



LAO PEOPLE'S DEMOCRATIC REPUBLIC
PEACE INDEPENDENCE DEMOCRACY UNITY PROSPERITY

SECTORAL ADAPTATION GUIDELINES UNDER THE SASAPS 2025-2030

UNDER THE NATIONAL ADAPTATION PLANNING PROCESS



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MINISTRY OF AGRICULTURE AND ENVIRONMENT

Lao PDR Sectoral Adaptation Guidelines for the Agriculture and Forestry, Water Resources and Urban Development and Transport Sectors SASAP (2025–2030) under the National Adaptation Process.

Prepared under the guidance of:

Department of Environment (DoE), Ministry of Agriculture and Environment, Government of Lao PDR

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FORWARD

The Government of the Lao People's Democratic Republic recognizes the critical importance of addressing climate change and its far-reaching impacts on socio-economic development, natural resources, and the livelihoods of communities across the country. As a signatory to the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement, the country has reaffirmed its commitment to enhance climate resilience and transition towards sustainable development pathways. These commitments are supported by national frameworks such as the *Decree on Climate Change* and the *National Strategy on Climate Change by 2030*, which set the ambitious target of achieving net-zero emissions by 2050.

In this context, the Ministry of Agriculture and Environment (MAE), through its Department of Environment (DoE), is leading national efforts to mainstream climate change adaptation into development planning. Building on the *National Adaptation Plan* (NAP) finalized in 2024, *these Sectoral Adaptation Guidelines* have been prepared to provide a practical and coherent framework for the formulation, implementation, and monitoring of *Sectoral Adaptation Strategies and Action Plans* (SASAPs).

The *Sectoral Adaptation Guidelines* were developed under the Green Climate Fund (GCF)-funded Readiness Support for Mainstreaming Climate Change Adaptation into Sectoral Planning project, implemented by the MAE with technical assistance from the Global Green Growth Institute (GGGI). They draw on lessons learned from the first generation of SASAPs covering Water Resources, Agriculture and Forestry, and Urban Development and Transport, and consolidate best practices, methodologies, and institutional arrangements to support their replication and scaling across additional sectors.

The purpose of these guidelines is to ensure that all sectoral planning processes in Lao PDR adopt a consistent and evidence-based approach to identifying climate risks, prioritizing adaptation actions, and integrating resilience into national and subnational policies and investment frameworks. The SAGs promote an inclusive, gender-responsive, and participatory approach, ensuring that adaptation planning benefits all groups, particularly women, ethnic minorities, and vulnerable communities most affected by climate change.

On behalf of the MAE, we would like to extend our appreciation to all ministries, agencies, and partners who contributed technical inputs and expertise throughout the development process. The MAE extends its sincere appreciation to GCF for its financial support and to GGGI for its technical assistance in facilitating the development of this SASAP. The contribution of sectoral focal points, provincial departments, and all partners involved in consultations and technical discussions is gratefully acknowledged. Their expertise and engagement have been instrumental in shaping the priorities and proposed actions contained in this strategy.

The successful application of these Sectoral Adaptation Guidelines will rely on continued collaboration among government institutions, development partners, civil society organizations, and local communities. By working together and maintaining a spirit of partnership, Lao PDR can build a more climate-resilient, inclusive, and sustainable future, where adaptation planning is not an isolated effort, but a shared national endeavor supporting long-term prosperity for all.

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Acronyms and Abbreviations

ADB	Asian Development Bank
AFD	Agence Française de Développement
ASEAN	Association of Southeast Asian Nations
CBA	Community-Based Adaptation
CEDAW	Convention on the Elimination of all Forms of Discrimination Against Women
CRVA	Climate Risk and Vulnerability Assessment
CSO	Civil Society Organization
DAE	District Office of Agriculture and Environment
DALAM	Department of Land Administration and Management
DCC	Department of Climate Change [former department merged into DoE]
DMH	Department of Meteorology and Hydrology
DOA	Department of Agricultural
DOE	Department of Environment
DOI	Department of Irrigation
DPC	Department of Planning and Cooperation
DPWT	District Office of Public Works and Transport
DRM	Disaster Risk Management
DWR	Department of Water Resources
EbA	Ecosystem-based adaptation
EU	European Union
FAO	Food and Agriculture Organization of the United Nation
FPIC	Free Prior Informed Consent
GBV	Gender Based Violence
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
GEDSI	Gender Equality Disability and Social Inclusion
GGGI	Global Green Growth Institute
GHG	Greenhouse Gas
GIS	Geographic Information Systems
GIZ	Deutsche Gesellschaft für International Zusammenarbeit
GOL	Government of Land
GWP	Global Water Partnership – Southeast Asia
HDI	Human Development Index
IDA	International Development Association
IFC	International Finance Corporation
IFAD	International Fund for Agricultural Development
IPCC	Intergovernmental Panel on Climate Change
IWA	International Water Association
IWMI	International Water Management Institute
IWRM	Integrated Water Resources Management
JICA	Japan International Cooperation Agency
LAK	Lao Kip
LDC	Least Developed Country
LNFD	Lao National Development Front
LUIS	Land Use Information System
LWU	Lao Women Union
LYU	Lao Youth Union
M&E	Monitoring and Evaluation
MAE	Ministry of Agriculture and Environment
MAF	Ministry of Agriculture [former ministry merged into MAE]
MCA	Multi Criteria Analysis
MEM	Ministry of Energy and Mines [former ministry merged into MIC]

MIC	Ministry of Industry and Commerce
MIS	Management Information System
MONRE	Ministry of Natural Resources and Environment [former ministry merged into MAE]
MoU	Memorandum of Understanding
MPI	Ministry of Planning and Investment
MRC	Mekong River Commission
NAFRI	National Agriculture and Forestry Research Institute
NAP	National Adaptation Plan
NAPA	National Adaptation Programme of Action
NBS	Nature-based solutions
NBCA	National Biodiversity Conservation Area
NCAWMC	National Commission for the Advancement of Women, Mothers and Children
NDC	Nationally Determined Contribution
NGO	Non-Government Organizations
NPA	National Protected Area
NPDS	National Power Development Strategy
NSEDP	National Socio-Economic Development Plan
NSCC	National Strategy on Climate Change
NUOL	National University of Laos
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
ODA	Official Development Assistance
PAE	Provincial Office of Agriculture and Environment
PDNA	Post Disaster Needs Assessments
PIU	Project Implementation Unit
PMU	Project Management Unit
PPP	Public Private Partnership
RCP	Representative Concentration Pathways
SAP	Sectoral Adaptation Plan
SASAP	Sectoral Adaptation Strategy and Action Plan
SAG	Sectoral Adaptation Guidelines
SAR	Situation Analysis Report
SASAP	Sectoral Adaptation Strategy and Action Plan
SDG	Sustainable Development Goal
SFM	Sustainable Forest Management
SSP	Shared Socio-Economic Pathways
SWG	Sector Working Group
UN	United Nations
UNDP	United Nations Development Programme
UNDRR	United Nations Office for Disaster Risk Reduction
UNEP	United Nation Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNICEF	United Nations Children's Fund
USDA	United States Department of Agriculture
VPA	Voluntary Partnership Agreement
WASH	Water Sanitation and Hygiene
WB	World Bank
WFP	World Food Programme
WHO	World Health Organization
WMO	World Meteorological Organization
WUA	Water User Associations

Terminology and Definition

Adaptative Capacity: The ability of systems, institutions, humans, and other organisms to adjust to potential damage, take advantage of opportunities, or respond to consequences [1].

Climate Resilience: The capacity of social, economic, and environmental systems to cope with a hazardous event or trend, maintaining essential functions, identity, and structure while also adapting and transforming. [1].

Climate Scenario (SSP/RCP): Standardized projections used to describe possible climate futures based on greenhouse gas emission trajectories. **Representative Concentration Pathway (RCP)** represents climate modelling scenarios representing different greenhouse gas concentration trajectories adopted by the IPCC and **Shared Socioeconomic Pathway (SSP)** represents Scenarios describing possible societal futures used with RCPs to project climate impacts. [1]

Ecosystem-based Adaptation (EbA): The use of biodiversity and ecosystem services as part of an overall adaptation strategy to help people adapt to the adverse effects of climate change. [2]

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 [1].

Hazard: 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 impacts. [1].

Impacts: Effects on natural and human systems. The term impacts is used primarily to refer to the effects on natural and human systems of extreme weather and climate events and of climate change. Impacts generally refer to effects on lives, livelihoods, health, ecosystems, economies, societies, cultures, services, and infrastructure due to the interaction of climate changes or hazardous climate events occurring within a specific time period and the vulnerability of an exposed society or system. Impacts are also referred to as consequences and outcomes. The impacts of climate change on geophysical systems, including floods, droughts, and sea level rise, are a subset of impacts called physical impacts [1].

Mitigation: Efforts to reduce or prevent the emission of greenhouse gases or enhance carbon sinks to limit global warming. [1]

Nature-based Solutions (NbS): Actions that protect, sustainably manage, and restore natural or modified ecosystems to address societal challenges effectively and adaptively. [3]

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. In this report, the term risk is used primarily to refer to the risks of climate-change impacts [1].

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. [1].

Executive summary

The *Sectoral Adaptation Guidelines* aims to provide a coherent, practical framework to mainstream climate change adaptation into sectoral and subnational planning processes in the Lao People's Democratic Republic. They have been developed under the leadership of the Ministry of Agriculture and Environment (MAE), through its Department of Environment (DoE), with technical support from the Global Green Growth Institute (GGGI) and financing from the Green Climate Fund (GCF). The Guidelines operationalize the *National Adaptation Plan (NAP, 2025–2030)* by translating its principles into sector-specific methodologies and institutional mechanisms for resilience building.

Purpose and Scope

The Guidelines serve as a step-by-step reference for the preparation, implementation, monitoring, and review of Sectoral Adaptation Action Plans. They aim to harmonize adaptation planning methods across ministries, ensure alignment with national policies (NAP, NDC, NSCC 2030, Green Growth Strategy, and 9th NSEDP), and promote coherence among ongoing and future adaptation initiatives.

The SASAP Guidelines support ministries and provincial departments to:

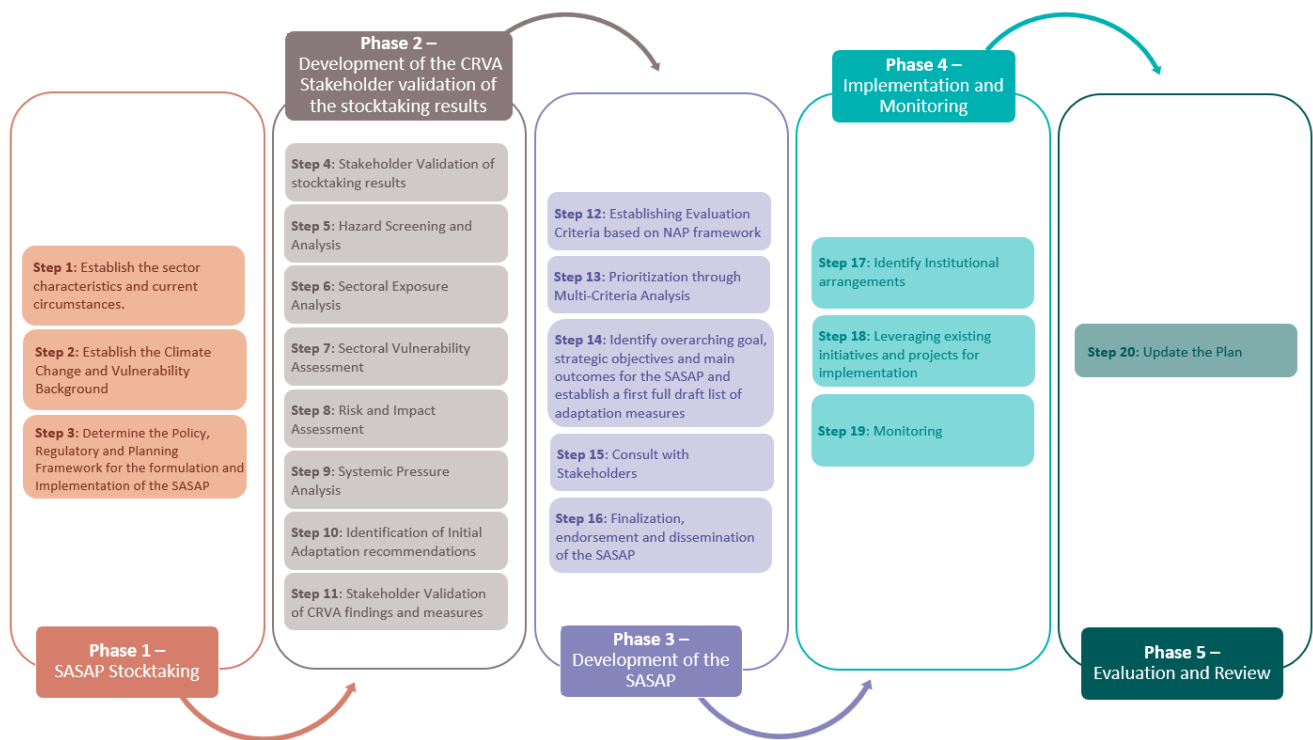
- Systematically assess sectoral exposure, vulnerability, and risks to climate change through standardized *Climate Risk and Vulnerability Assessments (CRVA)*;
- Identify and prioritize adaptation measures using transparent and participatory Multi-Criteria Analysis (MCA);
- Integrate Gender Equality, Disability, and Social Inclusion (GEDSI) principles and community participation in all planning phases;
- Establish clear implementation, monitoring, and evaluation mechanisms to ensure accountability and learning.

Structure and Methodology

The Guidelines outline a five-phase process comprising twenty key steps, from preliminary stocktaking and CRVA to prioritization, implementation, and monitoring:

1. **Stocktaking and Baseline Analysis:** Review sectoral frameworks, data systems, and institutional arrangements.
2. **Climate Risk and Vulnerability Assessment (CRVA):** Identify climate hazards, exposure, sensitivity, and adaptive capacity.
3. **SASAP Development:** Translate CRVA results into strategic objectives, outcomes, and prioritized adaptation actions.
4. **Implementation and Monitoring:** Define institutional roles, financing mechanisms, and progress indicators.
5. **Evaluation and Review:** Establish periodic updates and adaptive learning processes.

This methodology aims to promote consistency across sectors while allowing flexibility to reflect local realities, data availability, and emerging priorities. The process emphasizes evidence-based decision-making, stakeholder ownership, and iterative learning.



Key Principles

The Guidelines are based on cross-cutting principles:

- National ownership and institutional leadership of line ministries;
- Evidence-based planning grounded in scientific and local knowledge;
- Participatory governance through multi-stakeholder engagement;
- Gender equality and social inclusion in all adaptation measures;
- Policy coherence across sectors and levels of governance;
- Sustainability and financing, leveraging both domestic and international resources;
- Monitoring, evaluation, and learning (MEL) for continuous improvement.

Expected Outcomes

The implementation of SASAPs guided by these Guidelines will:

- Enhance the capacity of national and subnational institutions to identify and manage climate risks;
- Support the formulation of bankable adaptation projects and improve access to climate finance;
- Strengthen the integration of adaptation into policies, investments, and development planning;
- Promote inclusive, resilient, and low-carbon development across key sectors.

By providing a unified methodological foundation, the *SASAP Guidelines* enable Lao PDR to move from planning to action, mainstreaming adaptation within all sectoral policies and ensuring that resilience becomes a cornerstone of sustainable national development.

PART I: ADAPTATION AND MITIGATION PROCESS IN LAO PDR

1. Lao PDR Climate Change Context

Lao PDR faces mounting climate risks that increasingly threaten the country's sustainable development trajectory and the resilience of its population. Its geographic diversity and socio-economic dependence on natural resources, particularly in agriculture, forestry, and water, make it highly vulnerable to climate variability and extremes. The country is already experiencing the adverse impacts of climate change, marked by both slow onset shifts and more frequent extreme weather events.

Observed trends include rising mean temperatures, approximately +1°C since 1950 [3], shifting rainfall patterns, and increased incidence of floods, droughts, landslides, and heatwaves. Climate projections under RCP 4.5 and 8.5 scenarios suggest continued warming, with average temperatures expected to rise by 1.5°C to 2.5°C by mid-century under moderate emissions, and potentially up to 5°C by 2100 under high-emissions pathways (SSP5–8.5). Rainfall patterns are becoming more erratic, with historical declines of over 200 mm annually and future projections indicating more intense wet-season rainfall and prolonged dry periods [3]. These changes are already translating into longer droughts, intensified heatwaves, and shifts in seasonal cycles, posing significant risks to food and water security, ecosystems, and human health.

The economic toll of these hazards is growing rapidly. Between 2009 and 2018, annual losses from disaster events, particularly floods and droughts, nearly quadrupled, from USD 94 million in 2009 to USD 371.5 million in 2018 equivalent to 2.1% of the national GDP and 10.2% of the national budget in that year [4]. Floods, droughts, and landslides are among the most pressing hazards, increasingly affecting both urban and rural areas. Riverine flooding is exacerbated by altered rainfall-runoff dynamics and upstream hydropower development, while flash floods frequently impact urban centers like Vientiane, Savannakhet, and Champasak. Upland provinces such as Xiengkhouang and Phongsaly face heightened exposure to prolonged dry spells, erosion, and landslides [3].

These projected climatic changes pose significant challenges to infrastructure, agriculture, water resources, and biodiversity. A comprehensive understanding of the country's evolving climate landscape is therefore critical to guide national adaptation planning, prioritize sectoral interventions, and strengthen resilience at all levels of society.

2. Why Adapt?

Mitigation and adaptation are the two possible policy responses to climate change.

- ▶ **Mitigation** aims at reducing Greenhouse Gas (GHG) emissions and enhancing carbon sinks and reservoirs (storage), to restrict global warming. Adaptation is the process of anticipating the adverse effects of climate change and taking appropriate action to prevent or minimise the damage that can be caused.
- ▶ **Adaptation** is necessary because an increase in global temperature in the coming decades is inevitable, even if all GHG emissions are halted. Mitigation and adaptation strategies can be complementary.

Mitigation efforts in Lao PDR focus on transitioning toward low-carbon growth through forest conservation, renewable energy, and sustainable land-use management. However, the inertia of the climate system means that even with ambitious emission-reduction actions, the impacts of temperature rise, altered precipitation, and extreme events will persist for decades. Consequently, adaptation is central to Lao PDR's national response, aiming to strengthen resilience across communities, infrastructure, and ecosystems by anticipating risks and integrating climate considerations into all development planning.

The Government of Lao PDR recognizes the challenges that climate change poses to its population, natural resources and economy, and has taken considerable measures to identify and address, to the extent possible, current and future climate risks at the policy and operational level. Aligned with its international and global commitments, the GoL has developed a wide array of national (cross-)sectoral strategies and action plans which have been translated into the national legal framework, focusing on climate change adaptation, sustainable and green growth, and disaster management since the late 1990s [3]. These include:

- climate change national strategies (2010, 2023) [5]
- health adaptation national strategy (2023) [6]
- green growth national strategy (2019),
- disaster risk reduction strategy (2020) [7]
- national sectoral policies on forestry (2005), natural resources and environment (2015), water (2023), housing and urban development (2023), and gender equality (2021).

In parallel, the government is advancing sustainable urban planning and public transport development, with ongoing efforts to improve infrastructure and enhance climate resilience. The 3rd Lao National Urban Forum in December 2024 emphasized SDG localization and youth engagement in shaping sustainable cities [8].

The Government of Lao PDR has embedded this dual approach within the Nationally Determined Contribution (NDC) and the National Adaptation Plan (NAP), both of which guide sectoral and local implementation.

Lao PDR's climate action is guided by the Decree on Climate Change (2019) and aligned with the 9th National Socio-Economic Development Plan (NSEDP) and the Green Growth Strategy. This framework emphasizes that climate adaptation and development are inseparable: building resilient cities, transport networks, farming systems, and water management practices is fundamental to achieving long-term sustainability. As the country moves toward the preparation of the 10th NSEDP (2026–2030), the SASAPs provide the analytical foundation and investment roadmap to mobilize domestic and international climate finance and to monitor progress toward a climate-resilient, low-carbon future.

3. Lao PDR National Adaptation Planning Process

The policy efforts from the GoL towards climate change adaptation have translated into updating or creating transverse or sector-specific national legal frameworks on climate (2019) [9] and meteorology (2017) [10], environmental protection (2012) [11], natural resources (2017), disaster management (2017, 2019 [12], 2023), and gender equality (2019) [13].

In parallel of those legal framework, Action programmes and plans have emerged, including the National Adaptation Programmes of Actions (NAPA), approved by the government of Lao PDR in 2009, updated in 2024 under the NAP [14], and the 2013-2020 Climate Change Action Plan.

Adopted in January 2025, the National Adaptation Plan (NAP) provides Lao PDR with a long-term framework to strengthen resilience, sustainability, and inclusiveness in the face of climate change. It builds on the country's international and global commitments and also aligns with national development priorities and the 18 Sustainable Development Goals (SDGs) under the 2030 Agenda [15].



The NAP supports existing national frameworks on sustainable development and resilience such as the National Strategy on Climate Change (2030), NDC (2021), and the 9th Five-Year National Socio-Economic Development Plan (NSED) [16]

The NAP outlines short-term (2025–2030) and medium-term (2030–2035) actions, aligned with national development strategies. Lao PDR NAP has two main objectives:

- To reduce vulnerability to the impact of climate change by building adaptive capacity and resilience
- To coherently facilitate the integration of climate change adaptation into relevant new and existing policies, programmes and activities. The latter will particularly focus on development planning processes and strategies across all relevant sectors and levels of governance

Institutionally, climate action is coordinated through environmental committees at national, provincial, and district levels, and a forthcoming National Steering Committee for Climate Change, chaired by the Ministry of Agriculture and Environment (MAE) through the Department of Environment (DoE).

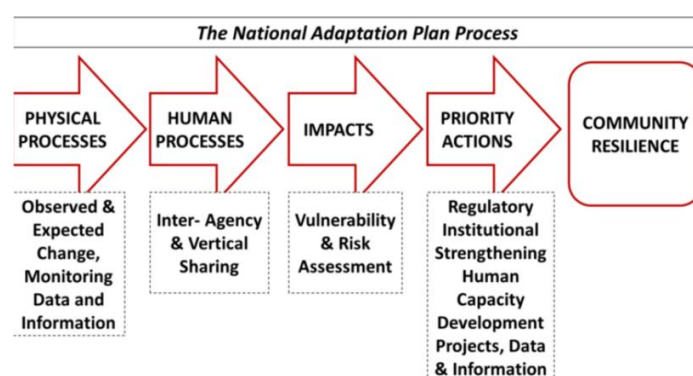


Figure 1. Overview of the Lao PDR NAP Process (source: Lao PDR NAP, p. 2)

4. Climate Change Policy and legislative framework

Lao PDR has made significant strides in establishing a comprehensive climate change policy framework that integrates resilience, mitigation, and inclusive development across sectors. The cornerstone of this framework is the National Strategy on Climate Change toward 2030 (NSCC 2030), endorsed in January 2023 [17]. This strategy outlines strategic priorities across eight sectors, including agriculture, forestry, water resources, energy, health, education, urban development, and tourism, and is built on three foundational pillars: resilience building, emissions reduction, and green growth. It updates the earlier 2010 strategy and aligns with Lao PDR’s international commitments under the Paris Agreement, including its NDCs and NAP [15].

To support implementation, Lao PDR has adopted a suite of sectoral laws and decrees that embed climate change considerations into environmental governance and resources management. The Environmental Protection Law (2012, revised) provides the legal basis for environmental safeguards, mandating Environmental Impact Assessments (EIAs), pollution control, and climate-sensitive project screening [11]. The Forestry Law (2019) incorporates climate resilience and sustainable forest management principles [18], while the Water and Water Resources Law (1996) support watershed protection and equitable water allocation [19]. The Decree on Climate Change No. 09/PM (2019) formally mandates climate integration across ministries and establishes the Department of Climate Change [now Department of Environment] as the national coordinating body [9].

Institutionally, climate coordination is now housed within the MAE, following the merger of the former MAF and MONRE. MAE chairs the National Steering Committee on Climate Change, which oversees policy alignment, climate finance, and international reporting obligations under the UNFCCC [20]. The ministry also leads the

development of sector-specific climate action plans, including agriculture and forestry, and promotes community-based adaptation (CBA) and ecosystem-based approaches (EbA) to strengthen local resilience [21].

To operationalize these frameworks, Lao PDR has adopted the Green Growth Strategy (2019), which promotes low-carbon development, resources efficiency, and inclusive growth [43]. Climate indicators have been integrated into the 9th NSEDP, ensuring that adaptation and mitigation are tracked across national planning cycles. Additionally, SWGs under the Round Table Process facilitate stakeholder engagement, donor coordination, and technical alignment across climate-sensitive sectors [22]. These platforms enable inclusive dialogue between government agencies, development partners, civil society, and research institutions.

Table 1: International and National Framework for Climate Adaptation in Lao PDR

Framework	Key focus /contribution
Paris Agreement on Climate Change (2015)	Set global goal on adaptation to enhance adaptive capacity, strengthen resilience, and reduce vulnerability to climate change.
The first Biennial Update Report of the Lao PDR - 2020	Focuses primarily on greenhouse gas inventory and mitigation actions.
Green Growth Strategy (2019)	Promotes low-carbon development, resource efficiency, and inclusive growth.
9th National Socio-Economic Development Plan (NSEDP) 2021-2025	Integrates climate indicators into national planning and monitoring frameworks.
National Strategy on Climate Change toward 2030 (NSCC 2030)	Sets strategic direction across 8 sectors; built on resilience, mitigation, and green growth pillars.
National Adaptation Plan (2025)	Framework for sectoral adaptation strategies; aligns with Paris Agreement commitments.
Nationally Determined Contributions (NDCs) 2020-2025	Emissions reduction and adaptation targets under the UNFCCC
Sectoral Adaptation Strategies and Action Plans (SASAPs) 2021-2030	Operationalize NAP across agriculture, forestry, water, health, and infrastructure.

Table 2: Legislation Framework for Climate Adaptation in Lao PDR

Legislation frameworks	Key focus /contribution
Environmental Protection Law (Revised, 2024)	Mandates EIAs, pollution control, and climate-sensitive project screening.
Decree on Climate Change No. 09/PM, 2019	Mandates climate integration across ministries; establishes Department of Climate Change (DCC) [now Department of Environment - DoE]
Law on Disaster Risk management (2019)	Establishment of Disaster Management Committees, Disaster Risk Reduction (DRR) Measures, and Emergency Response and Relief protocols

5. Lao PDR Sectoral Adaptation Efforts

Ongoing and projected climate changes are expected to pose significant risks to Lao PDR's key economic and social sectors, including water resources, agriculture and forestry, and urban development and transport. Integrating climate adaptation into sectoral decision-making is therefore central to achieving the country's resilience objectives under the National Adaptation Plan (NAP) and Nationally Determined Contribution (NDC) frameworks.

Sectoral policies and plans represent critical entry points for mainstreaming adaptation, as each sector coordinates a wide range of ongoing strategies, investment programs, and regulatory frameworks that directly shape climate vulnerability and resilience outcomes.

Integrating adaptation at the sectoral level aims to:

- Systematically apply a climate resilience lens as a criterion for evaluating the success of sectoral policies, strategies, and projects;
- Assess interlinkages and cross-sectoral impacts, recognizing that climate risks and adaptation responses often overlap across water, land, food, energy, and infrastructure systems;
- Promote coherence and prevent maladaptation by ensuring that adaptation actions enhance social resilience, address gender and equity dimensions, and exploit potential synergies across sectors;
- Blend top-down and bottom-up approaches in setting adaptation goals and actions, ensuring that national policy direction is grounded in local needs and experiences;
- Design measurable indicators to monitor progress and evaluate the effectiveness of adaptation measures as part of sectoral performance frameworks.

By systematically integrating adaptation, each sector can:

- Avoid high-risk or maladaptive investments,
- climate-proof existing and planned infrastructure and services,
- Actively contribute to reducing vulnerability and enhancing resilience through sectoral programmes, and (
- Maximize synergies and coordination with other sectors and stakeholders.

While each sector bears primary responsibility for identifying climate risks and implementing adaptation measures within its mandate, cross-sectoral coordination and collaboration remain essential to avoid fragmented or contradictory actions. Climate risks such as droughts, floods, and heat stress cut across administrative and sectoral boundaries, requiring coherent planning between the Ministry of Agriculture and Environment (MAE) and other relevant ministries. Strengthened institutional mechanisms and data-sharing systems will be key to ensuring that adaptation is integrated, inclusive, and mutually reinforcing across all three sectors, supporting Lao PDR's transition toward a climate-resilient development pathway.

PART II: THE DEVELOPMENT OF THE SASAPs AND THE SAG

1. Purpose of the Sectoral Adaptation Plans

The Sectoral Adaptation Strategies and Action Plans (SASAPs) have been developed to operationalize Lao PDR's National Adaptation Plan (NAP) by translating its overarching priorities into actionable, sector-specific strategies. Each SASAP provides a clear roadmap for integrating climate adaptation into policies, projects, and investment planning within key sectors of the national economy, helping to ensure that development remains climate-resilient, inclusive, and sustainable.

The SASAPs serve as practical tools to identify, prioritize, and implement adaptation measures tailored to sectoral needs and vulnerabilities. They are grounded in the results of the Sectoral Climate Risk and Vulnerability Assessments (SCRVAs), which analyze exposure to climate hazards, assess adaptive capacity, and determine key resilience gaps. By building on these assessments, each SASAP defines a coherent framework of strategic outcomes, objectives, and priority actions to guide implementation over a five-year period.

Developed through transparent and participatory consultations with national, provincial, and local stakeholders, the SASAPs aim to ensure that adaptation measures are context-appropriate, equitable, and feasible. They also emphasize cross-sectoral coordination and shared learning, recognizing that climate risks and adaptation responses are interconnected across water, land, agriculture, forestry, urban development, transport, and infrastructure systems. Strengthening coordination between ministries, local authorities, and civil society is therefore essential to ensure that adaptation measures are both technically sound and socially inclusive.

The SASAPs align with Lao PDR's broader climate and development frameworks, including the Nationally Determined Contribution (NDC) and the 9th National Socio-Economic Development Plan (NSEDP). Collectively, they contribute to the country's long-term vision of climate resilience by:

- Addressing policy, institutional, technical, and financial barriers that constrain adaptation;
- Guiding the mobilization of public, private, and international finance for climate-resilient investments;
- Promoting Gender Equality, Disability, and Social Inclusion (GEDSI) to ensure equitable access to adaptation benefits; and
- Establishing mechanisms for monitoring, evaluation, and learning (MEL) to track progress and inform policy updates.

Ultimately, SASAPs are designed as living frameworks, flexible, evidence-based instruments that will evolve over time as new data, technologies, and experiences emerge. Together, they represent a critical step toward a coordinated, whole-of-government approach to building resilience across all sectors of Lao PDR's economy and society.

2. Purpose of the Sectoral Adaptation Guidelines

The Sectoral Adaptation Guidelines (SAGs) have been developed to support Lao PDR's priority sectors in systematically integrating climate change adaptation into national and subnational planning. Their purpose is to ensure that a coherent, consistent, and evidence-based approach to adaptation is adopted across government institutions, while reflecting both national priorities and evolving international best practices. The guidelines complement the NAP by providing methodological direction for the preparation, implementation, and monitoring of SASAPs.

The SAGs are intended to serve as a practical tool for ministries, departments, and provincial authorities, helping them design and execute adaptation measures that align with national policies, sectoral mandates, and international climate commitments such as the NDC and the SDGs. They promote an integrated approach that bridges national

and local action, enabling Lao PDR to strengthen climate resilience across sectors including Water Resources, Agriculture & Forestry, and Urban Development & Transport.

Climate adaptation remains a developing and dynamic policy area in Lao PDR. While substantial progress has been made through the NAP process and the development of the first SASAPs, sectoral adaptation planning and implementation are still evolving. As new climate data, research, and technologies become available, adaptation strategies will need to be continuously refined to ensure their relevance, efficiency, and sustainability. This process requires new ways of thinking and collaboration, combining scientific evidence with local knowledge, and establishing mechanisms for learning and feedback.

The SAGs reflect current best practices in adaptation planning and implementation in Lao PDR and are designed to evolve over time. They provide a framework that can be periodically updated to incorporate lessons learned, address emerging challenges, and respond to shifts in national priorities, financing opportunities, and institutional arrangements. These guidelines also emphasize the integration of GEDSI principles, ensuring that adaptation actions promote equitable benefits and participation for all groups.

Recognizing that climate risks and development needs are constantly changing, the SAGs are conceived as living documents. They will be reviewed and refined regularly under the leadership of relevant ministries, in coordination with the Department of Environment (DoE) under the MAE. This iterative process will ensure that sectoral adaptation planning remains aligned with Lao PDR's long-term vision of resilient, inclusive, and sustainable development.

3. Target audience

The SASAPs and SAGs are primarily designed for policymakers, technical departments, and development partners involved in the planning, management, and governance of climate change adaptation across key sectors in Lao PDR. These include water resources, agriculture and forestry, urban development and transport, and other interlinked areas such as energy, environment, and public infrastructure. The documents aim to guide ministries, departments, and provincial and district authorities in identifying, prioritizing, and implementing adaptation actions that are consistent with national climate policies and development goals. They also provide a reference framework for development partners, research institutions, and civil society organizations contributing to adaptation planning, capacity-building, and investment in climate-resilient systems and infrastructure.

Because climate change impacts are cross-sectoral and multi-dimensional, the SASAPs and SAGs emphasize the need for strong coordination and collaboration between sectors and levels of governance. Climate risks, such as floods, droughts, heatwaves, and landslides, cut across administrative and institutional boundaries, influencing multiple sectors simultaneously. Therefore, adaptation measures must be mutually reinforcing, coherent, and aligned to prevent duplication and conflicting policies. Enhanced cross-sectoral coordination promotes synergy, efficiency, and inclusiveness. It enables shared use of data and technical knowledge, supports joint capacity-building and training, improves resource allocation, and strengthens institutional learning. Collaborative planning between line ministries, local governments, and non-state actors also ensures that adaptation measures respond effectively to local needs while advancing national resilience objectives.

While the primary audience of these documents are national policymakers and technical experts, their successful implementation depends on the active participation of all stakeholders, including local authorities, communities, private sector actors, and vulnerable groups. Broad engagement fosters ownership, strengthens accountability, and ensures that adaptation actions contribute to a resilient, inclusive, and sustainable development pathway for Lao PDR.

PRECONDITIONS FOR THE ELABORATION OF A SASAP

1 - SASAP requires dedicated personnel.

The development of each SASAP demands sustained effort and technical attention over several months. The process, from the initial stocktaking to the final validation, can take 8 to 10 months. It is therefore essential that the ministry responsible assigns a dedicated focal person or technical officer to coordinate and lead the process. This individual should be granted sufficient time and support to manage day-to-day coordination, given that technical staff often carry heavy workloads.

2 - SASAP requires a clear lead institution.

Each SASAP must be led by the ministry or department responsible for the sector. In cases where responsibilities overlap between multiple agencies (e.g., Agriculture and Forestry, Water Resources, or Urban Development and Transport), the roles of each institution, lead and supporting, must be defined from the outset. This decision should be transparent and agreed upon among all relevant agencies to avoid duplication and ensure accountability.

The Ministry of Agriculture and Environment (MAE), as the national focal point for climate change, should provide overall coordination, facilitation, and quality assurance throughout the SASAP process. This includes technical guidance, participation in workshops, and support during review and endorsement stages. However, leadership and ownership of each SASAP remain with the respective sectoral ministries (e.g., Department of Water Resources, Department of Agriculture, Department of Urban Development and Transport).

3 - SASAP requires strong staff engagement and coordination.

The lead agency should appoint at least one technical officer to act as the national focal point for SASAP. This officer, supported by a core technical team and a consultant, will coordinate activities such as:

- Identifying and inviting key stakeholders for consultations;
- Reviewing draft documents and providing timely feedback;
- Facilitating meetings and technical discussions;
- Presenting sectoral priorities and ensuring institutional ownership.

Ideally, the “SASAP Team” should consist of a lead technical officer, a supporting assistant, and a consultant, with other experts contributing as needed during the CRVA, workshops, or validation stages. While the involvement of an external consultant can be highly beneficial, institutional knowledge and continuity within the ministry are equally important.

4 - SASAP requires financial and logistical resources.

Adequate resources are essential to support stakeholder engagement. Each SASAP should plan for at least two major multi-stakeholder workshops, an inception workshop at the beginning and a validation workshop at the end, along with potential focus group discussions and provincial consultations to ensure inclusivity. Additional technical meetings with line departments and partners should be budgeted for throughout the process. These activities are crucial for ensuring transparency, consensus, and cross-sectoral ownership.

5 – SASAP require communication and visibility

The SASAP process benefits from proactive communication. Engaging the media and using public information platforms helps raise awareness, foster transparency, and strengthen ownership among stakeholders and communities. Regular updates can increase public understanding and support for adaptation planning.

PART III: GUIDELINES FOR EFFECTIVE DEVELOPMENT AND IMPLEMENTATION OF SASAPS

1. Principles of elaboration

The Sectoral Adaptation Strategies and Action Plans (SASAPs) are grounded in a strong national policy and regulatory framework that promotes sustainable land and water use, balanced rural–urban development, improved environmental quality, and climate-responsive planning. They build upon key national strategies and laws, including sectoral development visions and five-year plans, as well as the Decree on Climate Change (2019), which reinforces the institutional basis for adaptation and the mainstreaming of climate resilience across all sectors.

Each SASAP is designed to complement the National Adaptation Plan (NAP) by providing a sector-specific roadmap for climate change adaptation, aligning sectoral actions with national priorities and international commitments under the Nationally Determined Contribution (NDC). The SASAPs can therefore be considered as operational extensions of the NAP, elaborated based on the following guiding principles:

- **Investment priorities:** Identified investments must directly support overcoming barriers and scaling up climate-resilient practices and technologies;
- **Stakeholder participation:** All adaptation priorities must be defined through transparent and participatory consultations with representatives from government, the private sector, and civil society;
- **Feasibility and operational viability:** Adaptation actions should be practical, evidence-based, and implementable within existing institutional capacities;
- **GEDSI integration:** Adaptation measures must promote gender equality, disability inclusion, and social equity, ensuring that vulnerable groups benefit equitably;
- **Leadership and accountability:** Implementation and monitoring will be carried out by clearly identified and mandated national institutions;
- **Policy and strategy alignment:** Each SASAP must complement existing national policies and ongoing initiatives to enhance coherence, minimize duplication, and improve efficiency;
- **Sustainable financing:** The SASAPs encourage blended financing, private-sector engagement, and the mobilization of international climate finance to support adaptation actions.

Designed as five-year frameworks, the SASAPs apply consistent guiding principles and planning logic across sectors, following a structured cycle from risk and vulnerability assessment to identification, prioritization, and implementation of adaptation actions, and the establishment of a robust monitoring, evaluation, and learning system. As living documents, the SASAPs will be periodically reviewed and updated to reflect new data, technological advances, and evolving climate and development priorities.

2. Phase Summary and methodological approach

The formulation of the SASAP should follow a structured, participatory, and evidence-based process aligned with the guiding principles of the NAP. The approach ensured scientific rigor, inclusiveness, and alignment with national priorities and international climate commitments. The process was carried out in five main phases and twenty steps presented in the [Figure 2](#).

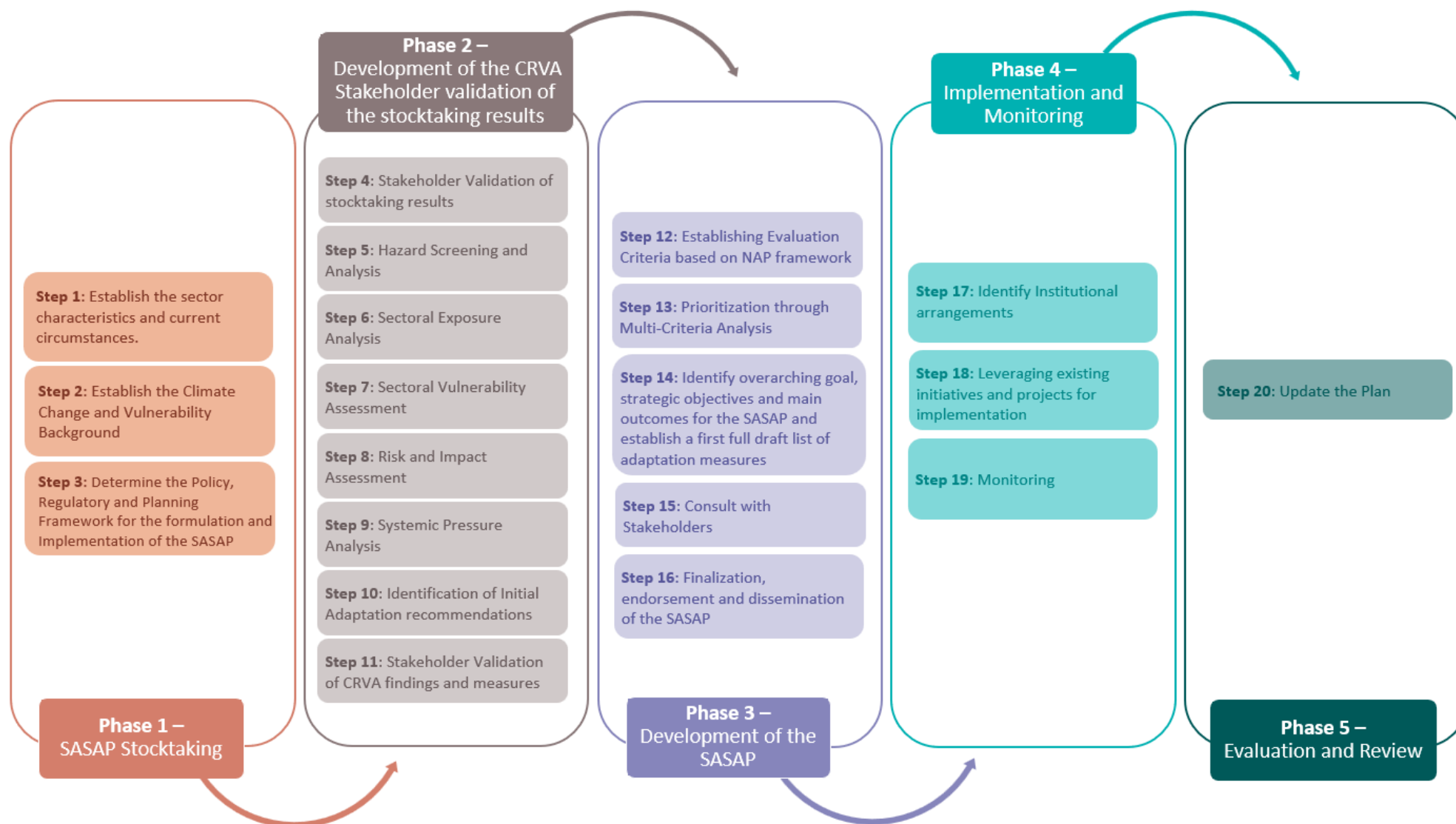


Figure 2: Overview of Phase and steps for development and implementation of SASAP

Phase 1 – SASAP Stocktaking

Phase 1 focuses on gathering all baseline knowledge required to build a robust, context-specific SAP. It combines preparatory work, literature review, policy and planning framework analysis. This stage ensures that all subsequent steps are informed by accurate data, local realities, and alignment with Lao PDR's national and international commitments. It focuses on establishing the baseline necessary to guide the development of SASAP. Several preparatory activities were conducted, including gap and needs assessments to offer a comprehensive review of regulations, policies, and institutional frameworks related to climate adaptation in the agriculture and forestry sectors, as well as an assessment of the socio-economic contexts

Step 1 – Establish the sector characteristics and current circumstances.

The first step focuses on compiling a comprehensive understanding of each sector's current conditions, governance frameworks, and socio-economic significance. This involves conducting an extensive review of available literature, including national statistics, sectoral reports, peer-reviewed studies, geospatial datasets, and provincial-level development plans, as well as drawing lessons from best practices in comparable contexts. In parallel, a socio-economic and cultural context analysis should be undertaken to assess the sector's contribution to GDP, employment, food security, exports, and cultural heritage. Particular attention should be given to identifying vulnerable groups, gender dimensions, and indigenous knowledge systems that shape adaptive capacities and are essential for designing inclusive and context-specific adaptation measures.

As an example, the [Table 3](#) present an overview of the source used for the literature review for the Agriculture and Forestry sectors.

Table 3: Overview of the literature review source for the Agriculture and Forestry Sectors

SECTORAL STRATEGIES AND PLANS		
Lao PDR's Forest Reference Emission Level & Forest Reference Level for REDD+	GoL	2018
5-year development plan for agriculture and forestry 2021-2025	GoL	2021
National REDD+ Strategy-Final	GoL	2021
Lao Forest Strategy 2035 and vision 2050 version 17.08.2023	GoL	2023
NAP for Sustainable Rattan & Bamboo (2021-2025)	GoL	2021
Agriculture Development Strategy to 2025 and vision to 2030 (draft)	GoL	2021
NAFRI Research Priority Lists 2021-2025	GoL	2021
SFM - REDD+ Completion Report	GoL	2017
Strategic Framework for GSA in Lao PDR	GoL	2020
The 3rd Lao Census of Agriculture 2019_2020 Volume II	GoL	2021
The 3rd Lao Census of Agriculture 2019_2020 Volume I	GoL	2021
PCSF for Agricultural Production and Commercialization_Presentation	GoL	2020
Strategic Vision of Department of Agricultural Land Management 2040 (draft)	GoL	2024
STATISTIC DATA		
Socio-economic and environment - https://www.k4d.la/		
Agriculture statistic - https://lirms-dalam.net/?thematic=sava		
Lao statistics - https://laosis.lsb.gov.la		
Lao Disaster Information (LaoDi) - https://laodimolsw.la/		
LITERATURE REVIEW – BEST PRACTICES		

<i>Policy Papers</i>		
Climate smart rice cropping systems in Vietnam - State of knowledge and prospects	CIRAD	2017
ASEAN Regional Guidelines for Promoting Climate Smart Agriculture (CSA) Practices	ASEAN-CRN	2015
Integrating Agriculture in National Adaptation Plans - Vietnam case study	UNDP	2020
Study on a High-Quality Voluntary Carbon Market for ASEAN	ACMF	2024
<i>Academic research</i>		
Climate change adaptation strategy of agricultural sector in Southeast Asia	Eka Nurjati and Septian Adityawati 2024 IOP Conf. Ser.: Earth Environ. Sci. 1414 012066	2024
<i>ASEAN countries regulations</i>		
Decision No 923/QĐ-TTg dated June 28, 2017, on approval of the program on restructuring the agricultural economy and mitigating disaster risk and stabilizing people's lives	Government of the Socialist Republic of Vietnam	2017
Decision No 3444/QĐ-BNN-KH Dated 12 September 2022 on Approving the action plan of the Ministry of Agriculture and Rural Development to implement the National Strategy on Green Growth for the period 2021–2030	Government of the Socialist Republic of Vietnam	2022
Decision No. 540/QĐ-TTg dated June 19, 2024 on approving the Science Development and Technology Transfer Programme to promote a circular economy in agriculture by 2030. The goal is for at least 20% of agricultural science research projects to focus on circular economy applications	Government of the Socialist Republic of Vietnam	2024
Circular No. 10/2023/TT-BKHDT on the Set of statistical for green growth indicators	Government of the Socialist Republic of Vietnam	2023
OTHERS		
Lao PDR provincial story-based climate risk vulnerability and adaptation assessment	The Walker Institute	2025
Climate Knowledge Portal, Lao risk country profile	World Bank	-

Step 2 – Establish the Climate Change and Vulnerability Background

The second step aims to collect and organize all relevant information needed to carry out the Climate Risk and Vulnerability Assessment (CRVA). Data collected should inform the subsequent CRVA, which analyzed climate hazards, exposure, sensitivity, and adaptive capacity at the sectoral level to identify key climate risks and vulnerabilities. SAR and CRVA provided the analytical foundation for the subsequent formulation of the SASAP.

Key activities include:

- **Preliminary hazard screening:** Define an initial set of climate and non-climate pressures affecting agriculture and forestry, to guide the CRVA's focus.
- **Data collection for CRVA inputs:** Compile hazard datasets (e.g., historical flood, drought, heat events, landslides), exposure data (e.g., land-use maps, agricultural production zones, forestry inventories), and socio-economic indicators (e.g., livelihoods, poverty rates, gender-disaggregated data).
- **Sectoral Focus Group Discussions (FGDs):** Conduct FGDs with key actors in the sector, including provincial authorities, local community representatives, technical experts, and private sector stakeholders. These sessions will serve to validate and complement findings from the literature review and data collection, bring forward local knowledge and perspectives, identify perceived risks, and highlight practical challenges

and opportunities for adaptation. Insights from FGDs will directly inform the CRVA design and ensure that subsequent analyses and recommendations are grounded in field realities.

RECOMMENDATIONS – SOURCES OF INFORMATION FOR THE CRVA

Start by reviewing the NAP document, as a major effort was made to include and list as many potential impacts of climate change as possible for the sectors/areas prioritized in the NAP. It is worth reading the information contained in the NAP, even if the sector/area of your interest was not prioritized, as some of the potential impacts relevant to your assessment are already identified in this document. Other sources of information include the Initial, Second and Third National Communications to the UNFCCC as well as the Stocktaking; Vulnerability and Adaptation (V&A); Technology Needs Assessment (TNA) and Other Relevant Information reports elaborated in the framework of the National Communications to the UNFCCC.

Information relevant to this section may also be found in various sectoral policies, strategies and planning documents. In addition, there is a wide variety of international and regional reports on sectoral impacts of climate change, which often include adaptation strategies and specific measures. It is recommended to look for information on your sector/area in the various Assessment Reports of the Intergovernmental Panel on Climate Change (IPCC), and on documents issued on the topic by trusted regional and international organizations and Think Tanks that focus on the targeted sector/area of interest for the SASAP.

Step 3 - Determine the Policy, Regulatory and Planning Framework for the formulation and Implementation of the SASAP

The third step focuses on establishing a clear understanding of the institutional, policy, and planning landscape governing the sector to ensure that SASAP is effectively anchored in national systems and aligned with existing mandates. It involves two main activities.

First, a stakeholder mapping exercise should be conducted to identify all relevant institutions, community organizations, private sector actors, and development partners engaged in or influencing climate change adaptation. This mapping defines their respective roles, responsibilities, and levels of influence, highlighting coordination mechanisms and potential overlaps or synergies among actors.

As an example, the [Table 4](#) present an overview of stakeholder mapping for the Agriculture and Forestry sectors.

Table 4: Stakeholder mapping for the Agriculture and Forestry Sector

NATIONAL LEVEL INSTITUTIONS	
Ministry of Agriculture and Environment (MAE)	
Department of Agriculture (DOA)	Relevant departments can play a main role in participating in project activities, especially the capacity development workshops, and consultation meetings related to climate change adaptation and mitigation planning process and adaptation finance related activities.
Department of Environment (DOE)	
Department of Livestock & Fisheries (DLF)	
Department of Irrigation (DOI)	
Department of X	

Department of Land Administration and Management (DLAM)	
Department of Forestry (DoF) Forest Inventory and Planning Division REDD+ Division	They are crucial roles for mitigation regarding the forest degradation, deforestation, conservation and restoration in forest sector
<i>* Given the interdependencies between agriculture, forestry, water resources, and energy, cross-sectoral coordination mechanisms are essential. The National Steering Committee on Climate Change (NSCCC) and the National Environment Committee (NEC) ensure alignment with the NAP and NDC, while inter-ministerial working groups should help foster collaboration on shared adaptation priorities.</i>	
Ministry of Public Work and Transport (MPWT)	Plays a key role in developing and maintaining rural and urban infrastructure, including roads, irrigation, and logistics systems essential for market access and climate-resilient agricultural supply chains.
Ministry of Industry and Commerce (MIC)	Plays a key role on land-use and watershed management affecting hydropower catchments and support agri-business value chains and market access.
Ministry of Education and Sports (MOES)	Plays a key role by contributing to building human capacity for climate-smart agriculture and forestry through education, vocational training, and research integration.
Ministry of Finance (MOF)	Mobilizes and manages public and climate finance to support the implementation of adaptation actions and to incentivize private-sector investment in resilient practices.
SUBNATIONAL INSTITUTIONS	
Provincial and District Offices (DAE, PAE, etc.)	At the provincial and district levels, Provincial and District Offices are key implementing agencies, responsible for translating national policies into local actions, coordinating with local authorities, and engaging communities in adaptation measures.
Village Authorities	Village authorities can play an essential role in mobilizing local participation, facilitating field-level implementation, and ensuring that adaptation measures reflect community priorities and traditional knowledge.
RESEARCH, ACADEMIA, AND EXTENSION SERVICES	
National Agriculture & Forestry Research Institute (NAFRI), MAF	NAFRI will play a key role in providing recommendations and feedback on the adaptation of climate change, mainstreaming into the development plan of agriculture and forestry.
National University of Laos (NUOL)	Academic institutions can contribute through applied research, development of climate-resilient technologies, and capacity building for farmers and technicians. Agricultural extension services and vocational training centers are critical for disseminating knowledge on climate-smart agriculture, forest restoration, and sustainable land management.

CIVIL SOCIETY AND COMMUNITY-BASED ORGANIZATIONS	
Lao Women Union (LWU)	Mass organization can help promote inclusive participation and gender equality in agriculture and forest management.
Lao Youth Union (LYU)	
Lao Front for National Development (LFND)	
Farmers Unions or Cooperatives	Community groups play important roles in advocacy, awareness raising, and grassroots implementation. These groups can help build collective action in project and program implementation.
Water User Associations (WUAs)	
International NGOs	International NGOs such as WWF, GIZ, SNV, CARE, or WCS can support pilot initiatives on ecosystem-based adaptation, agroforestry, and biodiversity conservation.
DEVELOPMENT PARTNERS AND DONORS	
Food and Agriculture Organization (FAO)	Development partners provide significant technical and financial support to climate-resilient agriculture and forest programs. These agencies support the integration of adaptation priorities into ongoing and pipeline projects.
Asian Development Bank (ADB)	
World Bank	
Global Green Growth Institute (GGGI)	
Agence Française de Développement (AFD)	
Japan International Cooperation Agency (JICA),	
Swiss Agency for Development and Cooperation (SDC)	
United Nations Development Programme (UNDP)	
PRIVATE SECTOR	
Private sectors, particularly agribusinesses, forestry enterprises, and cooperatives, are increasingly recognized as key stakeholders in scaling up sustainable and climate-smart investments. Their involvement in contract farming, processing, and value chain development provides opportunities to promote green financing, sustainable production, and certification schemes.	

Second, the step involves the identification of policy, information, and institutional gaps that may hinder the effective implementation of adaptation measures. This includes assessing weaknesses in regulatory frameworks, data availability, technical capacity, and financial resources that could limit adaptive planning and delivery.

This activity should involve a systematic review of national and sectoral policies, legislation, regulations, strategies, and plans. The objective is to determine which policy instruments already integrate climate change considerations and which remain aligned with adaptation priorities. An “Enabling Environment Table,” consistent with the approach used under the NAP should be prepared to summarize existing frameworks, their level of climate integration, and key gaps. The review should also identify upcoming policy or planning revisions within the SASAP timeframe that could serve as entry points for mainstreaming climate adaptation. In addition, the process includes a cross-check with the NAP, NDC, and related national and international frameworks, such as the Paris Agreement and

Nationally Appropriate Mitigation Actions to ensure coherence and consistency across commitments. This comprehensive assessment helps pinpoint the institutional, regulatory, and capacity barriers that must be addressed to create an enabling environment for effective and sustained adaptation action.

As an example, the [Table 5](#) present an overview of Planning Framework and [Table 6](#) of the Regulatory Framework specific to the Agriculture and Forestry sector.

Table 5: Sectoral Planning Framework for the Agriculture and Forestry Sector

Sectoral Strategies & Plans	
Lao PDR's Forest Reference Emission Level & Forest Reference Level for REDD+	2018
5-year development plan for agriculture and forestry 2021-2025	2021
National REDD+ Strategy	2021
Green and sustainable Agriculture Framework to 2030	2021
Lao Forest Strategy 2035 and vision 2050	2023
NAP for Sustainable Rattan & Bamboo (2021-2025)	2021
Agriculture Development Strategy to 2025 and vision 2030	2021
NAFRI Research Priority Lists 2021-2025	2021
SFM_REDD+Completion Report	2017
Results of the Policy analysis on scaling green agriculture	
Strategic Framework for GSA in Lao PDR_Presentation	2020
The 3rd Lao Census of Agriculture 2019_2020 Volume II	2021
The 3rd Lao Census of Agriculture 2019_2020 Volume I	2021
PCSF for Agricultural Production and Commercialization_Presentation	2020
Revision of the National Biodiversity Strategy and Action Plan (NBSAP)	-

Table 6: Sectoral Regulatory Framework for the Agriculture and Forestry Sector

Laws and Decrees	Key focus /contribution
Law on Agriculture (1998) ²	Defines and categorizes agricultural lands, outlines management structures for small, medium, and large-scale irrigation based on user/state involvement and establishes rules regarding water flow and access rights between land plots.
Water and Water Resources Law (1996)	Supports watershed protection, equitable water allocation, and basin-level planning.
Law on Livestock and Veterinary (2016)	Defines and regulates the registration, identification, conservation, improvement, and expansion of animal breed and set disease surveillance, outbreak controls, and zoonotic coordination.
Decree on Agriculture land (2025)	Defines specific target uses for agricultural land and mandates agricultural land use planning at village, district, and provincial levels and mandates protection of specific priority areas and establishes reserve zones, including buffer zones along waterways.

Together, these activities should provide the foundation for a coherent and inclusive sectoral adaptation strategy, one that builds existing strengths, addresses institutional bottlenecks, and supports coordinated action across all levels of governance.

Phase 2 – Development of the CRVA Stakeholder validation of the stocktaking results

The CRVA builds on the preparatory stocktaking and literature review phase, using both quantitative climate data and qualitative stakeholder insights to assess hazards, exposure, sensitivity, adaptive capacity, and overall risk across priority sectors. This stage ensures that adaptation actions are evidence-based and grounded in both scientific modelling and local knowledge.

Step 4 – Stakeholder Validation of stocktaking results

The stocktaking results developed in the earlier stages should be reviewed and validated through participatory stakeholder engagement. This process typically involves consultations such as focus group discussions bringing together representatives from government institutions and if possible, development partners, academia, civil society, and the private sector. Stakeholders are invited to assess the accuracy and completeness of the baseline findings, identify missing information, and ensure that the CRVA will reflect the realities, priorities, and experiences of the sector. This collaborative process helps to refine the analytical framework, strengthen ownership, and build consensus on the key challenges, vulnerabilities, and data gaps that the subsequent stages of the CRVA will address.

Step 5 – Hazard Screening and Analysis

This step involves identifying and analyzing the main climate-related hazards relevant to Lao PDR's sectors, with particular attention to their spatial and temporal dimensions. A preliminary national-level screening should draw on multiple information sources, including the *Lao PDR Provincial Storyline-Based Climate Risk, Vulnerability and Adaptation Assessment* (2025), the World Bank Climate Knowledge Portal, and the *ThinkHazard* platform. While multiple hazards may be reviewed, floods and droughts are expected to remain the dominant risks, and should be examined in terms of typologies (fluvial, pluvial, meteorological, hydrological, agricultural) and historical impacts. The hazard analysis can combine Regional Climate Models (RCMs) from CMIP5 (RCP2.6, RCP4.5, RCP8.5) datasets to project precipitation and temperature changes for mid-century (2046–2065) and end-century (2081–2100) horizons. Cross-comparison between datasets is encouraged to ensure robustness and scientific reliability.

When possible, climate hazard mapping should be conducted using high-resolution precipitation and temperature data to visualize hazard trends at national and provincial scales, highlighting current and projected hotspots for drought and flood risks. Such visual tools strengthen the communication of findings to decision-makers and local stakeholders.

Step 6 – Sectoral Exposure Analysis

The exposure analysis assesses the degree to which sectoral assets, resources, and populations are at risk from identified climate hazards. Assets for each sector, such as rice production areas, forest ecosystems, irrigation infrastructure, urban drainage systems, or transport corridors, are categorized into relevant sub-sectors. Exposure levels can be then evaluated using a scoring system (e.g., 0–3) reflecting hazard severity and combined into a color-coded matrix to illustrate areas of highest vulnerability. This analysis should integrate both biophysical exposure (e.g., topography, soil erosion, infrastructure location) and the geographical distribution of sectoral activities. The results provide the foundation for subsequent vulnerability and sensitivity assessments, helping prioritize adaptation measures for the most at-risk systems and regions.

Step 7 – Sectoral Vulnerability Assessment

This step focused on assessing the sector's vulnerability as a function of its sensitivity to climate hazards and its adaptive capacity to cope with them. The analysis integrates environmental, socio-economic, institutional, and GEDSI-related dimensions to capture the full range of factors influencing sectoral resilience. Sensitivity indicators may include reliance on rainfed agriculture, the fragility of transport and water infrastructure, land tenure insecurity, and exposure to market or supply chain disruptions. Adaptive capacity indicators encompass access to irrigation and storage systems, adoption of climate-smart technologies, early warning systems, institutional coordination, and social safety mechanisms. Each factor is evaluated using a standardized scoring system (e.g., 0–3) and translated into a color-coded matrix that highlights vulnerability levels across sub-sectors and regions. The resulting vulnerability profiles serve as a critical diagnostic tool to identify hotspots and guide the prioritization of adaptation interventions.

Step 8 – Risk and Impact Assessment

Building on the vulnerability analysis, this step quantifies the overall climate risk for each sector using the formula:

$$\text{Risk} = (\text{Hazard Severity} \times \text{Sensitivity}) - \text{Adaptive Capacity}$$

This calculation enables a consistent comparison of risk levels across sub-sectors and geographic areas. Risks are further disaggregated into primary, secondary, and tertiary impacts to capture cascading effects. For example, a drought event may directly reduce agricultural yields (primary), lead to household income loss and food insecurity (secondary), and eventually trigger rural-to-urban migration or social instability (tertiary). The outcome of this analysis is a sector-specific risk matrix that identifies the most critical hazards and their likely impacts. This risk matrix serves as a key input for the next phase of prioritizing adaptation measures and resource allocation.

Step 9 – Systemic Pressure Analysis

Climate change does not act in isolation but interacts with existing human-induced pressures on natural and built systems. This step maps the interlinkages between climate hazards and anthropogenic drivers such as deforestation, unsustainable land use, soil degradation, over-extraction of groundwater, and unplanned urban expansion. Understanding these interdependencies is essential to avoid maladaptation and ensure that proposed adaptation measures address both climatic and non-climatic stressors. Systemic pressure analysis helps identify leverage points where policy, planning, or management actions can simultaneously reduce environmental degradation and enhance climate resilience, thus promoting integrated, cross-sectoral responses.

Step 10 – Identification of Initial Adaptation recommendations

The CRVA culminates in the identification of preliminary adaptation options tailored to each sector's risks, vulnerabilities, and development priorities. These initial recommendations should be informed by the NAP, sectoral strategies, and stakeholder inputs gathered throughout the CRVA process. The objective is to produce an initial long list of adaptation measures that will later undergo prioritization using a multi-criteria framework in Phase 3.

The identification process draws on multiple sources, including:

- Adaptation measures already outlined in the NAP and relevant national or sectoral policies;
- Provisions and actions from provincial development and hazard management plans;
- Recommendations emerging from stakeholder consultations, field evidence, and CRVA findings;
- Ecosystem-based Adaptation (EbA) and community-led approaches documented in sectoral best practices; and

- GEDSI-focused measures that ensure equitable benefits for women, ethnic minorities, persons with disabilities, and other vulnerable groups.

The result is a comprehensive adaptation options table summarizing each measure's thematic area, policy alignment, targeted hazards, and relevance to specific vulnerable populations or ecosystems. This table provides the analytical foundation for prioritizing and sequencing adaptation actions in the following stage of SASAP formulation.

Step 11 – Stakeholder Validation of CRVA and Identification of Initial Measures

Once the CRVA is completed, the next step involves validating its findings and jointly identifying initial adaptation measures through a structured stakeholder engagement process. This ensures that the CRVA results, and proposed measures accurately reflect on-the-ground realities, local knowledge, and sectoral priorities.

A dedicated validation workshop should be organized with representatives from line ministries, provincial authorities, research institutions, community-based organizations, and development partners. The workshop's purpose is to review key CRVA outputs, such as hazard maps, exposure and vulnerability profiles, and risk hotspots, and to ensure alignment between analytical results and stakeholder perspectives. Participants should also discuss the feasibility and appropriateness of potential adaptation responses.

Objectives of the workshop include:

- Presenting key CRVA findings, including hazard exposure maps, vulnerability assessments, and priority risk areas.
- Verifying that data and analysis reflect local realities, particularly from provincial and community perspectives.
- Identifying additional hazards, vulnerable groups, or socio-economic impacts not captured in the initial analysis.
- Building consensus on priority risks and adaptation themes to guide subsequent steps in the SASAP process.

Preparatory tasks involve developing a concise CRVA summary report with clear visuals and soliciting preliminary written feedback from participants. During the workshop, facilitators should present findings, guide plenary and group discussions, and record all inputs, including qualitative insights such as indigenous knowledge or locally observed hazard trends.

Following the workshop, all feedback should be systematically integrated into an updated CRVA report. The revised version should then be circulated among participants for final confirmation.

Phase 3 – Development of the SASAP

Phase 3 represents the culmination of the analytical, consultative, and prioritization processes carried out in the previous phases. It focuses on translating the CRVA findings and stakeholder-validated priorities into a comprehensive Sectoral Adaptation Strategy and Action Plan.

This phase ensures that adaptation priorities are clearly articulated, strategically aligned with national frameworks, and supported by practical implementation tools such as Concept Notes and Monitoring Frameworks. It involves the consolidation of adaptation measures, participatory validation with key stakeholders, and final refinement of the SASAP for official endorsement and dissemination.

Step 12 – Establishing Evaluation Criteria based on NAP framework

The prioritization of adaptation measures should guide by a set of criteria adapted from the NAP–UNEP framework and tailored to reflect the socio-economic, institutional, and environmental realities of Lao PDR. These criteria ensure that the selection process is both technically sound and aligned with national priorities.

1. Severity of climate change impacts,
2. Poverty reduction potential,
3. High value,
4. Alignment with environmental and climate agreements,
5. Contribution to livelihood security,
6. Feasibility of implementation,
7. Sustainability and long-term benefits,
8. Institutional capacity,
9. Financial operationalization,
10. Urgency of action.

Step 13 - Prioritization through Multi-Criteria Analysis

An initial long list of adaptation measures was extracted from the NAP-UNEP adaptation catalogue and subsequently classified and prioritized using a Multi-Criteria Analysis (MCA). Building on the findings of the CRVA and stakeholder feedback, each proposed measure was evaluated against a set of the ten criteria identified.

► Weighting of Criteria

Each evaluation criterion is assigned a weighting value between 0.0 and 1.0, representing its relative importance in the Lao PDR context. Higher weightings are given to criteria considered essential for implementation success, such as feasibility and sustainability (both weighted at 1.0), while criteria with a more situational influence, such as urgency of action, may receive lower weightings.

► Scoring of Measures

Each adaptation measure is scored on a scale of 1 to 10 for every criterion. Scoring reflects Lao-specific feasibility, relevance, and sectoral realities, rather than relying on generic global benchmarks. For example, an adaptation measure that is technically proven in Lao PDR, aligns with national policies, and is logistically feasible would score higher than a complex measure with limited precedent in the country.

► Integration of Barriers to Adaptation

Barriers identified in previous studies, such as those highlighted in the *Lao PDR Provincial Storyline-Based CRVA Assessment*, are factored into the scoring process. Measures facing significant institutional, financial, technical, or social barriers may receive lower scores for feasibility, sustainability, or institutional capacity, even if their potential benefits are high.

As an example, the [Figure 3](#) present an overview of the MCA Framework used for the SASAP-AF, SASAP-WR and SASAP-UdT

Evaluation criteria	Severity of CC Impacts		Poverty Reduction		High Value		Alignment with Env. & Climate agreements		Lives & Livelihood security		Feasibility of Implementation & availability of resources		Sustainability & long-term benefits		Institutional capacity to implement		Financial operationalization		Urgency of Action		
Proposed adaptation measures from NAP-UNEP	Score (1 to 10)	Weighting	Score (1 to 10)	Weighting	Score (1 to 10)	Weighting	Score (1 to 10)	Weighting	Score (1 to 10)	Weighting	Score (1 to 10)	Weighting	Score (1 to 10)	Weighting	Score (1 to 10)	Weighting	Score (1 to 10)	Weighting	Score (1 to 10)	Weighting	TOTAL WEIGHTED SCORE
Adaptation measure 1	x	0,4	x*	0,6	x	0,7	x*	0,8	x	0,8	x*	1	x	1	x*	1	x	1	x*	0,4	Σweighted score
Adaptation measure 2	y	0,4	y*	0,6	y	0,7	y*	0,8	y	0,8	y*	1	y	1	y*	1	y	1	y*	0,4	Σweighted score
Adaptation measure ...	z	0,4	z*	0,6	z	0,7	z*	0,8	z	0,8	z*	1	z	1	z*	1	z	1	z*	0,4	Σweighted score

Figure 3: Multi-Criteria Analysis framework

► Role of MCA in Decision-Making

The MCA is intended as a decision-support tool, not a substitute for expert judgment. Given the inherent subjectivity in scoring, especially when measures are still broadly defined, the results of the MCA should serve as a starting point for stakeholder discussions rather than a definitive ranking. Final prioritisation will be determined through sectoral validation workshops and expert review, ensuring that context-specific knowledge and practical constraints are fully incorporated.

► Screening Process

Following MCA scoring, the highest-ranking measures, typically the top 10/15 per sector, will be carried forward for further refinement and inclusion in the Sectoral Adaptation Strategies and Action Plans (SAPs). This screening step ensures that only the most feasible, impactful, and contextually relevant measures proceed to the detailed planning stage.

Step 14 - Identify and propose an overarching goal, strategic objectives and main outcomes for SASAP and establish a first full draft list of adaptation measures

The step involves consolidating analytical findings and stakeholder inputs into a coherent strategic framework for SASAP. This includes defining the overarching goal, strategic objectives, and expected outcomes that will guide the implementation of sectoral adaptation actions.

From the initial long list of adaptation options, compiled from the NAP, UNEP Adaptation Catalogue, and complementary sources, approximately 15 high-priority actions should be identified and consolidated into a draft Sectoral Action Plan.

To ensure strategic alignment, each selected measure is mapped against Lao PDR's key policy frameworks, including the NAP, the Nationally Determined Contribution (NDC), the 9th National Socio-Economic Development Plan (NSED), and sectoral strategies. In parallel, a complementary review of Official Development Assistance (ODA) projects, using data from the Lao PDR ODA-MIS Portal, can be undertaken to cross-check existing investments and ensure coherence between ongoing initiatives and proposed adaptation priorities.

To guide the development of SASAP, [Table 7](#) below presents a proposed template for the Action Plan.

Table 7: Sectorial Action Plan Framework

Actions	Description	List of activities	GEDSI Integration	Stakeholders to support the implementation	Example of existing or under funding Projects	Cost	Schedule
OVERARCHING GOAL:							
Outcome 1:							
<u>Rationale:</u>							
<u>Coherence with NAP & national strategies:</u>							
Strategic objective 1.1:							
1. Action 1	.						
2. Action 2							
Strategic objective 1.2:							
3. Action 3							
4. Action 4							
Outcome 2:							
<u>Rationale:</u>							
<u>Coherence with NAP & national strategies:</u>							
Strategic objective 2.1:							
5. Action 5							
6. ...							

Step 15 – Consult with Stakeholders

Stakeholder consultation plays a central role in finalizing and validating the SASAP. The draft list of adaptation measures, along with their proposed objectives and alignment with national policies, is presented to sectoral stakeholders, government agencies, provincial authorities, development partners, and civil society, for discussion and refinement.

Each of the 15 actions should be evaluated with relevant technical officers in terms of technical soundness, institutional feasibility, and socio-economic relevance, with particular attention to cross-sectoral synergies and GEDSI considerations. Consultation can be led through focus group discussion or consultation workshop facilitated in thematic breakout groups that would provide a participatory platform to confirm the final selection of adaptation measures and agree on the top priorities for detailed development into Concept Notes.

Objectives of the consultation include:

- Presenting results of the MCA and the transition from the long list to the finalized short list.
- Validating the 10–15 priority measures to ensure they are contextually appropriate, feasible, and consistent with sectoral and national adaptation goals.
- Selecting the five measures considered most urgent and impactful for development into detailed Concept Notes.
- Refining measure descriptions based on stakeholder feedback, including cultural, gender, and local knowledge dimensions.

Step 16 – Finalization, endorsement and dissemination of the SASAP

This step consolidates all technical, analytical, and participatory inputs into the final version of the SASAP. Building upon stakeholder feedback and policy alignment exercises, the plan is refined to include a detailed Action Plan, Monitoring and Evaluation (M&E) Framework, and five Concept Notes representing the highest-priority adaptation measures. To guide the development of SASAP a proposed outline of the SASAP is presented in [Appendix 01](#).

Action Plan

The Action Plan operationalizes the 10–15 validated adaptation measures, outlining key components such as objectives, expected outputs, implementation steps, responsible institutions, indicative costs, potential funding sources, and timelines.

Monitoring Framework

A Monitoring and Evaluation (M&E) Framework accompanies the plan to track progress, assess effectiveness, and enable adaptive management. It defines clear quantitative and qualitative indicators, data collection methods, and review cycles, ensuring alignment with national adaptation monitoring systems and UNFCCC reporting requirements.

Concept Notes

The final step involves developing Concept Notes for the five top-priority adaptation measures identified by stakeholders. These replace serve as concise, ready-to-use project proposals that can be mobilized for domestic or international climate finance. Each Concept Notes includes:

- Title and Rationale
- Potential location for implementation.
- Climate challenge addressed.
- Lead and supporting institutions.

- Estimated cost and indicative funding sources.
- Key activities and sequencing with implementation timeframes

Designed as practical tools, the Concept Notes can be presented individually to donors or grouped into integrated programs for resource mobilization. Their development marks the completion of the SASAP formulation process and the transition toward implementation and financing under national and international adaptation frameworks. To guide the development of the SASAP, a proposed template is presented in [Appendix 02](#).

STRATEGIC ROLE OF CONCEPT NOTES

Concept Notes are not just administrative tools; they are a bridge between planning and implementation. They:

- Provide donors and funding agencies with a quick reference to the country's most urgent adaptation needs.
- Ensure coherence between SAP measures and funding opportunities under national, bilateral, and multilateral mechanisms (e.g., GCF, GEF, Adaptation Fund).
- Enhance readiness for funding by including preliminary cost estimates and implementation arrangements.
- A portfolio combining the SAP executive summary, a table of measures (or action plan), and the five Concept Notes will form the funding package to be actively promoted after SAP approval.

Final Review, Endorsement, and Dissemination

The final draft SASAP must:

- Follow the agreed structure and presentation format, with clear linkages between CRVA findings, sectoral priorities, and selected adaptation measures.
- Include all updated tables, annexes, and outputs from the validation process.
- Be reviewed by lead agencies and a cross-section of stakeholders for final comments and technical verification.

A final workshop with lead agencies should present the complete SASAP and Concept Notes, address any last-minute revisions, and secure institutional endorsement. Upon consensus, the finalized package is submitted to the Cabinet of Ministers for formal approval. Once approved, the SASAP and accompanying Concept Notes should be widely disseminated to ensure national ownership and visibility:

- Digital publication on government and partner websites to enable public access.
- Printed distribution to provincial and district offices, community leaders, and civil society organizations.
- Targeted presentations to potential donors, technical partners, and development agencies to facilitate resource mobilization.

This dissemination phase ensures transparency, promotes policy coherence across sectors, and enables the SASAP to serve as a practical reference for both implementation and investment planning at all levels of government.

Phase 4 - Implementation and Monitoring

Once the Sectoral Adaptation Strategy and Action Plan has been formally adopted, the priority shifts to operationalization and monitoring. The first step is the wide dissemination of the SASAP at national, provincial, and local levels to ensure all relevant stakeholders understand its objectives, guiding principles, and pathways for action. Recognizing and maintaining the engagement of stakeholders is crucial, as the successful implementation of SASAP depends on their continued ownership, coordination, and participation.

Following adoption, attention must turn to the detailed Action Plans that operationalize SASAP's strategic objectives. These define the specific measures, responsibilities, and monitoring mechanisms required to translate strategic priorities into tangible results.

The overarching aim of this phase is to mainstream adaptation across existing policies, strategies, and programs, ensuring alignment with national instruments such as the NAP, NDC, NSEDP, and sectoral frameworks. Embedding the SASAP into these planning systems strengthens institutional resilience, enhances policy coherence, and supports cross-sectoral synergies.

Step 17 – Identify Institutional arrangements

Effective implementation of the SASAP requires clear institutional arrangements and coordination mechanisms that define responsibilities at national, sectoral, and subnational levels. The Ministry of Agriculture and Environment (MAE) can serve as the lead institution, guiding and overseeing implementation through its technical departments, depending on the sectoral scope. The MAE will use SASAP as a strategic coordination framework to inform planning, monitor progress, and facilitate inter-ministerial collaboration on climate adaptation.

As the lead agency, the MAE works closely with other key ministries, such as the Ministry of Public Works and Transport (MPWT), Ministry of Industry and Commerce (MIC), and Ministry of Finance (MOF), whose mandates intersect with climate-sensitive areas including infrastructure, energy, water management, trade, and finance. These institutions play a pivotal role in integrating adaptation measures into sectoral programs and ensuring resource mobilization.

At the subnational level, Provincial and District Offices (PAE and DAE) are central to implementation, monitoring, and mid-term review of SASAP actions. Their engagement ensures that adaptation activities respond to local realities, climate risks, and community needs. Coordination with decentralized bodies will also be essential to align local and watershed-based planning with national adaptation priorities.

Close collaboration between MAE, the National Environmental Committee, and the National Steering Committee on Climate Change (which oversees NAP implementation) ensures consistency and coherence across all adaptation strategies. The SASAP should be disseminated and discussed across ministries, development partners, and civil-society stakeholders to promote awareness and ownership.

Implementation should span over a five-year period, with timelines adapted according to urgency, available funding, and coordination opportunities with ongoing national or donor-funded initiatives.

Step 18 - Leveraging existing initiatives and projects for implementation

To ensure efficient implementation and maximize impact, the SASAP must build upon and align with existing national and international initiatives that share complementary objectives. These include ongoing and pipeline ODA-funded projects, national programs, and private-sector initiatives that address climate resilience, natural resource management, sustainable infrastructure, and livelihoods.

Aligning SASAP actions with these initiatives allows Lao PDR to leverage existing financial, institutional, and technical mechanisms, avoiding duplication of effort and accelerating the scaling-up of adaptation outcomes. For example, ongoing projects supported by the Asian Development Bank (ADB), Agence Française de Développement (AFD), World Bank, UNDP, FAO, and GGGI provide critical entry points for mainstreaming SASAP priorities into ongoing investments.

SASAP encourages line ministries, provincial authorities, and development partners to establish structured coordination mechanisms, such as joint steering committees, shared monitoring frameworks, and harmonized work plans, to ensure coherence between national adaptation priorities and donor-funded activities.

This collaborative approach will:

- Enhance resource efficiency by pooling financial and technical capacities.
- Foster institutional learning and exchange of best practices.
- Strengthen policy coherence across sectors.
- Accelerate the achievement of Lao PDR's climate-resilient and inclusive development objectives.

Through the alignment of national adaptation actions with partner-supported projects, the SASAP becomes not only a strategic roadmap but also a mobilization instrument, ensuring that climate adaptation efforts in Lao PDR are coherent, well-funded, and impactful across all levels of governance.

INTERNATIONAL CLIMATE FUNDING

1. The Green Climate Fund is a new global fund within the UNFCCC mechanisms, created to support the efforts of developing countries to respond to the challenge of climate change with both mitigation and adaptation actions.
2. The Adaptation Fund was established by the parties to the Kyoto Protocol of the UNFCCC to finance concrete adaptation projects and programs in 45 developing countries that are parties to the Kyoto Protocol.
3. The Global Environment Facility is an international partnership of 183 countries, international institutions, civil society organizations, and the private sector that aims to address global environmental issues.
4. Two funds under the Global Environment Facility are the Least Developed Country Fund and the Special Climate Change Fund.
 - 4.1. The Least Developed Country Fund was established to assist least developed countries to take quick actions including implementing projects identified under the National Adaptation Program of Action to Climate Change [14].
 - 4.2. The Special Climate Change Fund supports adaptation and technology transfer in all developing countries party to the UNFCCC. The Fund supports both long- and short-term adaptation activities in water resources management, land management, agriculture, health, infrastructure development, fragile ecosystems (including mountainous ecosystems), and integrated coastal zone management.

Step 19 - Monitoring

Once operational, the SASAP must be continuously tracked, assessed, and updated through a structured monitoring and evaluation (M&E) framework. This system enables decision-makers to assess progress, identify implementation gaps, and make necessary adjustments to strengthen outcomes and maintain alignment with national adaptation priorities.

Monitoring serves multiple purposes: it tracks implementation progress, measures the effectiveness of adaptation measures, and ensures accountability among implementing agencies. Equally important, it facilitates learning and adaptive management, recognizing that the underlying science, socio-economic conditions, and climate risks are dynamic. SASAP must therefore be flexible, designed to evolve in response to new evidence, lessons learned, and emerging challenges.

To achieve these objectives, a tracking and evaluation program should be embedded within the SASAP framework. This system not only demonstrates the SASAP's contribution to national adaptation objectives but also enables early detection of delays, overlaps, or underperforming measures so that corrective action can be taken in a timely manner.

Monitoring Framework

The monitoring system should establish clear mechanisms for reporting, accountability, and review, including:

- Defined schedules and milestones for each adaptation measure, linked to measurable outputs, outcomes, and indicators.
- Designated responsibilities for monitoring and evaluation at appropriate levels (ministries, provincial authorities, implementing partners).
- Regular review criteria, allowing adjustments where actions are not achieving expected results or where new priorities emerge.
- Feedback loops that capture lessons learned and integrate stakeholder input into future planning cycles.

SASAP's M&E system should integrate sector-specific indicators that are harmonized with the UNFCCC adaptation monitoring framework. Indicators referenced in the M&E tables correspond to UNFCCC categories for resilience and adaptive capacity, providing a standardized approach for national and international reporting.

To guide the development of SASAP, [Table 8](#) below presents a proposed template for the Monitoring Framework.

Table 8: Monitoring Framework for Sectorial Plan

Objectives & actions		Indicators	Progress			GEDSI		Related UNFCCC Indicators
Adaptation actions	Activities	Indicators	Base-line	Mid-term review	End of program review	GEDSI indicator	GEDSI target	UNFCCC Indicator
<i>Strategic objective 1.1:</i>								
1.			0					
			0					
			0					
			0					
2.			0					
			0					
			0					

Phase 5 - Evaluation and Review

Step 20 – Update the Plan

Evaluation and continuous improvement are central to ensuring that SASAP remains relevant, effective, and evidence based. Given the evolving nature of climate science, socio-economic conditions, and institutional contexts, the SASAP must be treated as a living document, one that evolves with new knowledge, lessons learned, and policy developments.

Periodic evaluation enables policymakers and implementing agencies to assess how effectively SASAP is achieving its objectives and to identify where revisions are needed. In line with international best practice, a comprehensive review of the SASAP should be undertaken approximately every five years, aligned with the review cycle of the National Adaptation Plan (NAP) and Lao PDR's reporting obligations under the UNFCCC. Interim reviews may be conducted more frequently if major shifts in climate conditions, policy priorities, or data availability occur.

Review and Reporting Cycles

Regular reviews are essential to maintain accountability and ensure SASAP's continued relevance.

- Annual progress reviews will assess achievements, challenges, and resource utilization.
- A mid-term evaluation will provide a more in-depth assessment of progress toward outcomes and propose necessary course corrections.
- A final review will evaluate overall performance and capture lessons learned and inform the next cycle of adaptation planning.

Findings from these reviews will feed into Lao PDR's national adaptation reporting system, supporting transparency and progress reporting under the Paris Agreement and the UNFCCC. By embedding adaptive monitoring and learning mechanisms, the SASAP ensures that adaptation remains a living process, one that evolves alongside new data, scientific understanding, and stakeholder experience to strengthen Lao PDR's long-term climate resilience.

This review process ensures that implementation experience feeds directly into subsequent iterations of the SASAP, fostering a culture of continuous improvement. Evaluation findings should be documented and used to refine methodologies, strengthen coordination, and enhance the integration of gender equality, disability, and social inclusion (GEDSI) principles across future adaptation strategies.

The evaluation process culminates in the revision and update of the SASAP, ensuring that its objectives, measures, and monitoring framework reflect the latest science, socio-economic trends, and institutional learning. Updated versions should then be submitted for endorsement by the Government of Lao PDR, ensuring alignment with current national priorities and international commitments.

By institutionalizing regular evaluation and updates, Lao PDR ensures that the SASAP remains dynamic, forward-looking, and resilient, serving as a robust foundation for long-term climate adaptation and sustainable development.

Appendix

[Appendix 01](#): Proposed outline for SASAP

[Appendix 02](#): Proposed template for the Concept Notes

Appendix 01- Proposed outline for SASAP

PART I: CONTEXT AND GOVERNANCE

1. Introduction
2. Lao PDR National Adaptation Planning Process
3. Presentation of the Sector in the Framework of Lao PDR NAP
 - 3.1. Target audience
 - 3.2. Principles of elaboration
4. Methodological Approach and SASAP Formulation Process
5. Gender Considerations
6. Overview of the Sector

PART II: THE HISTORICAL AND CLIMATE PROJECTION AND VULNERABILITY STORY

1. Climate Change Context
 - 1.1. Observed climate trends for Lao PDR
 - 1.2. Climate related hazards impact on the Sector
 - 1.1.1 *Extreme heat events*
 - 1.1.2 *Droughts and extended dry periods*
 - 1.1.3 *Floods*
 - 1.1.4 *Landslides*
 - 1.1.5 *Exposure assessment synthesis for the sector*
 - 1.3. Vulnerability Context

PART III: POLICY AND INSTITUTIONAL FRAMEWORK

1. Current institutional arrangements
2. Climate Change Policy Framework and Legislation
3. Sector Framework and Legislation

PART IV: LAO PDR SECTORAL ADAPTATION STRATEGY AND ACTION PLAN

1. Introduction and Strategic goal
2. Action Plan for the Sector
3. Concept notes for climate change adaptation projects

PART V: MEASURE FOR IMPLEMENTATION, MONITORING AND EVALUATION, AND REPORTING

1. Implementation
 - 1.1. Institutional arrangements
 - 1.2. Fundings
 - 1.3. Leveraging existing initiatives and projects for implementation
2. Monitoring framework

Appendix 02- Proposed template for the Concept Notes

CONCEPT NOTE 1

Name of the Action

Rationale

Locations of potential implementation

Objectives

Schedule / Duration

Climate Risks Addressed

Cost estimate

Social and Gender equity

Source of financing

Actions	Main activities	Timeline			Responsability	Budget (USD)
		20YY	20YY	20YY		
Action 1:	1.1.					
	1.2.					
	1.3.					
	1.4.					
	1.5.					
	Required Budget for Action 1					

Recommendations for implementation – Next Steps / Additional information

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