CLIMATE COMMUNITY-BASED VULNERABILITY ASSESSMENT AND ACTION PLANNING

Climate Change Vulnerability Assessment and Guidelines
for Community-Based Sustainable Environmental Management in Lao PDR

GOAL WATERS

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ABOUT THE GOAL WATERS PROGRAMME

The UNDP GoAL-WaterS (Governance, Accountability and Learning for Water Sustainability) programme supports equitable, efficient and environmentally sustainable use and protection of freshwater and marine resources. It helps identifying priorities and opportunities and addressing gaps and constraints in water and ocean governance by developing policy reform plans and action at national and local levels.

Building on UNDP's close working relationship with country governments and partners, GoAL-WaterS provides flexible support to national and local authorities and partners, supporting the 2030 Agenda with an emphasis on Sustainable Development Goals 6 to "Ensure availability and sustainable management of water and sanitation for all" and 14 to "Conserve and sustainably use the oceans, seas and marine resources for sustainable development."

GoAL-WaterS activities are implemented through UNDP Country Offices or partners and strategically coordinated by the UNDP-SIWI Water Governance Facility (WGF) at the Stockholm International Water Institute (SIWI). UNDP GoAL-WaterS constitutes Project Output 2 - "Freshwater and coastal resources management frameworks strengthened at local and national level" –of the Global Water and Ocean Governance Support Programme. The funding has been provided to UNDP by the Swedish International Development Cooperation Agency.

http://www.watergovernance.org/programmes/GoAL-WaterS/

Purpose and Scope of this guide

The objective of this guide is to **provide local stakeholders with a tool to better assess communities' vulnerability and improve decision making and action planning processes for climate resilience and environmental management at the local level**. It completes the "*Water Resources Management: Development, Integration, and Implementation*" guide by giving an in-depth focus on community vulnerability assessments to improve water resources management. This document builds on lessons learned from recent experiences in Lao PDR and the region to address the adaptation planning gap, especially for water resources management.

Through the development of community-based processes, engaging communities at the local level will lead to a better understanding of climate and environmental vulnerability and climate change implications, such as floods and droughts. Improved knowledge will enhance environmental management, particularly through better planning for the use and preservation of water resources.

This offers step-by-step guidance for designing and implementing a community vulnerability assessment as well as action planning processes, which covers the entire life cycle of adaptation interventions. This holistic focus on the full range of adaptation measures, plans and strategies constitutes a new approach to vulnerability assessments and a paradigm shift in adaptation planning.

With the aim to strengthen local capacities, the target audience of this guide comprises personnel from ministries and officials from provinces involved with climate change, infrastructure planning, and natural resources management. It may be used to better plan climate-resilient actions as part of national programmes, diagnose particular situations at the local level or support local climate action.

The expected results focus on enhancing the use of community-based vulnerability assessment for improved water resources management in Lao PDR to ensure that informed communities, public and private stakeholders are able over the short and medium term to take part in the improvement of sector planning and further implementation, with a strong emphasis on water resources management and integrity.

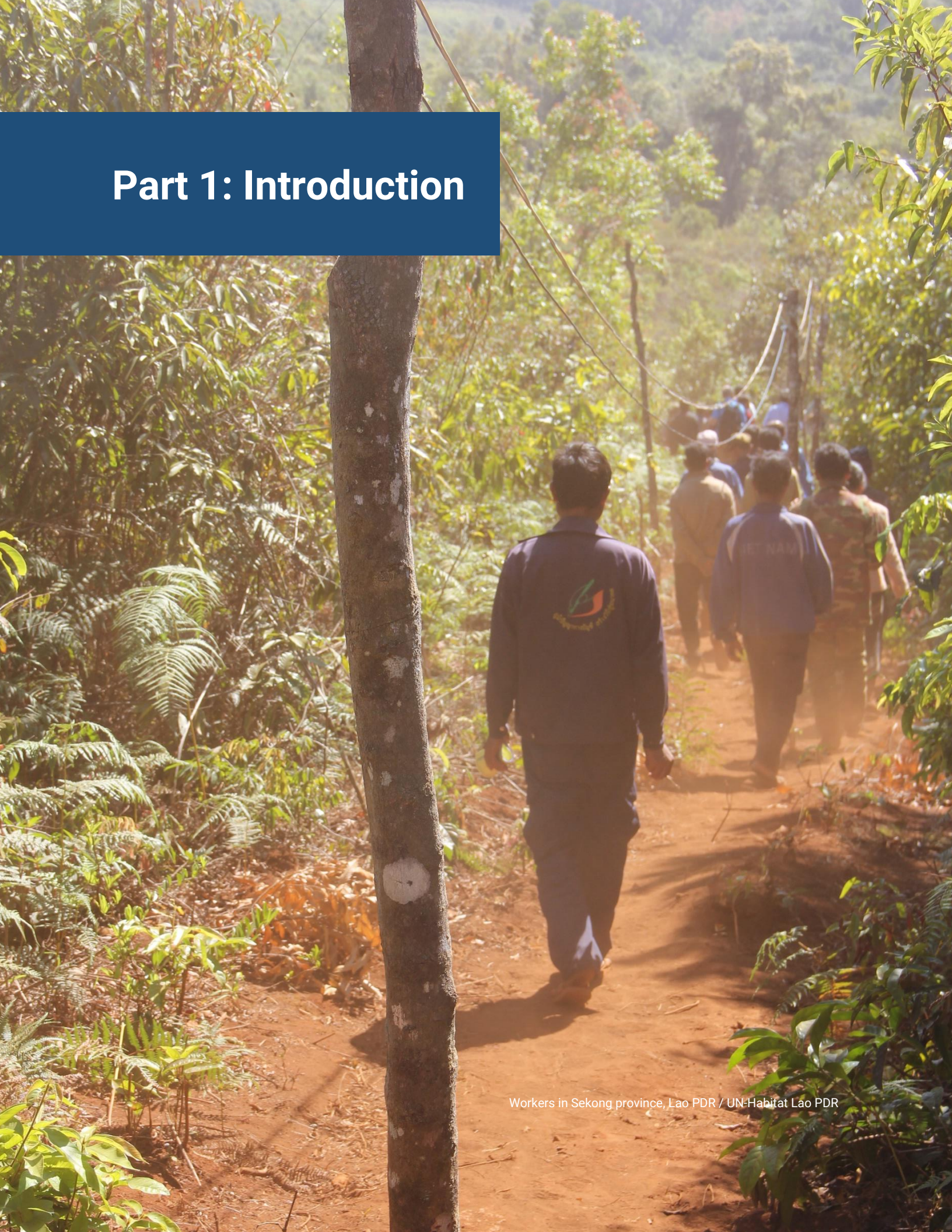
This guide is aimed at national and sub-national officials and technical staffs from relevant ministries in charge of environmental management in Lao PDR.

CONTENTS

ACRONYMS

AP	Action Plan
CAAP	Community Adaptation Action Planning
CAP	Climate Action Plan
CbA	Community-based Approach
CbVA	Community-based Vulnerability Assessment
CRVA	Community Vulnerability and Risk Assessment
DoNRE	District Office of Natural Resources and Environment
ESS	Environmental and Social Safeguards
ESMP	Environmental and Social Management Plan
FGD	Focus Group Discussion
FPIC	Free Prior and Informed Consent
LDC	Least developed countries
MoNRE	Ministry of Natural Resources and Environment
NAP	National Adaptation Plan
NDC	Nationally Determined Contributions
NSEDP	National Socio-economic Development Plan
PoNRE	Provincial Office of Natural Resources and Environment
SDG	Sustainable Development Goal
UN-Habitat	United Nations Human Settlements Programme
VA	Vulnerability Assessment
VRA	Vulnerability and Risk Assessment

Part 1: Introduction



Workers in Sekong province, Lao PDR / UN-Habitat Lao PDR

1.1 Climate Change in Lao PDR

Since Lao PDR is one of the world's most vulnerable countries to climate change, the challenges from climate change are increasingly striking its urban and rural communities. The country's population has grown considerably , rising from 5.3 million in 2000 to 7.2 million in 2020[1], with official projections showing an increase to 10.7 million by 2050.[2]. Growing population pressure is placed on urban areas and marginal land, most of which are already vulnerable to flooding, erosion, and landslides. Despite an evident shift from agricultural work towards the service sector, agriculture remains the dominant source of employment, still accounting for 60% of the labor force in 2018.[3] Heavy reliance on natural resources, in addition to population-induced ecosystem changes, have worsened environmental degradation and climate change-related hazards at the time the lack of coping capacity increases difficulties in minimizing their impacts. Storms, floods, and droughts have wreaked havoc on Laos in recent years, causing landslides, fires, disease outbreaks, loss of life, and infrastructure and livelihood destruction, among other consequences. Droughts and floods mainly impact the poorest people in the country, including many ethnic minority groups living in mountainous areas and flood plains.

For the past twenty years, the country has experienced an increase in the occurrence of disasters. Recently, in October 2020, nine districts in Saravane, Savannakhet and Sekong were affected by floods. In 2018, Tropical Storm Son-Tinh caused heavy rains and flooding in 55 districts of 13 provinces across the country, and torrential rain overwhelmed a dam in Attapeu Province, causing flash floods. Some of those provinces, in central and southern Lao PDR, were also affected by Tropical Storm Podul and Tropical Depression Kajiki in 2019, resulting in damage estimated at US$164 million[4]. In 2010, extreme droughts during the typical rainy months between May and October severely affected the year's harvest and created life-threatening food shortages in southern Lao PDR, affecting around 85,000 people. This drought took place after Typhoon Ketsana, which damaged agricultural land, housing and infrastructure, especially in the southern provinces and was responsible for 28 deaths and an economic loss of US$58 million.[5] Floods in 2011 caused a loss of US$200 million and were followed by a series of flood events in 2013, which were caused by different weather systems that occurred in different locations from July to October - 395,000 people were affected, and over 20 lives were lost in 12 affected provinces.[6] Finally, in 2008, floods affected more than 200,000 people and 75,000 hectares of agricultural land. In the near future, considering climate models results, projections show a trend of consistent warming and an increase in the intensity of heavy precipitation periods and extreme events, disproportionally affecting Laotian provinces and communities.[7]

In this context, the Government of Lao PDR has committed to tackling climate change comprehensively, reducing poverty and the effects of natural shocks through a more sustainable

[1] World Bank (2022). *Population, total, Lao PDR*. Accessed on the 4th of May 2022 https://data.worldbank.org/indicator/SP.POP.TOTL?locations=LA

[2] UNFPA (2015). *Population and Development in Lao PDR. Understanding opportunities, challenges and policy options for Socio-Economic Development.* https://lao.unfpa.org/sites/default/files/pub-pdf/Population%20and%20Development%20in%20Lao%20PDR_Eng.compressed.pdf

[3] Asian Development Bank. (2019). *Education for Employment Sector Development Program: Report and Recommendation of the President*. https://www.adb.org/projects/documents/lao-50399-003-*rrp*.

[4] AHA Centre (14 October 2019) *Situation Update: Tropical Storm Podul and Tropical Depression Kajiki*

[5] http://www.un-spider.org/sites/default/files/41.%20UN-SPIDER_Lao PDR%20rev1-ilovepdf-compressed.pdf

[6] https://www.reuters.com/article/us-Lao PDR-floods/floods-in-Lao PDR-kill-20-damage-rice-crops idUSBRE97R0BB20130828

[7] World Bank and Asian Development Bank. (2021). *Climate risk country profile: Lao PDR.* https://www.adb.org/sites/default/files/publication/709846/climate-risk-country-profile-lao-pdr.pdf

natural resources management. The Lao PDR's Nationally Determined Contribution (2015) (NDC) defined adaptation and mitigation activities to be implemented over 2015-2030, including implementing climate change action plans to develop and implement effective, efficient and economically viable climate change mitigation and adaptation measures. To accomplish this, the government has established priorities in its 9th National Socio-economic Development Plan (2021-2025) (9th NSEDP), especially to advance 3) Good Living Condition and Liveable Society, 4) Environmental Protection and Risk Reduction, and 5) Build Resilient Infrastructure and Promote Linkages and Connectivity in All Levels. With hazards likely to increase in frequency and intensity, a significant challenge is to allow communities to adapt, protect existing infrastructure, deliver resilient new infrastructure and adjust land use planning and management in a way that will withstand future floods, droughts and storms and promote holistic development. Simultaneously, the country has engaged in the development of a National Adaptation Plan (NAP) in order to strengthen adaptation planning and to understand and fill the adaptation gap at the national and sub-national levels.

Adaptation planning is indeed a critical aspect to strengthen in Lao PDR to advance local resilience throughout the country. For the past decades, Lao PDR has made considerable progress in strengthening and reforming its policies and frameworks to advance resilience and enhance environmental sustainability. Still, several recent processes highlighted the difficulty of measuring the progress on the adaptation component due to the general lack of climate change adaptation integration at all levels of policy development, as well as the absence of multisectoral strategies, especially for human settlements development. To fill these gaps, the revised 2021 NDC sets targets to enhance mainstreaming of climate change adaptation into strategies with a results-based management framework. Poor coordination, limited institutional capacity, lack of reliable information and data available, lack of the importance of integrated approaches, including gender and all people considerations, and high focus on sectoral strategies are among the most pressing challenges to address to enhance climate change adaptation.

Understanding communities' risk and vulnerability in an integrated way is critical for adaptation planning and resilience in human settlements, as well as to improve environmental management. Exploring and analysing the socio-economic, physical, and ecological systems and how they are – or could be – affected by shocks is therefore a key resource to help communities, local authorities and their partners to identify how vulnerability, exposure and risk interact, and improve development outcomes through informed decision making and finance mobilisation. In this respect, capacity development on risk analysis in Lao settlements, using community-based approaches, could have significant benefits on climate change adaptation planning, especially for marginalised and vulnerable communities.

1.2 Community-based approach to better tackle climate action

A community-based approach (CbA) to climate change is "**a community-led process, based on communities' priorities, needs, knowledge, and capacities, which should empower people to plan for and cope with the impacts of climate change**".[8] Overall, CbA aims at enabling communities to understand and integrate the concept of climate risk into their daily lives in order to cope with and respond to immediate climate variability and long-term climate change. This approach allows local communities to determine the objectives and means of adaptation practices, it is based upon a participatory assessment of the risks posed by climate change, and emphasizes the development needs of vulnerable communities.[9]

Although CbA projects may look quite similar to livelihood development projects, the former uses **climate and environmental local and scientific knowledge to anticipate and understand the potential impact of climate change on communities' vulnerability and livelihoods**. **CbA builds on human rights-based methods** to harness the information and experience that communities have in dealing with climate variability through a cost-effective approach.[10] CbA targets the most vulnerable people and fully includes them in all levels of adaptation planning and implementation, with communities and the social component of sustainable development remaining central to planning and action.[11]

Due to the climate change vulnerability that Lao PDR experiences, improving knowledge for better understanding such vulnerability is critical so that community/local adaptation strategies can be devised and implemented effectively. As CbA has not yet been mainstreamed at national and local levels in Lao PDR, it is imperative to advance its implementation to enable communities to participate, study and analyze their vulnerabilities; identify contributing factors to their vulnerability and exposure; and prepare, implement and monitor communal adaptation plans while improving environmental management. However, considering the implementation of such approaches, many barriers have to be overcome such as the lack of multisectoral coordination and human and financial resources to be allocated.

In Lao PDR, lowland areas account for only 20 per cent of the land area but accommodate over half the country's population and are the preferred spot for agricultural production. Community-based action planning is therefore needed to plan towards long-term solutions, which will enable the communities to be resilient to future hazards such as floods, droughts and storms. Shocks, stresses and uncertainties may wreak havoc on people's lives, aggravate inequality, and hamper development. Although enhancing resilience entails addressing various types of risks, including economic shocks, social and political crises, and climate-related hazards.

To improve environmental management and reduce climate vulnerability, Lao PDR is making progress towards achieving an effective land use planning. As a result, understanding climate change impacts and the way they affect natural resources, especially water resources are essential for its success in the long term. At the local level, there is an urgent need for actions that strengthen community participation and vertical integration for improving natural resources management, reducing capacity constraints and risk. Organizing participatory activities can provide opportunities to find sensitive solutions that enhance adaptive capacity while considering

[8] Reid et al. (2009). Community-based Adaptation to Climate Change: An Overview, in *Community-based Adaptation to Climate Change*, Participatory Learning and Action (PLA) Series, no. 60, International Institute for Environment and Development, 11-33.

[9] WIREs Climate Change (2013). *Community-based adaptation: a review of past and future challenges*. Available at: https://wires.onlinelibrary.wiley.com/doi/epdf/10.1002/wcc.231

[10] Reid, H., (2016) Ecosystem- and community-based adaptation: learning from community-based natural resource management, *Climate and Development*, 8:1, 4-9.

[11] Op. Cit.

community's local knowledge and practices. Engaging the community throughout the entire process can also build ownership of the planning process and related interventions, leading to higher levels of community commitment and more climate resilience-based sustainable implementation outcomes. [12]

Issues such as observed and projected changes in weather and seasonal patterns, climate impacts, and response to such impacts (including community strategies to increase climate resilience) are important aspects to assess climate change exposure and adaptive capacity. Since climate change represents a threat to livelihoods, exploring communities' employment strategies may also aid understanding to what extent incomes are impacted by climate hazards, what is the impact's trend and what are the resources needed (economic, human, etc.) to build and improve climate resilience at the community level.

Table 1: Relevance of Community Vulnerability and Risk Assessment (CRVA) and Climate Action Plan (CAP) at different levels of engagement

Engagement Level	Relevance for the development of policies, plans and actions in Lao PDR	
	Community Vulnerability and Risk Assessment (CRVA)	**Community Action Planning (CAP)**
Community	• Sharing local environmental and climate knowledge and information • Collecting updated data for understanding communities' perceptions of current and future climate risks. • Communities can express themselves and actively participate in the process.	• Based on the CVRA's findings, activities, and projects that reduce vulnerabilities and risks can be identified and ranked. • Ensure that action plans consider local characteristics and needs, and incorporate vulnerable groups, such as women, elderly, youth and ethnic.
City/District	• Improve disaggregated climate vulnerability data. • Policies, plans and strategies (relating to DRR, Climate Change, infrastructure, etc.) are informed by local realities. • Since local governments engage in data collection and analysis, information is available and capacity is built for up-scaling on further opportunities.	• Climate resilience action plans are informed by and support community climate resilience action plans. • Authorities are better positioned to understand, coordinate and implement action plans at the local level. • Actions in community-level action plans may go beyond the settlement´s boundaries, improving impact and the cost-benefit relation.
Provincial	• Inform and influence policies and planning at the district/province/ regional levels using community based results. • Update databases and inform projections.	• Strengthen "*Sam sang*" decentralization strategy. • Inform and influence action plans at higher levels for an integrated approach. • Better target climate investment and regional projects.
National	• Influence national policies and plans, forming the basis for communications to the UNFCCC and undertaking the NAP process. • National plans and policies can better tackle barriers to improve community-level resilience to climate change.	• Ensuring that actions captured in community-level action plans reach higher levels of discussion contributes to making context-specific decisions, better targeting multilateral and foreign investment, and ensuring fair representation of vulnerable communities.

[12] UN-Habitat (2020). *Climate Change Vulnerability and Risk – A Guide for Community Assessments, Action Planning and Implementation*. Available at: https://unhabitat.org/climate-change-vulnerability-and-risk-%E2%80%93-a-guide-for-community-assessments-action-planning-and

Part 2: Background and Conceptual Framework

Community discussions in Sekong province, Lao PDR / UN-Habitat Lao PDR

2.1. Community-based Vulnerability Assessment (CbVA) tool for increasing resilience

In a recent rapid vulnerability analysis conducted by UN-Habitat and MoNRE[13], preliminary results highlighted that 46% of the villages at the national level have been exposed to at least one climate change-related hazard, affecting about 3 million people. However, the majority of programmes, plans and projects in Lao PDR do not explicitly consider climate threats or long-term implications of climate change and their impact on infrastructure, settlements, ecosystems and communities. In addition, there is little evidence of interventions that analyse their impact on both ecosystems and the adaptive capacity of local communities. The use of CbVA tools is an opportunity for engaging government and locals in the process of identifying vulnerabilities and designing action plans to increase resilience and improve environmental management.

This participatory approach aligns and strengthens the government's '*Samsang*' strategy[14], whereby local government institutions play a key role in planning, developing and implementing infrastructures in close consultation with communities and other stakeholders. The involvement of local stakeholders and communities sets the grounds for further capacity-building actions and will ensure that results and proposed actions are context-specific, appropriately tailored to reflect local realities, including cultural norms and practices. Moreover, gender-responsive adaptation procedures and strategies ease communication between men and women, ensuring fair benefits and greater attention to gender equality at all levels. Since adaptation is an ongoing process, engaging society as a whole is essential for supporting the co-generation of knowledge and successfully raising awareness among multiple stakeholders.

Finally, by focusing on community-based vulnerability assessments, local stakeholders will therefore participate in laying the foundations to:

1. Prioritize locations where the greatest capacity gaps exist. This will result in the acceleration of the adoption of area-based approaches, while also allowing the inclusion of a spatial lens along with a sectoral vision to develop integrated approaches;
2. Enhance engagement of diverse stakeholders to strengthen water management and integrity, as well as human settlements governance;
3. Target the needs of marginalized communities for more equitable resilience in Lao human settlements; and,
4. Strengthen risk-informed development planning and investments over the medium and long term.

[13] UN-Habitat (2020). *National CCVA in Lao PDR - Preliminary Results*. UN-Habitat Lao PDR.

[14] Issued in 2012, the *Sam Sang* ("Three Builds") directive is a political manifesto aiming at revolutionising Lao development context, producing a national targeted development program to graduate from the LDC status, with a strong emphasis on developing an approach to decentralised administration. Therefore, this strategy identifies villages as the development unit (e.g., delivery of rural development outputs), districts as the integration unit (e.g., coordination across sectors to ensure effective and efficient delivery in villages), and provinces as the strategic/planning unit (e.g., resource allocation priorities).

Box 1. Recent experience in Community-based Vulnerability Assessment in Lao PDR

In 2020, two methodological tools to assess vulnerability were developed in Lao PDR, contributing to improve local vulnerability understanding. One focused on the development of a Climate Vulnerability Assessment Model, while the other one was specifically designed to provide support on COVID-19 response to community. Both initiatives laid the foundation for the acceleration of community-based vulnerability assessments to improve the understanding of local contexts and socio-economic dynamics at play, and consequently better inform decision-making processes anchored in local realities.

- **The Climate Vulnerability Assessment Model** was designed for obtaining quick, reliable and up-to-date information through the analysis of quantitative data. Secondary data, such as annual rainfall, average temperatures and updated shapefiles of infrastructure and services, was provided by MoNRE and analysed. Results from the Population and Household Census 2015 were also incorporated in the analysis.

  In addition, participatory data collection methods, such as community-based approaches, were used to obtain village-level primary data through provincial and district level Natural Resources and Environment Offices (PoNRE and DoNRE), helping capture the main challenges faced by communities. District-level surveys were designed to collect data from all the villages within its jurisdiction, filled by district focal points and collected by the respective PoNRE through participatory approaches in the villages.

  Results showed that human settlements in Lao PDR were highly vulnerable with 46% of the villages throughout the country exposed to at least one climate change-related hazard, representing about 3 million people affected, with Attapeu and Champasak provinces, in the south, and Oudomxay, Luangmantha and Luangprabang provinces in the north, concentrated most climate change impacts during the assessed period.

- **The COVID-19 Vulnerability Mapping Model (VMM)** was developed to provide support on COVID-19 response to communities by identifying geographical areas most at risk of outbreaks. The main result was the geo-referenced identification of which people, services and areas were more vulnerable and what were the factors increasing risks.

  As a result, this analysis identified key aspects that link COVID-19 exposure and risk due to urbanization, migration, basic services and climate change, and mapping initiatives were developed showcasing communities at risk.

2.2. Key concepts and terminologies[15]

Key climate change-related concepts and terminologies are used throughout this guide. Definitions are in alignment with those provided by the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment report[16], and are provided below:

- ***Adaptive capacity***
  The ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences.

- ***Exposure***
  The presence of people, livelihoods, species or ecosystems, environmental functions, services, and resources, infrastructure, or economic, social, or cultural assets in places and settings that could be adversely affected.

- ***Hazards***
  The potential occurrence of a natural or human-induced physical event or trend or physical impact that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems and environmental resources. In this report, the term hazard usually refers to climate-related physical events or trends or their physical impact.

- ***Sensitivity***
  The degree to which a system or species is affected, either adversely or beneficially, by climate variability or change. The effect may be direct (e.g., a change in crop yield in response to a change in the mean, range, or variability of temperature) or indirect (e.g., damages caused by an increase in the frequency of coastal flooding due to sea level rise).

- ***Stresses***
  Chronic and ongoing dynamic pressures within a system, whose cumulative impacts undermines the capacity for sustainability and resilience.

- ***Resilience***
  The capacity of social, economic and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity and structure, while also maintaining the capacity for adaptation, learning and transformation.

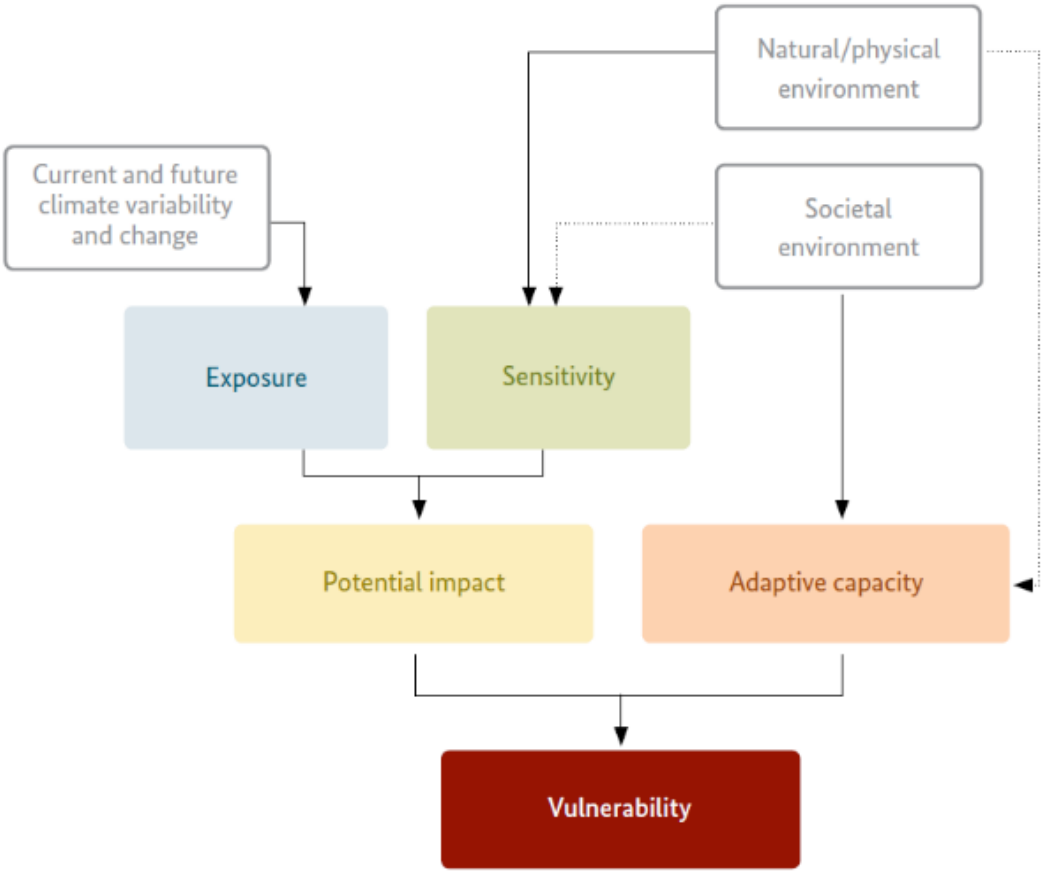
- ***Risk***
  The potential for consequences where something of value is at stake and where the outcome is uncertain, recognizing the diversity of values. Risk is often represented as probability of occurrence of hazardous events or trends multiplied by the impacts if these events or trends occur. Risk results from the interaction of vulnerability, exposure, and hazard.

[15] UN-Habitat definitions as per Climate Change Vulnerability and Risk: A Guide for Community Assessments, Action Planning and Implementation (2020)
[16] IPCC (2014). *Summary for policymakers*. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects.

- ***Potential Impacts***
  Exposure and sensitivity in combination determine the potential impact of climate change. For instance, heavy rain events (exposure) in combination with steep slopes and soils with high susceptibility to erosion (sensitivity) will result in erosion (potential impact).

- ***Vulnerability***
  The propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt (see Figure 1).
  Vulnerability can also refer as to "a function of character, magnitude and rate of climate variation to which a system is exposed, its sensitivity, and its adaptive capacity"[17]. This definition is articulated in the following equation for simplicity: V = Exposure x Sensitivity/Adaptation. Climate change *exposure*, and a system's *sensitivity* to it, determine the *potential impact*. However, vulnerability to that impact also depends on the system's *adaptive capacity*. These four key components are shown in figure below.

Figure 1. Components of vulnerability (source: UN-Habitat, 2020).



[17] *Ibid.*

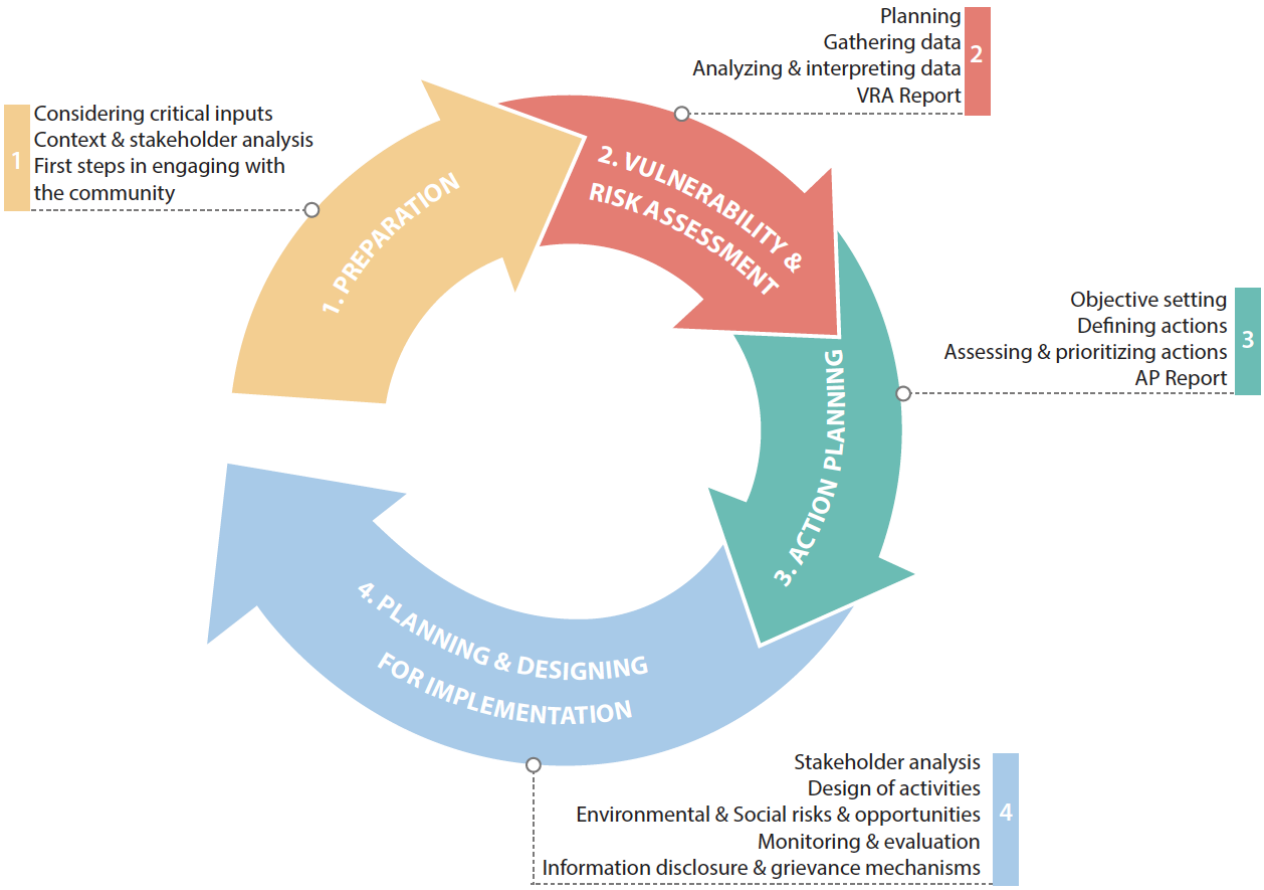
2.3. Community-based Vulnerability Assessment (CbVA) methodology overview

Community-based Vulnerability Assessment aims at promoting the social dimension of vulnerability and accelerating the inclusion of vulnerable groups, such as women, girls, youth, the elderly, and the disabled into processes. Therefore, based on participatory data collection methods, CbVA processes can help capture the main challenges faced by communities and their perceptions of current and future risks of climate change for better informed decision-making on climate adaptation and natural resources management, and considering local realities.

In this respect, the methodology of the assessment has been designed to achieve several results:

- Firstly, to analyse critical systems, including infrastructure, socio-economic systems, and ecosystems in target districts or locations;
- Secondly, to overlay pre-existing climate change projections in Lao PDR onto the current conditions in the three critical systems to project the probable future scenarios if no adaptation actions are taken; and
- Finally, to define future scenarios for action, based on business as usual (taking no action to adapt to climate change), a minimum adaptation scenario that maintains current development, and a more resilient and sustainable development scenario.

Figure 2. Phases diagram (source : UN-Habitat, 2020)



In practice, such approach is developed at the local level by:

1. **Assessment Preparation Phase (VA):**
    - Considering critical inputs, analysing the context and local stakeholders, and assessing social and environmental risks and opportunities.

2. **Vulnerability and Risk Assessment Phase (VA):**
    - Engaging with communities;
    - Planning the vulnerability and risk assessment (including the training of local enumerators and technical officers);
    - Gathering data from communities using human-centric variables and indicators, analysing results; and,
    - Interpreting collected data to develop the VRA report.

3. **Action Planning Phase (AC):**
    - Setting the objectives for action planning considering results of the VRA, defining actions, assessing and prioritizing actions, and developing an Action Plan;

4. **Implementation phase (AC):**
    - Designing activities for implementation, evaluating environmental and social risks and opportunities, setting monitoring and evaluation mechanisms along information disclosure and grievance processes.

To ease replication and facilitate implementation, it is suggested to:

1. **Use open-source software, low-cost technology, and accessible data wherever possible.**

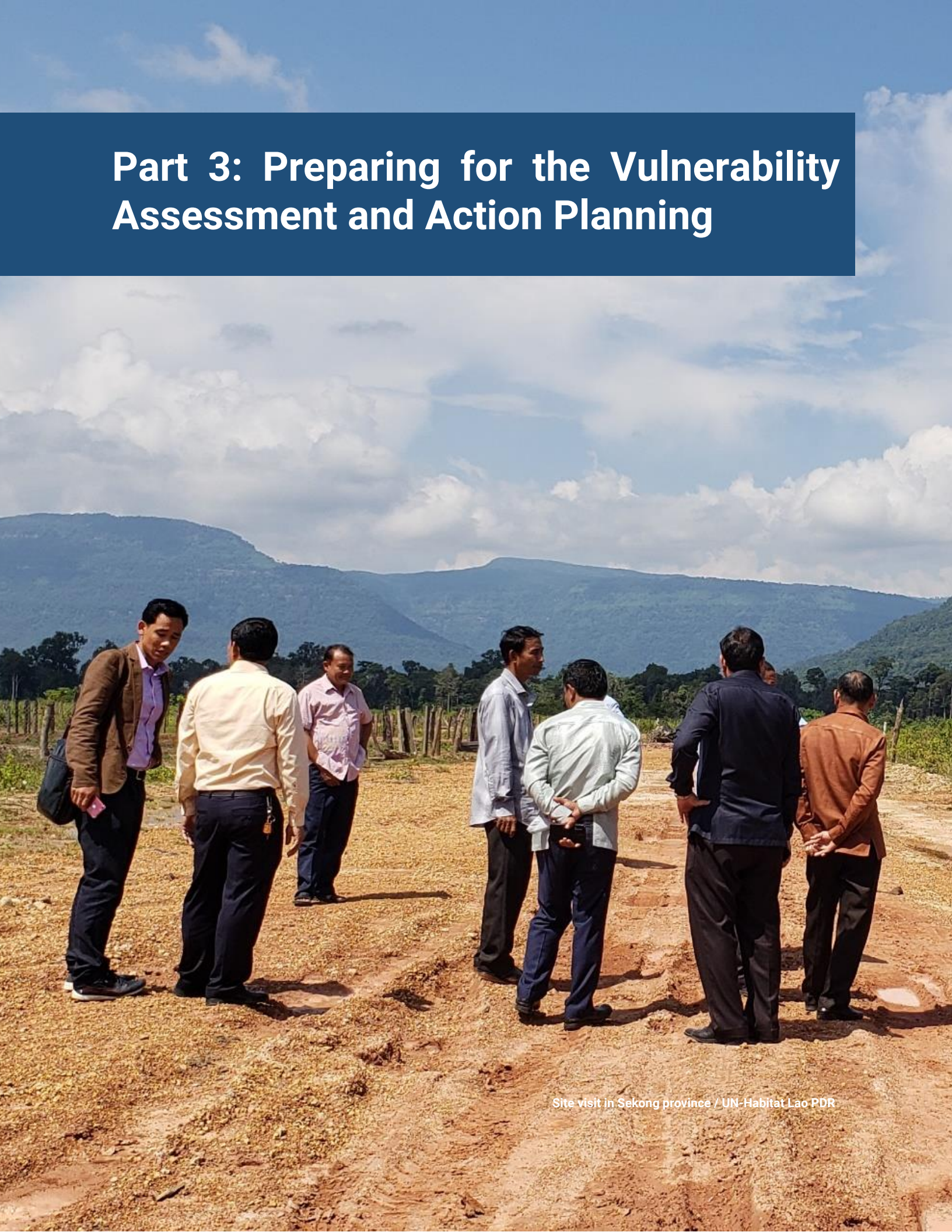
    From previous experience from the field, the use of digital tablets with open-source software enabling the development of surveys in English and in Laotian, such as Kobotoolbox[18], appeared as an easy, efficient and time-saving method to collect local data.

2. **Train local stakeholders on the methodology.**

    This way, capacity is built at the local level through technically aware district-level government staff and local enumerators. In recent initiatives, this methodology was successful and enabled staff from PoNRE and DoNRE to directly engage with local communities exposed to various hazards and risks.

[18] https://www.kobotoolbox.org/

Part 3: Preparing for the Vulnerability Assessment and Action Planning

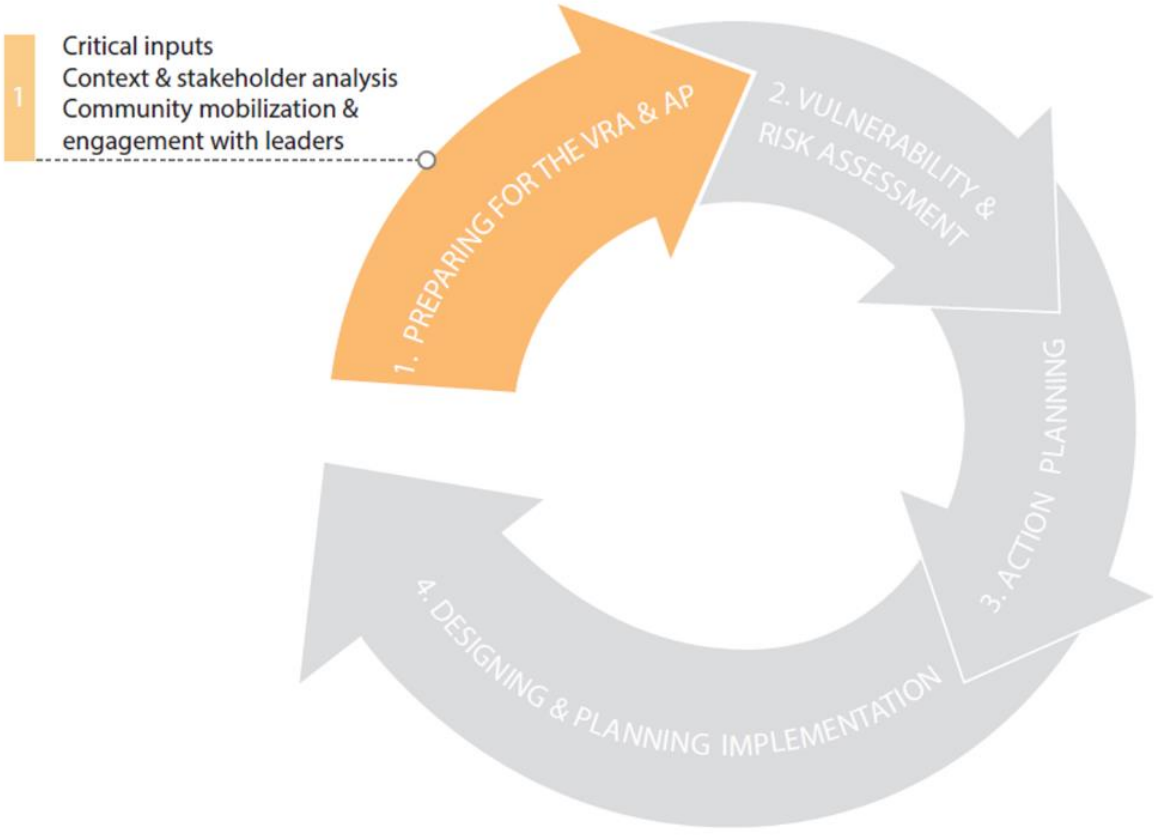


Site visit in Sekong province / UN-Habitat Lao PDR

Prior to start the Vulnerability and Risk Assessment and Action Planning, the team needs to walk through the assessment preparatory phase, highlighting the main considerations and needs for effectively conducting the VRA and AP.

Considering Lao PDR context, during this phase, the team needs to clearly define the objectives and expected outcomes of the initiative, identify additional skills needed and gather technical experts if required, get an overview of the policy framework, analyse the context using secondary data to capture available and missing information, explore social and environmental risks and opportunities, and start mapping relevant stakeholders and their levels of influence.

Figure 3. Preparation phase for vulnerability assessment and action planning (source: UN-Habitat, 2020).



3.1. Identifying objectives and expected outcomes

To get started, the assessment team will need to **define the objectives and scope** of the CbVA process. This will help them to develop an overarching framework for the analysis. The first step is to **clarify the utility of CVA and how the assessment will be used**. This will determine the focus of the analysis and how in-depth it will be.

For community-level planning and action, the VA & AP planning stage is one of the most critical phases and entails a research-intensive approach. The vulnerability assessment's scope and scale must strive for a degree of depth that fits the objective. Therefore, the preliminary step of framing a VA is essential to ensure the success of the intervention, to identify resources available and need, and to understand the level of effort required to undertake the work. In addition to the objectives, VA outputs and results can be presented in different formats depending on the intended audiences and use requirements.

The information provided should be primarily tailored to their temporal, geographical, and sectoral scales for it to be useful to critical choices. Finally, it is important that the objectives, as well as the scope and expectations are properly stated before starting the activities. Thus, the Tool below can be used to guide some key definitions.

Tool 1: Scope of the CbVA

Key characteristics	Description
Geographical coverage	*Identify and list (e.g., Phine district)*
Timeframe	*Define and describe (e.g., 3 months from May to July)*
Sectors to assess	*Identify and list (e.g, water sector)*
Resources available/needed	*Identify and list (e.g., human resources, fundings, logistics)*
Data available/needed	*Identify and list (e.g., available: population census / needed: individual water provision system)*
Type of output needed by decision makers	*Identify and list (e.g., detailed list of local water systems used by communities)*

3.2. Setting up the team

After setting up the objectives and scope of the assessment, strategically defining the CbVA team members will determine the quality of the results as well as the extent to which the process is genuinely participatory.

The team definition should be based on skills and experience, incorporating national experts and members of the civil society that can provide technical assistance and facilitate and communicate at ease. Having assembled the team, roles and responsibilities of team members must be defined. Clear objectives must be well communicated so that the team understands the activities projected. It is recommended that team members undertake different activities to better develop community-level activities and research, analysis, and documentation. After roles are

defined, it is suggested to incorporate a coordinator role to ensure that the links to the overarching framework are well understood and field-level data is correctly analysed.

Tool 2: Setting up the team: example from recent experience in Lao PDR

Defined roles	Activities	Identified personnel	Needed personnel
VA Manager/Coordinator	• In charge of the overall work coordination • Liaise with all team members and local partners • Ensure the activities are conducted on time	*(list of names and availability)*	*(e.g., recruitment needed)*
Information Management specialist	• In charge of defining the methodology and indicators in collaboration with local partners and communities • In charge of the overall analysis of collected data	*(list of names and availability)*	*(e.g., recruitment needed)*
Community officers	• In charge of liaising directly with communities (building trust)	*(list of names and availability)*	*(e.g., recruitment needed)*
Local enumerators	• In charge of the data collection at the local level • Responsible for training communities' focal points	*(list of names and availability)*	*(e.g., recruitment needed)*

3.3. Alignment with national and local climate change and environmental policies, strategies, and plans

The main objective of the VA is to enable communities, local stakeholders and sub-national authorities in Lao PDR to inclusively engage into processes to make informed planning decisions and take actions to adapt to climate change. Thus, it is critical to understand how the VA assessment will comply with relevant national processes and standards in order to ensure that all processes are consistent with local and national procedures and standards.

As climate change is a strategic and long-term challenge, it requires complex information to support decision making. The tool below can be used to define alignment strategies with existing policies, plans, and programmes relevant to the VRA and AP process in Lao PDR, providing an explanation of how the project is consistent with these. This table can be further developed and updated accordingly.

Tool 3: Alignment with policies, plans and programmes

Sector	Relevant Policies, Plans and Programmes[19]	Strategy alignment and key assessment criteria for consideration in planning
Policies and Plans	National Socio-Economic Development Plan 9th (2021-2025), and Provincial Socio-Economic Development Plans	*Identify and list*
Urban Planning	Lao PDR Law on Urban Planning, 1999	*Identify and list*
	Law on Land, 2003, revised in 2019	*Identify and list*
	Vision toward 2030 and the 10 years Urban Development Strategy (2016-2025) and the 4 years investment plan (2017-2020)	*Identify and list*
	Urban Development Strategies and Master Plans	*Identify and list*
Transport	Lao PDR Transport Sector Policy and Strategy	*Identify and list*
Buildings	Lao PDR Law on Construction, 2009	*Identify and list*
	Decision on Construction Management, 2019	*Identify and list*
Housing	Savannakhet Urban Development Strategy 2020	*Identify and list*
Energy	Law on Electricity 1997, revised in 2017	*Identify and list*
	The Power Sector Policy Statement 2001	*Identify and list*
	The Renewable Energy Development Strategy of the Lao PDR 2011	*Identify and list*
Water	National Water Resources Strategy and Action Plan 2016-2020	*Identify and list*
	Water and Resources Law, 1996, revised 2017	*Identify and list*
	Lao PDR Water Supply Law, 2009	*Identify and list*
	Law on Enterprises, 2005	*Identify and list*
Environment	Natural Resources and Environment Strategy, 2016-2025	*Identify and list*
	Strategy on Climate Change, 2010	*Identify and list*
	National Adaptation Plan, under development	*Identify and list*
	Decree on Climate Change, 2019	*Identify and list*
	Intended Nationally Determined Contribution (INDC), 2015, NDC revised in 2020	*Identify and list*
	National Adaptation Programme of Action, 2009	*Identify and list*
	Law on Disaster Risk Management, 2019	*Identify and list*
	Law on Environmental Protection (Amended), 2012. Article 21: Initial Environmental Examination, and Article 22: Environmental Impact Assessment	*Identify and list*
Investment	Law of Investment Promotion, 2009, amended 2016	*Identify and list*

[19] Suggested. Policies, plans and programmes listed in this table can be removed or additional ones can be inserted.

At this stage, it is also important to identify relevant rules, regulations, standards, and procedures of relevance to both the climate and disaster vulnerability of the selected communities and any prospective actions that may be undertaken.

3.4. Context analysis and secondary data collection

During the preparation phase, it is suggested to gather the following data:

1. Demographic data: population counts, ethnicity, sex-disaggregated data, etc.
2. Climate change information: projections, historical records, types of hazards identified, occurrence, etc.
3. Sector-specific data: water coverage, distribution systems, types of use, etc.

Tool 4: Data sources and type: example from recent experience in Lao PDR

Type	Data	Source
Secondary	Census 2015	Available on-line
	Total annual rainfall / Number of rainy days a month by province (last 30 years)	MONRE to provide
	Average temperature in April and June / Maximum and minimum temperature by province (past 30 years)	MONRE to provide
	Updated Shapefiles of infrastructure and services (water bodies and rivers, roads, health centres, schools)	Ministry of Home Affairs (National Geographic Department)
	Major climate hazards (Related information on the intensity, scale of the hazard, casualties, economic impacts, etc.)	Ministry of Labour and Social Welfare (Social Welfare Department)
	Sectors, assets, or services that were impacted the most due to major climate hazards	Ministry of Labour and Social Welfare (Social Welfare Department)
Primary	District level survey*	PONRE to provide, MONRE to collect

** When secondary data is not available, it is suggested to create a district-level survey to collect data from local focal points at the village level.*

3.5. Identifying Environmental and Social Risks and Opportunities

During the preparation phase, it is also recommended to develop an Environmental and Social Safeguards (ESS) screening tool (if not existing) at the beginning of the VA to identify potential opportunities, risks and mitigation measures. ESS policies will also allow identifying potential benefits that can be enhanced throughout the process.

Even if conducting a VA is essentially focused on evaluating local situations through observation and community engagement, it is critical to ensure environmental and social characteristics are considered at every step of the process. By mainstreaming designated environmental and social safeguards, the VA will make sure that all groups of the community are integrated, that cultural heritage is taken into consideration, and even that future actions will preserve human rights, integrate gender and disability, and strengthen spatial justice.

Tool 5: Environmental and Social Safeguards Screening tool (to be tailored according to the local situation)

Safeguard standards	Potential risks and impacts	Is it a risk from the activity? (yes/no)	Explanation/Justification
P 1: Labour and working conditions	Worker's rights may be neglected/violated	*Yes/no*	*Explain*
	The work could involve the use of child labour	*Yes/no*	*Explain*
	The work could involve the use of forced labour	*Yes/no*	*Explain*
	Freedom of workers' organisations or collective bargaining may be neglected.	*Yes/no*	*Explain*
	May particularly affect the safety to live, work and participate in urban life for persons in vulnerable situations.	*Yes/no*	*Explain*
	Worker's rights may be neglected/violated	*Yes/no*	*Explain*
P 2: Climate change resilience, community health, safety and security	Does the initiative adversely affect the resilience of eco-systems, urban systems, infrastructure or communities?	*Yes/no*	*Explain*
	Activities, machinery or infrastructure associated to the intervention could have adverse impact on the community' health and safety	*Yes/no*	*Explain*
P 3: Displacement and involuntary resettlement	Involves displacement, physical or economic, and/or involuntary resettlement	*Yes/no*	*Explain*
P 4: Biodiversity conservation, and sustainable management of living natural resources	May adversely impact natural habitats	*Yes/no*	*Explain*
	May adversely impact critical habitats	*Yes/no*	*Explain*
	May adversely impact legally protected areas (by national or international regulations)	*Yes/no*	*Explain*
P 5: Indigenous peoples	May adversely impact the rights, lands, resources and territories of the indigenous peoples	*Yes/no*	*Explain*
P 6: Cultural Heritage	May adversely impact cultural heritage properties and sites of archaeological, historical, cultural, artistic, and religious significance. May adversely impact intangible heritage (uses and traditions...)	*Yes/no*	*Explain*
	In case the activities use cultural heritage, access and use by stakeholder is secured.	*Yes/no*	*Explain*
P 7: Compliance with the Law	Activities to the intervention do not imply/involve any violation of local regulations	*Yes/no*	*Explain*
P 8: Access and Spatial Justice	The equal distribution of activities benefits is not guaranteed	*Yes/no*	*Explain*
	May adversely result in any form of discrimination in the access to the intervention benefits	*Yes/no*	*Explain*
P 10: Human Rights	May result in the violation of any human right	*Yes/no*	*Explain*
P 11: Gender	May especially have negative impacts on girls and women	*Yes/no*	*Explain*
	May adversely involve any form of discrimination against girls and women	*Yes/no*	*Explain*

P 12: Children, Youth and Older persons	May especially have negative impacts on children, youth and/or older persons	*Yes/no*	*Explain*
	May involve any form of discrimination against children, youth or older persons	*Yes/no*	*Explain*
P 13: Disability	May especially have negative impacts on persons with disabilities	*Yes/no*	*Explain*
	May involve any form of discrimination against persons with disabilities	*Yes/no*	*Explain*
P 14: Resilience	May affect the protective factors and/or the adaptive capacity of environmental systems	*Yes/no*	*Explain*
	May affect the protective factors and/or the adaptive capacity of social (including urban, community and governance) systems.	*Yes/no*	*Explain*

3.6. Developing a stakeholder analysis and mapping

Finally, in order to well prepare the VA, a stakeholder analysis and mapping is needed to ensure that participatory processes are effective and engage all relevant actors. Formal and informal institutions and organizations have a significant role in supporting or hindering people's climate resilience and natural resources management, and hence should be engaged along the process. Stakeholders include government, academic and research institutions, development partners, NGOs, service providers and grassroots organizations. This mapping process enables the identification of potential collaborators, as well as targets for learning and influence. Moreover, involving local institutions and communities can help increase ownership and acceptance of the VA results and recommendations, paving the way towards localized AP. Consequently, identifying and classifying relevant stakeholders and stakeholder groups within a community will be decisive to get an overview of the ways in which different groups and institutions can contribute to the assessment.

Some examples of key stakeholders in Lao PDR include:

- Local governments (PONRE, DONRE, PPI, PAF, PEM, Lao Women Union, Lao Youth Union, etc.)
- Local institutions (non-governmental organizations, community-based organizations, educational institutions, etc.)
- Community leaders (village chiefs, district chiefs, etc.)
- Vulnerable people (women, youth, the elderly, people with disabilities, indigenous peoples, etc.)
- Local private sectors and financial institutions (companies, banks, etc.)
- Neighboring communities (that may be affected by the project, or may share similar issues and concerns).

In practice, many methodologies are available to conduct stakeholder analyses. Stakeholder mapping can be used to assess and prioritize the engagement of different group of people and their roles in relation to the project, level of vulnerability how they can contribute to the project, etc. It is recommended to identify as many stakeholders as possible for a comprehensive analysis. The mapping exercise can also help to select key informants (such as local leaders and community representatives), who can provide useful insights into the local context.

In addition, mapping levels of influence can support the understanding of local governance, roles in decision making and identify gaps inclusion in decision-making processes. While data and information to be used for stakeholder analysis may frequently be gathered from secondary sources such as online material, conducting interviews with key informants is usually recommended in order to receive updated and trustworthy information. The tools below were developed by UN-Habitat used for the stakeholder analysis and mapping.[20]

Tool 6: Stakeholder analysis

Stakeholders can be listed as in the following table, which include details on their stake, influence, and capacity. This tool can be complementarily used with other tools and methods, such as snowball mapping. The snowball mapping method can help complete the stakeholders list by starting with a few and asking those to identify new stakeholders and provide further contacts.

Stakeholder *(Name of specific person, institution or group)*	**Stake** *(Why should they be engaged in the process?)*	**Influence** *(How and how much can they contribute to decision-making?)*	**Capacity** *(What knowledge/ skills/ resources can they contribute to the process?)*
Identify and list	*Explain*	*Explain*	*Explain*
Identify and list	*Explain*	*Explain*	*Explain*
Identify and list	*Explain*	*Explain*	*Explain*

Tool 7: Stakeholder mapping

Following the stakeholders' analysis, a stakeholder mapping tool can be applied based on their level of influence, capacity and stake. This mapping exercise identifies prioritized stakeholders for engagement process during later phases, as those stakeholders with a high stake and high influence should be engaged in the VRA process. At the same time, those with a high stake and low influence should be involved and empowered throughout the process. Those with a high influence but low stake could potentially be high assets in advocacy and communication. Lastly, those stakeholders with low influence and low stake can probably be engaged but would have a lower priority than the other groups. [21]

[20] UN-Habitat (2020). Climate Change Vulnerability and Risk – A Guide for Community Assessments, Action Planning and Implementation. Available at: https://unhabitat.org/climate-change-vulnerability-and-risk-%E2%80%93-a-guide-for-community-assessments-action-planning-and

[21] *Ibid.*

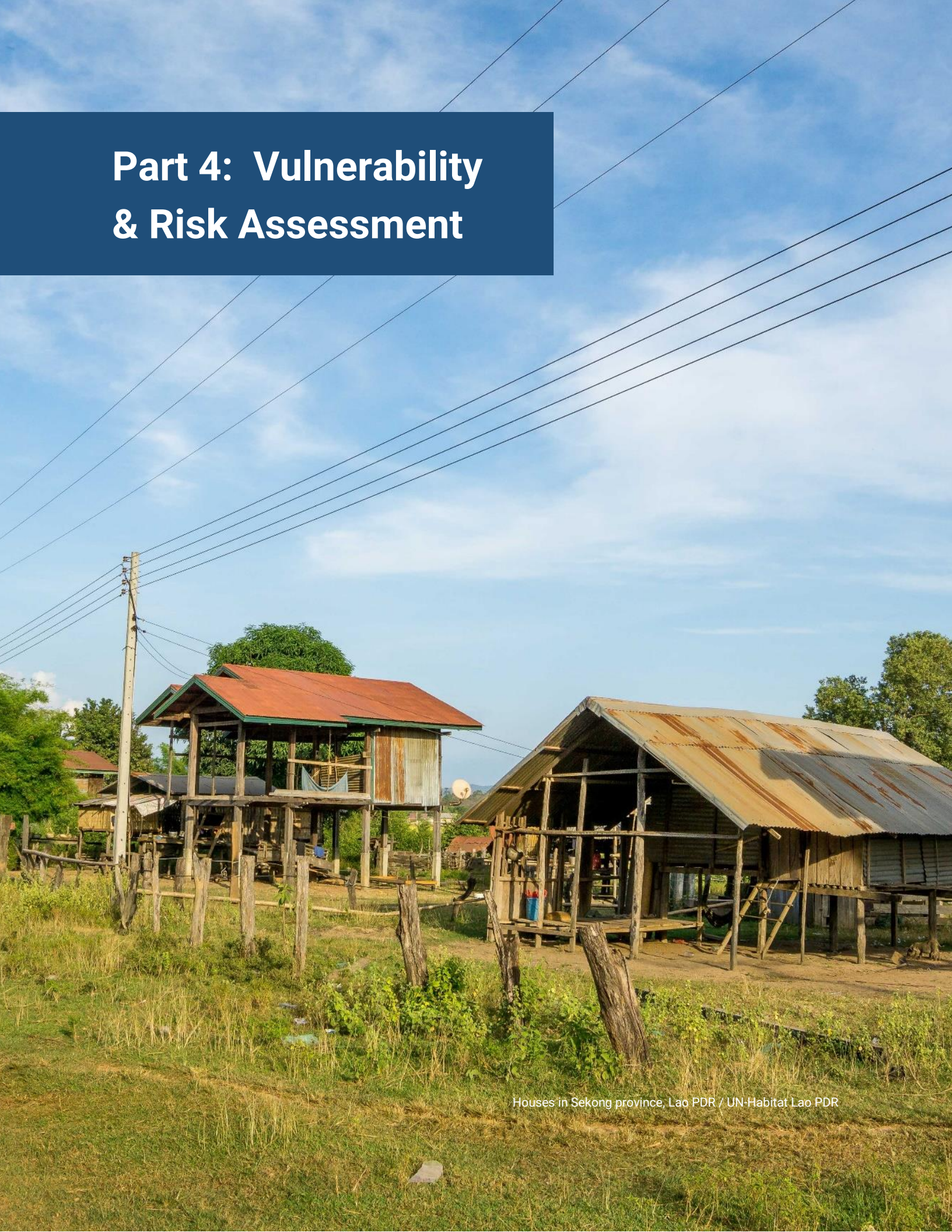
	Low influence	High influence
Low stake	*Identify and list*	*Identify and list*
High stake	*Identify and list*	*Identify and list*

CONCLUSION BOX 1.

Key steps for preparing the Vulnerability Assessment

1. Identifying objectives and expected outcomes
2. Setting up the team
3. Aligning with national and local climate change and environmental policies, strategies, and plans
4. Analysing the context and collecting secondary data
5. Identifying Environmental and Social risks and opportunities
6. Mapping relevant stakeholders

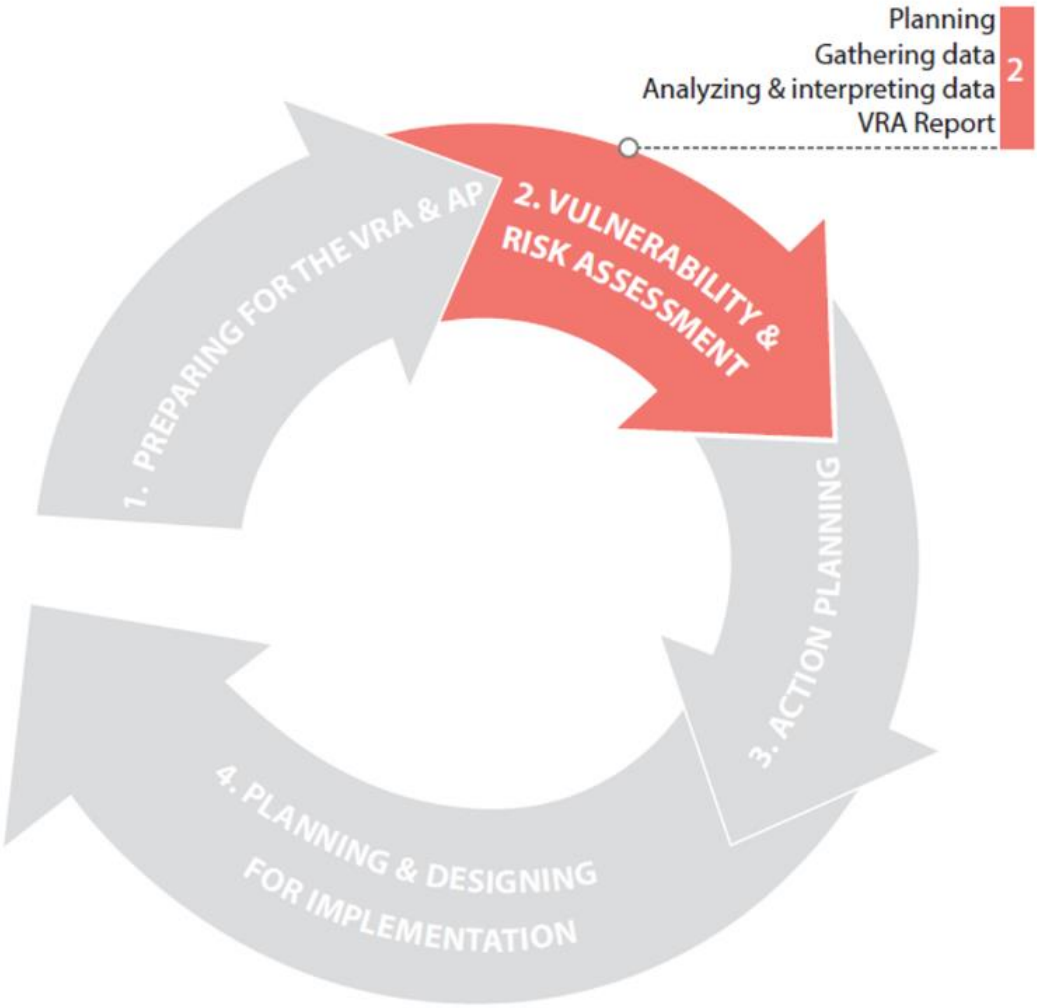
Part 4: Vulnerability & Risk Assessment



Houses in Sekong province, Lao PDR / UN-Habitat Lao PDR

Once the preparatory phases are over, the VRA development phase will be carried out in order to understand local vulnerabilities, as well as the climate-related hazards, shocks and stressors.

Figure 4. Vulnerability and Risk Assessment Phase (source: UN-Habitat, 2020).



Considering assessing the risks, it is important to focus on both the possibility of climatic variability and catastrophic events as well as their adverse impacts. Since underlying vulnerabilities are likely to enhance the negative effect of climate-related hazards, a comprehensive approach positioning communities at the centre is needed to better assess the baseline situation.

4.1. Step-by-step Guidance

- **Step 1: Planning and getting organized for the assessment**

  Prior to the data collection, a strong planning process is needed to build a solid basis for an effective and accurate assessment. In this respect, the assessment team will plan the way forward based on the initiative's objectives and resources available through the definition of the following:

  - **The level at which data should be collected** (community level, household level or both);
  - **The most appropriate data collection methods/tools to use** in the given context, capturing diverse dimension of vulnerabilities; and,
  - **The order in which these methods/tools will be applied**, which could be used consecutively or in parallel.

  It is recommended to start from general information to detailed data, scaling down the assessment. Therefore, starting by assessing the main issues faced by communities is useful to get an overview of local realities, and further refine the process through activities with communities to better identify target issues. As recommended[22], focus group discussions and household surveys can be later organised to collect qualitative data such as how the community perceives climate-related vulnerability and risk, or quantitative aspects such as the level of service accessibility, water access and availability, among other relevant characteristics.

- **Step 2: Engaging with the community**

  Enabling the communities to participate in adaptation begins with making them aware of environmental and climate change issues. **It is important to develop engagement strategies that ensure full and equal participation throughout the process since the uneven distribution of impacts and vulnerabilities to climate change results in some groups being impacted more severely than others**. These groups are not only particularly vulnerable but also traditionally underrepresented, especially throughout decision-making processes. To address the issue of underrepresentation during stakeholder consultations, gender and youth-oriented participatory approaches must be used. This may be accomplished by holding separate and mixed gatherings of male and female community members to ensure full and equal participation.

  Community meetings are also needed to introduce the CbVA team and provide community members with an overview of the process. It is suggested to train facilitators in the different tools that will be used to guide the discussions and be able to respond to doubts and questions. Experience in Lao PDR has shown that meetings with community members are particularly useful to collect data and raise awareness, and are usually led by the village chief or other community leaders. Also, it is important to count on team members that are proficient in the local language to ensure community members have the opportunity to ask questions and share concerns about the process, as well as to nominate representatives to actively participate in the implementation of the assessment. It is up to the facilitation team to ensure that those selected or nominated by their

[22] *Ibid.*

community for this role are representative of the community in terms of gender, ethnicity, age and socio-economic status.

Obtaining **Free Prior and Informed Consent (FPIC)** at the start of the process is also highly critical when using this type of human rights-based approach. This is the first step towards acknowledging that activities may potentially affect the lands, territories, and resources, which are sometimes owned by vulnerable groups. Therefore, FPIC should be required and obtained before the approval and/or commencement of activities. In the same line, Environmental and Social Safeguards mainstreaming should begin at initial meetings with local stakeholders, in order to raise awareness on their rights and the principles that must be followed throughout the entire process.

The Free Prior and Informed Consent (FPIC) is a principle protected by international human rights standards that state, all peoples have the right to self-determination and – linked to the right to self-determination – all peoples have the right to freely pursue their economic, social and cultural development.

Backing FPIC are the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), the Convention on Biological Diversity and the International Labour Organization Convention 169, which are the most powerful and comprehensive international instruments that recognize the plights of indigenous peoples and defend their rights.

Rather than just aiming at obtaining consent, **FPIC is a process through which people are able to conduct their own independent and collective discussions and decision-making**.

It provides communities with the opportunity to shape project goals and objectives, to ensure that their needs are addressed, and their customary laws and rights are respected.

FPIC should be obtained from each community and should involve a participatory process.

FPIC Principles:

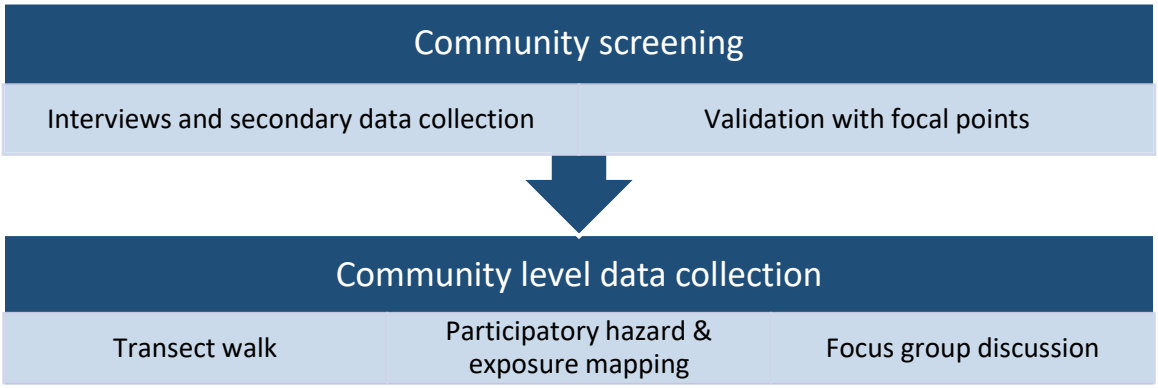
- **FREE:** refers to consent given voluntarily and without coercion, intimidation or manipulation.
- **INFORMED:** refers mainly to the nature of the engagement and type of information that should be provided prior to seeking consent and also as part of the ongoing consent process.
- **CONSENT:** refers to the collective decision made by the rights-holders and reached through the customary decision-making processes of the affected Indigenous Peoples or communities.

- **Step 3: Collecting data**

It is suggested to **create a community profile** through the collection of data on a set of characteristics which are: population, spatial and urban use, natural resource-based production, critical point facilities and lifeline utilities. Then, **hazard mapping** is needed to complete the assessment. Although household survey is suggested as a tool for collecting specific data, in Lao PDR it is common practice to collect the information through village chiefs and community representatives, since remote villages are hard to reach, and these focal points are able to provide reliable and up-to date data.

If the assessment team has not engaged with the community previously, it is recommended to organise meetings with community leaders (village and district chiefs) to explain the purpose of the assessment and get an authorization to work in the settlement. During this meeting, the team should clarify objectives of the assessment, how much time will be needed and where the discussions will take place. It is important to select an appropriate venue that is available, accessible and comfortable for women or other less mobile community members. The team may also want to request the assistance of local government institutions (such as PoNRE and DoNRE) for communicating information about the assessment to participants and introducing the facilitators and project team to community members.

Two main steps are needed, as shown in the figure below:



- **Step 3.1: Community screening**

The **community screening** involves secondary sources, interviews and validation processes to verify that the data received– from individuals or organisations external to the community, is accurate and updated. This stage is integral to the CVA process. It will enable the assessment team, as a facilitator, to get the best out of the process in terms of enhancing participation, analysis, and action planning during each subsequent stage.

This step includes general information of the community settlements such as the demographics, access to basic services, main issues, and local needs. In parallel, the data and information obtained during the previous phase (e.g., governance scan) can help inform the community screening. Once the data has been collected, the community focal points may help to validate it, obtain additional inputs, and continue building engagement.

Tool 8: Community screening[23]

Settlement characteristics	
Element	**Type of data**
Settlement name	*Name of the settlement under study*
Location (GPS coordinates)	*Latitude and longitude*
Administration and governance	*Governance structure and capacities*
Land tenure	*Land tenure characteristics*
Population	
Element	**Type of data**
Population	*Total number of people living in the settlement*
Distribution by gender	*Number / percentage of females and males*
Distribution by age	*Number / percentage of children (0-14 years), percentage of youth (15-24 years), adults (25-64 years), and elderly (65 years and above)*
People with disabilities	*Number / percentage of people with disabilities*
Urban Land Use	
Element	**Type of data**
Formal urban land use categories	*Total land area under land use categories within the settlement boundaries (e.g., residential area, industrial area, etc.)*
Natural Resource Based Production	
Element	**Type of data**
Crops	*Crops varieties, total area used to grow crops (in hectares, square meters, etc.)*
Fishing	*Fish varieties and products*
Livestock	*Livestock reared, total area used for livestock (in hectares, square meters, etc.)*
Forest products	*Forest products being used/produced by community members*
Critical Point Facilities	
Element	**Type of data**
Educational facilities	*Types of facilities the community has access to, distance to facilities*
Health facilities	*Types of facilities the community has access to, distance to facilities*
Local government buildings	*Types of facilities the community has access to, distance to facilities*
Religious buildings / community halls	*Types of facilities the community has access to, distance to facilities*
Evacuation centers	*Types of facilities the community has access to, distance to facilities*
Other critical point facilities	*Identify other types of facilities that are relevant, distance to facilities*
Lifeline Utilities	
Element	**Type of data**
Water supply	*Access to drinking water, water supply network coverage, etc.*

[23] Adapted from UN-Habitat (2020), Tool VRA 1 – Community Screening

Wastewater and sanitation	*Access to sanitation, wastewater network coverage, etc.*
Stormwater management	*Drainage network coverage*
Energy	*Access to energy, electricity supply network coverage, etc.*
Solid waste management	*Access to waste collection system*
Transport	*Access to transport (including public and private modes)*
Road network	*Access roads to the settlement, types (paved/unpaved), etc.*

○ Step 3.2: Community-level data collection

The assessment team can approach the community using diverse participatory methods and tools to **capture a diversity of aspects of socio-environmental characteristics**. While the transect walk can be conducted in person, other techniques can be employed using virtual means of communication. Below are some of the tools used by UN-Habitat in Asia and the Pacific:

a. **The transect walk** can be conducted by the team in a collective or individual way, in order to get an overview of the community's spatial conditions and main characteristics. The objective of this exercise is to receive more information about the built environment and infrastructure such as roads network used to access to the community, buildings, sanitation system, hazard prone areas (e.g., steep slopes that are prone to landslides), environmental systems, and other main characteristics. In most cases where the information from secondary sources is not available and accessible, the transect walk can also be employed to obtain additional information to complement the community screening. Some methodology using this kind of processes also encourage to repeat this initiative at different time of the day to capture communities' dynamics and perspectives.

b. **The participatory hazard and exposure mapping exercise** can be used to complement other processes by considering the spatial component of vulnerability. It is used to identify areas where hazard exposure is more intense or more frequent, mapping the specific location of community assets, and focusing on the spatial vulnerabilities related to the communities' livelihoods, habits and perceptions. This approach can support the generation of data that can be applied in planning process and in identifying actions on reducing vulnerabilities. Participants will be asked to map areas and community assets which are particularly vulnerable to climate hazards using various media (maps, digital tools, photography). This mapping exercise will also help identify community infrastructure and environmental assets and analyze their exposure to climate hazards. These include, for instance, road network, community infrastructure (e.g., temples, school, hospital, etc.), ecosystem services (forest, water sources, etc). Moreover, participants should be asked to provide information on how assets are being affected.

c. **Focus Group Discussions (FGD)** are also often applied as a tool to collect qualitative data through community-based approaches. The objective of the

FGD is to gather a small group of people to discuss a number of topics and issues, guided by a facilitator. It is used to identify general needs and problems, understand participants´ perceptions on climate change current and future risks, and identify community capacities that can be further built or reinforced to enhance local resilience. This method applies a semi-structured approach, by asking predominantly open-ended questions, which allow the participants to express their opinions on various topics. Through this exercise, it is essential to ensure FGDs capture diversity within the community as specific groups might be more resilient or vulnerable than others.

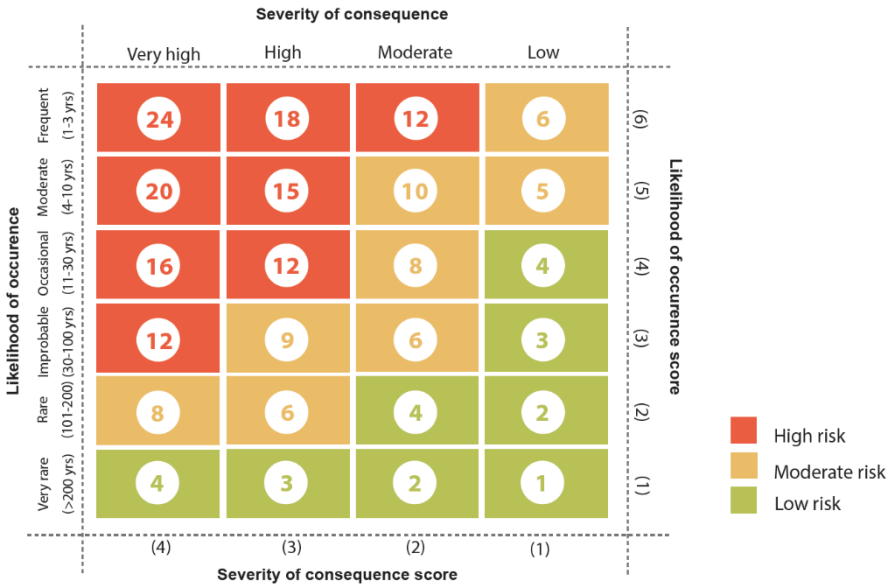
- **Step 4: Analysing data**

Once the data collection has been completed, it is recommended that the assessment team validates key findings with the community, prior to analysing and interpreting detailed data. Following internationally recognized methodologies, the VRA focuses on four key components: climate-related hazards (including risks), exposure, sensitivity and adaptive capacity. Thus, the following analyses should be developed:

a. **Hazard analysis:** focuses on climate-related events or trends and their physical impacts. It explores the current risk level of these hazards and expected future impacts based on climate change projections.
b. **Exposure analysis:** Identifies elements (e.g., people, livelihoods, ecosystem services, etc.) that are located in places where they could be adversely affected by hazards.
c. **Sensitivity analysis:** Evaluates the degree to which a system or species is affected, either adversely or beneficially, by climate variability or change.
d. **Adaptive capacity analysis:** Looks at the ability of systems, institutions, humans and other natural conditions to adjust to or cope with potential impacts, to take advantage of opportunities, or to respond to consequences.[24]

Tool 9: Risk level[25]

This tool can be used to identify the risk level based on the likelihood and severity of consequence scores. Yellow and red areas have to be prioritized during the Action Planning phase.



[24] *Ibid.*
[25] *Ibid.*

- **Step 5: Documenting and reporting the analysis**

  Once all the analysis is completed and finalized, the expert team will need to document it in the VRA report (*the reporting format for the VRA report is outlined in Annex 1*). As mentioned previously, it may include information on the most significant climate hazards faced by the community and related impacts, information on vulnerable population groups (e.g., poor, elderly, youth, people with chronic disease, unemployed, etc.) that are expected to be most affected by climate change, hazards occurred in the past, etc. For displaying assessment findings, maps, diagrams, and graphs are useful and effective tools. This information will help in prioritizing the adaptation actions.

  The analysis should also be documented in a **concise report that summarizes the key findings and options for planning**. This should be adapted to the particular context and analysis to ensure it fits the intended purpose. Moreover, in compiling the report, the team needs to consider the audience (for example, the local government, the project management team or a donor agency) and target the level of detail in messaging accordingly. The team may also need to consider developing a simplified version of the report to be shared with community members, and if needed it should be translated into local language.

CONCLUSION BOX 2.
Key steps for conducting the Vulnerability Assessment

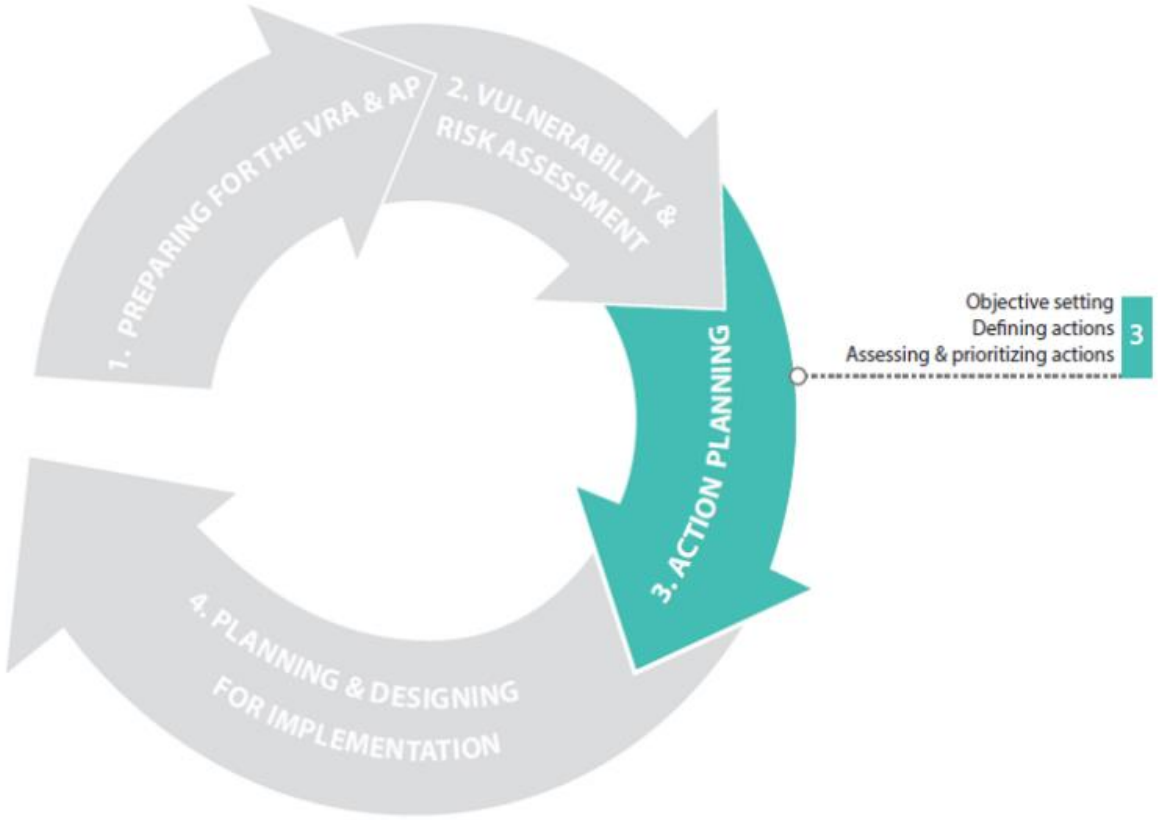
1. Planning and getting organized for the assessment
2. Engaging with the community
3. Collecting data
4. Analysing data
5. Documenting and reporting the analysis

Part 5: Action Planning

Community discussions, Lao PDR / UN-Habitat Lao PDR

Following the Vulnerability Assessment phase, the third phase of the process described in this guide is the Action Planning Phase. This step aims at translating the assessment into implementation processes. In this respect, this step is meant to define which community-based interventions are needed to strengthen climate change resilience and improve local natural resources management systems.

Figure 6. Action Planning Phase (source: UN-Habitat, 2020).



As indicated earlier, it is admitted that when priorities identified are mainstreamed into community adaptation action planning, their needs are better reflected in local development plans and communities can gain better access to the resources and support to implement their plans. In addition, CAAP processes provide important insights into community experiences with climate change that can inform integration of adaptation in development plans.[26]

[26] CARE (2014). *Community adaptation action planning*. Available at: https://careclimatechange.org/wpcontent/uploads/2014/08/Cba_Planning_Brief.pdf

To successful develop a Community Adaptation Action Planning (CAAP), four main steps are essential: (1) Identifying climate change issues; (2) Interpreting these issues into objectives; (3) Identifying actions based on the objectives; and (4) Prioritizing the identified actions. These steps can be conducted in a participatory manner through various activities in the target communities and can be carried out as part of workshops.

5.1. Identifying Issues

Adaptation requires a flexible and continuous process of analysis, planning and action over time, informed by climate information. In order to identify issues, it is critical to get feedback from the community after presenting the main findings of the conducted CbVA. By using community meeting or FGDs, vulnerable spots and assets can be identified, and issues captured. This process will also enable communities to rank their priorities and focus on particular challenges but care is required to ensure that more marginalised groups are included.

5.2. Setting Objectives

After the identification of critical issues, participants can be split into groups or asked to individually write down objectives. After that, the objectives can be discussed with the whole group, pointing out those goals that are shared and emphasizing whether they enhance and support a collective vision.

Tool 10: Turning issues into objectives

Key Areas	Issue	Objective
Population	*e.g., High incidence of water-borne diseases related to regular flooding*	*e.g., By 2025 the incidence of waterborne diseases will be reduced by 20%*
Natural resource based production	*e.g., High economic dependency on a single crop*	*e.g., By 2025 the diversification of crops being harvested by the community will be increased, with a 30% of the cultivated land being used for climate-resilient crops*

5.3. Prioritising actions

Issues and objectives identified can now be prioritized through a participatory, bottom-up approach to ensure the full ownership of communities in activities that they have engaged, and consequently the sustainability of developed initiatives. As indicated earlier, it is always critical to ensure that community meetings and FGDs are representative of the diversity of the settlement to leave no one behind.

As a result, this step aims at guiding the process of prioritizing activities based on various criteria comprising cost-effectiveness to ensuring the maximum adaptation benefits, avoiding maladaptation and risks to environmental and social impacts, etc. **It is also critical to envisage this process through a multisectoral lens** to avoid sector separation, and rather capture the complexity of settlements and potential co-benefits of solutions chosen.

In practice, prioritizing options can be conducted as a standalone, or back-to-back workshops with the objective setting workshop. Prior to the workshop, a number of preparatory activities may be carried out by the team:

- Defining criteria and prioritizing actions targeting multiple co-benefits;
- Screening out duplicate actions or those that are already being initiated/implemented by other stakeholders;
- Separating non-climate related actions: Despite focusing and building on VRA findings, some identified options may not be directly relevant to climate adaptation, mitigation or disaster risk reduction;
- Organizing options following key areas and time frames which can help set time horizons and coverage over the short, medium and long term.

5.4. Defining Action Plans

Through this last step of the Action Planning definition, participants will be asked to **propose climate-resilience options which relate to the previously identified objectives, and considering possible co-benefits related to these actions.** All actions need to be captured, which facilitators may go over them with the community. At this point, any actions that are not climate-related or relevant will be eliminated or set aside for further consideration.

Through this phase, options may also be defined beforehand by the technical team prior to presenting them during the workshop. These can then be discussed, obtaining inputs on appropriateness and acceptability and providing participants an opportunity to define other options that they may consider important. Another option is to directly engage with communities to define options, with the support of technical staff. Whatever option is chosen, it is however critical to make sure that local development plans respond to and support community adaptation goals stated in action plans, by communities themselves.

CONCLUSION BOX 3.
Key steps for planning actions

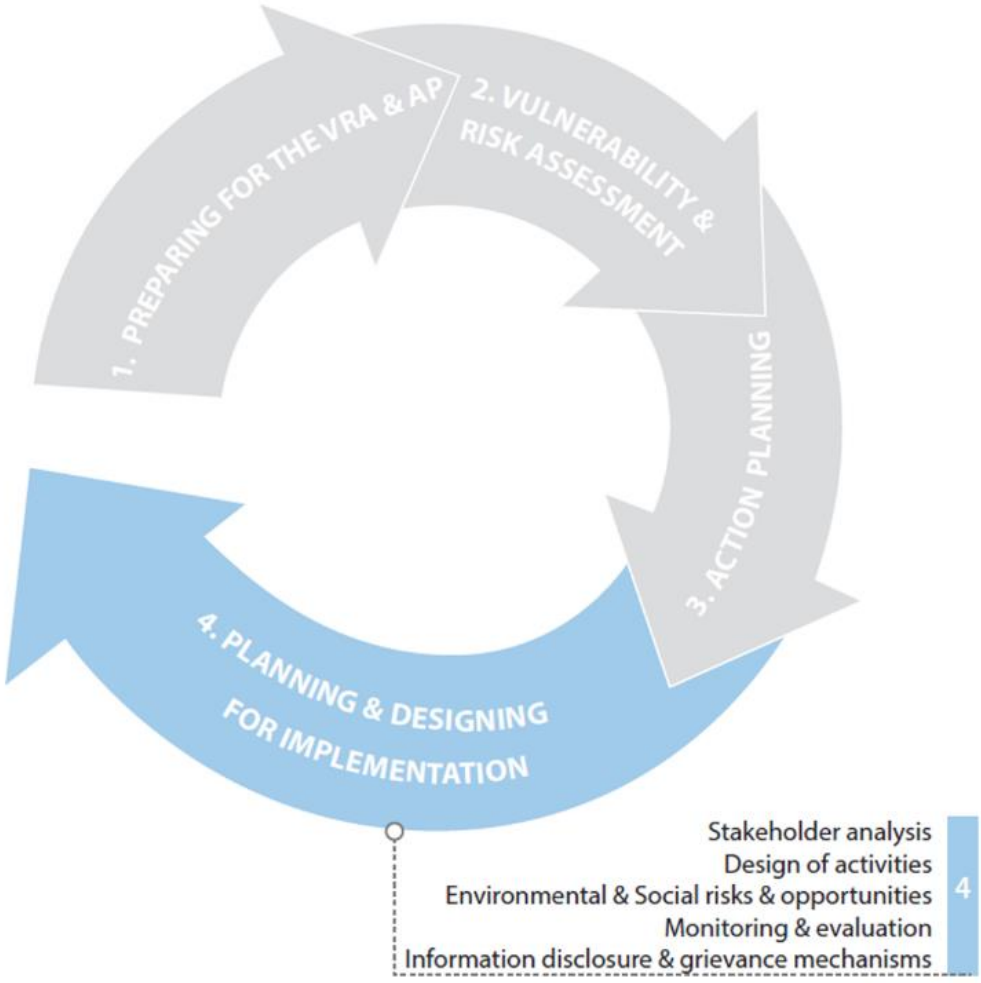
1. Identifying Issues
2. Setting Objectives
3. Prioritising actions
4. Defining Action Plans

Part 6: Planning and Designing for implementation

Village in Attapeu province, Lao PDR / UN-Habitat Lao PDR

This final part describes the step-by-step process of planning for project implementation of community-level interventions. It highlights the different steps that can be taken before the actual implementation of projects.

Figure 7. Planning and Design for Implementation Phase (source: UN-Habitat, 2020).



6.1. Intervention Design

Prioritized actions will lead to the design of different projects that enhance climate resilience. These interventions can be either soft or hard, small or large. All interventions must be appropriately contextualized and geographically specific to make sure that they respond to the issues identified during the full process. At this stage, community participation will be determined by the team since experts in relevant fields will be involved for the design of the different interventions. However, to enhance local resilience, a particular focus on local coping capacities and indigenous knowledge is mandatory. Environmental and social safeguards, as well as gender and youth and other crosscutting issues, should be mainstreamed into the design process for all projects and sub-projects. In addition to the execution of in-depth cost-benefit analysis, possible project-related risks should be recognized and analyzed from the beginning to avoid drawbacks at the time of implementation.

Gender and youth issues, along with Indigenous People considerations should be thoroughly included into the design process to ensure that all viewpoints are considered, noting that different groups will have different values and priorities. For this aim, a community-based participative strategy that differentiates requirements by gender, age, ethnicity and ability is needed. While some initiatives will be more sensitive than others, all must take into account the aforementioned issues. Appropriate methods throughout sub-project design will aid in addressing and mitigating previously identified vulnerabilities, particularly those of persons in vulnerable situations.

6.2. Implementation

Implementation of projects, sub-projects and adaptation actions may occur individually or collectively. **Review and adjustment of plans** is part of the process and should take place periodically to ensure that projects/initiatives are updated and relevant for the community. Since actions can be either implemented by government entities, execution characteristics will vary from case to case. It is important to seek for technical support when needed, to avoid increasing risk and vulnerability through the execution of planned activities. In the same line, it is recommended to strengthen local and regional networks to leverage resources and increase the impact and create new opportunities for projects up-scaling.

However, some actions and activities can be undertaken independently by community members with locally available resources. This includes, for example, use of drought-tolerant crops and community rice banking. Other actions, including those related to public goods and services, will require external technical and financial support, for example development of water supply or irrigation infrastructure, establishment and strengthening of early warning systems or services related to value chain engagement. It is beyond the scope of a project to plan to resolve entrenched issues, such as land tenure rights, illiteracy or inequitable access to resources, which may prevent successful realization of adaptation plans and visions, it is recommended that communities should include advocacy actions, conducted through linkages with local institution or civil society networks.

As mentioned earlier, it is also essential to highlight that each situation is unique, and therefore this guide is aimed at giving methodological options that can be tailored to better respond to local realities.

6.3. Monitoring, Evaluation, Adjusting and Modifying

Implementing climate action is a continuing process, especially as new impacts from climate change will emerge. Tracking and measuring success and progress of actions or responses to these change are part of the process to facilitate necessary alterations and further roll-out of measures taken. Success factors, or otherwise, are important bases and evidence for national and local policies relating to adaptation. Tracking and measuring success and progress, however, should happen at multiple levels and for multiple audiences, from the assessment team over to the stakeholders, and down to the community. The team should develop measures for monitoring and evaluation (M&E), reporting on results and adjusting objectives and strategies to ensure that the climate change actions remain aligned with its development goals and remains responsive to the needs of the community over time.

The M&E monitoring framework will structure the plan for monitoring and evaluating programs, activities and projects in the particular community. To verify that activities are appropriately responding to the objectives specified, indicators should be revised, updated, and included into the framework. The gender perspective should also be included in the monitoring and evaluation strategy through the development and inclusion of gender-sensitive indicators that can be measured through gender disaggregated data. The assessment team may also decide to carry out monitoring and evaluation planning in a participatory way, depending on the project.

In this respect, adjusting and monitoring processes should be applied to review climate change strategies and actions, and the measures for monitoring and evaluating their progress and performance in order to evolve and remain appropriate despite changing natural, economic, social and political conditions. This step allows for new climate change information to be incorporated into the regular planning updates.

CONCLUSION BOX 4.
Key steps for designing and implementing actions

1. Designing interventions
2. Implementating interventions
3. Monitoring, evaluating, adjusting and modifying interventions

Woman in Attapeu, Lao PDR / UN-Habitat Lao PDR

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ANNEX 1: Proposed Outline for a CbVRA Report

Executive Summary (English and local language)

- Brief overview of purpose, and methods of the assessment, summary of main findings and proposed adaptation options.

1. **Introduction**
   - Background
   - Objectives and expected outcomes of the assessment
   - Overview of the process
2. **Methodology for the assessment**
   - Key concepts and terminologies
   - Overview of data collection approach and tools
   - Matrices for data collection and analysis/identified indicators
   - Timeframe
   - Overview of assessment team (optional)
3. **Community profile**
   - Overview of physical, environmental, and socio-economic characteristics
   - Overview of infrastructure and connectivity profile
   - Overview of administration and governance
4. **Current vulnerability to climate change and hazards**
   - Overview of observed climate change
   - Current vulnerability index
   - Summary of current vulnerability: vulnerable sectors, social group and locations
5. **Future climate change risk**
   - Overview of future climate change projections
   - Potential impacts
   - Future risk profile
6. **Overall key findings**
   - Summary of findings and analyzing results
7. **Climate Adaptation Options/Interventions (Recommendations)**
   - Summary of potential adaptation options (long and short lists if needed)
8. **Annexes**
   - Any relevant information such as list of communities included in consultations, survey questionnaires, statistical data, etc.
9. **References**

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