of the Ministry of Health to ensure accurate and high-quality information due to the prevalence of fake and misleading content.
Lessons Learnt	<p>From the experience of the disaster management committee:</p> <ul style="list-style-type: none"> • Lack of budget preparation to help when a disaster occurs. • Lack of preparation of technical readiness to deal with disaster events of rescue teams, public health, and relief units. • 3. Lack of involvement of the local committee in the process of implementation, such as the village head not answering the phone, the village head reporting abnormal and slow conditions.
Dakcheung District	
Activities	Discussion
Review of proposed project activities	<p><u>Component 1. Climate-resilient health systems leadership and governance</u></p> <ul style="list-style-type: none"> • Stakeholders suggested rewording Activity 1.1.1, with "senior leadership official" replacing "senior health officials". Furthermore, stakeholders suggest including district, provincial, central and provincial levels and that the relevant villages need to be identified. • Regarding Activity 1.1.2, stakeholders mentioned a need for greater specificity in knowing at which level the approval will be given – whether from the MOH or government approvable through the National Assembly. Additionally, it was suggested

	<p>that "senior" be replaced with "provincial and district level staff" for greater clarity.</p> <ul style="list-style-type: none"> Stakeholders requested more information on Activity 1.1.3, to know when and how often the dissemination of guidelines and manuals would occur. Stakeholders suggested an overseeing management committee for Activity 1.1.4.
	<p><u>Component 2: Health information systems are improved to include climate and weather data to track, prepare for, and reduce climate-related risks to health</u></p> <ul style="list-style-type: none"> Stakeholders commented on Activity 2.1.1, that the DHIS2 requires daily data entry by health staff to update the health information. They suggested an automated system which compiles data every 1-3 months and compares data on changes in temperature or humidity every 1-3 months. Accessibility to the system remains an issue and stakeholders suggested cooperation between MOH and MONRE to integrate climate data into the system. Suggestions to Activity 2.1.2 were that before rolling out of an expanded national facility accreditation program's commodity management requirement, guidelines are first required to establish the guidelines or criteria of standard of the national facility accreditation for adapting to climate change. Activity 2.2.1 requires a mention of the importance of an EWS, as well as training for health centres and epidemiologists about the process of monitoring EWS.
	<p><u>Component 3. Health service delivery in rural provinces is improved and able to manage climate-related disease burden and determinants of health</u></p> <ul style="list-style-type: none"> Activity 3.1.1 requires a mention of the methods to strengthen the community health services and a standard that will determine the resilience of EWEs for a universal standard. Participants were particularly positive towards Activity 3.2.1 and mentioned the need to ensure construction is climate-resilient and built according to a standard. They noted that this would require initial assessments to determine whether the village structures were built accordingly. All participants strongly agreed with Activity 3.2.3, especially to provide backup electricity for some health centres where there is not enough electricity, to maintain vaccines and for lighting in the centres. They also suggested to a backup electricity generator and a pre-installation assessment. Maintenance and special technical staff were highlighted as important. Stakeholders agreed with Activity 3.2.4, commenting on lessons learnt from previous WASH infrastructure projects which found that WASH infrastructure lacks a proper design, uses of non-substandard materials and non-durable construction.
	<p><u>Component 4: Communities are engaged, informed, and motivated to respond to early warnings, manage and mitigate risk, and seek care appropriately</u></p> <ul style="list-style-type: none"> Stakeholders mentioned a previously unsuccessful project as "unsustainable" because it was done as wanted without assessing the needs of the people and no creation of committees at each level. To support Activity 4.1.1, stakeholders suggest including sustainable incentives to encourage community involvement, as well as emphasized the need for incentives and training for health volunteers who are reporting via the app. Stakeholders agreed with Activity 4.1.2 but commented on the lack of Internet coverage in certain areas, and that not all families owned smartphones.
Lessons Learnt	<p>In the health sector there have been no projects related to climate change, but there is a poverty reduction project which involves water management and building latrines. The previous project was not sustainable because it was conducted without assessing the needs of the people and without creating a committee at each level. The water or Namlin cannot be used because the selection of water sources was not balanced and appropriate, with unclear water. The project established latrines for the villagers but were not functioning due to a lack of water.</p>

List of Participants

Table 6 - List of Participants Provincial Validation Workshop **have been redacted in accordance with the GCF Information Disclosure Policy, as the portion is confidential under the disclosure policy of the Accredited Entity.**

Table 7 - List of Participants National Validation Workshop 24th of November 2022 *has *been redacted in accordance with the GCF Information Disclosure Policy, as the portion is confidential under the disclosure policy of the Accredited Entity.**

Table 8 - List of Participants Provincial Validation Workshop 25th of November 2022 **has been redacted in accordance with the GCF Information Disclosure Policy, as the portion is confidential under the disclosure policy of the Accredited Entity.**

Table 9 - List of participants for Nonbok, Phonxay and Dakcheung Workshops 23rd, 24th and 25th of November 2022 **has been redacted in accordance with the GCF Information Disclosure Policy, as the portion is confidential under the disclosure policy of the Accredited Entity.**