KINGDOM OF CAMBODIA
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Cambodia Climate Change Strategic Plan 2024 -2033

ROYAL GOVERNMENT OF CAMBODIA 202

Samdech Moha Borvor Thipadei HUN MANET
Prime Minister of the Kingdom of Cambodia

The Royal Government of Cambodia proudly announces the launch of the second ten-year Cambodia Climate Change Strategic Plan 2024-2033, a testament to our nation's unwavering commitment to tackle climate change and its far-reaching impacts on our economy and society. As a signatory to the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement, Cambodia remains steadfast in its international commitments to foster a sustainable future. This strategic plan marks a significant milestone in our climate action journey, building on the foundations laid by the first Cambodia Climate Change Strategic Plan 2014-2023.

Cambodia is highly vulnerable to climate change, with rising temperatures, increased frequency and severity of extreme weather events, and sea level rise threatening its agriculture, fisheries, and tourism industries. The country has demonstrated its ability to address these challenges by setting an ambitious national climate change agenda, and by developing key policies to respond to climate change impacts, such as the Updated Nationally Determined Contribution in 2020, the Long-Term strategy for Carbon Neutrality in 2021, and mainstreaming climate change into relevant national policies and processes. These accomplishments have been made possible through enduring collaboration among pivotal government stakeholders and invaluable support from development partners.

The Cambodia Climate Change Strategic Plan 2024-2033 has been carefully crafted to serve as a unique national policy that encompasses on mitigation, adaptation and governance ambitions. It prioritises the protection of our most vulnerable communities, with a particular focus on children and women, who are disproportionately affected by the impacts of climate change. The plan is aligned with pivotal national policies, including the Pentagonal Strategy Phase 1, the Circular Strategy on Environment 2023-2028, the National Strategy Development Plan 2024-2028, as well as sectoral strategies. This holistic approach to environmental governance underlines our commitment to addressing the interrelated challenges of climate change, economic development, and social equity.

We are confident that the Cambodia Climate Change Strategic Plan 2024-2033 will bring substantial benefits to the Cambodian people and contribute significantly to the global efforts to mitigate the impacts of climate change, building a more resilient society. We recognise that climate action requires a collaborative effort, involving not only government agencies but also development partners, non-governmental organisations, academia, and the Cambodian community at large.

Together, we stand strong and ready to confront the challenges and seize the opportunities that await us in our endeavour to create a more resilient and sustainable Cambodia.

Phnom Penh, March 2025

Prime Minister

Samdech Moha Borvor Thipadei HUN MANET

PREFACE

Guided by principles of peace, national unity, and territorial integrity, fostered through unwavering determination, patriotism, and numerous sacrifices, and under the wise leadership of **Samdech Moha Borvor Thipadei Hun Manet**, **Prime Minister of the Kingdom of Cambodia,** the Royal Government of Cambodia has earnestly advanced the implementation of the Pentagonal Strategy Phase 1, the Long-Term Strategy for Carbon Neutrality 2021 and the Circular Strategy on Environment 2023-2028. These concerted efforts have led to significant achievements and impressive growth across political, economic, social, and environmental domains towards Cambodia's development.

The Pentagonal Strategy Phase 1 of the Royal Government of Cambodia is pivotal to Cambodia's socio-economic policy framework, providing a unified strategic direction for strengthening institutional capacities. The governance systems of the Royal Government of Cambodia have undergone modernisation enhancing efficiency and effectiveness of the delivery system further facilitating rapid social and economic development which has earned praises regionally and globally. This transformation aligns Cambodia in the path realising middle-income status, featured by economic growth, poverty reduction, and regional and international integration.

In recent decades since the establishment of the Environment Institution in 1993, the environmental sector has received unwavering focus from the Royal Government of Cambodia. This is evident from the multistakeholder and multi-agency cooperation, active engagement from development partners and donors, and participation from Cambodian people in managing environmental and natural resources. The leadership and dedication of officials at all levels of the Ministry of Environment have led to significant policy implementation, legal reforms, and institutional modernisation, yielding favourable outcomes.

Aligned with Phase 1 of the Pentagonal Strategy and in accordance with existing national policies, strategies, and international frameworks, the Ministry of Environment has developed the "Cambodia Climate Change Strategic Plan 2024-2033".

The new Cambodia's Climate Change Strategic Plan 2024-2033 (CCCSP 2024-2033) aims to address gaps identified in the approach towards the country's Nationally Determined Contribution 3.0 (NDC3.0) and Long-Term Strategy for Carbon Neutrality targets and give specific attention to emerging climate themes and to the most vulnerable, marginalized and at risk-population, especially children and women. It has been developed to be aligned with key national policies such as the Pentagonal Strategy Phase 1 and the Circular Strategy on Environment 2023-2028 and line agency sectoral strategies.

The CCCSP 2024-2033 also presents financial and technology needs and estimated resource needs which will be further refined according to the national development needs and circumstances. Moving forward it is anticipated the line agencies will develop and implement their respective action plans to support Cambodia's progress towards carbon neutrality and climate resilience through inclusive and sustainable national development.

On behalf of the Ministry of Environment, I extend my sincere appreciation to **Samdech Moha Borvor Thipadei Hun Manet**, **Prime Minister of the Kingdom of Cambodi**a for guiding the formulation and authorization of the Cambodia Climate Change Strategic Plan (2024-2033).

I am confident that the departments under the Ministry of Environment will collaborate effectively with relevant ministries, institutions, local authorities, development partners, the private sector and other stakeholders to implement the Cambodia Climate Change Strategic Plan 2024-2033, translating the strategy into actionable plans. This collective endeavour aims to benefit all

Cambodians across generations and enhance Cambodia's standing and leadership in climate action on the global stage.

Phnom Penh 6 March 2025

Minister of Environment

Eang Sophalleth

ACKNOWLEDGEMENT

The development of the Cambodia Climate Change Strategic Plan 2024-2033 was coordinated by the Department of Climate Change of the Ministry of Environment, supported by the Cambodia Climate Change Alliance Phase III (CCCA 3), a programme co-financed by the European Union, UNDP and Sweden, and by the United Nations Children's Fund (UNICEF) and Australian Government Department of Foreign Affairs and Trade (DFAT).

Thanks to **H.E Dr. Eang Sophalleth,** Minister of Environment and Chair of National Council for Sustain Development (NCSD), **H.E Dr. Chuop Paris,** Secretary of State, in charge for General Directorate of Policy and Strategy, **H.E Sum Thy,** Director General of Policy and Strategy and all member of Climate Change Technical Working Group (CC-TWG) that always provided guidance, strategic and coordination to successful of the CCSSP 2024-2033 development.

Sincerely thanks to staff members and focal points of line ministries, development partners and international NGOs, such as OXFAM International, who provided valuable information and insights during individual interview and consultations on climate mitigation and adaptation measures.

The CCCSP 2024-2033 is a result of proactive work which shall be widely integrated, subject to Cambodia’s development circumstances.

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BTR	Biennial Transparency Report
CCCSP	Cambodia Climate Change Strategic Plan
CE	Circular Economy
COP	Conference of Parties
CPER	Cambodia Climate Public Expenditure Review
CSDG	Cambodia Sustainable Development Goals
CSO	Civil Society Organization
DP	Development Partners
DRF	Disaster Risk Financing
DRR	Disaster risk resilience
ECCTWG	Environment and Climate Change Technical Working Group
EE	Energy efficiency
ETF	Enhanced Transparency Framework
EV	Electric vehicle
EW4ALL	Early Warning for All
FAO	Food and Agriculture Organisation
FIF	Financial intermediary fund
FOLU	Forestry and Other Land Use
GCF	Green Climate Fund
GDP	gross domestic product
GEDSI	Gender Equality Disability and Social Inclusion
GHG	Greenhouse gas
GPP	Green Public Procurement
IHL	Institution of Higher Learning
LTS4CN	Long-term Strategy for Carbon Neutrality
M&E	Monitoring and Evaluation
MAFF	Ministry of Agriculture, Forestry and Fisheries
MEF	Ministry of Economy and Finance
MISTI	Ministry of Industry, Science, Technology and Innovation
MLMUPC	Ministry of Land Management, Urban Planning and Construction
MLVT	Ministry of Labour and Vocational Training
MME	Ministry of Mine and Energy
MoE	Ministry of Environment
MoEYS	Ministry of Education, Youth and Sport
MoH	Ministry of Health
MoINFO	Ministry of Information
MoP	Ministry of Planning
MoSVY	Ministry of Social Affairs, Veterans and Youth
MoT	Ministry of Tourism
MoWA	Ministry of Women's Affairs
MoWRAM	Ministry of Water Resource and Meteorology
MPWT	Ministry of Public Work and Transportation

MRC	Mekong River Commission
MRD	Ministry of Rural Development
MRV	Monitoring, reporting and verification
MSME	Micro, small and medium enterprises
MTR	Mid-term Review
NAP	National Adaptation Plan
NC	National Communication
NCAP	National Cooling Action Plan
NCDD	National Committee for Sub-National Democratic Development
NCDM	National Committee Disaster Management
NCSD	National Council for Sustainable Development
NDCs	Nationally Determined Contributions
NGOs	Non-Government Organization
NIS	National Institution of Statistics
NSAF	National Social Assistance Fund (NSAF)
NSCCC	National Steering Committee on Climate Change
NSDP	The National Strategy Development Plan
NSPC	National Social Protection Council
PFM	Public Finance Management
PIP	Public Investment Programme
RDF	Refuse derived fuel
RE	Renewable energy
REDD+	Reducing emissions from deforestation and forest degradation
RGC	Royal Cambodian Government
SBCC	Social behaviour change communication
SCP	Sustainable Consumption and Production
SNAPDRR	Strategic National Action Plan for Disaster Risk Reduction
SRSP	Strengthening shock-responsive social protection
STEM	Science, Technology, Engineering, and Mathematic
SUP	Single Use Plastics
UNDP	United Nations Development Programme
UNEP	Unnited Nations Environment Programme
UNFCCC	United Nations Framework Convention for Climate Change
WASH	Water Sanitation and Hygiene
WFE	Water, Food and Energy
WTE	Waste to energy

EXECUTIVE SUMMARY

The Kingdom of Cambodia has a diverse economy, with agriculture, tourism, and manufacturing playing a significant role. With a population of 16.8 million as of 2022, Cambodia has recently encountered several challenges, notably the economic repercussions of the COVID-19 pandemic. However, a more immediate concern is the impact of climate change. Given its reliance on climate-sensitive industries, Cambodia is particularly vulnerable to the adverse effects of climate change. The nation faces several significant risks, including those posed by rising temperatures, extreme weather events, and rising sea levels. Despite adaptation efforts, the country is projected to see a 9.8% GDP loss by 2050 due to climate change impacts. In response to these challenges, the Royal Government of Cambodia (RGC) has been engaged in international climate agreements and has developed several climate policies including the Cambodia Climate Change Strategic Plan (CCCSP) 2014-2023 and the updated CCCSP 2024-2033.

The CCCSP 2024-2033 aims to address climate change challenges, enhance resilience, and promote sustainable development. It seeks to integrate national policies such as the Long-Term Strategy for Carbon Neutrality (LTS4CN), the National Strategic Development Plan (NSDP), the Nationally Determined Contribution (NDC), the Cambodia Sustainable Development Goals (CSDGs) and the Pentagonal Strategy Phase 1 to support the country's efforts to build resilience to climate change impacts. The development of the CCCSP 2024-2033 includes inputs from line agencies during consultations and interviews to ensure that the strategies remain relevant and complement climate actions by line agencies.

The strategic plan demonstrates Cambodia's commitment to global efforts in addressing climate change, fostering international cooperation, and contributing to a more sustainable future for both the nation and the world.

The vision, mission and strategic outcomes of the current CCCSP are based on the analysis of institutional capacity, observed climate change impacts and climate change projections for the Kingdom of Cambodia and recent international development in climate actions and commitments under the Paris Agreement. This CCCSP action oriented to mobilise adequate resources and address data gaps to achieve a low- carbon and resilient society in the Kingdom of Cambodia.

Vision: Achieve carbon neutrality and climate resilience through inclusive and sustainable development.

Mission: Create a national framework to reduce emissions, enhance resilience, and improve climate governance to ensure societal, environmental, and economic well-being. This includes promoting renewable energy, sustainable natural resource management and climate-smart practices.

Three **(3) strategic areas** and **19 strategic outcomes** have been developed to achieve the vision and mission of the CCCSP 2024-2033.

Strategic Areas and Outcomes: Cambodia has developed a number of strategies to combat climate change, including the LTS4CN, the Pentagonal Strategy Phase 1, the Circular Strategy on Environment 2023-2028 and NSDP. The CCCSP 2024-2033 builds upon these preceding efforts, with a particular focus on reducing emissions, enhancing resilience, and improving governance. The following three strategic areas have been identified:

Mitigation: Accelerate renewable energy and energy efficiency, green industry, reduce reliance in fossil fuels, implement circular economy principles to address pollution, develop sustainable water and waste management systems, expand urban green spaces, and halt deforestation and promote reforestation and afforestation to ensure environmental sustainability.

Adaptation: Strengthen national policies related to natural resource management, climate-smart agriculture, ecosystem conservation, and mainstream GEDSI to strengthen the resilience of vulnerable groups (women, older people, local communities, etc.).

Governance: Strengthen national institutions and increase cooperation across ministries at the national and sub-national levels. Enhancing finance mechanisms and communication, raising awareness across line agencies and levels of society, capacity-building, fostering international cooperation and regional partnerships, addressing information gaps and strengthening monitoring and evaluation.

The CCCSP 2024-2033 aims to implement these strategies in two phases:

Phase 1: Immediate term 2024-2028 which focuses on accelerating the implementation of governance measures related to human capacity, promoting GEDSI, sustainable natural resource management, awareness raising and addressing data gaps.

Phase 2: Medium term 2029-2033 focuses on strengthening and incorporating key programs aimed at promoting green growth, advancing GEDSI, strengthening public health and scaling up climate-resilient initiatives across vital economic sectors. It also includes mobilising climate financing, expanding emission reduction measures, and expanding sustainable waste management practices.

The Cambodia Climate Change Strategic Plan (CCCSP) 2024-2033 outlines a comprehensive approach to addressing climate change. Existing institutions such as the Environment and Climate Change Technical Working Group (ECCTWG) of the National Council for Sustainable Development (NCSD) will continue to facilitate collaboration. The plan also calls for strengthening existing ministries to integrate climate change considerations into their respective mandates.

To ensure successful implementation, the CCCSP will prioritize diversified financing through government budget, international grants, bilateral partnerships, private sector investment, and innovative green bonds. Building strong partnerships to support the development of a skilled workforce is also critical. This includes a focus on STEM education and empowering women to participate in these fields, both of which are essential to building a low-carbon future.

Recognizing the importance of continuous improvement, the CCCSP will establish a robust monitoring and evaluation framework. This framework will track progress, ensure accountability and inform future strategies. It will be aligned with national systems and international commitments such as the Paris Agreement, promote participatory learning, and integrate gender considerations. Regular reviews will be conducted to assess progress and allow for adjustments as needed. Overall, the CCCSP 2024-2033 serves as a strategic and coordinated effort to combat climate change towards a clean, green and sustainable Cambodia.

Strategic Objectives	1. Promoting GHG Mitigation	2. Strengthening Adaptation Capacity to Climate Change	3. Promoting Good Governance and Digital Transformation
Strategic Outcomes	1.1 Increase contribution of Renewable Energy (RE) in national energy mix and utilization in key economic sectors (transport, agriculture, tourism, manufacturing etc) whilst reducing dependency fossil fuel	2.1 Strengthen resilience measures across all economic sectors and essential social services (utility, sanitation, healthcare, nutrition, education, social and child protection, tourism, sustainable food system and critical infrastructure such as WASH, energy, roads, etc), with particular focus on the needs of children and most vulnerable communities.	3.1 Enhance climate finance mechanisms
	1.2 Increase Energy Efficiency (EE) and Renewable Energy (RE) in installations, buildings, housing and transportation (public transportation, electric vehicles)	2.2 Strengthen disaster risk reduction, preparedness and recovery across communities (coastal communities, Tonle Sap and Mekong River riparian communities)	3.2 Increase accessibility and targeted information education, communication and training on climate change
	1.3 Strengthen implementation of CE and pollution prevention in key economic sectors (tourism, agriculture, construction, manufacturing, transport, etc)	2.3 Strengthen ecosystem conservation and sustainable natural resources management (including Mekong River, Tonle Sap Lake, forest, biodiversity, urban ecosystem and mainstreaming nature-based solutions and adaptation)	3.3 Strengthen current and future workforce towards low-carbon and resilient transition
	1.4 Strengthen sustainable and resilient water resources and supply, solid waste and wastewater management system and infrastructure (targeting zero waste, phasing out single use plastics (SUP), increase SUP alternatives, waste to energy (WTE), garment sector waste, groundwater and surface water resources, etc)	2.4 Strengthen resilience of vulnerable groups (such as children and local communities) and mainstream GEDSI in climate actions and resilience	3.4 Strengthen multi-stakeholder engagement and involvement in strategy implementation
	1.5 Increase urban green space and urban greening promoting utilisation of nature-based solutions	2.5 Strengthen sustainability and resilience measures (including climate smart technologies, regenerative agriculture, etc) in the agriculture and food value chain for a sustainable food system	3.5 Strengthen access to technical assistance for multi-stakeholder capacity building
	1.6 Increase forest cover and halt deforestation (including increase in private sector investment and	2.6 Strengthen infrastructure and building resilience and environmental sustainability (including expanding	3.6 Address data and information gaps for effective monitoring and evaluation

	involvement in FOLU, development of relevant standards and guidance, etc.)	application of green building standards, passive cooling design, building codes, green and gray infrastructure, etc)	3.7 Strengthen regional and international cooperation and partnerships (including ASEAN, Mekong River Commission (MRC), Mekong Cooperation initiatives, UN agencies, climate finance facilities, development banks and development agencies) 3.8 Developnga a road map for digital transformation in environment and climate change work

Figure 1: Summary of Cambodia Climate Change Strategic Plan 2024-2033

1. INTRODUCTION

1.1. Overview

Cambodia is among the most climate vulnerable countries in the region and faces significant challenges due to climate change. In light of its impressive economic growth Cambodia is facing increasing emissions from rapid development activities. It is projected that even if global temperature rise is contained below 2degC and the RGC maintains current level of investment in climate adaptation, Cambodia will see a 9.8 per cent loss in its GDP by 2050 (MEF, 2019). Despite climate adaptation measures and programmes, vulnerable communities and vulnerable areas in Cambodia are at risk of facing consequences of climate change that go beyond what people can adapt to, for example loss of livelihood, lives and homes during extreme floods[1].

The Royal Government of Cambodia (RGC) has implemented various adaptation and mitigation measures through major climate change policies and strategies. Cambodia has been actively involved in international climate change agreement and fulfilling its Paris Agreement commitments.

At the national level Cambodia's development focus is on poverty reduction and achieving upper-middle-income status by 2030, as per the National Sustainable Development Plan (NSDP). The Royal Government developed the first Cambodia Climate Change Strategic Plan 2014-2023 and associated action plans which was a cross-sectoral framework responding to climate change issue. It was intended to build synergy with existing government policy documents such as National Strategic Development Plan (NSDP), Rectangular Strategy, National Policy on Green Growth and sector development plans.

Recent efforts such as the updated Nationally Determined Contribution (NDC), the Circular Strategy on Environment 2023-2028 and the Long-Term Strategy for Carbon Neutrality (LTS4CN) requires the updating of the CCCSP. The new CCCSP 2024-2033 is expected to accelerate and complement the implementation of the abovementioned strategies, the NSDP, the Cambodia Sustainable Development Goals (CSDGs) and Pentagonal Strategy Phase 1.

1.2. Context and Rationale

Cambodia’s economy and growth is driven by climate -dependent key economic sectors such as agriculture, tourism, forestry, fishery and water resources. Coupled with vulnerabilities of its population and infrastructure makes Cambodia among countries significantly impacted by climate change.

The wide array of policy instruments such as the LTS4CN, the NDC, Cambodia Sustainable Development Goals and the Circular Strategy on Environment 2023-2028 are evidence of RGC’s ambition towards climate action. Strengthening greater interconnectivity and perhaps framework law on climate change may enhance effectiveness of implementation of these instruments and mobilisation of timely and adequate resources and technological capacity.

The Cambodia Climate Change Strategic Plan (CCCSP) 2024-2033 aims to address climate change challenges, accelerate climate actions, promote greater inter-agency and inclusive

[1] This situation where negative effects of climate change occur despite mitigation and adaptation efforts can be referred to as loss and damage (concerned with the unavoidable and irreversible impacts of the climate crisis). About Loss and damage | UNEP - UN Environment Programme

coordination, expand effective and efficient resource mobilisation for increased resilience and adaptive capacity whilst promoting sustainable development in the country.

The formulation of the CCCSP 2024-2033 involved assessment of historical climate data, identifying key climate-related challenges, and understanding the socio-economic impacts of climate change on Cambodia's population. The development of the strategy involves extensive concerned stakeholder's consultations and capitalises on the implementation of key national policies and strategies namely:

1. The Pentagonal Strategy – Phase I, 2023;
2. Circular Strategy on Environment 2023-2028;
3. The National Strategy Development Plan 2019 - 2023;
4. The Cambodia's Updated Nationally Determined Contribution (NDC), 2020; and
5. The Long-term Strategy for Carbon Neutrality (LTS4CN), 2021

The strategic outcomes rely on the integration of abovementioned national policies and strategies, and other sectoral strategies. Existing national strategies of neighbouring ASEAN member countries (like Thailand, Singapore, and Vietnam), international intergovernmental instruments and actions (such as the Global Stock Take, Biennial Transparency Reporting and the Loss and Damage Fund) were also referred to in order to ensure that the CCCSP 2024-2033 aligns with regional and international trends and climate action. This comprehensive approach ensures a cohesive, effective and seamless response to climate change while fostering sustainable growth and regional and international collaboration.

The strategic plan focuses on prioritising adaptation and mitigation measures, such as improving water management, enhancing forest conservation, promoting sustainable agriculture, and investing in renewable energy sources. In anticipation of increased threats posed by climate change resulting from extreme weather events, early warning and early action can protect people and properties before disaster strikes. Meaningful engagement with at-risk or vulnerable communities enhances resilience against these extreme events[2]. Additionally, the strategy emphasises capacity building and knowledge sharing among line agencies, local communities, policymakers, and stakeholders to ensure effective implementation and long-term sustainability of proposed actions.

Collaboration with international partners and mobilisation of climate finance is essential to support Cambodia's efforts in tackling climate change. The CCCSP 2024-2033 builds upon the achievements and lessons learned from the previous decade's strategy, ensuring a more effective and efficient response to climate change challenges. Given the global climate change situation continues to evolve, the CCCSP 2024-2033 will help Cambodia adapt to emerging threats and opportunities, such as rising sea levels, extreme weather events, shifting agricultural patterns and access to latest climate--smart technologies and financing.

The CCCSP 2024-2033 provides a clear, updated strategy which will enable Cambodia to plan and mobilise sufficient resources and strengthen technical capacity towards climate action. It will also continue to garner international support and investments in climate actions, which will be essential for the country's sustainable development.

It also seeks to provide directions, promote seamless inter-agency coordination, accelerate greater climate-responsive public investment management and provide guidance for climate actions in key economic sectors whilst mainstreaming GEDSI leaving no one behind.

[2] Also known as anticipatory action or forecast-based action, means taking steps to protect people before a disaster strikes based on early warning or forecasts. (International Federation of Red Cross- IFRC)

1.3. National Circumstances

1.3.1. Geography

Cambodia's geography is characterized by its low-lying terrain, tropical monsoon climate, the Mekong River, and extensive coastal areas. About 80% of the country lies in the Mekong River Basin (MRB) which experiences the annual flood pulse and sediment deposits important to the fishery sector. Cambodia remains one of the most heavily forested countries in the region (MoE, 2022).

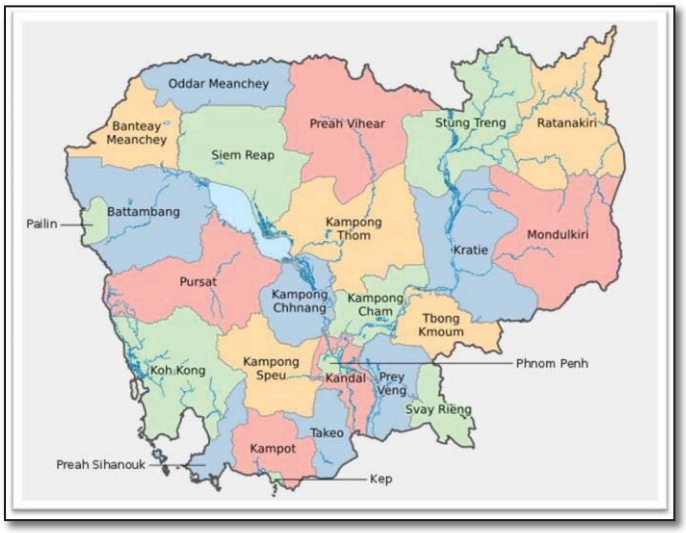

Figure 2: Cambodia map

1.3.2. Climate

Cambodia's climate is predominantly tropical monsoon, with distinct wet and dry seasons influenced by its location near the equator and topography. The country experiences high temperatures and humidity, ranging from 23°C to 35°C (73°F to 95°F) annually. The wet season, from May to October, brings heavy rainfall and occasional flooding due to the southwest monsoon, while the dry season, from November to April, is characterized by cooler temperatures and limited rainfall. According to the Inform Risk Index, Cambodia ranks fourth most flood-exposed country in the world. The Mekong and Tonle Sap floodplains[3] is highly exposed to riverine floods (World Bank, 2023). Cambodia is also highly exposed to flash flooding after extreme rainfall, especially during tropical cyclone events and the monsoon and storm seasons.

1.3.3. Impact of Climate Change

In addition to being among countries most exposed to flood, Cambodia also experiences some of the highest average temperatures in the world, averaging an estimated 64 days per year when the maximum temperature exceeds 35°C. This places Cambodia among the top 23 countries with acute exposure to extreme heat. Effects of heat stress and urban heat islands (UHI) are a growing concern in the agriculture sector and in cities. The increase in average temperatures escalates pest activities and diseases in crops and livestock. Heat stress has health and economic implications by lowering productivity and increasing health cost affecting mostly those engaged in outdoor employment, manufacturing and the poor.

The changing hydroclimatic conditions fuelled by climate change affects precipitation and the flow patterns of the river. Sea level rise, increases coastal erosion further affecting lives and livelihood of coastal communities. The Mekong River, which plays a crucial role in Cambodia's water supply, agriculture, and fisheries, is also affected by climate change by altering its water flow and sedimentation patterns.

The Northern Tonle Sap Basin is one of Cambodia's most important agricultural regions providing essential resources to support the livelihoods of more than 3 million people. It is also among the most vulnerable regions in Cambodia being prone to floods and droughts, which are projected to

[3] World Bank Document

become more frequent and intense due to climate change further exacerbating socioecological and economic vulnerabilities (GCF, 2023).

1.3.4. Economic Development

Over the past few decades Cambodia's economy has seen rapid inclusive growth, primarily driven by sectors such as agriculture, garment and footwear manufacturing, construction, and tourism. The country has experienced a significant increase in GDP, with an average annual growth rate of around 7% from 1994 until 2023. Cambodia aims to become an upper-middle-income country by 2030 and a high-income country by 2050. The country is an open economy dependent on trade and foreign direct investment. Cambodia's development goals are clearly expressed in its Pentagonal Strategy and the National Strategic Development Plan.

Climate change poses a considerable threat to Cambodia's economic development, as it exacerbates existing vulnerabilities in key economic sectors mentioned above. The country's heavy reliance on rain-fed agriculture makes it susceptible to droughts and floods, which can lead to crop failures and reduced food security. Furthermore, rising sea levels and more frequent extreme weather events can cause damage to infrastructure, disrupting transportation and trade.

To mitigate these impacts, Cambodia has increased investments and implemented policies and strategies to adapt to climate change, such as promoting sustainable agriculture practices, investing in renewable energy, and improving disaster risk management and resilient infrastructure.

1.3.5. COVID-19 Context of Cambodia

Cambodia has been significantly affected by the COVID-19 pandemic. The COVID-19 pandemic has led to economic slowdown, job losses, and disrupted supply chains, impacting the country's tourism, garment, and construction industries. The government has implemented lockdowns and restrictions, which have further strained the economy. The combined impact of COVID-19 and climate change exacerbated existing vulnerabilities in Cambodia, requiring the government and international community to formulate and implement effective solutions to address these interconnected crises.

1.3.6. Gender and Climate Change

Women accounted for 51.19 per cent of the total population of Cambodia in 2019 and represented about 64% of the labour force in agriculture. They also make up about 80% of the garment and footwear workforce. Women are disproportionately affected by the impacts of climate change as they have a key role in agriculture, manufacturing and services sector, as well as domestic responsibilities in raising and caring for family members. The RGC formulated the Gender and Climate Change Strategic Plan (GCCSP) 2013-2023 and the Master Plan on Gender and Climate Change 2018-2030 to address gender aspects in climate mitigation and adaptation and environmental sustainability. The Masterplan on Gender and Climate Change 2018-2030 predominantly addresses the vulnerabilities of women to climate change. It outlines various adverse impacts, including women's heightened susceptibility to health issues, increased risk of workplace violence, greater reliance on natural resources for livelihoods, and the consequences of resource scarcity. Women have limited access to climate change information, often due to lower levels of education relative to men and additional role as primary caregiver in the household. Relative to men, women have limited savings and safety net and thus face disproportionate impact of climate induced disaster. The RGC has put in place measures to mainstream gender in key policy documents, such as the NDC, LTS4CN, NSDP, Cambodia Climate Public Expenditure

Review (CPER), the Public Investment Program (PIP), the Cambodia Sustainable Development Goals (SDGs) and in on-going government reform efforts. Through improved inter-agency coordination at various levels of administration, gender equality, disability and social inclusion (GEDSI) policy implementation can be further expanded.

1.3.7. Climate Action

Cambodia has been actively addressing climate change through various strategies and policies, such as the Long-Term Strategy for Carbon Neutrality (LTS4CN), the updated Nationally Determined Contribution (NDC), Cambodia Sustainable Development Goals (CSDGs), Cambodia Climate Change Strategy Plan 2014-2023 and the Circular Strategy on Environment 2023-2028. Climate action has also been mainstreamed in the National Strategic Development Plan (NSDP), and the Pentagonal Strategy Phase 1 of the Royal Government of Cambodia. The LTS4CN outlines priority mitigation actions to achieve the country's goal of a carbon neutral economy in 2050, working both on reducing sources of emission, such as the combustion of fossil fuels, and increasing carbon sinks, through reforestation and afforestation, reduction of deforestation, etc.

The NDC focuses on the government's commitments on both mitigation and adaptation, on climate change governance, transparency and tracking system. The SDGs provide a framework for Cambodia to achieve sustainable development objectives across various sectors, including climate action (SDG 13). The NSDP, on the other hand, integrates climate change considerations into national planning and budgeting processes. Cambodia has also joined global efforts through committing Global Cooling Pledge at COP 28 Dubai, anchored by COP 28 Presidency and UNEP Cool Coalition to tackle cooling related emissions.

The Cambodia Climate Public Expenditure Review 2022 (CPER 2022)[4] underscored the government's commitment to climate action and social welfare despite the impact of the COVID-19 pandemic. It highlighted a shift towards sustainable investments and resilience building, particularly for floods, droughts, and strengthening of rural infrastructure. While domestically funded climate change spending declined in 2022, disbursements from climate change loans increased by 17%. This shows that investments in climate change adaptation will continue, even as domestic resources decline. Social protection for vulnerable groups remains a priority, with cash transfers reaching US$379.4 million in 2022, a recording an increase from US$294 million in 2021.

The Pentagonal Strategy Phase 1 consists of five pillars: (1) macroeconomic management, (2) social development, (3) infrastructure development, (4) human resource development, and (5) good governance and anti-corruption. This strategy aims to promote sustainable and inclusive growth while addressing climate change challenges. Additionally, the Circular Strategy on Environment 2023-2028 is based on the three pillars Clean, Green and Sustainable, and it focuses on promoting circular economy, reducing waste and promoting resource efficiency further contributing to climate change mitigation and adaptation efforts.

Cambodia has also implemented additional actions, such as National Green Growth Strategy 2013-2030 (NCGG)[5] and Cambodia's National Cooling Action Plan. The NCGG principles focus on four pillars, namely, economy, environment, society and culture. It is aimed at boosting the Cambodian economy towards green economy with emphasis on efficient use of natural resources, environmental sustainability, creating green jobs, promoting green technology and economic reforms. Cambodia's National Cooling Action Plan offers a comprehensive framework for actions to mitigate cooling-related energy demand and emissions combined with adaptation measures to increase resilience in the face of rising temperatures. Cambodia has stepped up

[4] Cambodia Climate Public Expenditure Review 2022
[5] National Strategic Plan on Green Growth

efforts to scale-up development leaving no one behind (LNOB) by supporting 'whole society' involvement in policy development, implementation, monitoring and reporting.

The RGC will align implementation of relevant national strategies with current developments in international climate action policy commitments such as the Biennial Transparency Report, meeting requirements of the Loss and Damage fund mechanisms, National Adaptation Plan Process and the Global Stocktake.

These initiatives support the country's efforts to build resilience to climate change impacts, particularly in vulnerable sectors: agriculture, water, forestry, health, built environment, in cities and coastal zones. Given its geography, economic development and climate vulnerability as reported in its updated NDC and National Communication (NC) and despite the RGC's ambitious plans and actions on climate adaptation, some impacts of climate change are unavoidable, such as extreme events and sea level rise. At a global level, Cambodia can access the Loss and Damage Fund to help address economic losses (such as damage to infrastructure) and non-economic losses (such as damage and loss of cultural heritage) due to extreme events. Cambodia as party to the UNFCCC must strengthen capacity to comply with new approach to UNFCCC monitoring and reporting. The RGC and its partners have undertaken efforts such as technical capacity building to comply with the Loss and Damage funding mechanism and updated reporting requirements of the UNFCCC.

1.4. Cambodia's Development Vision

1.4.1. Economic Development Projections of the Country

Cambodia's economic development projections for the period between 2024 and 2033 indicate a positive outlook with steady growth. The country is expected to maintain a robust average annual growth rate of around 7%, driven by factors such as increased investments in infrastructure, growing garment and textile industry, and a thriving tourism sector. The government's focus on attracting foreign direct investments and fostering a business-friendly environment will contribute to this growth. However, challenges such as income inequality, improving human capital development, and ensuring sustainable economic progress remain crucial for Cambodia to achieve its long-term economic goals during this period.

1.4.2. Economic Recovery Agenda of the Country

Cambodia's Economic Recovery Agenda, post-COVID-19, focuses on a multi-faceted approach to revive and strengthen the nation's economy by 2033. The strategy encompasses five key priorities:

1) Enhancing competitiveness and productivity,
2) Promoting economic diversification,
3) Boosting human capital development,
4) Strengthening social protection and resilience, and
5) Implementing sustainable and green growth policies.

To achieve these goals, the government has outlined several initiatives. First, they aim to improve infrastructure, digital connectivity, and logistics to attract foreign investments and support local businesses. Second, the diversification of the economy will be promoted by fostering growth in sectors such as agriculture, tourism, manufacturing, and services. Third, the government plans to invest in education and vocational training to equip the workforce with necessary skills for the evolving job market. Fourth, social protection measures will be enhanced to ensure vulnerable

populations have access to basic services and support during economic transitions. Fifth, the government is committed to adopting environmentally sustainable practices and green technologies to mitigate climate change impacts and promote long-term economic growth.

By implementing these strategies, Cambodia aims to achieve a resilient and inclusive economy, capable of withstanding future shocks and providing opportunities for its citizens by 2033.

2. VISION

Cambodia is progressing toward carbon neutrality and climate resilience as part of its commitment to sustainable national development. The Cambodia Climate Change Strategic Plan 2024–2033 serves as a roadmap to foster solidarity and mobilize line ministries, development partners, and the private sector in achieving the ambitious goal of carbon neutrality and enhanced resilience to climate change.

3. MISSION

The mission of the CCCSP 2024-2033 is to provide a national framework through inclusive process to reduce emissions, strengthen resilience and improve governance mechanisms for societal, environmental and economic well-being. This comprehensive plan involves various initiatives, including the promotion of renewable energy, energy efficiency improvements, sustainable land use management, green built environment, reforestation and afforestation and the adoption of inclusive climate-smart and resilient practices across economic sectors. Additionally, Cambodia emphasizes the importance of community involvement, capacity building, and international cooperation to ensure a successful transition towards a low-carbon future. By implementing this vision, Cambodia aspires to not only protect its environment but also improve the overall quality of life for citizens, leaving no one behind towards a prosperous and resilient nation.

4. GOAL AND OBJECTIVE

To promote sustainable development through the adoption of low-carbon technologies and the enhancement of climate resilience.

In order to achieve the goal and objective, three strategic priorities are essential: (1) Promote the reduction of greenhouse gas emissions in line with the Long-Term Carbon Neutral Development Strategy toward 2050; (2) Strengthen adaptive capacity to climate change; and (3) Enhance good governance and promote digital transformation."

5. STRATEGIC FRAMEWORK

The Cambodia Climate Change Strategic Plan (CCCSP) is a national framework designed to address climate change challenges and promote sustainable development in the country. The CCCSP 2024-2033 outlines priorities, actions, and goals to be achieved by 2033. It consists of 3 strategic areas, mitigation, adaptation and governance, and 20 strategic outcomes.

Strategic Objectice	1. Promoting GHG Mitigation	2. Strengthening Adaptation Capacity to Climate Change	3. Promoting Good Governance and Digital Transformation
Strategic Outcomes	1.1 Increase contribution of Renewable Energy (RE) in national energy mix and utilization in key economic sectors (transport, agriculture, tourism, manufacturing etc) whilst reducing dependency fossil fuel	2.1 Strengthen resilience measures across all economic sectors and essential social services (utility, sanitation, healthcare, nutrition, education, social and child protection, tourism, sustainable food system and critical infrastructure such as WASH, energy, roads, etc), with particular focus on the needs of children and most vulnerable communities.	3.1 Enhance climate finance mechanisms
	1.2 Increase Energy Efficiency (EE) and Renewable Energy (RE) in installations, buildings, housing and transportation (public transportation, electric vehicles)	2.2 Strengthen disaster risk reduction, preparedness and recovery across communities (coastal communities, Tonle Sap and Mekong River riparian communities)	3.2 Increase accessibility and targeted information education, communication and training on climate change
	1.3 Strengthen implementation of CE and pollution prevention in key economic sectors (tourism, agriculture, construction, manufacturing, transport, etc)	2.3 Strengthen ecosystem conservation and sustainable natural resources management (including Mekong River, Tonle Sap Lake, forest, biodiversity, urban ecosystem and mainstreaming nature-based solutions and adaptation)	3.3 Strengthen current and future workforce towards low-carbon and resilient transition
	1.4 Strengthen sustainable and resilient water resources and supply, solid waste and wastewater management system and infrastructure (targeting zero waste, phasing out single use plastics (SUP), increase SUP alternatives, waste to energy (WTE), garment sector waste, groundwater and surface water resources, etc)	2.4 Strengthen resilience of vulnerable groups (such as children and local communities) and mainstream GEDSI in climate actions and resilience	3.4 Strengthen multi-stakeholder engagement and involvement in strategy implementation
	1.5 Increase urban green space and urban greening promoting utilisation of nature-based solutions	2.5 Strengthen sustainability and resilience measures (including climate smart technologies, regenerative agriculture, etc) in the agriculture and food value chain for a sustainable food system	3.5 Strengthen access to technical assistance for multi-stakeholder capacity building
	1.6 Increase forest cover and halt deforestation (including increase in private sector investment and	2.6 Strengthen infrastructure and building resilience and environmental sustainability (including expanding	3.6 Address data and information gaps for effective monitoring and evaluation

	involvement in FOLU, development of relevant standards and guidance, etc.)	application of green building standards, passive cooling design, building codes, green and gray infrastructure, etc)	3.7 Strengthen regional and international cooperation and partnerships (including ASEAN, Mekong River Commission (MRC), Mekong Cooperation initiatives, UN agencies, climate finance facilities, development banks and development agencies) 3.8 Develop digital road map for digital transformation in environment and climate change work..

Figure 3: CCCSP 2024-20233: Strategic areas and outcomes

5.1. Strategic Objective 01 – Promoting GHG Mitigation

Emission reduction measures implemented in key economic sectors (Agriculture, Forestry and Land Use (FOLU), Transportation, Waste Management, Industrial Activity and Energy) guided by NDC, LTS4CN, Sustainable Consumption and Production (SCP) Roadmap, Circular Strategy on Environment, National Energy Efficiency (EE) Policy and Roadmap for Development of an Electric Vehicle (EV) Charging Stations Network in Cambodia, etc.

5.1.1. Strategic Outcomes

1. Increase contribution of Renewable Energy (RE) in national energy mix and utilization in key economic sectors (transport, agriculture, tourism, manufacturing etc) whilst reducing dependency fossil fuel
2. Increase Energy Efficiency (EE) and Renewable Energy (RE) in installations, buildings, housing and transportation (public transportation, electric vehicles)
3. Strengthen implementation of CE and pollution prevention in key economic sectors (tourism, agriculture, construction, manufacturing, transport, etc)
4. Strengthen sustainable and resilient water resources and supply, solid waste and wastewater management system and infrastructure (targeting zero waste, phasing out single use plastics (SUP), increase SUP alternatives, waste to energy (WTE), garment sector waste, groundwater and surface water resources, etc)
5. Increase urban green space and urban greening promoting utilisation of nature-based solutions
6. Increase forest cover and halt deforestation (including increase in private sector investment and involvement in FOLU, development of relevant standards and guidance, etc.)

5.2. Strategic Objective 02 - Strengthening Adapatation Capacity to Climate Change

Strengthen adaptation and resilience to climate change by mainstreaming gender equality, disability and social inclusion (GEDSI) in related policies and sectoral strategies, strengthening nature-based solutions, expanding climate responsive financing, wider communication, training and awareness and strengthening early warning and disaster risk resilience.

5.2.1 Strategic Outcomes

1. Strengthen resilience measures across all economic sectors and essential social services (utility, sanitation, healthcare, nutrition, education, social and child protection, tourism, sustainable food system and critical infrastructure such as WASH, energy, roads, etc), with particular focus on the needs of children and most vulnerable communities.
2. Strengthen disaster risk reduction, preparedness and recovery across communities (coastal communities, Tonle Sap and Mekong River riparian communities)
3. Strengthen ecosystem conservation and sustainable natural resources management (including Mekong River, Tonle Sap Lake, forest, biodiversity, urban ecosystem and mainstreaming nature-based solutions and adaptation)
4. Strengthen resilience of vulnerable groups (such as children and local communities) and mainstream GEDSI in climate actions and resilience
5. Strengthen sustainability and resilience measures (including climate smart technologies, regenerative agriculture, etc) in the agriculture and food value chain for a sustainable food system
6. Strengthen infrastructure and building resilience and environmental sustainability (including expanding application of green building standards, passive cooling design, building codes, green and gray infrastructure, etc)

5.3. Strategic Objective 03 – Enhancing Good Governance and Digital Transformation (Enablers):

Strengthening institutional and human resources capacity; coordination between focal entities, line ministries, departments and sections in national and subnational levels, inclusive and evidence-based policy development and implementation; and financing mechanisms.

5.3.1 Strategic Outcomes

1. Enhance climate finance mechanisms
2. Increase accessibility and targeted information education, communication and training on climate change
3. Strengthen current and future workforce towards low-carbon and resilient transition
4. Strengthen multi-stakeholder engagement and involvement in strategy implementation
5. Strengthen access to technical assistance for multi-stakeholder capacity building
6. Address data and information gaps for effective monitoring and evaluation
7. Strengthen regional and international cooperation and partnerships (including ASEAN, Mekong River Commission (MRC), Mekong Cooperation initiatives, UN agencies, climate finance facilities, development banks and development agencies)

6. IMPLEMENTATION

6.1 Targets, Key Activities and Resources

In view of the progress already made by Cambodia in climate action, the CCCSP 2024-2033 is oriented to amplify actions to address rising emissions and climate vulnerability. The CCCSP 2024-2033 aims to minimize redundancies, strengthen clarity in inter-agency roles, and increase effectiveness and inclusiveness in climate change mitigation, adaptation and governance. It also calls for greater engagement of private sector, trade unions and local communities.

The following tables present the strategic outcomes, targets, key activities, implementing agencies and human resources and technology needs for the implementation of the CCCSP 2024-2033. The budget estimates are guided by the implementation of various strategies such as the LTS4CN, the Pentagonal Strategy and the NDC.

6.2 Activities

The CCCSP 2024-2033 includes activities focused on mitigation, adaptation, governance and awareness raising. Mitigation activities are targeted to reduce greenhouse gas emissions through renewable energy, energy efficiency improvements, reforestation and afforestation, promoting sustainable transportation and waste management. Adaptation activities aim to strengthen adaptive capacity of various stakeholders, economic sectors and natural resources. Governance measures are aimed at enabling seamless implementation of the strategy. These include addressing data and technological gaps, financing, human resources development, policies and regulatory environment and inter-agency coordination. Additionally, raising awareness through education, community outreach, and policy advocacy will encourage broader participation in and ownership of climate actions.

6.3 Setting Timelines and Targets

A two-phase implementation approach is proposed to efficiently address impact of climate change. The first phase (2024-2028) will focus on reinforcing policies and address data gaps to support monitoring, promote seamless inter-agency coordination, reporting and verification (MRV) and enhanced transparency framework (ETF). The first phase aims to accelerate actions related to emissions reduction, mobilisation of climate financing, alignment of sectoral policies and regulations, capacity building and availability of technologies to strengthen resilience across key economic sectors and vulnerable areas and communities.

The second phase (2029-2033) will concentrate on scaling up implementation of strategies, monitoring progress, and adapting the plan as needed to achieve the desired impact on mitigating and adapting to climate change, supported by strong governance mechanisms.

6.4 CCCSP 2024-2033 Implementation Plan

The Environment and Climate Change Technical Working Group (ECCTWG) shall act as the secretariat for coordinating the development and implementation of the framework. The Secretariat will also be responsible for producing the CCCSP progress reports and M&E. Indicators, procedures and responsibilities for data collection will be agreed with the concerned line ministries, climate financing facilities, the National Institute of Statistics, and other parties interested in actively engaging in the process. Think tanks, research institutions and institutes of higher learning (IHL) could be engaged to provide support in advancing various activities and

M&E of the CCCSP 2024-2033. In line with the CCCSP's aim to be inclusive, implementing agencies will make efforts to increase consultation with local communities, including representatives of women and youth groups trade unions and informal workers associations with the support of development partners, non-governmental and community-based organisations.

Table 1: Strategic Objective 1 - Targets, key activities and resources for GHG mitigation

Strategic Objective 1 – Promoting GHG Mitigation: Emission reduction measures implemented in key economic sectors guided by LTS4CN in FOLU, Transportation, Waste, Industrial Activity and Energy, SCP Roadmap, NDCs, National EE Policy, Circular Strategy on Environment, National Energy Efficiency Policy, Roadmap for Development of an Electric Vehicle Charging Stations Network in Cambodia					
Strategic Outcomes	**Targets**	**Impact on vulnerable groups and GEDSI**	**Budget Estimate[6]**	**Activities**	**Key Delivery Entities**
1.1 Increase contribution of Renewable Energy (RE) in national energy mix and utilization in key economic sectors (transport, agriculture, tourism, manufacturing etc) whilst reducing dependency fossil fuel 1.2 Increase Energy Efficiency (EE) and Renewable Energy (RE) in installations, buildings, housing and transportation (public transportation, electric vehicles)	• Construction of Renewable Enegergy Infrastructure such as hydropower, solar farms and wind energy • Reduction in energy consumption • Reduced dependence on fossil fuel energy sources • Reduced emissions from fossil fuel • Increase in engineered/ sanitary landfills (reduce emissions and pollution from waste management) • Increase in biomass in energy mix (from agriculture waste)	• Access to and affordability of energy to vulnerable groups/ communities including community-owned renewable energy initiatives • Access to affordable and sustainable housing, thermally comfortable transportation and mobility to low-income groups • Access and / or encourage more women enrolment in energy related studies (engineering, financing and servicing) at IHL	NCAP[7] roadmap USD 50mill (i) Building codes and enforcement USD 25mill (ii) Enhance maintenance of vehicle emissions USD 600,000 (ii) EV charging/ maintenance USD 3mill (*Expressway 4*) (iii)[8] Study on Integration of renewable energy resources USD 300,000 (iv) Road construction and maintenance standard USD 600,000 (vi) USD 500mill – 1bill (excluding investment in mass transportation system) (vi)	i. Scale up implementation of / review and improve, green building codes incorporating guidance on EE, water efficient and RE installations in existing and new buildings; integrated in sustainable and affordable housing development plans, nature-based solutions, new and existing public buildings such as healthcare facilities, schools and government-owned buildings (for example through the Commune Investment Plan, involvement local groups, and by create an enabling environment and policies) ii. Implement and enforce regulations consistent with EE, water efficiency and RE policies iii. Advance implementation of National Cooling Action Plan (NCAP) and Energy Efficiency Policy iv. Develop and implement EV charging and maintenance standards and safety regulations v. Develop and implement action plan and target for suitable, practical and affordable RE installations in key economic sectors (agriculture, tourism, manufacturing, building and construction) vi. Reduce cost of acquiring, manufacturing, maintenance and servicing of energy efficient and water efficient installations and equipment (eg tax incentives). vii. Integrate EE and RE for mass transportation requirements in the implementation of the “roadmap for the Comprehensive Master Plan on the Cambodian Transit and Logistics System 2023-33” viii. Increase use of low-GWP refrigerants to accelerate phasing down of HFCs **Technological and Human Capacity Needs[9]** • RE and EE installation design, building and maintenance and implementation of NCAP • Architecture, urban planning and engineering for design and construction of green spaces (urban areas) and buildings (including affordable homes and passive cooling design) • Means to incentivize climate action investment schemes for private sector (developer, construction companies, architects etc) • Electric mobility (private and mass transport) energy sources (solar, hydrogen etc) including maintenance, servicing, financing and infrastructure, battery recycling • National GHG emissions inventory for all mitigation measures aligned with enhanced transparency framework (ETF) • Assess buy back of surplus solar energy from private households	• MME • MoE • MAFF • MISTI • MoH • MLMUPC • MRD • MoWA • MAFF • MPWT • MLVT • National Institute of Statistic (NIS) • MoINFO

[6] *Where indicative budget is not provided, it is recommended to implement feasibility studies or cost benefit analysis*
[7] NCAP – Cambodia National Cooling Action Plan 2023
[8] World Bank (2024) Cambodia Recommendations to the National Roadmap for Electric Mobility Transition; https://documents1.worldbank.org/curated/en/099031924073537111/pdf/P17690614457da0e71a4501e8dcdea2d59d.pdf
[9] *Access to technology, IHL curriculum and continuous professional education and training.*

Strategic Objective 1 – Promoting GHG Mitigation: Emission reduction measures implemented in key economic sectors guided by LTS4CN in FOLU, Transportation, Waste, Industrial Activity and Energy, SCP Roadmap, NDCs, National EE Policy, Circular Strategy on Environment, National Energy Efficiency Policy, Roadmap for Development of an Electric Vehicle Charging Stations Network in Cambodia					
Strategic Outcomes	**Targets**	**Impact on vulnerable groups and GEDSI**	**Budget Estimate**	**Activities**	**Key Delivery Entities**
1.3 Strengthen implementation of CE and pollution prevention in key economic sectors (tourism, agriculture, construction, manufacturing, transport, etc)	• Reduced consumption of Single Use plastics (SUP) • Increase use of sustainable alternatives to Single/ Multi Use plastics • Wider public awareness through sustainable lifestyle education and consumer information • Reduced postharvest loss and food waste in food value chain • Advance priority actions under the SCP Roadmap 2022-2035	• Integrate GEDSI in awareness on sustainable lifestyle education and consumer information, postharvest loss reduction and SCP roadmap implementation	USD 134 mill[10] Plastic Management project (i) Hospitality Rating – USD 2.5mill (ii) Scaled up climate resilient agricultural production through increased access to solar irrigation systems and other climate-resilient practices - cold chain investment USD 10mill[11] (iii) Building code with mainstreaming climate change into building designs and promote low cost materials for housing- USD 6.6mill (iv)	i. Develop and implement plastic reduction roadmap (or masterplan) ii. Accelerate implementation of hospitality (hotels/ accommodation) sustainability rating, eco-label certification or sustainable tourism sites iii. Develop and implement postharvest loss and food waste reduction programme in the agriculture value chain iv. Accelerate implementation of eco/sustainability labelling standards for packaging materials, building/ construction materials, energy efficiency, water efficiency etc. v. Develop and implement postharvest loss and food waste reduction programme in the agriculture value chain, including for perishable produce, dairy and meat products **Technological and Human Capacity Needs** • Research and development and domestic production of alternative/ sustainable and raw materials for packaging materials (SUP/multi-use plastic substitutes • Research and development on postharvest loss reduction technologies, equipment and infrastructure • Sustainable cold chain infrastructure and technology for agriculture and food sector • Research and development in life-cycle analysis • Develop and impart academic curriculum on green buildings in architecture and engineering universities. • Pilots / Demonstrators projects (including at provincial/district level) on urban NbS cumulated benefits	• MoE • MAFF • MoH • MLMUPC • MRD • MoWA • MAFF • MPWT • MLVT • NIS. • MoINFO

[10] Cambodia: Solid Waste and Plastic Management Improvement Project (5yr project 2024-2029; USD67mill = appx USD 134mill for 10yrs) https://projects.worldbank.org/en/projects-operations/project-detail/P170976

[11] NDC No.16 on Adaptation climate resilient practices including cold-chain and food storage to improve food security and reduce postharvest loss

Strategic Objective 1 – Promoting GHG Mitigation: Emission reduction measures implemented in key economic sectors guided by LTS4CN in FOLU, Transportation, Waste, Industrial Activity and Energy, SCP Roadmap, NDCs, National EE Policy, Circular Strategy on Environment, National Energy Efficiency Policy, Roadmap for Development of an Electric Vehicle Charging Stations Network in Cambodia					
Strategic Outcomes	**Targets**	**Impact on vulnerable groups and GEDSI**	**Budget Estimate**	**Activities**	**Key Delivery Entities**
1.4 Strengthen sustainable and resilient water resources and supply management, solid waste and wastewater management system and infrastructure (targeting zero waste, phasing out single use plastics (SUP), increase SUP alternatives, waste to energy (WTE), garment sector waste, groundwater and surface water resources, etc)	• Wider implementation of waste segregation and separation at source • Wider recycling programmes and implementation of sub-decrees on waste and recycling. • Wider compliance with wastewater treatment requirements and regulations • Zero waste programmes established • SUP phased out • Increase SUP alternatives	• GEDSI and informal sector consideration in sustainable waste management activities including education and implementation • GEDSI consideration and mainstreaming in the research and development (R&D) and implementation of waste and wastewater management and treatment • Increase enrolment of women in wastewater/ waste management and engineering and technology studies	Implementation of National 3R strategy. Cost of recycling plastic USD 4000/tonne (i, ii) New sanitary landfills USD 788mill and RDF USD 16.9mill (iv) Wastewater treatment – USD3-5mill (*with co-financing and implementation of mandatory treatment standards*)[12] (v and vi)	i. Promote the campaigns “Today, I don’t use plastic bags” and “Clean Cambodia! Khmer Can Do!” ii. Implement waste separation at source iii. Develop and implement national solid waste strategy/masterplan (including recycling facilities – plastics, aluminium, glass, paper etc and formalizing informal waste sector players) iv. Strengthen holistic sustainable textile waste management applying circular economy principles v. Construction of sanitary landfill and RDF/WTE facilities vi. Wider implementation of wastewater standards for key economic sectors (garment and footwear, food processing, agriculture-livestock etc) vii. Implement mandatory wastewater treatment standards for garment sector, waste (and wastewater) treatment facilities, including for decentralised waste-water treatment facility for small cities **Technological and Human Capacity Needs** • WTE/RDF technology and training • Sustainable business model for waste management system • Wastewater treatment engineering and technology • Capacity development programme on the design and implementation of social behaviour change communication (SBCC) to raise awareness and promote sustainable waste management behaviour. • Water pollution monitoring, control, surveillance and enforcement	• MoE • MoH • MAFF • MLMUPC • MRD • MISTI • MoWRAM • MoWA • MPWT • MLVT • MoINFO

[12] Note: Management of industrial wastewater in the interest of social and environmental well-being entails compliance with treatment and discharge standard.

Strategic Objective 1 – Promoting GHG Mitigation: Emission reduction measures implemented in key economic sectors guided by LTS4CN in FOLU, Transportation, Waste, Industrial Activity and Energy, SCP Roadmap, NDCs, National EE Policy, Circular Strategy on Environment, National Energy Efficiency Policy, Roadmap for Development of an Electric Vehicle Charging Stations Network in Cambodia					
Strategic Outcomes	**Targets**	**Impact on vulnerable groups and GEDSI**	**Budget Estimate**	**Activities**	**Key Delivery Entities**
1.5 Increase urban green space, built environment and urban greening programme utilising nature-based solutions	• Integrated nature-based solutions in Green City Strategic Planning Methodology and Sustainable City Strategic Plan for Secondary Cities for urban planning and development • Increased green space per capita • Increased utilisation of passive design in building and construction	• Consider impact of heat stress on low-income and outdoor employment; integrate urban green space in inner/outer districts and to low-income/ affordable housing schemes	USD 500mill (for Phnom Penh alone for 10 years)[13] including tree planting increasing greenspace, implementing NBS-green infrastructure. (i-ii) Expand one tourist, one tree (USD 2mill) and seedling distribution (USD 1/seedling) (iv) Enforcement of building codes (v) (*see budget green building codes 1.1 above*)	i. Implement targets for urban green space per-capita ii. Mainstream and integrate nature-based solutions in urban planning, regulations and building codes including at sub-national level. iii. Roll-out climate financing model for Public-Private-Partnerships in green / sustainable and resilient building design, construction and real estate including affordable and resilient homes iv. Accelerating and expanding tree planting campaigns v. Full enforcement of building codes, passive cooling design, construction permits, urban planning regulations and green space requirements vi. Develop and implement urban greening guidance in urban development master plans incorporating nature-based solutions vii. Promote and implement better building design, thermal comfort, scaling up passive cooling strategies in new construction and retrofitting solutions in older buildings. **Technological and Human Capacity Needs** ● Curriculum and continuous professional development programmes on nature-based solutions, engineering and design; urban design, green and gray infrastructure ● Continuous learning and certificate programmes/ schemes for green building certification and audit ● Establish platform for community of practice on urban design and nature-based solutions	● MoE ● MoH ● MAFF ● MLMUPC ● MRD ● MISTI ● MoWRAM ● MoWA ● MPWT ● MLVT ● MoINFO

[13] Cambodia Resilient Urban Green Infrastructure Economic and Policy Analysis Study https://ncsd.moe.gov.kh/sites/default/files/2022-09/SV_Cambodia%20GI%20Report%20Final.pdf

Strategic Objective 1 – Promoting GHG Mitigation: Emission reduction measures implemented in key economic sectors guided by LTS4CN in FOLU, Transportation, Waste, Industrial Activity and Energy, SCP Roadmap, NDCs, National EE Policy, Circular Strategy on Environment, National Energy Efficiency Policy, Roadmap for Development of an Electric Vehicle Charging Stations Network in Cambodia					
Strategic Outcomes	**Targets**	**Impact on vulnerable groups and GEDSI**	**Budget Estimate**	**Activities**	**Key Delivery Entities**
1.6 Increase forest cover and halt deforestation (including increase in private sector investment and involvement in FOLU, development of relevant standards and guidance, etc.)	• Implement and monitor all measures to reduce deforestation rate, stop deforestation (by 2045), afforestation, agroforestry and implementation of REDD+ investment plan • increased private sector investment and involvement in reforestation and halting deforestation • achieve relevant LTS4CN targets • Increase adoption of climate smart and regenerative agriculture for emission reduction	• Assess and mitigate impact on groups (local communities for eg) and women dependent on forest for livelihood (non-timber forest products – NTFP)	USD 200mill (*LTS4CN*) (i-v) USD 20mill (vi) Seedling distribution to communities (100mill seedling at USD1/ seedling) approximately USD 100mill (vii) and Tree planting campaign USD 2mill (vii)	i. Develop and implement participatory Natural Resources Management Plan ii. Engagement strategy to increase private sector and community participation and involvement in natural resources management and increasing forest cover (e.g. through REDD+) iii. Scale up local communities' contribution to mitigation efforts (example by generating income from carbon credits) iv. Implement sustainable agriculture practices among local communities such as refrain from slash-and-burn practices, through scaling up of agroforestry practices to improve livelihoods and food security. v. Full enforcement of laws and regulations to halt deforestation vi. Review and realign policies to stop deforestation; disincentivize logging vii. Increase participation of relevant stakeholders, civil society organisations (CSOs), communities and private sector in tree (al least 1 million tree per year) planting campaign **Technological and Human Capacity Needs** • Continuous learning and training in REDD+, carbon credits, carbon financing, SMART patrolling, GIS and remote sensing • Research and development into scaling up alternative and non-forest product livelihoods • Research and development and scaling up no-/low tillage agriculture. • Technology, tools and training for intelligence gathering, surveillance and enforcement of laws against deforestation • National database and community of practice on technology, tool, training on participatory natural resource management.	• MoT • MAFF • MoE • MOP • MLVT • MAFF

Table 2: Strategic Objective 2: Targets, key activities and resources for Strengthening Adaptation Capacity

Strategic Objective 2 – Strenthening Adaptation Capacity to Climate Change: Strengthen adaptation and resilience to impact of climate change by mainstreaming GEDSI in related policies and strategies such NDCs, NAP process and communication and financing, Strategic National Action Plan for Disaster Risk Reduction					
Strategic Outcome	**Targets**	**Impact on vulnerable groups and GEDSI**	**Estimated Budget**	**Activities**	**Key Delivery Entities**
2.1 Strengthen resilience measures across all economic sectors and essential social services (utility, sanitation, healthcare, nutrition, education, **social and child protection**, tourism, sustainable food system and critical infrastructure such as WASH, energy, roads, etc), with particular focus on the needs of children and most vulnerable communities.	• Increased number of resilient public facilities (eq. hospitals, community centres and schools) • Strengthened labour protection and minimize loss of productivity from heat stress • Broaden public access to health data • Increase resilience capacity of basic social sectors to improve functionality and services during extreme weather events. • Expand the number of kilometres of road repaired integrated with climate resilience features • Expand access to low-cost housing for low-income households, and create climate-proof low-cost shelter for land recipients. • Increased capacity to respond to food insecurity, reduce risks	• Integration of GEDSI in resilience building for economic sectors (including youth employment, children, education)	Capacity for vulnerability assessment USD 3.9mill; Conduct climate risk analysis for the existing electricity infrastructures and provide recommendations (USD325, 000); Strengthen institutional capacities (USD108,000); and Vulnerability Assessment towards the development of climate change strategic plans (USD 2.6mill) (i) USD 3.7bill – for raising the resilience standards of new transport infrastructure and building resilient transport network (ii) USD 94mill – urban resilience (iii) Low-cost/ affordable housing USD 33mil (iv) USD 370mill for *resilient water sector - rehabilitation, repurposing, and retrofitting of existing reservoirs and dams and adding additional functions, such as flood control and additional storage. (v-viii)* USD 80mill for WASH resilience. USD 62mill – healthcare facilities building climate resilience (ix-xi)	i. Full GEDSI responsive vulnerability assessment of critical infrastructure and services, urban, coastal and riparian, water and energy security and implement resilience measures (such as sea wall completion, coastal erosion prevention, urban flood control/prevention, improvement in human, animal and plant health data, social protection delivery capacity and monitoring gaps) ii. Develop and implement standards/ requirements for climate resilient design and material for new road constructions and maintenance of existing ones responding to climate risks and vulnerability iii. Develop and implement urban greening and resilience guidance in urban development master plans integrating GEDSI and nature-based solutions (NbS). iv. Develop and implement GEDSI responsive affordable, low cost and resilient housing requirements in city / urban masterplan and development v. Review and repurpose water storage facilities for climate resilience, water resources security and quality vi. Advance integrated water resources management (IWRM)[14] vii. Review and prioritise regional technical cooperation and assistance in transboundary water resources management based on GEDSI and leaving no one behind (LNOB) principles viii. Implement groundwater mapping, monitoring and management strategies for water security and climate resilience ix. Insurance and healthcare plan Work-Rest-Schedule-WRS corresponding to GEDSI requirements and health impact from climate change such as heat-stress for outdoor workers / employment	• MME • MAFF • MEF • MoE • MoH • MLMUPC • MRD • MoWA • MPWT • NCDM • MISTI • MoH • MoEYS • MOSVY • NSPC

[14] Integrated Water Resources Management (IWRM) is defined by the Global Water Partnership (GWP) as "a **process** which promotes the **coordinated development and management of water, land and related resources**, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems". IWRM concept has been integrated into most Mekong River Commission (MRC) programs. Cambodia is a member of the MRC and could have access to technical knowledge and capacity building in this area to strengthen climate resilience in water resources management and security.

Strategic Objective 2 – Strenthening Adaptation Capacity to Climate Change: Strengthen adaptation and resilience to impact of climate change by mainstreaming GEDSI in related policies and strategies such NDCs, NAP process and communication and financing, Strategic National Action Plan for Disaster Risk Reduction					
Strategic Outcome	**Targets**	**Impact on vulnerable groups and GEDSI**	**Estimated Budget**	**Activities**	**Key Delivery Entities**
2.2 Strengthen disaster risk reduction, preparedness and recovery across communities (coastal communities, Tonle Sap and Mekong River riparian communities)	• Reduce waste and plastic pollution in Tonle Sap Lake and coastal areas, upstream feeder streams, wetlands and other eco-sensitive zones, substantially • Increased percentage of flooded forest and mangrove restoration and protection, vitalising lake and coastal ecology • Reduce invasive species in wetlands, water bodies and coastal areas • Increase the number of community vulnerability reduction assessments • Expand measures to strengthen community adaptive capacity to climate change • Strengthen and diversification of local livelihoods, improving decent work (including green jobs and eco-tourism jobs in addition to fishing) • Strengthened and expanded early warning system and disaster preparedness and response (including community level data on animal and plant disease, human health) • Restoration and regeneration of degrade ecosystems and to protect woodlands , floodplains. and coastal zones	See above	Early warning and disaster risk management – USD 30mill[15]	x. Pilot and scale up GEDSI responsive climate-smart social services initiatives (education, health, child protection)16 xi. Expand compliance with WHO Guidance for Climate-resilient and Environmentally Sustainable Health Care Facilities and align health EWS technologies 17and database xii. Review and implement improvements in National Committee for Disaster Management18 advancing implementation plan for the Disaster Risk Financing Strategy (2023-2028) xiii. Review emergency food storage capacity including cold storage xiv. Integrate in disaster risk resilience and reduction measures, standard for protection of diets and prevent acute malnutrition in the case of flood and droughts. (in the form of anticipatory cash and SBC xv. Advance understanding and implementation of blue carbon development[19] xvi. Geospatial analysis tools for continuous weather and vulnerability assessment across the sensible regions in the country **Technological and Human Capacity Needs** • Technical capacity on GEDSI and LNOB integration, assessment and implementation of interventions for resilience building and risk reduction. • GEDSI/ inclusive early warning system, technology and tools; • Real time weather, hydrometeorological data and sharing platform/ system • Agro-climatic Monitoring and Information Systems (AMIS) • Capacity at national and subnational levels to conduct climate-proof assessment and design • Curriculum, continuous learning and professional development programmes for climate science, meteorology and disaster resilience, management, recovery and prevention etc. • Digital tools to facilitate efficient aid distribution and emergency cash transfers	See above

[15] input from World Food Program (WFP) - Current major confirmed pipeline projects focused on EWS have a cumulative budget of $30m+ (CREWS, GCF-UNDP, SOFF). The Early Warning for All Implementation Roadmap (soon to be finalized) will provide a more detailed cost estimate specifically related to EWS.
[16] Climate smart social protection addresses climate, economic, environmental and social vulnerabilities to food insecurity and poverty by protecting and promoting livelihoods (FAO, 2017) – cash payout schemes, health coverage during disaster etc.
[17] Improve compatibility across different designs and systems
[18] Focusing on national emergency services deployment; strengthening early warning system EWS1294 coverage to **last-mile communication (**access and timeliness) serving climate vulnerable sectors such as agriculture, energy, water resources and supply, health; align current EWS technologies and databases etc; Develop and implement **"Anticipatory Action Plan and Early Warning" strengthening disaster risk resilience and response**
[19] "Blue carbon" is the carbon stored in coastal and marine ecosystems. These ecosystems include everything from mangroves to seagrass beds and salt marshes. The World Bank's first-of-its-kind blue carbon readiness framework empowers governments to tap into their full blue carbon potential to benefit people and the planet. (WB 2023 - Unlocking Blue Carbon Development)

Strategic Objective 2 – Strenthening Adaptation Capacity to Climate Change: Strengthen adaptation and resilience to impact of climate change by mainstreaming GEDSI in related policies and strategies such NDCs, NAP process and communication and financing, Strategic National Action Plan for Disaster Risk Reduction					
Strategic Outcome	**Targets**	**Impact on vulnerable groups and GEDSI**	**Estimated Budget**	**Activities**	**Key Delivery Entities**
2.3 Strengthen ecosystem conservation and sustainable natural resources management (including Mekong River, Tonle Sap Lake, forest, biodiversity, urban ecosystem and mainstreaming nature-based solutions and adaptation)	• Ecosystem conservation promoted • Expand sustainable and resilient measures for natural resources management (for example integrating ecosystem-based adaptation measures, regeneration of ecosystems/habitat)	• Integrate GEDSI and promote local communities' involvement in ecosystem, biodiversity conservation and resilience	Integrated Natural Resource Management (INRM)[20] in the Productive, Natural and Forested Landscape of Northern Region of Cambodia and Preylang conservation Project approximately USD 6mill (i) Reducing vulnerability of local communities though sub-national climate governance reform (focusing on policy) USD 10mill and building adaptive and resilient capacity for MRD officers at national and sub-national level – USD 10mill (ii)	i. Increase community's capacity in community based natural resources management (CBNRM) among coastal communities, Tonle Sap and Mekong River riparian communities, coastal, highlands and urban communities ii. Capacity at national and sub-national level to empower local communities to develop/upgrade community-based ecotourism iii. Expand conservation and construction of watersheds and water storage facilities and expand NbS for water resources conservation and management **Technological and Human Capacity Needs** ● Strengthen the capacity and leadership of women to protect and conserve natural resources including forest, fisheries and water resources. ● Establish community of practice for ecosystem and community-based adaptation.	● MME ● MAFF ● MEF ● MoE ● MoH ● MLMUPC ● MRD ● MoWA ● MPWT ● NCDM ● MISTI ● MoEYS ● MOSVY ● NCDM ● MOP ● NSAF ● NCDDS

[20] INRM supports and promotes integrated programming across sectors traditionally classified as "environmental," such as land use, forestry and biodiversity conservation and climate change, as well as many sectors that traditionally have not been linked to environment programming but are in fact strongly connected (e.g., food security, health, and governance).(USAID, 2021 – Integrated Natural Resource Management, https://pdf.usaid.gov/pdf_docs/PA00XX15.pdf

Strategic Objective 2 – Strenthening Adaptation Capacity to Climate Change: Strengthen adaptation and resilience to impact of climate change by mainstreaming GEDSI in related policies and strategies such NDCs, NAP process and communication and financing, Strategic National Action Plan for Disaster Risk Reduction					
Strategic Outcome	**Targets**	**Impact on vulnerable groups and GEDSI**	**Estimated Budget**	**Activities**	**Key Delivery Entities**
2.4 Strengthen resilience of vulnerable groups and mainstream GEDSI in climate actions and resilience	• Strengthened institutional capacities at national and sub-national levels to integrate gender responsiveness in climate change adaptation policies, plans, programming, including gender sensitive budgeting • Enhanced monitoring and evaluation systems of sectoral ministries to track gender outcomes in climate change initiatives with a particular focusing among other on collecting and managing sex-disaggregated data, gender indicators and budgeting and outcome-based reporting • Enhanced the participation of people identified as vulnerable in policy processes	• Capacity needs assessment of vulnerable groups • Registry of vulnerable households, marginalized and those with disabilities, conduct risk mapping	Market supply chain of rural women entrepreneurs resilient to climate change – USD 8mill (ii) Strengthen institutional capacities at national and sub-national levels to integrate gender responsiveness – USD 0.5mill (iii) Enhance coordination and implementing accountability mechanisms to reduce climate change vulnerabilities of disadvantaged women and other marginalized groups – USD 50,000 (iii) Technical guidelines for gender mainstreaming in NDC process - USD 0.12mill (iv) Enhance monitoring and evaluation systems of sectoral ministries to track gender outcomes in climate change initiatives with particular focus on collecting and managing sex disaggregated data, gender indicators and budgeting – USD 0.2mill (v) Capacity development for climate change committee members and sectoral ministries on gender analysis, gender responsive and NDC – USD 0.4mill (v) USD 0.5bill[21] (i-v)	i. Implement broad-based adaptive social protection systems (for eg. Expand social assistance cash transfer program that covers vulnerable households (and groups such as children, people with disabilities and local communities)) ii. Diversify livelihood opportunities for slow-onset impact of climate change among vulnerable groups iii. Strengthening resilience capacity of vulnerable communities and community based organizations through investment in nature-based adaptation projects, enhanced access to earlier warning system and disaster preparedness, and climate resilient livelihoods. iv. Develop and implement capacity development plan for national line ministries and sub-national administrations to integrate GEDSI into climate change adaptation policies, plans, programming. v. Scale up technical and financial support to sub-national administrations to implement gender responsive (including addressing Gender-based Violence GBV) climate change adaptation plans vi. Integrate result-based implementation of gender responsive into CCCSP 2024-2033 M&E and reporting systems vii. Develop criteria to inform better access to service such as social protection, education health and livelihood support system **Technological and Human Capacity Needs** • GEDSI framework and national and sub-national capacity for strengthening resilience of vulnerable groups and mainstream GEDSI in climate actions and resilience	

[21] 20201231_NDC_Update_Cambodia.pdf (unfccc.int) adaptation budget measures 26-30, relatively little data is available on climate change finance and gender linkages (CPER 2022). USD 500mill estimate (UNICEF)

Strategic Objective 2 – Strenthening Adaptation Capacity to Climate Change: Strengthen adaptation and resilience to impact of climate change by mainstreaming GEDSI in related policies and strategies such NDCs, NAP process and communication and financing, Strategic National Action Plan for Disaster Risk Reduction					
Strategic Outcome	**Targets**	**Impact on vulnerable groups and GEDSI**	**Estimated Budget**	**Activities**	**Key Delivery Entities**
2.5 Strengthen sustainability and resilience measures (including climate smart technologies, regenerative agriculture, etc) in the agriculture and food value chain for a sustainable food system	• Scaled-up Climate-Resilient Agricultural, resistant crops, seed bank, Production/ minimize harvest, crop and production loss • Training Manual developed on climate-smart and sustainable livelihood for agriculture value chain stakeholders • Scaled-up climate-resilient agricultural production, processing, distribution and consumption integrated across all vulnerable regions (such as the northern Tonle Sap region) • Enhanced diversification of production systems, post-harvest handling and storage, strengthening food value chain and fortified reserves.	• Access to capacity building and training for women and youth participation and empowerment • Gender responsive climate smart technologies design and implementation	Activity i: • Improvement of support services and capacity building to crop production resilient to climate change- USD 69mill; • Research for the development and enhancement of agricultural productivity, quality, and transfer USD 2mill; and • Development of new technologies and increased yields by using new crop varieties which adapt to climate change USD 1.5mill Developing a training manual and providing training on approaches for development of climate-smart and sustainable livelihood to rural poor people- USD 10mill (Note DRR insurance scheme USD 0.25mill) (ii) Agroecological transition in the uplands of Battambang– USD 10mil (iii) Effective management and protection of ecological systems of marine and costal zones – USD 70mill (iv) Training manual and providing training on climate smart agriculture – USD 10mill and climate resilient fishery USD 33.5mill (v) Scaled up climate- resilient agricultural production through increased access to solar irrigation– USD 10mill (vi) See also 3.2 (vii) Development of horticulture and other food crops – USD 15.3mill) and Development of Industry crops – USD 12.5mill (viii)	i. Research and development and expansion of extension services to farmers promoting climate-resilient, high-value crops, value addition and market access ii. Expand climate-smart agricultural practices, financial instruments (including crop insurance, disaster protection/recovery); and monitor adoption of technologies/ practices and their effectiveness iii. Mainstream and incentivise agroecology, nature-based solutions and regenerative agriculture practices iv. Expand protection (including enforcement) of critical habitat for fisheries (mangrove, seagrass etc) v. Incentivise community level (sub-national level) climate resilient investment for smallholder farmers (storage, value-addition, market access, solar installations, rainwater harvesting, water security, WASH etc); vi. Review and scale up irrigation rehabilitation and expansion (focusing on climate resilience and effectiveness) also taking into account Water-Food-Energy nexus (WFE)[22] vii. Conduct capacity needs assessment and develop and implement programmes on Climate-Smart and Sustainable Livelihood viii. Scale up support for vulnerable communities to implement Climate-Smart agriculture, post-harvest technology and sustainable livelihood **Technological and Human Capacity Needs** • Capacity building programmes for new Commune Agriculture Technical Officers and sub-national administration officials on climate smart technologies, regenerative agriculture, vulnerability reduction assessment tool etc) in the agriculture and food value chain and provide extension to vulnerable communities • Post-harvest loss and food waste reduction technologies • Community of practices (among IHL, CSOs, line agencies and private sector) on regenerative and climate smart agriculture	• MEF • MAFF • MoE • MoH • MLMUPC • MRD • MoWA • MPWT • NCDM • MISTI

[22] WFE is about understanding and managing often-competing interests of water, food and energy security while ensuring the integrity of ecosystems (FAO). https://www.fao.org/land-water/water/watergovernance/waterfoodenergynexus/en/

Strategic Objective 2 – Strenthening Adaptation Capacity to Climate Change: Strengthen adaptation and resilience to impact of climate change by mainstreaming GEDSI in related policies and strategies such NDCs, NAP process and communication and financing, Strategic National Action Plan for Disaster Risk Reduction					
Strategic Outcome	**Targets**	**Impact on vulnerable groups and GEDSI**	**Estimated Budget**	**Activities**	**Key Delivery Entities**
2.6 Strengthen infrastructure and building resilience and environmental sustainability (including expanding application of green building standards, passive cooling design, building codes, green and gray infrastructure, etc)	• Green building guideline, building codes integrated with resilience criteria • Expanded enforcement of green building and related regulations • Increased number of building with passive design and compliance with green building	• studies on the impact of climate change on women in poor housing are conducted • integrated findings of studies into relevant green building codes.	Building codes and enforcement USD 25mill enforcement of regulations and air quality at construction sites USD 0.5mill (i) Align road design standards with climate risk levels of specific locations, increase the resilience standards for new transport infrastructure, and increase allocation for road maintenance USD 0.94 bill[23] (ii) Including Green Building Development USD 7.9mill (iii)	i. Strengthen enforcement of regulations on green building standards resilient and urban development (national green building guideline, and building code, national cooling action plan etc. considering mixed-use land approached with green and blue spaces) ii. Mainstream climate resilience requirements for all new road construction and maintenance and upgrading of existing roads iii. Mainstream implementation of and compliance with green building iv. in cities considering mixed-use land approached with green and blue spaces. **Technological and Human Capacity Needs** • Capacity building programmes at national and sub-national administrative levels on green building codes enforcement. • Continuous professional development programmes for green and gray infrastructure (at IHL) • Research and development into resource efficient building materials,	• MoE • MoH • MLMUPC • MoWA • MPWT • NCDM • MISTI

[23] https://documents1.worldbank.org/curated/en/099092823045528995/pdf/P178871154c24a0917720149301a3431d83a4f0ced08.pdf page 12 Align road design standards with climate risk levels of specific locations, increase the resilience standards for new transport infrastructure, and increase allocation for road maintenance by around US$94 million per year, prioritizing investments for critical rural roads, particularly in Battambang, Prey Veng, and Kampong Cham.

Table 3: Strategic Objective 3 - Targets, key activities and resources for good governance

Strategic Objective 3 – Enhancing Good Governance and Digital Transformation: Strengthening institutional and human resources capacity, inclusive and evidence-based policy development and implementation and financing mechanisms, and mainstreaming digital transformation					
Strategic Outcome	**Targets**	**Impact on vulnerable groups and GEDSI**	**Estimated Budget**	**Activities**	**Key Delivery Entities**
3.1 Enhance climate finance mechanisms	• Operationalised Cambodia Climate Finance Facility (CCFF)'s application for funding • Integrated climate strategies, plans, and policies in fiscal and PFM practices • Strengthen the carbon market opportunities to generate substantial private investments for climate action • Strengthen public-private-partnerships in climate mitigation and adaptation investments • Developed disaster risk financing plan (under the Disaster Risk Financing strategy) • Deployed incentives for EE and RE investment and installations • Implemented incentives for climate smart technologies • Integrated gender responsive criteria in climate financing • Expanded green financial products (green bonds, blended financing • Established GPP standards and standard operating procedures	• Integrate GEDSI and vulnerable groups need for climate financing (assessment, design, implementation and M&E)	Current budget earmarked for the Cambodia Climate Finance Facility is USD 100mil[24] (to USD 150mill). Activities (i-xiii) to mobilise climate financing. Based on Climate Public Expenditure Review 2022 NDC funding is USD 483.7mill annually	i. Establish green finance taxonomy to create a common and gender responsive green investment language essential for green financial ecosystem ii. National committee/ working group on gender and climate responsive green finance mechanisms, green public procurement, regulatory control and standards iii. Mobilise financing for example through CCFF with innovative funding sources and approaches such as green bonds, blended financing[25] iv. Policies to facilitate access to credit insurance for disaster recovery and resilience respectively which is responsive to gender and vulnerable groups v. Integrate climate financing in public budget and expenditure, and monitoring and evaluation vi. Keep track of the national climate expenditure, both public and private vii. Develop a comprehensive national climate financing strategy viii. Conduct feasibility study on carbon market opportunities implementing measures to expand market system for emission reduction, including legal and institutional framework, according to the Paris Agreement requirements Article 6 (on carbon markets). ix. Explore the mobilization of climate finance through carbon trading x. Implement ETF for climate reporting (aligned with Paris Agreement) xi. Operationalize climate finance, funding and grants information database (in NDC tracker for example) xii. Align current policies, strategies and regulations to achieve national mitigation and adaptation goals xiii. Build instirutional capacity to be Acredited Entiry for Green Climate Fund **Technological and Human Capacity Needs** • Capacity-building program on green finance for stakeholders including financial institutions and regulators (disaster recovery, management and resilience) • Empowered national and sub-national line agencies to develop and implement gender responsive green financing data collection and subsequent actions • strengthen the capacities of technical and senior national and sub-national officials and private sector on GPP carbon markets, green bonds and other innovative products	• MEF • MoE • Government banks • MAFF • MPWT • MME • NSPC

[24] The Cambodian Climate Financing Facility's (CCFF) cross-cutting goals include accelerating implementation of the country's Nationally Determined Commitment (NDC), scaling up climate finance, and lowering greenhouse gas emissions while boosting climate resilience. CCFF will finance high-impact climate projects, focused on resource-constrained NDC priority sectors, through long-term concessional lending and crowding in private sector participation. https://www.greenclimate.fund/project/fp228

[25] CCFF should go beyond GCF financing with other funding modalities such as blended financing from public or philanthropic sources to increase private sector investment in sustainable development. (https://www.convergence.finance/blended-finance)

Strategic Objective 3 – Enhancing Good Governance and Digital Transformation: Strengthening institutional and human resources capacity, inclusive and evidence-based policy development and implementation and financing mechanisms, and mainstreaming digital transformation					
Strategic Outcome	**Targets**	**Impact on vulnerable groups and GEDSI**	**Estimated Budget**	**Activities**	**Key Delivery Entities**
3.2 Increase accessibility and targeted information education, communication and training on climate change	• Upgraded curriculum and training methodologies, including libraries, to include climate change subjects in primary schools, non-formal education, life-long education • Training programme developed and enhancing public sector human capacity on climate change, climate action, interventions, adaptation and financing measures • Enhanced and increased quality of broadcasting means and expand the capacity of coverage for raising awareness on climate change nationwide	• Integrate GEDSI and vulnerable groups need for targeted information education, communication and training on climate change and SBCC programmes	Update curriculum and training for education officials on climate change (USD 2mill) (i) Building adaptive and resilient capacity for MRD officers and village leaders – USD 20mill (ii) Training and enhancing human capacity on climate change in information sector – USD 0.75mill (ii) Enhance the quality of broadcasting means and expand the capacity of coverages – USD 5mill (iii, iv) Public awareness campaigns USD20mill (iii, iv) Strengthen the cooperation with local and international development agencies, NGOs – USD 1mill (v)	i. Update curriculum on climate change subjects in primary and secondary schools, IHL and non-formal education, life-long education ii. Expand training to relevant ministries and sub-national administration, CSOs, media professionals and communities on relevant policies related to climate action such as LTS4CN, Circular Strategy on Environment, NDC, RE, EE etc. iii. Organizing awareness campaign and demonstration of cost-effective low carbon technologies relating energy, agriculture and transportation among private sector and SME. iv. Design and implement nationwide educational campaigns on environmental and climate actions v. Capacity development programme on the design and implementation of stakeholder specific social behaviour change communication (SBCC) on climate action vi. Expand multi-stakeholder involvement in the design and implementation of SBCC programmes	• MoEYS • MAFF • MoINFO (government and private sector media) • MoE
3.3 Strengthen current and future workforce towards low-carbon and resilient transition	• Expanded research and development capacity of institutes of higher learning (IHL) to support climate actions, policy development, GEDSI, evidence-based decision making • Reviewed academic programmes at IHLs and vocational institutes and implemented climate and gender responsive measures for future ready work force towards	• Integrate GEDSI and vulnerable groups need for future ready low-carbon and resilient transition	See also 3.2 (i) for life-long learning Upgrading curriculum and training methodologies USD 2mill (ii) Build centres of excellence for delivering climate change courses and research USD 3.5mill (R&D/ research centres) (ii,iii)	i. Incentivise private sector/ employer investment in upskilling workforces in green sectors – particularly promoting women upskilling ii. Review and revise formal education curriculum for green / low carbon workforce (STEM, passive cooling, clean energy, climate smart technologies) iii. Scale-up R&D efforts in green technology innovation to foster national clean technology ecosystems and accelerate the adoption of gender responsive green technologies (including cooling technologies, servicing and maintenance of green technology equipment, tools and software)	• MoEYS • MoE • MAFF • MoWA • MLVT

Strategic Objective 3 – Enhancing Good Governance and Digital Transformation: Strengthening institutional and human resources capacity, inclusive and evidence-based policy development and implementation and financing mechanisms, and mainstreaming digital transformation					
Strategic Outcome	**Targets**	Impact on vulnerable groups and GEDSI	**Estimated Budget**	**Activities**	**Key Delivery Entities**
3.4 Strengthen multi-stakeholder engagement and involvement in strategy implementation	• Expand multi-stakeholder partnerships, involvement and support in climate mitigation and adaptation measures • Enhance monitoring and evaluation systems of sectoral ministries to track gender outcomes in climate change initiatives (for example collecting and managing sex-disaggregated data, gender indicators and outcome-based reporting and the dissemination)	• Capacity building mainstreaming GEDSI in the implementation of CCCSP 2024-2033 • Gender responsive M&E design and implementation • Gender responsive data gathering	Update and implement the Cambodia Climate Change Strategic Plan (CCCSP) USD mill (1) Integrate climate change measures into national policies, strategies and sectoral strategies and plans and Enhance institutional capacity on climate change (mitigation, adaptation, policy, strategies, planning, and finance) – USD 7mill (ii, iii and iv)	i. Increase Environment and Climate Change Technical Working Group engagement with financial institutions, IHL,NSPC, research institutions, communication/media professionals, ii. Review sectoral strategies and develop and implement CCCSP 2024-2033 implementation/ action plan iii. Align line ministries M&E with CCCSP 2024-2033/ NDC/ LTS4CN MRV iv. Integrate CCCSP 2024-33 into respective ministries and institutions' strategy and action plans v. Strengthen coordination mechanisms between key agencies led by MOE (DRR and EWS agencies such as MoWRAM, NCDM, MEF and MoE) in relation to asset management of climate financing to improve the awareness of funds	• MoE • MoINFO
3.5 Strengthen access to relevant technical assistance for multistakeholder capacity building	• Strengthen institutional capacities at national and sub-national levels on GEDSI, multistakeholder engagement, climate change adaptation policies, plans, programming, and budgeting		Strengthen resilience and adaptation capacity to climate change in the most vulnerable provinces/districts/commune - USD 10mill Provide capacity building and supports for Climate Change Innovation at the provincial along Tonle Sap River – USD 2.5mil	i. Review and implement climate change mitigation and adaptation technological and capacity needs assessment and recommendations respectively	• All relevant agencies

Strategic Objective 3 – Enhancing Good Governance and Digital Transformation: Strengthening institutional and human resources capacity, inclusive and evidence-based policy development and implementation and financing mechanisms, and mainstreaming digital transformation					
Strategic Outcome	**Targets**	**Impact on vulnerable groups and GEDSI**	**Estimated Budget**	**Activities**	**Key Delivery Entities**
3.6 Address data and information gaps for effective monitoring and evaluation	Strengthen and expand vulnerability assessment, emissions data, economic sector performance, climate change related interventions data, GEDSI responsive data collection and analysis Produce evidence-based data exploring lesser-known climate change linkages (migration, health, productivity, economic losses) to support decision-making, project design, and implementation Aligned climate data and information with ETF guidance and tools		See 3.5 above (i) National end-to-end early warning Systems USD 15mill And Establish an automated nationwide hydromet monitoring network and data transmission program – USD 48mill (ii) See 3.2 (v) for iii	i. Review and upgrade National Institute of Statistics to close data gaps in climate change mitigation and adaptation ii. Explore feasibility of a central database on climate change mitigation and adaptation (building on existing ones maintained by CCCA/NCSD, World Bank etc) aligned with ETF and support compliance with Loss and Damage Funding mechanism iii. Explore collaboration with academia, research institutions and development partners to identify the lesser-known climate change linkages (migration, child risk, health, productivity, economic losses) to be supported to produce evidence-based data **Technological and Human Capacity Needs** • Technical capacity on ETF and Loss and Damage Funding mechanism across different levels of administration and line agencies • Further Aligning NDC tracker with ETF – strengthen technical review expertise and inventory reporting, assessment of financial, technology transfer and capacity building support needed and received	• MoE • MOP / NIS • Ministry of Interior (for coordination in data collection and management process) • NCDM • MOWRAM • MEF • Institutes of Higher Learning (IHL) • Research organisations
3.7 Strengthen regional and international cooperation and partnerships (including ASEAN, Mekong River Commission (MRC), Mekong Cooperation initiatives, UN agencies, climate finance facilities, development banks and development agencies)	Expand Cambodia's participation and contribution in ongoing efforts of UNFCCC and other UN agencies Expand Cambodia's active participation and contribution in regional initiatives such as ASEAN, various multilateral Mekong partnerships	Representation and integration of GEDSI and vulnerable groups interests in international and regional initiatives	See 3.2 (v) for i USD 1mill per ministry (MoH) (ii)	i. Strengthen line agencies international cooperation programmes to facilitate technological transfer and human resources capacity development ii. Strengthen line agencies participation and negotiations skills in international and regional climate forums integrating national interests and concerns iii. Implement enabling environment among sectoral national policies & sub-national institutional framework and international climate commitments including NDCs, Carbon Neutrality, Kigali Amendment, Global Cooling Pledge	All relevant line agencies and public institutes

3.8 Developing road map for digital transformation in environment and climate change work	Identification of needs and priorities for development of digital platforms, including human resources for effectiveness of implementation in the 3 strategic objectives Partnership building with government agencies, private sector, and development partners for information and data sharing for digital platform and infrastructure		a budget of US$ 200,000 for developing a road map and US$ 1.5 million for implementation during 15 years of CCCSP	i) conduct desk study and stakeholder consultation ii) Assess the technology needs and cost benefit analysis for developing digital platform in phases iii) Developing a road map and conducting financial and human resources analysis	MOE, MAFF, MOWRAM, MPWT, MPT, NCDM,

6.4.1 Phase 1 - In the immediate term (2024 – 2028)

The implementation phases of the CCCSP 2024-2033 should be aligned with the mandate of line agencies. The first phase of CCCSP 2024-2033 implementation aims to accelerate action whilst addressing data gaps and strengthening human capacity and climate-responsive public investment management and create wider awareness on the impact of climate change on the economy, human health and the environment. In order to facilitate implementation of the first phase, the RGC has set up the following broad activities according to mitigation, adaptation, governance, capacity building and financing.

Table 4: Phase 1 - Immediate Term Programmes (2024-2028)

The Immediate Term	**Phase 1 2024-2028**	
i) accelerate implementation of governance measures enabling compliance with and enforcement of relevant regulations and strategies **ii)** strengthen climate resilience in agriculture, **buildings, cities** and infrastructure and access to essential services **iii)** **strengthen management of climate responsive public investment** **iv)** **strengthen seamless inter-agency coordination** **v)** address technological and human resources needs for climate action and **GEDSI** **vi)** accelerate sustainable natural resources management **vii)** address data gaps and strengthening gender responsive monitoring and evaluation mechanisms **viii)** raise awareness across all sectors and levels of administration and society		
Programmes	1.	Mitigation: Reducing greenhouse gas emissions and promoting low-carbon development. • Accelerate implementation of strategies, policies and enforcement of regulations related to halting deforestation, promoting afforestation and expanding nature-based solutions, minimum energy performance standards (MEPS) • Implement and enforce of national building technical regulations and green building certifications for energy efficiency and passive cooling design & resource efficient materials • Implement waste separation at source and operation of sanitary / engineered landfills • Implement urban greening programmes and Nature-based Solutions programmes in cities with better urban planning and thermally comfortable built spaces • Scale up design and promote use of sustainable mass transportation services

The Immediate Term		Phase 1 2024-2028
Programmes	2.	Adaptation - Building resilience to impact of climate change. • GEDSI responsive vulnerability assessment of key economic sector and stakeholders and inclusive of workers in formal and informal sectors. • Expand early warning systems for extreme weather events – target group, timing and location specific • Adoption of climate resilience criteria for infrastructure and building • Wider adoption of gender responsive climate resilient agriculture technologies • Increase adaptive capacities of communities exposed to climate shocks by accelerating the roll out of key disaster risk reduction and early warning systems strategies, including NAP-DRR, EW4ALL implementation roadmap, the SRSP framework and the National DRF strategy
	3.	Governance: Strengthening institutional capacity, policy implementation, regulatory enforcement. • Accelerate awareness and capacity building across all levels of administration • Review of policies and regulations to strengthen alignment across relevant strategies • Expand gender responsive and inclusive multistakeholder engagement fostering greater partnerships, providing regular platform for exchange of best practices and wider awareness of government policies and regulations and making informed purchasing decisions of energy efficient appliances and green/ sustainable products • Strengthen institutional capacity for effective green public procurement • Strengthen seamless inter-agency coordination measures • Developing a road map for digital transformation

The Immediate Term		Phase 1 2024-2028
Programmes	4.	Capacity Building: Investment in human resources, technology, resilient infrastructure and public awareness. • Information, education, awareness and training for government officials, women, youths (future workforce), local communities and improving access to climate information • Review and improve curriculum and research and development at IHL to support economic sector needs for green growth and climate action. • Streamline data collection (gender responsive data collections), monitoring and evaluation mechanism across line agencies and levels of administration seeking to align with Paris Agreement Enhanced Transparency Framework (ETF)
	5.	Climate financing and investment: Mobilising financial resources for wider implementation of mitigation, adaptation and governance measures. • Measures in place for efficient, effective and timely mobilisation of multiple sources of funding • Finalise gender integrated green financing taxonomy • Develop a comprehensive national climate financing strategy, including loss and damage funding mechanism • Expand implementation of Sub-decree 41 of MEF for climate-responsive public investment management[26]

6.4.2 Phases 2 In the medium term (2029 – 2033):

The second phase of CCCSP 2024-2033 emphasizes medium term actions to tackle the effects of climate change and strengthen the nation's resilience. This phase incorporates crucial programmes aimed at advancing green growth, decoupling economic growth from natural resource deterioration, wider GEDSI, strengthening public health and climate resilient programmes across key economic sectors.

[26] Sub-decree 41 (Dec 20220 establishes standard operating procedures (SOP) for domestically funded projects and is expected to (i) establish standard criteria for project selection; (ii) allow the MEF to monitor project progress; and (iii) introduce procedures for in-year monitoring of public investment projects by line ministries.

Table 5: Phase II - Immediate Term Programmes (2029-2033)

The Medium Term	**Phase II 2029-2033**	
i) mobilisation of climate financing **ii)** decoupling economic growth from natural resource deterioration **iii)** expansion of emission reduction measures **iv)** expansion of gender responsive climate resilience measures in infrastructure, vulnerable communities **v)** expansion of sustainable waste management practices and infrastructure **vi)** implementation of ETF for NDC, M&E and reporting of related strategies which are also gender responsive **vii)** strengthening public health and climate resilient programmes across key economic sectors		
Programmes	1.	Mitigation: Reducing greenhouse gas emissions and promoting low-carbon development. • Mobilisation of investment, incentives and financing in EE and RE for building, construction and transportation • Halting deforestation and increase livelihood from REDD+ programmes or Article 6 projects • Increase income and improve livelihood and decent work for women and vulnerable communities • Expand regeneration and restoration of degraded landscape and increase production • Expanded sustainable mass transit and urban mobility • Reduced emissions and improved resilience in key economic sectors • Expansion of waste material recovery and recycling facilities and sanitary landfills paving the way for RDF/WTE facility • Increase production/ availability of SUP alternatives
	2.	Adaptation: Building resilience to impacts of climate change. • Deployment of GEDSI integrated disaster resilience and recovery financing • Effective and efficient early warning system at different level of administration • Multistakeholder partnerships in disaster resilience and recovery • Expansion of nature-based solutions and ecosystem-based adaptation of climate vulnerable ecosystems and communities (Tonle Sap, coastal communities) • Expansion of gender responsive climate adaptation and resilience measures in key economic sectors • Increase compliance with climate resilient requirements among public health facilities, schools and community centres • Expand climate resilient infrastructure and construction including consideration for heat resilience (roads, new and existing buildings and facilities)

The Medium Term	Phase II 2029-2033	
Programmes	3.	Governance: Strengthening institutional capacity, policy implementation, regulatory enforcement. • policies and strategies aligned for effective implementation off CCCSP 2024-2033 • evidence-based policy design and implementation (supported by ETF and MRV) • strengthened surveillance, monitoring and enforcement of laws for protected areas, pollution control, natural resources conservation and management • diversified sources of climate financing • multi-stakeholder GEDSI integrated involvement and participation in climate mitigation, adaptation and capacity building • maintenance and continuous improvement of climate mitigation and adaptation data and MRV
	4.	Capacity Building: Investment in human resources, technology, resilient infrastructure and public awareness. • Expand local expertise with increase green jobs opportunities • Expand climate responsive IHL curriculum and R&D • Robust stakeholder specific information, education, communication, awareness and training programmes and social behaviour change communication (SBCC) • Increase R&D and community of practices among IHL on climate mitigation and adaptation across key economic sector and stakeholder groups including women and vulnerable communities
	5.	Climate financing and investment: Mobilising financial resources for wider implementation of mitigation, adaptation and governance measures. • Diversified sources of funding including private sector investment in climate mitigation, adaptation and capacity building • Increase number of sustainability reporting among private sector

6.5 Institutional Arrangement

In 2017, the Environment and Climate Change Technical Working Group (ECCTWG) was established as a platform for technical dialogue between national institutions and a platform to engage development partners, academia, the private sector and civil society. The ECCTWG has 38 members from 19 different ministries/agencies and observers from development partners, NGOs and academia. The ECCTWG's mandate and priority program are to provide technical and advisory support to the NCSD to strengthen Cambodia's capacity to respond to climate change.

The Environment and Climate Change Technical Working Group (ECCTWG) shall act as the secretariat for coordinating the development and implementation of the CCCSP 2024-2033. The Secretariat will also be responsible for producing the CCCSP progress reports and M&E. Indicators, procedures and responsibilities for data collection will be agreed with the concerned line ministries, climate financing facilities, the National Institute of Statistics, and other parties interested in actively engaging in the process. Think tanks, research institutions and institutes of higher learning (IHL) could be engaged to provide support in advancing various activities, implementation and M&E of the CCCSP 2024-2033. Communities, including representatives of women and youth groups, workers and trade unions will be consulted as well.

To ensure effective implementation, the CCCSP establishes institutional arrangements through the Environment and Climate Change Technical Working Group. Line ministries and local authorities are responsible for integrating climate change considerations into their respective policies, programs, and projects with action plans. Increased involvement and participation of financial institutions would be actively sought to scale up and mobilise funding for mitigation, adaptation and governance.

The CCCSP 2024-2033 also emphasises effective and inclusive information dissemination, communication, awareness and training for concerned stakeholders to strengthen solidarity and actions in climate mitigation, adaptation and monitoring and evaluation.

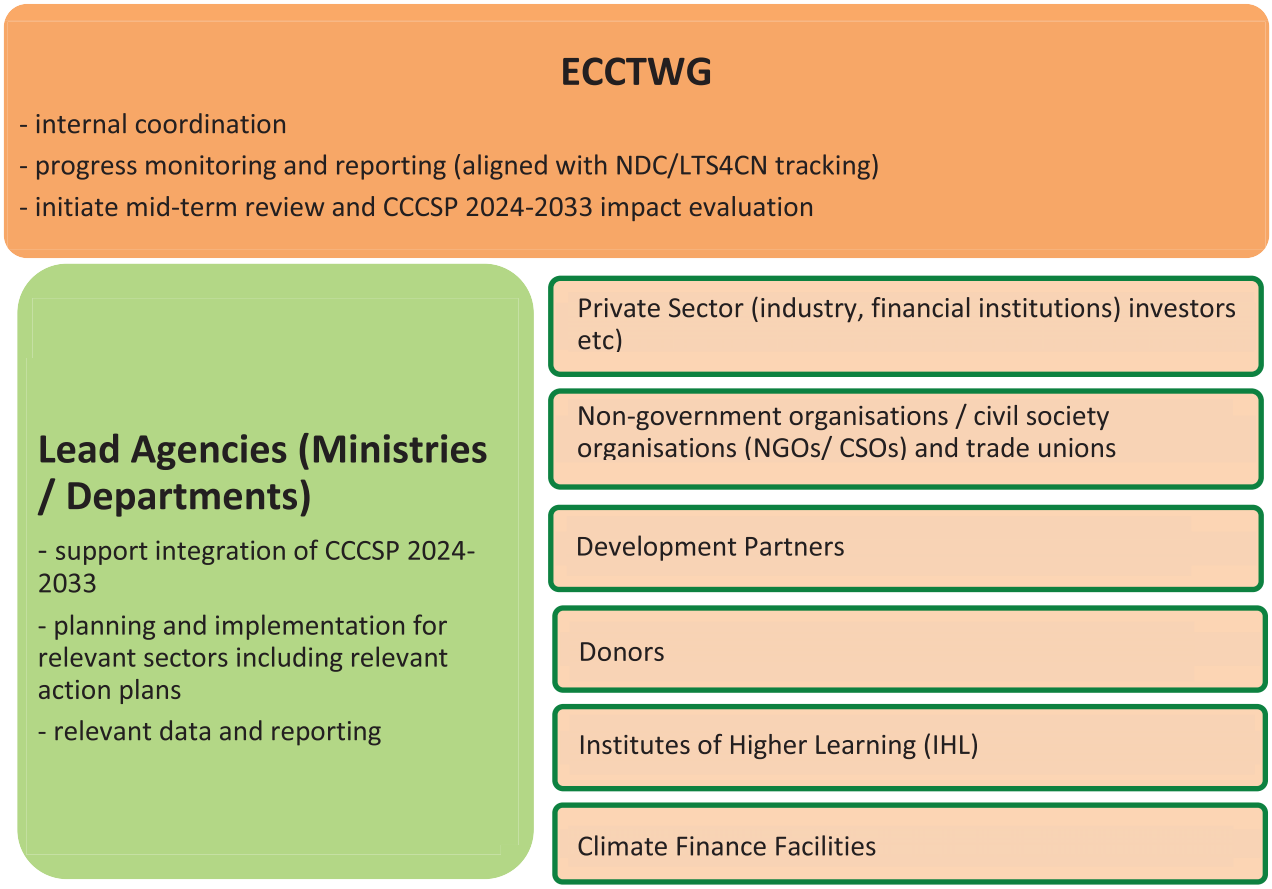

Figure 4: Institutional arrangement

internal stakeholders (government/ public sector) – supporting policies, regulations and procedures, financing strategies (public private partnerships, incentives, finance facility procedures), M&E

external stakeholders - implementation support, financing, technical assistance, implementation, capacity building, research and development, reporting, GEDSI mainstreaming, support education, training and awareness, compliance with policies and regulations

The Cambodia Climate Change Strategic Plan 2024-2033 can be effectively implemented through a combination of institutional arrangements, including:

1. strengthening mechanisms and measures to oversee and coordinate policies, programs, and projects across various ministries and sectors;
2. strengthening the capacity of existing institutions such as the Ministry of Environment, Ministry of Agriculture, Forestry, and Fisheries, and the General Department of Water Resources to integrate climate change considerations into their operations;
3. strengthen mobilisation climate financing and other resources for priority projects and initiatives;
4. enhancing partnerships with local governments, civil society, private sector, and international organizations to facilitate knowledge sharing, resource mobilization, and joint implementation of climate actions; and
5. regularly monitoring, evaluating, and reporting on the progress of the Strategic Plan to ensure accountability and adapt the approach as needed.

6.6 Financial and Technological Needs

The financial and technology needs are referenced from key government climate change related strategies, policies, development banks and UN agencies' reports namely the NDC, LTS4CN, NDC tracker, Pentagonal Strategy, Cambodia Climate Public Expenditure Review (2022) and reports of the World Bank, UNDP and FAO. These are best estimates given the existing data gaps. According to the Cambodia Climate Public Expenditure Review – CPER (2022) the mitigation and adaptation expenditure accounts for 4% and 96% respectively of the of the CPER in 2022. The World Bank report on Cambodia Climate Change Institutional Assessment emphasised among others the need to strengthen effective public finance management (PFM) for climate action, further enhance inter-agency coordination and technical capacity and to accelerate implementation of Green Public Procurement (GPP). RGC is working with its partners to explore, implement and deliver innovative financial product to the market as means of climate financing. Among those being explored is green bonds. To this end the RGC has engaged partners to strengthen capacity building of relevant stakeholders, identify appropriate projects and issuer base, develop incentives (such as tax incentive for both local investors and issuers), and technical assistance[27]. A responsive and resilient PFM systems is characterised by the RGC's capability to respond more efficiently and effectively to climate induced disasters and disruptions with increased integrity and accountability.

The NDC reports that funding requirements for mitigation actions as USD 5.8billion and adaptation a total of USD 2billion for a period of 10 years (or in total an average of USD 780million annually). As a developing country and being among the most vulnerable to impact of climate change, adaptation measures is expected to make up most of the climate financing requirements and RGC [28]national budget.

Cambodia's human resource capacity development for a low carbon future is characterised by increase focus on STEM education, increasing enrolment of women in STEM and engineering studies. There will also be increased emphasis on private sector engagement and focus on delivering skills that are in demand by industry, in order to support the RGC in achieving strategic goals to move up value chains, increase productivity and support growth towards low carbon economy.

6.6.1 Financial Resources Mobilisation

The landscape of funding for climate actions involves a variety of mechanisms which can be categorised as follows:

- International and multilateral funding mechanisms that provide grants and other forms of financing – typically the Green Climate Fund (GCF), and the Global Adaptation Fund. Another new international funding arrangement was agreed to at the COP27 in 2022 to assist countries vulnerable to adverse effects of climate change. At the COP28 meeting in 2023 the World Bank was invited to operationalize financial intermediary fund (FIF) for an interim period of four years. This funding mechanism called the Loss and Damage fund is aimed at providing additional resources including external financing to developing countries facing extreme vulnerability to climate change.
- Bilateral funding such as developed country and developing / least developing country partnerships - in the form of grants, loans; and projects under Article 6 of the Paris Agreement.

[27] Green Bond Market for Cambodia https://www.adb.org/sites/default/files/publication/827631/green-bond-market-survey-cambodia.pdf
[28] developing countries are expected to suffer more damage from climate change impacts as a percentage of their gross domestic product (GDP) in comparison to developed countries. A rough analysis by the OECD of the categories of ODA-funded activities suggested that more than 60 per cent of overall ODA could be relevant to adaptive capacity and adaptation (https://www.iisd.org/system/files/publications/financing_mitigation_new_options.pdf)

- Private sector investments – such as the GCF's Private Sector Facility (PSF) and Convergence blended financing;
- Innovative financing mechanisms such as green bonds, carbon trading, blended financing.

Table 6 : Possible sources of funding for climate action

Sources[29] (non-exhaustive)	Purpose	Target Recipient	Approach
Government budget	Support climate agenda	Public Sector	Contribution to national agenda, Green bonds
Global Environment Facility	Supports concrete climate action projects	Public sector	Country submits unsolicited proposals
Global Adaptation Fund	Supports concrete adaptation projects and programmes in developing country	Public sector through National Implementing Entities (NIEs)	
Green Climate Fund	Supports concrete climate action projects – grants, concessional loans, equity, and guarantees	Public sector through accredited entities (NIEs)	
Development banks (World Bank, Asian Development Banks, Asian Infrastructure Investment Bank etc)	finance development / infrastructure projects (integrated climate mitigation and adaptation measures) – loans and grants	Public sector	
Global Facility for Disaster Reduction and Recovery	Support low- and middle-income countries - improve understanding and reduce their vulnerability to natural hazards and climate change - grants, concessional loans, direct funding	Public sector	
International Climate Initiative (IKI)	Supports climate action, adaptation, and biodiversity conservation – concessional loans and grants	Public sector and non-state actors	Country responds to a request for proposals
Others: International NGOs (such as OXFAM and SNV), private sector, banks, agriculture development funds, bilateral and multi-lateral cooperation programmes (such as Aus4ASEANFutures, Japan-ASEAN Integration Fund- or JAIF, Mekong-Lancang Cooperation and Mekong-Korea Cooperation)	Supports often sectoral climate actions – grants	Public sector and non-state actors	Country responds to a request for proposals/ submits unsolicited proposals Carbon credits Loss and Damage Fund

[29] Mapping of available sources of finance for climate change adaptation for the least developed countries November 2023 Mapping-of-adaptation-finance.pdf (unfccc.int)

RGC would diversify financial sources for the implementation of CCCSP 2024-2033 which involves further strengthening multi-stakeholder partnerships and building capacity of public sector officials in designing and implementing large scale climate change interventions. This would entail measures to sustain outcomes and subsequent activities often requiring maintenance and updating institutional knowledge and information. Following are some key considerations for financial resource mobilisation:

1. Sources
2. Target
3. Approach

Mobilisation of funding can be sector specific, such as agriculture, tourism and infrastructure, or target group specific, for example smallholder farmers and communities in vulnerable regions. Microfinancing landscape in RGC presents opportunities to mobilise small scale and affordable climate financing for rural communities and MSMEs who are often financially constrained in mainstreaming climate actions.

7. MONITORING and EVALUATION (M&E)

7.1 Evaluation of Results of CCCSP 2014-2023

The Royal Government of Cambodia launched its Cambodia Climate Change Strategic Plan (CCCSP) 2014-2023 in October 2013 aimed at setting a vision: **Cambodia to develop a green, low-carbon, climate-resilient, equitable, sustainable, and knowledge-based society.** Over the past decade of its CCCSP implementation, Cambodia has delivered numerous achievements in its response to climate change, at the international, national, and sub-national levels, with 14 national ministries and institutions developing and implementing their respective sectoral Climate Change Action Plans (CCAPs). They also allocate budgets and collaborate with development partners (DPs), the private sector, and civil society organizations for their highly effective climate change response actions through improving governance, promoting climate change adaptation activities, and reducing greenhouse gas (GHG) emissions. Cambodia's public spending on climate change has steadily increased, from 1.2% of GDP in 2015 to 2.1% in 2023. In addition, climate change has been integrated into the country's Rectangle Strategy, now the Pentagonal Strategy-Phase 1, and the National Strategic Development Plan. Key achievements in climate responses in the CCCSP since 2014 include:

- Energy sector: Significant progress has been made in expanding access to electricity and promoting renewable energy in the national energy mix. As of 2023, 92.3% of the Cambodian population had access to electricity, compared to only 71% in 2014. The contribution of renewable energy to the national energy mix increased from 51% in 2014 to 57.25% in 2023, particularly hydropower (hydropower plants), and solar power.
- Agriculture sector: Several initiatives have been implemented to promote climate-smart agriculture, including a climate-resilient rice trading sector and other agricultural service program development. These initiatives have increased the climate resilience of the agricultural sector. Rice production increased from 9.2 million tons in 2014 to 10.5 million tons in 2019 despite the challenges posed by climate change.
- Industry: Several policies and initiatives have been implemented to promote energy efficiency and reduce GHG emissions in the industrial sector, including the National Energy Efficiency Strategy and Action Plan and the Cambodia Industrial Energy Efficiency

Projects. The contribution of renewable energy to the industrial sector increased from 1% in 2014 to 2.6% in 2019.

- Education: Several initiatives have been implemented to raise awareness and build capacity for climate change among students, teachers, and the public, through a national climate change learning strategy, and climate change education programs. Approximately 3,000 students and teachers were trained in climate change, and climate change education was integrated into the national curriculum at all levels.
- Transport sector: Several policies and initiatives have been implemented to promote sustainable transport, including the National Sustainable Transport Policy and the Clean Air Action Plan. As a result, the share of public transport in urban areas increased from 3.3% in 2014 to 10.8% in 2019.
- Waste management: Several initiatives have been implemented to promote waste management and GHG emission reduction, including the National Solid Waste Management Strategy and Action Plan and the Solid Waste Management and Climate Change Projects. As a result, the percentage of waste disposed of in landfills decreased from 87% in 2014 to 42% in 2019.
- Forestry and other land use sectors: Several initiatives have been implemented to reduce emissions from deforestation and forest degradation and to promote sustainable land use practices, including the REDD+ program (Reducing Emissions from Deforestation and Forest Degradation), and sustainable landscape and ecotourism projects. As a result, Cambodia's forest cover increased from 57.5% in 2010 to 59.6% in 2019.

Despite the many achievements made and implementation of sectoral climate response measures promoted through the implementation of the CCCSP 2014-2023 several challenges remain, including policy and institutional development, subnational participation, technology needs assessment, donor coordination, public coordination, overlaps in the mandate, limited institutional and staff capacity, and monitoring, reporting, and verification (MRV).

7.2 Monitoring and Evaluation Framework for CCCSP 2024-2033

An M&E mechanism will identify key indicators for measuring efficiency and effectiveness building on the results of CCCSP 2014-2023 as the following:

- Measure to what extent adaptation efforts have been effective in keeping development on track in a changing climate;
- Monitor climate change mitigation actions and low-carbon development policies;
- Provide evidence-based data to support the mobilisation of adequate resources for effective, inclusive and sustainable strategy implementation;
- Generate evidence and lessons as a basis for future policy development;
- Facilitate the coherent integration of M&E of climate change in national development planning and key sectors;
- Support reporting obligations towards the UNFCCC and development partners.

The principles that underpin the framework are:

- Using national systems and procedures: The framework will be integrated with the Pentagonal Strategy Phase 1/NDC/LTS4CN M& E and tracking system and develop indicators, targets, measuring, reporting and verification (MRV) mechanisms. The CCCSP 2024-2033's M&E system will be designed in coherence with the Enhanced Transparency

Framework principles under the Paris Agreement and it will contribute to provide useful data for the submission of the biennial transparency report (BTR) and other reporting commitments of the UNFCCC.

- Mainstreaming M&E of climate change into national, sectoral and sub-national development planning.
- Strengthening accountability, equity and transparency: The framework will provide a way for measuring to what extent resources have been efficiently and effectively used to achieve the targets set in policies and action plans, thus improving accountability towards the public, state institutions, civil society and international donors.
- Promoting participatory learning: The framework will hence focus on generating knowledge through participatory approaches and will support identification and sharing of lessons learned.
- Addressing gender issues: Women and disadvantaged groups are often among those more affected by climate change impacts. The framework will address gender equality, gender-sensitive performance in climate change responses and gender mainstreaming in climate change responses including development and implementation of GEDSI vulnerability assessment standards or guidelines in FOLU, energy, agriculture, tourism and construction sector.

The indicators framework will include two categories measuring institutional response for climate change management and development performance in a changing climate:

- Upstream indicators, tracking effectiveness of climate risk management: This will include indicators related to the institutional framework, mainstreaming of climate change in policies and planning processes, climate financing, capacities of institutions, equity and transparency, and engagement of stakeholders and the private sector.
- Downstream indicators, tracking changes in the development situation, emissions and climate vulnerability of communities and ecosystems: The indicators will include national development statistics, indicators aggregated from sectors and individual adaptation and mitigation projects.

7.3 M&E Implementation

A mid-term review (MTR) will be launched in 2028 to review progress and amend targets, indicators and activities as necessary. An impact assessment will be launched at the end of phase II (in 2033). These are in addition to the annual monitoring and evaluation activities proposed above. The annual M&E activities will provide crucial inputs to the MTR and impact assessment.

The objectives of the MTR and impact assessment should be to:

- Assess effectiveness of the activities in meeting the outcomes of the CCCSP 2024-2033
- Review institutional arrangement and resource needs for the CCCSP 2024-2033
- Determine strategies for phase II and beyond 2033

8. Conclusion

This document introduces and reviews the Cambodian Climate Change Response Strategic Plan proposed by the Royal Government of Cambodia. This strategic plan document outlines base on the implementation and evaluation of the Cambodia Climate Change Strategic Plan Phase I 2014-2023, which aims to build a capacity and resilient to community on the climate change. The strategy will be implemented and led by National Council for Sustainable Development and the Ministry of Environment and participated in by national and sub-national

institutional ministries in accordance with the measures prepared by the ministries-institute in this strategic plan.

Cambodia accelerated the social development widely by protecting environmental, natural management and climate resilience for communities as well. Cambodia's Climate Change Strategic Plan 2024-2033 clearly envisages the deployment of greenhouse gas reduction and climate change adaptation measures towards achieving carbon neutrality by 2050.

In summary, to achieve the goals of the Cambodia’s Climate Change Strategic Plan Cambodia 2024-2033 calls for further efforts to ensure a clear allocation of resources through defining the role of financial assessment bodies for development, as well as ensuring sustainability to the planning of public investment and investment capital programmes.

Annex

Budget estimates for strategic outcome activities.

The budget estimates were derived primarily from:

- The Updated Nationally Determined Contribution (NDC) 2020
- The World Bank – Cambodia Country Climate and Development Report (2023)
- Cambodia Climate Public Expenditure Review (2022)
- Public Investment Programme 3-Year Rolling (2022-2024)

The gross estimate for each activity is derived from the source that best represents the activity as illustrated in the following table. The CCCSP 2024-2033 activities are designed to be aligned with existing policy and strategy actions. These activities should be integrated and be made of the planned activities under the relevant strategies and policies (particularly the NDC and RGC climate expenditure and investment programmes.

For activities where the estimated budget is not available, feasibility studies or cost benefit analysis can be carried out.

It must be noted that the budget are gross and based on past estimates such as the NDCs, thus may be underestimated. Detailed project or activities plan and resources mobilization plan should be developed with the participation of concerned stakeholders to ensure that desired outcomes are achieved in a cost effective and timely manner.

Promoting GHG Mitigation

Table 7: Mitigation Activities Source of Budget Estimates

Strategic Outcome	Activities	Corresponding Activities in the Source	Source
1.1 Increase contribution of RE in national energy mix **1.2 Increase EE and RE in installations, buildings, housing and transportation (public/ mass transportation, electric vehicles)**	i. Scale up implementation of / review and improve, green building codes incorporating guidance on EE and RE installations in existing and new buildings; integrated in sustainable and affordable housing development plans, new and existing public buildings such as healthcare facilities, schools and government-owned buildings	Roadmap study on Integration of renewable energy resources (solar, wind, hydro, biomass) into energy mix	NDC Action: • Mitigation 18 • Mitigation 23
	ii. Implement and enforce regulations consistent with EE and RE policies	Building codes and enforcement/certification for new buildings and those undergoing major renovation.	NDC Action: • Mitigation 14
	iii. Develop and implement EV charging and maintenance standards and safety regulations	EV charging/ maintenance for Expressway 4	World Bank (2024); Cambodia Recommendations to the National Roadmap for Electric Mobility Transition

			https://documents1.worldbank.org/curated/en/099031924073537111/pdf/P17690614457da0e71a4501e8dcdea2d59d.pdf
	iv. Develop and implement action plan and target for suitable, practical and affordable RE installations in key economic sectors (agriculture, tourism, manufacturing, building and construction)	Roadmap study on Integration of renewable energy resources (solar, wind, hydro, biomass) into energy mix	NDC Actions: • Mitigation 18
	v. Reduce cost of acquiring, manufacturing, maintenance and servicing of energy efficient installations and equipment (eg tax incentives).	Note: *there is no budget estimate for this activity as this can be **integrated in activities iv and v** for example.*	See activities iv above
	vi. Integrate EE and RE for mass transportation requirements in the implementation of the "roadmap for the Comprehensive Master Plan on the Cambodian Transit and Logistics System 2023-33"	Develop national road construction and maintenance design standards for national and provincial roads, considering climate change impact including M&E framework develop for climate proofing and **low-carbon technology roads**	NDC Actions: • Adaptation 56 *RGC's Comprehensive Master Plan on the Cambodian Transit and Logistics System 2023-33 174 projects USD 36.7bill (includes ports, railways, roads, waterways, sea and air).*
1.3 Strengthen implementation of CE and pollution prevention in key economic sectors (tourism, agriculture, construction, manufacturing, transport, etc)	i. Develop and implement plastic reduction roadmap (or masterplan)	World Bank - Cambodia: Solid Waste and Plastic Management Improvement Project (5yr project 2024-2029; USD67mill)	https://projects.worldbank.org/en/projects-operations/project-detail/P170976
	ii. Accelerate implementation of hospitality (hotels/ accommodation) sustainability rating, eco-label certification or sustainable tourism sites	Royal Government of Cambodia labels tourism sector as "Green Gold".	NDC Action • Mitigation 78
	iii. Develop and implement postharvest loss and food waste reduction programme in the agriculture value chain	Scaled up climate-resilient agricultural production through increased access to solar irrigation systems and other climate-resilient practices.	NDC Action • Mitigation 16
	iv. Accelerate implementation of eco/sustainability labelling standards for packaging materials, building/ construction material	Development of building code with mainstreaming climate change into building designs – promote low-cost materials for building and housing	NDC Action • Mitigation 53
1.4 Strengthen sustainable and resilient water resources and supply management, solid waste and	i. Develop and implement national solid waste strategy/masterplan (including recycling facilities – plastics, aluminium, glass, paper etc and formalizing informal waste sector players)	Cost for recycling plastic (USD 4,000/ton). See also World Bank - Cambodia: Solid Waste and Plastic Management Improvement Project above.	public-investment-programme-3-year-rolling-2023-2025.pdf NDC Action • Mitigation 8

wastewater management system and infrastructure	ii. Construction of sanitary landfill and RDF/WTE facilities	New sanitary landfills with landfill gas (LFG) extraction. And LFG extraction at the Dangkor Landfill. Potential for private sector engagement in financing, constructing, and operating sanitary landfill and LFG systems. Production of Refuse-Derived Fuel (RDF) from either a) fresh MSW or b) old MSW mined from the Dangkor landfill.	NDC Action • Mitigation 5 • Mitigation 7
	iii. Implement waste separation at source	Composting of biodegradable organic fraction of MSW supplemented with separation of organic waste **(at source).** - *1. A one-time Investment cost (CAPEX): From USD 40-60 per annual tonne for windrow/static pile composting to USD 300-500 per annual tonne for in-vessel composting.* - *2. Operating costs: at least USD 32 per tonne for static pile composting* Implement national 4R strategy (see also	NDC Action • Mitigation 8 • Mitigation 10
	iv. Wider implementation of wastewater standards for key economic sectors (garment and footwear, food processing, agriculture-livestock etc) v. Implement mandatory wastewater treatment standards for garment sector, waste (and wastewater) treatment facilities	Better management of industrial wastewater in the food & beverage sector. Overall, could be aimed to set up a finance vehicle of USD 5-10mill but to support factories with cofinancing. Note: *Management of industrial wastewater in the interest of social and environmental well-being* ***entails compliance with treatment and discharge*** *standard.*	NDC Action: • Mitigation 11
1.5 Increase urban green space and urban greening programme utilising nature-based solutions	Implement targets for urban green space per-capita	Note*: Green infrastructure is a nature-based solution to improve green space, address urban heat stress and flood mitigation*. "Phnom Penh – "*The total annual costs by year 10 are about USD 50m and the increase in GI assets covers about 2400 ha, which is about 3.5% of the total administrative area. The scenario includes a mixture of high value investment in green roofs and green walls, which may be required in more central*	Cambodia Resilient Urban Green Infrastructure Economic and Policy Analysis Study (2022) https://ncsd.moe.gov.kh/sites/default/files/2022-09/SV_Cambodia%20GI%20Report%20Final.pdf

		districts, as well as trees, parks and gardens which may be appropriate across the whole city", page 56.	
	Mainstream and integrate nature-based solutions in urban planning, regulations and building codes including at sub-national level.	Urban planning tools for climate change mitigation and the urban planning solution in three sub cities. Prepare modality of standardized green spaces for urban planning or new sub-cities to address vulnerability of urbanization.	NDC Action • Mitigation 01 • Adaptation 49
	Roll-out climate financing model for Public-Private-Partnerships in green / sustainable and resilient building design, construction and real estate including affordable and resilient homes	The study includes various public-private-partnerships and financing mechanisms for green infrastructure expansion in Phnom Penh. *See also budget for strategic outcome 3.1 below*	Cambodia Resilient Urban Green Infrastructure Economic and Policy Analysis
	Accelerating and expanding tree planting campaigns	Promoting one tourist, one tree campaign (USD 1/ tree seedling).	NDC Action • Adaptation 40
	Full enforcement of building codes, construction permits, urban planning regulations and green space requirements	see 1.1 above	NDC Action: • Mitigation 18 • Mitigation 23
1. 6 Increase forest cover and halt deforestation	i. Develop and implement participatory Natural Resources Management Plan	Note: the budget for i-iv is referenced from the corresponding budget in the LTS4CN. Seedlings distribute to public and local community USD 1 /seedling. REDD+ Investment Plan, which requires $16 million per year (over 10-year period =appx USD 160mill) (i-v)	LTS4CN page 16, 2.2.2 Public financing plan NDC Action: • Mitigation 38
	ii. Engagement strategy to increase private sector and community participation and involvement in natural resources management and increasing forest cover (eg. through REDD+)		
	iii. Scale up local communities' contribution to mitigation efforts (example by generating income from carbon credits)		
	iv. Implement sustainable agriculture practices among local		

	communities such as refrain from slash-and-burn practices through scaling up of agroforestry practices to improve livelihoods and food security.		
	v. Full enforcement of laws and regulations to halt deforestation		
	vi. Review and realign policies to stop deforestation; disincentivize logging	Actions to promote sustainable sourcing of fuel wood in the garment industry	NDC Action: • Mitigation 25
	vii. Increase participation of relevant stakeholders, civil society organisations (CSOs), communities and private sector in tree (1 million tree per year) planting campaign	Seedlings distribute to public and local community Promoting one tourist, one tree campaign	NDC Action: • Mitigation 38 • Mitigation 40

Strengthening Adaptation Capacity

Table 8: Adaptation Activities Source of Budget Estimates

Strategic Outcomes	Activities	Corresponding Budget Item in Source	Sources
2.1 Strengthen resilience measures across all economic sectors and essential social services (utility, sanitation, healthcare, nutrition, education, social and child protection, tourism, sustainable food system and critical infrastructure such as WASH, energy, roads, etc), with particular focus on the needs of children and most vulnerable communities. **2.2 Strengthen disaster risk reduction, preparedness and recovery across communities (coastal communities, Tonle Sap and Mekong River riparian communities)**	i. Full vulnerability assessment of critical infrastructure and services, urban, coastal and riparian, water and energy security and implement resilience measures (such as sea wall completion, coastal erosion prevention, urban flood control/prevention, improvement in human, animal and plant health data and monitoring gaps)	Vulnerability Assessment towards the development of climate change strategic plans to respond to the impacts on land, housings, coastal management, and building due to climate change	NDC Action: • Adaptation 10 • Adaptation 24 • Adaptation 38 • Adaptation 50
	ii. Develop and implement urban greening and resilience guidance in urban development master plans integrating nature-based solutions	Integrating climate change response measures onto the construction design for buildings and for rural housing (use of modern integration of technology)	NDC Action: • Adaptation 44 • Adaptation 49 • Adaptation 47
	iii. Develop and implement standards/ requirements for climate resilient design and material for new road constructions and maintenance of existing ones responding to climate risks and vulnerability	Repair and rehabilitate existing road infrastructure and ensure effective operation and maintenance systems, considering climate change impact (road construction and maintenance)	World Food Program (WFP) • Current major confirmed pipeline projects focused on EWS have a cumulative budget of $30m+ (CREWS, GCF-UNDP, SOFF). • *The Early Warning for All Implementation Roadmap (soon to be finalized) will provide a more detailed cost estimate specifically related to EWS.*
	iv. Develop and implement affordable, low cost and resilient housing requirements in city / urban masterplan and development	Integrating climate change response measures to the policy of social land concession (SLC) and its procedures Promote proper low cost shelters for low income households resilient to climate change, practically in the area of social land concession	NDC Action: • Adaptation 48 • Adaptation 52
	v. Review and repurpose water storage facilities for climate resilience, water	Establish a centralized and standardized approach to climate resilient water management	NDC Action: • Adaptation 57 • Adaptation 82

	resources security and quality	Establish nationally standardized best practice systems for irrigation	• Adaptation 84 • Adaptation 86
	vi. Advance integrated water resources management (IWRM)	Establish a centralized and standardized approach to climate resilient water management Integrated groundwater management in Cambodia	
	vii. Review and prioritise regional technical cooperation and assistance in transboundary water resources management	National end-to-end early warning systems with focus on effective dissemination to populations at risk Transboundary flood early warning systems with Vietnam and Thailand established	
	viii. Implement groundwater mapping, monitoring and management strategies for water security and climate resilience	Establish a centralized and standardized approach to climate resilient water management Integrated groundwater management in Cambodia -	
	ix. Insurance and healthcare plan Work-Rest-Schedule-WRS corresponding to health impact from climate change such as heat-stress for outdoor workers / employment	Enhance climate resilience in health service delivery	NDC Action: • Adaptation 34 • Adaptation 35 • Adaptation 38 • Adaptation 39
	x. Pilot and scale up climate-smart social services initiatives (education, health, child protection)	News coverage and program production for awareness raising on climate change and its impacts Upgrading curriculum and training methodologies, including libraries, to include climate change subjects for primary schools Build centers of excellence for delivering climate change courses and research among Universities Conduct training for education officials on climate change e.g. as a required component of teacher training	
	xi. Expand compliance with WHO Guidance for Climate-resilient and Environmentally Sustainable Health Care Facilities and align health EWS technologies and database	Establish a national climate and flood warning system, including a service center and flood emergency response plans	
	xii. Review and implement improvements in National Committee for Disaster Management advancing implementation plan for the Disaster Risk Financing Strategy (2023-2028)	National end-to-end early warning systems with focus on effective dissemination to populations at risk Develop and annually update national and subnational multi-hazard and climate risk assessments, including identification of most vulnerable communities	NDC Action • Adaptation 60 • Adaptation 61 • Adaptation 62

		Implement community–based disaster and climate risk management programs	
2.3 Strengthen ecosystem conservation and sustainable natural resources management (including Mekong River, Tonle Sap Lake, forest, biodiversity, urban ecosystem and mainstreaming nature-based solutions and adaptation)	i. Increase community's capacity in community based natural resources management (CBNRM) among coastal communities, Tonle Sap and Mekong River riparian communities, coastal, highlands and urban communities	Integrated Natural Resource Management (INRM) in the Productive, Natural and Forested Landscape of Northern Region of Cambodia (fund committed by UNDP and GEF) Prey Lang Forest Conservation Project (fund committed by the government of Japan)	Public Investment Programme (PIP) 3-year Rolling 2023-2025) page 64
	ii. Capacity at national and sub-national level to empower local communities to develop/upgrade community-based ecotourism	.Reducing vulnerability of local communities though sub-national climate governance reform (focusing on policy). Building adaptive and resilient capacity for MRD officers at national and sub-national level for mainstreaming climate change into rural development planning processes and technical design	PIP 2023-2025 • MoE - Cambodia Sustainable Landscape and Ecotourism (CSLEP) • MRD CSLEP NDC Action • Adaptation 33 • Adaptation 72
2.4 Strengthen resilience of vulnerable groups and mainstream GEDSI in climate actions and resilience	i. Implement broad-based adaptive social protection systems (for eg. Expand social assistance cash transfer program that covers vulnerable households (and groups such as children, people with disabilities and local communities)	Gender Mainstreaming of Water Resources Enhance monitoring and evaluation systems of sectoral ministries to track gender outcomes in climate change initiatives with particular focus on collecting and managing sex disaggregated data, gender indicators and budgeting, outcome-based reporting, and dissemination and up-scaling of the gender and climate change adaptation related knowledge generated	Public Investment Programme 3 Year Rolling (2023-2025) page 121 NDC Action • Adaptation 27 • Adaptation 28
	ii. Diversify livelihood opportunities for slow-onset impact of climate change among vulnerable groups	Market supply chain of rural women entrepreneurs resilient to climate change	NDC Action • Adaptation 31
	iii. Building resilience capacity of vulnerable communities and community based organizations through investment in nature-based adaptation projects, enhanced access to earlier warning system and disaster preparedness, and climate resilient livelihoods	Increased alloacation of budget through climate financing framework and donor coordination	NDC Action
	iv. Develop and implement capacity development plan for national line ministries and sub-national administrations to integrate GEDSI into climate change	Strengthen institutional capacities at national and sub-national levels to integrate gender responsiveness in climate change adaptation's policies, plans, programming, including gender budgeting	NDC Action • Adaptation 26

	adaptation policies, plans, programming.		
	v. Scale up technical and financial support to sub-national administrations to implement gender responsive (including addressing Gender-based Violence GBV) climate change adaptation plans	Capacity development for GCCC members and sectoral ministries on gender analysis, gender responsive and NDC Develop a technical guideline for gender mainstreaming in NDC process	NDC Action • Adaptation 29 • Adaptation 30
	vi. Integrate result-based implementation of gender responsive into CCCSP 2024-2033 M&E and reporting systems	Enhance monitoring and evaluation systems of sectoral ministries to track gender outcomes in climate change initiatives with particular focus on collecting and managing sex disaggregated data, gender indicators and budgeting, outcome-based reporting, and dissemination and up-scaling of the gender and climate change adaptation related knowledge generated.	NDC Action • Adaptation 28
2.5 Strengthen sustainability and resilience measures (including climate smart technologies, regenerative agriculture, etc) in the agriculture and food value chain	Research and development and expansion of extension services to farmers promoting climate-resilient, high-value crops, value addition and market access	Improvement of support services and capacity building to crop production resilient to climate change by promoting research, trials and up-scaling climate smart farming systems that increase resilience to CC and extreme weather events Research for the development and enhancement of agricultural productivity, quality, and transfer through strengthening of crop variety conservation and new crop variety release responding to the impacts of climate change Development of new technologies and increased yields by using new crop varieties which adapt to climate change	NDC Action • Adaptation 5 • Adaptation 7 • Adaptation 8
	Expand climate-smart agricultural practices, financial instruments (including crop insurance, disaster protection/recovery); and monitor adoption of technologies/ practices and their effectiveness	Developing a training manual and providing training on approaches for development of climate-smart and sustainable livelihood to rural poor people	NDC Action • Adaptation 17 Disaster insurance scheme (Cambodia Climate Change Financing Framework 2014); Agriculture Insurance in the ASEAN region: Cambodia (2022)[30]
	Mainstream and incentivise agroecology, nature-based		NDC Action • Adaptation 1

[30] Disaster and agriculture insurance at a very early stage of development in Cambodia; led by private sector such as Forte Insurance Company without premium subsidy support from the public sector.

	solutions and regenerative agriculture practices		
	Expand protection (including enforcement) of critical habitat for fisheries (mangrove, seagrass etc)	Effective management and protection of ecological systems of marine and costal zones to avoid adverse impacts from various factors, build their resilience and restore its functions for productive and healthy oceans	NDC Action • Adaptation 19
	Incentivise community level (sub-national level) climate resilient investment for smallholder farmers (storage, value-addition, market access, solar installations, rainwater harvesting, water security, WASH etc);	Promoting climate resilience in the fisheries sector Developing a training manual and providing training on approaches for development of climate-smart and sustainable livelihood to rural poor people	NDC Action • Adaptation 15 • Adaptation 17
	Review and scale up irrigation rehabilitation and expansion (focusing on climate resilience and effectiveness) also taking into account Water-Food-Energy nexus (WFE)	Scaled up climate resilient agricultural production through increased access to solar irrigation systems and other climate-resilient practices	NDC Action • Adaptation 16
	Conduct capacity needs assessment and develop and implement programmes on Climate-Smart and Sustainable Livelihood		See 3.5
	Scale up support for vulnerable communities to implement Climate-Smart agriculture, post-harvest technology and sustainable livelihood	Development of horticulture and other food crops for increase production, improved quality safety; harvesting and post harvesting technique and agro business enhancement Development of Industry crops for increase in production, improved quality safety; harvesting and post harvesting technique and agro business enhancement	NDC Action • Adaptation 3 • Adaptation 4
2.6 Strengthen infrastructure and building resilience and environmental sustainability (including green building standards, indoor air quality, etc).	i. Strengthen enforcement of regulations on green building standards (national green building guideline, and building code, national cooling action plan etc.	Building codes and enforcement Air quality management from construction sites	NDC Action • Mitigation 14 • Mitigation 50
	ii. Mainstream climate resilience requirements for all new road construction and maintenance and upgrading of existing roads	Align road design standards with climate risk levels of specific locations, increase the resilience standards for new transport infrastructure, and increase allocation for road maintenance by around US$94 million per year, prioritizing investments for critical rural roads, particularly in Battambang, Prey Veng, and Kampong Cham.	World Bank 2023
	iii. Mainstream implementation of and compliance with green building codes	Including Green Building Development	NDC Action • Adaptation 49. See 2.6 also (i)

Good Governance

Table 9: Enablers Activities Source of Budget Estimates

Strategic Outcome	Activities	Corresponding Budget Item in Source	Source
3.1 Enhance climate finance mechanisms	Establish green finance taxonomy to create a common and gender responsive green investment language essential for green financial ecosystem		Climate Public Expenditure Review 2022 NDC funding is USD 483.7mill annually
	National committee/ working group on gender and climate responsive green finance mechanisms, regulatory control and standards		
	Mobilise financing for example through CCFF with innovative funding sources and approaches such as blended financing[31]		
	Review and align existing laws, policies and on disaster-related fiscal risk management		
	Policies to facilitate access to credit insurance for disaster recovery and resilience respectively which is responsive to gender and vulnerable groups		
	Integrate climate financing in public budget and expenditure, and monitoring and evaluation		
	Keep track of the national climate expenditure, both public and private		
	Develop a comprehensive national climate financing strategy		
	Conduct feasibility study on carbon market opportunities implementing measures to expand market system for emission reduction, including legal and institutional framework, according to the Paris Agreement requirements Article 6 (on carbon markets).		
	Explore the mobilization of climate finance through carbon trading		
	Implement ETF for climate reporting (aligned with Paris Agreement)		
	Operationalize climate finance, funding and grants information database (in NDC tracker for example)		

[31] CCFF should go beyond GCF financing with other funding modalities such as blended financing from public or philanthropic sources to increase private sector investment in sustainable development. (https://www.convergence.finance/blended-finance)

3.2 Increasing targeted information education, awareness raising, communication and training on climate change	Update curriculum on climate change subjects in primary and secondary schools, IHL and non-formal education, life-long education	Upgrading curriculum to include climate change for non formal education Conduct training for education officials on climate change e.g. as a required component of teacher training	NDC Action • Adaptation 21 • Adaptation 23
	Expand training to relevant ministries and sub-national administration, CSOs, media professionals and communities on relevant policies related to climate action such as LTS4CN, Circular Strategy on Environment, NDC, RE, EE etc.	Building adaptive and resilient capacity for MRD officers at national and sub-national level for mainstreaming climate change into rural development planning processes and technical design. Build adaptive capacity on climate change for village leaders (Village Development Committees, VDCs) Enhance institutional capacity on climate change	NDC Action • Adaptation 72 • Adaptation 73 • Adaptation 77
	Organizing awareness campaign and demonstration of cost effective low-carbon technologies		LTS4CN
	Design and implement nationwide educational campaigns on environmental and climate actions	Training and enhancing human capacity on climate change in information sector	NDC Action • Mitigation 13 • Adaptation 40 • Adaptation 41
	Capacity development programme on the design and implementation of stakeholder specific social behaviour change communication (SBCC)		
	Expand multi-stakeholder involvement in the design and implementation of SBCC programmes	Strengthen the cooperation with local and International development agencies, NGOs and relevant institutions for technical and financial support to implement the adaptation planning in media sector	NDC Action • Adaptation 69
3.3 Strengthen current and future workforce towards low-carbon and resilient transition	Incentivise private sector/ employer investment in upskilling workforces in green sectors – particularly promoting women upskilling		See 3.2 (life long learning)
	Review and revise formal education curriculum for green / low carbon workforce (STEM, clean energy, climate smart technologies)	Upgrading curriculum and training methodologies, including libraries, to include climate change subjects for primary schools	NDC Action • Adaptation 20

	Scale-up R&D efforts in green technology innovation to foster national clean technology ecosystems and accelerate the adoption of gender responsive green technologies	Build centers of excellence for delivering climate change courses and research among Universities	NDC Action • Adaptation 22
3.4 Strengthen multi-stakeholder engagement and involvement in strategy implementation	Increase Environment and Climate Change Technical Working Group engagement with financial institutions, IHL, research institutions, communication/media professionals,	Update and implement the Cambodia Climate Change Strategic Plan (CCCSP)	NDC Action • Adaptation 75
	Review sectoral strategies and develop and implement CCCSP 2024-2033 implementation/ action plan	Integrate climate change measures into national policies, strategies and sectoral strategies and plans Enhance institutional capacity on climate change (mitigation, adaptation, policy, strategies, planning, and finance) through awareness raising, training, and advocacy	NDC Action • Adaptation 76 • Adaptation 77
	Align line ministries M&E with CCCSP 2024-2033/ NDC/ LTS4CN MRV		
	Integrate CCCSP 2024-33 into respective ministries' and institutions' strategy and action plans		
3.5 Strengthen access to technical assistance for multi-stakeholder capacity building	Review and implement climate change mitigation and adaptation technological and capacity needs assessment and recommendations respectively	Strengthen resilience and adaptation capacity to climate change in the most vulnerable provinces/districts/communes (produce vulnerability index maps at the commune level, integrate climate change into investment and development plans, demonstrate the identified actions at pilot sites) Provide capacity building and supports for Climate Change Innovation at the provincial along Tonle Sap River	NDC Action • Adaptation 74 • Adaptation 78
3.6 Address data and information gaps for effective monitoring and evaluation	Review and upgrade National Institute of Statistics to close data gaps in climate change mitigation and adaptation		
	Explore feasibility of a central database on climate change mitigation and adaptation (building on existing ones maintained by CCCA/NCSD, World Bank etc) aligned with ETF	National end-to-end early warning systems with focus on effective dissemination to populations at risk Establish an automated nationwide hydrometeorology monitoring network and data transmission program, including collection of climate and hydrological data	NDC Action • Adaptation 61 • Adaptation 81
	Explore collaboration with academia, research institutions and development		See 3.2 (v)

	partners to identify the lesser-known climate change linkages (migration, child risk, health, productivity, economic losses) to be supported to produce evidence-based data		
3.7 Strengthen regional and international cooperation and partnerships (including ASEAN, Mekong River Commission (MRC), Mekong Cooperation initiatives, UN agencies, climate finance facilities, development banks and development agencies)	Strengthen line agencies international cooperation programmes to facilitate technological transfer and human resources capacity development		
	Strengthen line agencies participation and negotiations skills in international and regional climate forums integrating national interests and concerns		USD 1mill (MoH, annually; based on interview)
3.8 Developing road map for digital transformation in environment and climate change work	Conduct desk study and stakeholder consultation		Pemtagonal Strategy, Circular Startegy, and LTS4CN
	Assess the technology needs and cost benefit analysis for developing digital platform in phases		
	Developing a road map and conducting financial and human resources analysis		US$ 1.7 million