KINGDOM OF CAMBODIA

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ROYAL GOVERNMENT OF CAMBODIA

NATIONAL ENVIRONMENT STRATEGY AND ACTION PLAN 2016-2023

2017

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Samdech Akka Moha Sena Padei Techo HUN SEN

Prime Minister of the Kingdom of Cambodia

MESSAGE

Cambodia is recognized as a country with rich natural and cultural resources. Environment and natural resources including land, water, air, geology, ecosystems, minerals, energy, oil, gas, rocks, sand, gem, forests, forestry products, wildlife, fishes and aquatic resources are the foundation of economic, social, cultural and well-being of the Cambodian people. Therefore, we have the obligation to sustainably protect, preserve, and utilize these rich natural resources for all generations.

Over the past two decades, Cambodia has maintained annual economic growth of 7%, for which it is mainly contributed from agriculture, garment industry, tourism and real estate sectors, and this growth has transformed Cambodia to become a low-middle income country.

However, population growth, change of lifestyle, increase of market demand and climate change have been threatening the environment and natural resources as well as the people's livelihoods, especially local communities.

In this regard, the Royal Government of Cambodia has been taking necessary measures to reduce pressures on and the loss and degradation of natural resources and environment. Those measures include institutional modernization; the formulation of policies, strategies, laws and regulations; and strengthening law enforcement in order to improve the effectiveness of environment and natural resources management as well as to respond to the current and future needs of the society. In particular, the Royal Government of Cambodia has focused on environmental protection, raising environmental awareness and education, increasing the number of protected areas, establishing biodiversity conservation corridors, increasing local communities' participation in the protection and conservation of natural resources, monitoring and evaluation of economic land concession projects, addressing land conflicts, and transferring the environment and natural resources management functions to sub-national administrations and increasing national budget for the environment and natural resources sectors in order to ensure environmental sustainability, social welfare and sustainable development.

The establishment of the National Council for Sustainable Development, in 2015 by integrating the roles and responsibilities of the National Council for Green Growth, the National Climate Change Committee, the National Biodiversity Steering Committee and the National Biosafety Steering Committee, is an important institutional reform to strengthen the effectiveness of the formulation and implementation of national policies, strategic plans and the mobilization of budget resources and technical assistance for promoting green growth, responding to climate change, environmental protection, natural resources management, biodiversity conservation and sustainable development in order to ensure the balance between conservation and development.

In addition, to address the challenges of natural resources and the environment degradation and to respond the impacts of climate change as well as to benefit from the

opportunities of green growth, the Royal Government of Cambodia has been formulating two documents at the same time, including the “Environment and Natural Resources Code of the Kingdom of Cambodia” and the “National Environment Strategy and Action Plan (NESAP) 2016-2023”. Both documents are a strategic response to the needs for modernizing the management and governance of the environment and natural resources.

The formulation of NESAP is in line with Article 59 of the Constitution of the Kingdom of Cambodia, the Law on Environmental Protection and Natural Resource Management and in line with the Royal Government of Cambodia's key development policies and strategic plans. Activities outlined in the NESAP will help Cambodia to achieve its sustainable development goals and strengthen cooperation between ministries, institutions and stakeholders who are responsible for sustainable development goals given that environment is a cross-cutting issue.

In this context, on behalf of the Royal Government of Cambodia, I announce the official launch of the “National Environment Strategy and Action Plan 2016-2023” which is a roadmap for helping the ministries, institutions and concerned stakeholders to formulate strategic plans and action plans for modernizing the management of environment and natural resources in order to ensure environmental sustainability. NESAP will contribute to the progress of implementation of the Rectangular Strategy Phase III and National Strategic Development Plan 2014-2018 by promoting investments in priority areas and improving the management of environment and natural resources in Cambodia.

On behalf of the Royal Government of Cambodia, I would also like to express my appreciation to excellencies, ladies and gentlemen from relevant ministries and institutions, private sector, educational institutions, non-governmental organizations, development partners, local communities and concerned stakeholders who have made great efforts and actively participated in the formulation of this important strategic document.

Finally, I would like to urge relevant ministries and institutions, private sector, educational institutions, non-governmental organizations, development partners, local communities and all stakeholders to continue working closely together to effectively implement the NESAP in order to promote the development of Cambodia towards a green, climate resilient, equitable, sustainable and knowledge-based society.

Phnom Penh, 8 December 2017

Samdech Akka Moha Sena Padei Techo HUN SEN
Prime Minister of the Kingdom of Cambodia

PREFACE

On behalf of the Ministry of Environment and the National Council for Sustainable Development, I would like to express my profound gratitude to **Samdech Akka Moha Sena Padei Techo HUN SEN**, Prime Minister of the Kingdom of Cambodia who always pays high attention to the environment and natural resources sectors and has provided strong supports to relevant ministries and institutions, especially the Ministry of Environment and the National Council for Sustainable Development in strengthening the effectiveness of environmental protection, natural resources management, biodiversity conservation and sustainable development.

From the beginning of the fifth mandate of the National Assembly, the Royal Government of Cambodia has launched the Rectangular Strategy Phase III and National Strategic Development Plan 2014-2018 by identifying the visions and goals towards a green, low-carbon, climate resilient, equitable, sustainable, and knowledge-based society. At the same time, the Royal Government has taken necessary measures to address and prevent natural resources degradation and ecological balance, which could affect the national ability to achieve sustainable development and the people's livelihoods, especially vulnerable groups such as women, children, elderly, indigenous minorities and disable people.

In this regards, at the end of 2015, the Royal Government has delegated responsibilities to the Ministry of Environment to lead the formulation of the "National Environment Strategy and Action Plan (NESAP) 2016-2023" and to the National Council for Sustainable Development to oversee and endorse the draft NESAP before submitting it to the Royal Government for examination and official approval. The formulation and effective implementation of NESAP is crucial for ensuring the efficient management of environment and natural resources in the Kingdom of Cambodia, as well as to respond to Cambodia's international obligations in accordance with the United Nations Sustainable Development Goals.

Since the environment and natural resources management is a cross-cutting issue, NESAP is not only developed for the Ministry of Environment but also for encouraging relevant ministries and institutions, private sector, educational institutions, non-governmental organizations, development partners and concerned stakeholders to integrate environmental issues into policies, strategies, action plans and investment plans at the national and sub-national levels. The process of NESAP formulation was conducted with active participation from and ownership of relevant ministries and institutions and concerned development partners, especially from members of the NESAP Inter-Ministerial Task Force comprised of 16 ministries and institutions including the Office of Council of Ministers; Ministry of Interior; Council for Development of Cambodia; Supreme National Economic Council; National Council for Sustainable Development; Ministry of Environment; Ministry of Economy and Finance; Ministry of Planning; Ministry of Agriculture, Forestry and Fisheries; Ministry of Land Management, Urban Planning and Construction; Ministry of Water Resources and Meteorology; Ministry of Rural Development; Ministry of Mines and Energy; Ministry of Industry and Handicrafts; Ministry of Public Works and Transport; and Ministry of Tourism. The draft of NESAP has been extensively reviewed through various consultative meetings at national, regional, and community levels in order to collect relevant comments and inputs from stakeholders so as to ensure that this document reflects the real situation of the environment and natural resources sectors, responds to the actual needs of the society, is comprehensive, is acceptable and applicable when it is approved and officially launched.

NESAP is concurrently formulated with the process of institutional modernization and new initiatives such as the process of formulation of the Environment and Natural Resources Code of the Kingdom of Cambodia and the reform efforts in environment and natural resources sectors in Cambodia.

I would like to express my profound thanks to all members of the NESAP Inter-Ministerial Task Force who had coordinated and led the technical works for the formulation of this document in a responsible manner. Meanwhile, I would like to thank the Asian Development Bank through the Greater Mekong Subregion's Core Environment Program and Environmental Operations Center for supporting the formulation process of this strategic document. At the same time, I would also like to thank all relevant ministries and institutions, sub-national administrations, line departments, development partners, non-governmental organizations, private sector and educational institutions for providing supports and good cooperation in formulating this important document.

In addition, I would like to take this opportunity to express my appreciation to the General Secretariat of the National Council for Sustainable Development and the Working Group on Cooperation, Planning, and Budgeting of the Ministry of Environment that had facilitated and provided effective technical and administrative supports for the NESAP formulation process.

Finally, on behalf of the Ministry of Environment and the National Council for Sustainable Development, I would like to call for all concerned stakeholders to continue their close collaboration in the implementation of NESAP in order to achieve its four strategic goals so as to improve the environment and natural resources management as well as to contribute to poverty reduction and to promote sustainable socio-economic growth.

Phnom Penh, 6 December 2017

Say Samal

Minister of Environment
Chairman of the National Council for Sustainable Development

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ADB	Asian Development Bank
AEC	ASEAN Economic Community
CARD	Council for Agricultural and Rural Development
CCAP	Climate Change Action Plan
CCCSP	Cambodian Climate Change Strategic Plan
CCSPs	Sectoral Climate Change Strategic Plans
CEP	Core Environment Program
CDC	Council for the Development of Cambodia
CIA	Cumulative Impact Assessment
CIF	Climate Investment Funds
CMDGs	Cambodian Millennium Development Goals
CNMC	Cambodia National Mekong Committee
COM	Council of Ministers
CSOs	Civil Society Organizations
CPEIR	Climate Public Expenditure and Institutional Review
CSR	Corporate Social Responsibility
DD	Decentralization and De-concentration
DRM	Disaster Risk Management
DPs	Development Partners
EC	Environment Code Formulation Process
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
ELC	Economic Land Concession
EOC	GMS Environmental Operation Centre
EPGD	Environment Protection General Directorate
ET	Evapotranspiration
FDI	Foreign Direct Investment
GDCC	Government-Development Partner Coordination Committee
GDP	Gross Domestic Product
GCF	Green Climate Fund
GMS	Greater Mekong Subregion
3Hs	Head, Heart, and Hands
ITC	Institute of Technology of Cambodia
KM	Knowledge Management
LAs	Line ministries and institutions
LDC	Least Developed Countries
LDCF	Least Developed Countries Fund
MAFF	Ministry of Agriculture, Forestry and Fisheries
M&E	Monitoring and Evaluation

MEF	Ministry of Economy and Finance
MME	Ministry of Mines and Energy
MIH	Ministry of Industry and Handicrafts
MLMUPC	Ministry of Land Management, Urban Planning and Construction
MoE	Ministry of Environment
MoEYS	Ministry of Education, Youth and Sports
MoI	Ministry of Information
MoP	Ministry of Planning
MoWRAM	Ministry of Water Resources and Meteorology
MoT	Ministry of Tourism
MPWT	Ministry of Public Works and Transport
MRD	Ministry of Rural Development
NCDD	National Committee for Sub-National Democratic Development
NCDM	National Committee for Disaster Management
NCSD	National Council for Sustainable Development
NCSD GS	National Council for Sustainable Development General Secretariat
NESAP	National Environment Strategy and Action Plan
NGO	Non-governmental Organization
NRE	Natural Resources and Environment
NRM	Natural Resources Management
NBSAP	National Biodiversity Strategy and Action Plan
NSDP	National Strategic Development Plan
NSU	National Support Unit
NPV	Net Present Value
ODA	Official Development Assistance
PAS	Protected Area System
PEER	Public Environmental Expenditure Review
PES	Payment for Ecosystem Services
PFM	Public Financial Management
PFMRP	Public Financial Management Reform Program
PPP	Public-Private Partnership
POPs	Persistent Organic Pollutants
3Rs	Reduce, reuse and recycle
RGC	Royal Government of Cambodia
R&D	Research and Development
RS III	Rectangular Strategy-Phase III
SDGs	Sustainable Development Goals
SESA	Strategic Environmental and Social Assessment
SMART	Specific, Measurable, Attainable, Realistic, and Time-bound
SME	Small and Medium Enterprise
SNA	Sub-National Administrations

TA	Technical Assistance
TF	NESAP Inter-Ministerial Task Force
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change

CHAPTER 1

INTRODUCTION

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1.1 BACKGROUND

The National Environment Strategy and Action Plan (NESAP) 2016-2023 is developed in pursuant to Article 59 of the Constitution of the Kingdom of Cambodia. This article mandates the Royal Government of Cambodia (RGC) to manage and protect its environment and natural resources, and also requires the RGC to prepare management plans for these vital natural resources. NESAP 2016-2023 is also developed in accordance with the 1996 Law on Environmental Protection and Natural Resource Management.

NESAP 2016-2023 is aligned to Rectangular Strategy Phase III (RS Phase III), that reaffirms the RGC's mission and commitment to sustainable development and poverty reduction responding to the people's will and changing contexts of national and international developments. RS Phase III gives continuity to the perusal of RGC's central strategic theme of growth, employment, equity and efficiency (RS III). In order to progress in these four strategic themes, RS III has identified road, water, electricity, and people as priority areas for investments. The RGC is increasingly investing in human capital to further improve its competitiveness in the regional and global market. The RGC also recognizes that the effective management of Cambodia's environment and natural resources will contribute to the success of RS III. While the management of environment and natural resources has gradually improved in recent years, particularly in the areas of land, water, minerals, and forestry; continuous efforts are needed, particularly in the emerging context of climate change, in order to ensure sustainable development (RSIII).

As such, the National Strategic Development Plan 2014-2018 (NSDP 2014-2018) highlights the necessity of strengthening the enforcement of laws and regulations, and financial and institutional mechanisms for placing environmental and natural resources sustainability issues as a centrality in the national development framework.

The government's commitment for mainstreaming the environment and natural resources sustainability into the national development framework is demonstrated through the establishment of the National Council for Sustainable Development (NCSD) on 9 May 2015. The NCSD is an inter-ministerial institution with Samdech Techo Prime Minister as its Honorary Chair, and Minister of Environment as its Chair. It draws its membership from key ministries and institutions as well as all governors of municipality and provinces. The NCSD has seven technical working groups and working closely with Government Think Tank[1].

The RGC has recently implemented an in-depth structural reform and is stepping up systematic measures for a clear demarcation of responsibilities and cooperation among relevant ministries and institutions to enable them to effectively achieve their roles and responsibilities in environment protection, biodiversity conservation and sustainable development.

The efforts for strengthening local governance and democratization has been spear-headed by the National Committee for Sub-National Democratic Development (NCDD). NCDD is the inter-ministerial mechanism for promoting local democratic development

[1] Supreme National Economic Council

through decentralization and de-concentration (DD) reforms throughout Cambodia. NCDD is also working with line ministries and institutions involved in the transfer of functions and much needed human and financial resources for sanitation and waste management, and environment and natural resources management and conservation in 25 provinces and capital and185 districts and municipalities.

NESAP 2016-2023 is well aligned with the existing RGC's RSIII and NSDP 2014-2018 as well as the current efforts for in-depth reforms and modernization of environment and natural resources management and conservation institutions. The development and implementation of NESAP 2016-2023 is to complement the existing national strategies, action plans and programs.

NESAP 2016-2023 focuses on furtherance of efforts to strengthen collaborations led by NCSD in promoting a cross-sectoral coordination, with emphasis on the cross-cutting themes such as gender and capacity development, application of relevant policy and economic tools, and in mainstreaming the environmental and natural resources sustainability into the country's development framework. They are to harvest the benefits of sustainable development and to contribute to the achievement of the Cambodia's localized Sustainable Development Goals (C-SDGs).

1.2 SIGNIFICANCE OF THE NATIONAL ENVIRONMENT STRATEGY AND ACTION PLAN 2016-2023

Cambodia has taken measures to address and prevent the loss of the natural resources and ecological balance that would compromise the country's ability in achieving sustainable development and livelihoods for the people, in particular for the vulnerable groups, i.e. women, children, elderly, ethnic minority and handicaps. The formulation and effective implementation of NESAP 2016-2023 are critical for Cambodia to sustain and consolidate the efforts for the development, protection and conservation of the environment and natural resources. To successfully achieve these efforts, there are three broad reasons to be tackled:

i) **Environmental sustainability is the main source of growth and development:** Cambodia's economic growth has been mainly due to the country's relatively narrow economic base, with rice and fish cultivation dominating the rural economy, light industry (garments), construction, tourism and other related services driving much of the urban economy. Furthermore, the key sectors driving economic growth and livelihoods in Cambodia such as agriculture, industry, mining, energy, tourism, transportation, urban development, and external trade remain highly dependent on natural resources – water, land, forests and mineral resources. The sustainable management and conservation of natural resources and environment are vital to create enabling conditions for the present and future economic growth, food, energy and water security, and poverty reduction in the country.
ii) **Environmental deterioration is prevalent**: Environmental deterioration is negatively impacting on agricultural productivity, and is worsening by the effects of climate change as well as causing health issues. These all have significant economic, social and human health implications.
iii) **Meeting future growth needs a sustainable supply of environment and natural resource goods, services, and functions:** With increased population, changes in consumption patterns, greater trade linkages with regional and international markets, and projected climate change, there will be more competition for natural resources in Cambodia. Managing, investing, and optimizing these resources are critical to meet future growth needs in the country.

NESAP 2016-2023 is also supporting relevant institutions and process for the development and implementation of the Environment and Natural Resources Code of the Kingdom of Cambodia.

1.3 OBJECTIVES AND SCOPE OF NESAP 2016-2023

NESAP 2016-2023 has been developed with the following objectives:

First, NESAP 2016-2023 is a strategy for NCSD and all government ministries and institutions at the national and sub-national levels, private sector, civil societies, development partners and local communities to integrate environmental consideration into policies, programs and investments. It can support the institution, law and policy development to improve integration of the environmental and natural resources sustainability into policies, strategies, action plans, programs and projects to promote effectiveness and efficiency of the cross-sector collaboration. NESAP 2016-2023 is therefore developed in an inclusive manner instead of the sector stand-alone strategy and action plan.

Second, NESAP 2016-2023 supports the existing Cambodian sustainable development, green growth, climate change, environment and biodiversity related strategies and action plans being coordinated and led by NCSD, NCDD, and implemented by related ministries and institutions, development partners, private sector, CSOs, NGOs, education and research institutions, and local communities.

Third, NESAP 2016-2023 initiates development of a set of programs and projects based on close collaboration and coordination with all concerned ministries and institutions, development partners, private sector, CSOs, and other stakeholders which contribute to the initiation of NESAP 2016-2023 implementation.

CHAPTER 2

STATE OF ENVIRONMENT AND NATURAL RESOURCES

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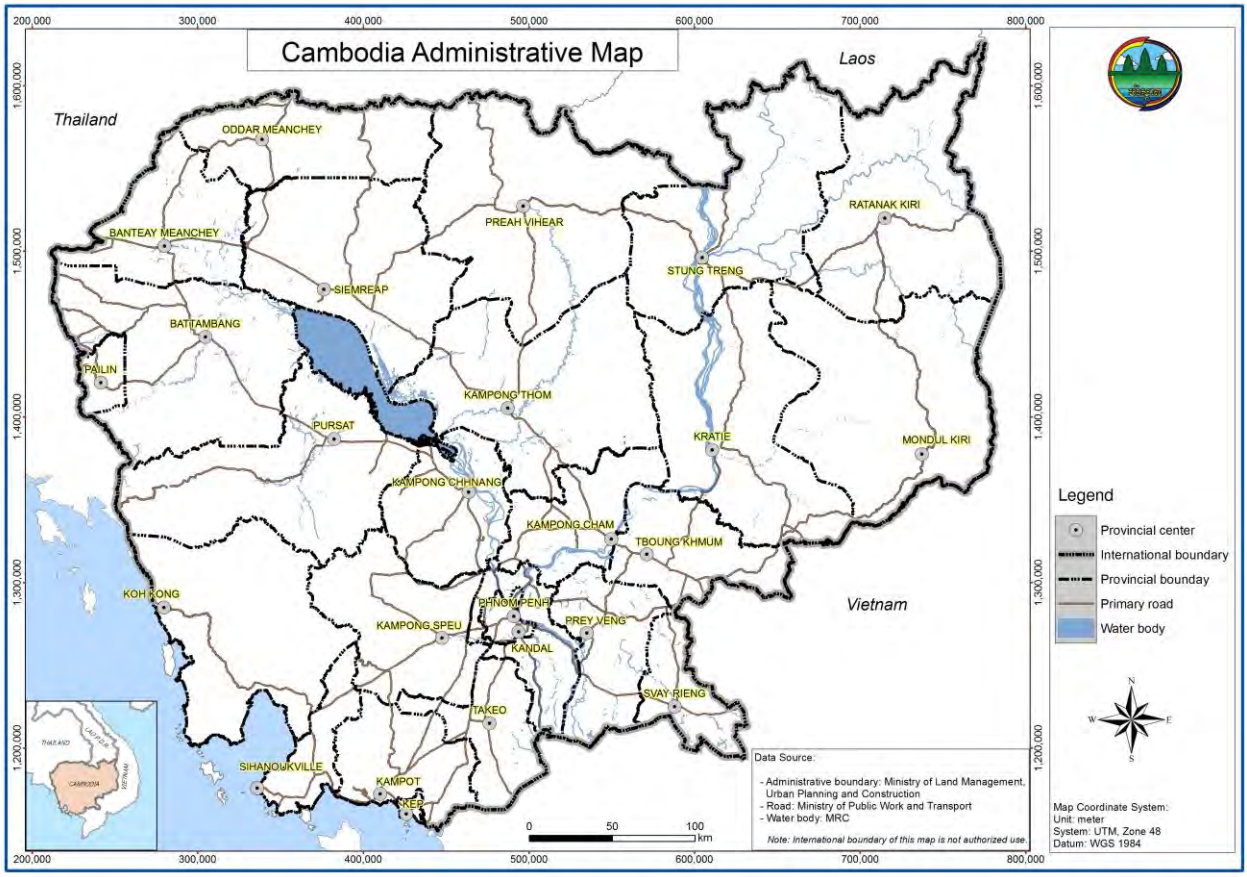
2.1 GEOGRAPHY AND CLIMATOGRAPHY

The Kingdom of Cambodia covers an area of 181,035 km^2 and is located in mainland Southeast Asia between latitudes 10° and 15° N and longitudes 102° and 108° E. Cambodia shares her borders with Thailand to the north and the west, Lao PDR in the north, and Vietnam in the east and southeast.

The alternating monsoon system controls the climate in Cambodia, and during the Southwest monsoon from May to November, about 90% of the annual rainfall occurs. The maximum mean temperature is about 28^{o}C and the minimum mean temperature about 22^{o}C. The dry season, from November to April, brings drier air and cooler air from November to March, and then hotter air in April and early May with maximum temperature of about 38^{o}C or higher.

The average annual rainfall amount is extremely variable among different parts of the country. Mean annual rainfall in Cambodia is estimated to be 1,200 – 1,300 mm/year in the Central Plains, 2,000 – 3,500 mm/year in the mountains, and 3,000 – 4,000 mm/year in coastal areas. Cambodia's unique hydrological regime is determined by the Mekong River and the Tonle Sap Great Lake. Approximately 155,000 km^2 or 86% of the total land area in Cambodia lies within the catchment of the Mekong River and comprises some 20% of the total land area of the Lower Mekong Basin (MOWRAM, 2014).

Figure 1: Map of Cambodia



2.2 ECONOMIC OVERVIEW

The Royal Government of Cambodia (RGC) has successfully implemented its socio-economic development plan while meeting several challenges such as slow global economic growth, reduction of global trade, appreciation of major currencies, and falling crude oil price.

Cambodia's economic growth remains strong despite world economic uncertainty and geo-political instabilities. The growth is 7% annually for a short to medium term (MEF, 2016) and GDP per capita was US$ 1,228 in 2015, projected to increase to US$ 1,325 in 2016. This growth graduates Cambodia into a low middle income country status. The 2016 foreign reserve is US$ 5,739,000 million (MEF, 2016).

The traditional growth engines in 2015 include agriculture (annual growth rate 4.3%), industry (annual growth rate 9.6%), transport and communication, tourism, financing, and real estate (MEF, 2016). The growth in industry sector is mainly contributed by garment, light industry, electricity, construction, and services.

The National Bank of Cambodia implemented careful measures noticeably reflecting national, regional, and global economic and financial status. Annual inflation rate is maintained at 3.5% per annum which is the ultimate goal of sustainable macroeconomic management and this growth has created favourable conditions for macroeconomic development.

The RGC is committed to bridge the gap between budget revenue and budget expenditure through public financial management reforms in order to increase effectiveness and accountability of budget allocation and financing resources. In the meantime, the Revenue Mobilization Strategy was prepared and implemented since 2014. Public budget revenue in 2015 is estimated to be 17.53% of GDP (grew from 16.7% in 2014 and 15.1% in 2013) (MEF, 2016). In this regard, the RGC has focused on strengthening existing mechanisms (policies and laws) and strengthening tax administration and management, promoting culture of tax payment, reducing smuggling and tax avoidances, and improving good governance in both customs and excise, taxation, and non-tax.

In 2015, total expenditure is 22.34% of the GDP higher than that in 2013 – 21.3% of the GDP. Current surplus increased 2.50% of the GDP and budget deficit reduced to -5.19% of the GDP in 2015 (MEF, 2016). Public debt management has been improved significantly. These achievements allow Cambodia to mobilize external concessional assistance in order to fulfil the demands of public capital investment for supporting prioritized sectors.

2.3 POPULATION AND SOCIAL DYNAMISM

Increasing population, changing demography, and the need for greater attention on gender equality are some of the key societal factors that are to be considered and planned for carefully.

Total population of Cambodia was over 15.8 million in 2015 with an average life expectancy of 69 years old. Population density is 88 persons/km^2. Average annual population growth was at 1.54% during 1998 to 2008 and declined to 1.36% since 2013. Cambodia has a high percentage of young population and labour force age-groups from 15 to 65 years old, with only around 5% of population estimated to be 65 years old or above in 2015. Demography as such creates both opportunities "demographic dividends": abundant labour supply, savings, human capital and skills, and challenges including growing demands for jobs, food, land, water and energy, commodities, higher education and qualification. The majority of the population in

Cambodia, estimated at 77.5%, lives in rural areas. However, the trend is gradually shifting with more and more rural to urban migration and urban expansion.

The changing age structure and accelerated urbanization require the RGC to work with stakeholders to augment the ability to choose policies for key areas, such as increasing public health coverage, water and sanitation provision, greater investments in green urban infrastructure, employment and social safety-net, effective population policy, family planning, increasing spending on education and skill development to realize economic and social benefits from such societal transition.

As a result of rapid economic growth, poverty rate has fallen rapidly to 13.5 % in 2014. However, there are numbers of people who live below or marginally above poverty line that makes them vulnerable to economic, social, and environmental shocks, in particular the impacts of climate change. Increased income disparity is an obstacle for achieving sustainable development since household's livelihood and ability to adapt to the above shocks is closely linked to their wealth and adaptation capacity.

Women play very important role in society and family; and they are more exposed to climate change, natural resource degradation, and subsequent impacts on income and livelihoods. The RGC has supported gender mainstreaming, such as providing greater financial resources for gender specific programs and policies, and their roles in decision making.

2.4 NATURAL RESOURCES

Cambodia is known for its rich endowment of natural resources such as forests, wild-life, arable land, wetland, freshwater and marine fishery, mineral resources and renewable energy potential. Natural resources per capita is high, especially for fresh capture fish and cropland availability per person. With increased population and changing lifestyle, without effective and modernized environmental and natural resources management, per capita natural assets availability will reduce further. In order to continue its current development speed for a long and sustained growth in the coming years and decades, changing resources use patterns, improving resource use efficiency and productivity, and modernization of environment and natural resources governance and management are high priorities.

Several studies highlighted the important role – functions, services, and tangible and intangible values - played by natural resources in providing income and livelihoods for local communities and indigenous groups. These findings will be crucial when used as evidence in lobbying for higher public financing on biodiversity conservation and habitat restoration. The economic, social, cultural and other intrinsic, aesthetic and intangible values of forest resources are remarkably high. For instance, a study showed that in Cambodia's biodiversity hotspots of Mondulkiri and Koh Kong alone, the net present value (NPV) of ecosystem services provided by selected forest types would amount to US$ 4.1 billion with annualized net present value (NPV) of US$ 416 million per year[2].

The empirical evidence also shows that the economic development and short-term gain without environmental considerations may cause serious environmental damage, in turn impairing the social welfare of the most vulnerable groups – women, children, poor, elderly, and ethnic minority. For example, deforestation and forest degradation change forest landscapes and ecosystems, and in turn have implications for biodiversity and

[2] A study showed the net present value (NPV) of ecosystem services provided by selected forest types, at a 10% discount rate over 50 years, was US$ 1,194/ha for deciduous, US$ 2,445/ha for semi-evergreen and US$ 3,721/ha for evergreen forests (EU's Country Environment Profile, 2012).

water catchment management by increasing run-off, thus causing flooding or water scarcity, and accelerating soil erosion and siltation of rivers and lakes, and affecting soil fertility. It may also affect human wellbeing by closing some opportunities and undercutting agricultural and livestock productivity, and increasing poor health.

2.4.1 Biodiversity

Cambodia has a rich diversity of species – including plant, animal – domestic and wild - invertebrates, amphibians and reptiles, fishes, birds, mammals - genetic diversity. Given its tropical location, field surveys continue to find new species.

Biodiversity and its associated ecosystem services have been under threats in the past decades due to (i) impacts of rapid land-use change resulting in forest conversion for road construction, dam installation and for producing agricultural commodities, (ii) changes in key hydrological and morphological conditions and their impacts on aquatic and terrestrial animal habitat and migratory routes, (iii) impacts of climate change, such as sea level rise, temperature increase and change in precipitation, and lack of effective measures in adapting changing climate, (iv) unsustainable exploitation of forest products and introduction of invasive alien species, and (v) soil, water and air pollution from urbanization, industry and other economic activities.

2.4.2 Land and Soil

Land and soil provide a wide range of provisioning, regulating, cultural, and supporting services. Land degradation, including declining soil fertility, and soil erosion are impacting biological, agricultural, and economic productivity.

Suboptimal land management is due to lack of knowledge of the soil resource base, and land uses and management issues including the mismatch soil conditions and their land use types. The country's capacity to deliver reliable soil information and land suitability to interested parties must be improved significantly.

It is projected that the forest-cover and quality, agricultural land, industrial, commercial and residential area have changed and will continue to change remarkably in the coming decades. Hence, it is important to make available an updated data on forest status and land use to support investment decision making so that areas of good soils for agricultural production would be identified, classified, and protected.

2.4.3 Forest

Cambodia is known for its high value forest areas and contains the largest remaining forest habitat in the region with 80% of the most valuable and endangered indigenous tree species. Forest provides not only timber but a wide range of non-timber forest products including wildlife, food, medicinal and ornamental plants, and a diversity of landscapes of interest to tourism. Forest ecosystems are essential to rural communities' livelihoods, supports biodiversity, and provides countless services such as air purification, maintaining soil fertility and biota, preventing soil erosion, water absorption and water retention services.

The protected areas such as national parks, wildlife sanctuaries, protected landscapes, multiple-use areas, Ramsar sites, natural heritage areas, marine protected areas and biodiversity conservation corridor as well as natural and cultural resorts and zoos have been attracting increased numbers of local and foreign tourists.

Forest cover since the 1970s, has been reported to decline significantly due to impacts of the war, unstable political situations, unsustainable and illegal logging practices,

uncontrolled forest conversion as a result of agricultural expansion, infrastructure development and urbanization.

According to Cambodia's Second National Communication on Climate Change to UNFCCC, under certain emission scenarios, up to years 2050-2080, most lowland forests (more than 4 million hectares) will be exposed to a longer dry period, particularly forest areas located in the northeast and southwest. Hence, forest productivity will decline if the soil water condition becomes drier; and if these forests are logged, it would take longer for them to grow to their original conditions.

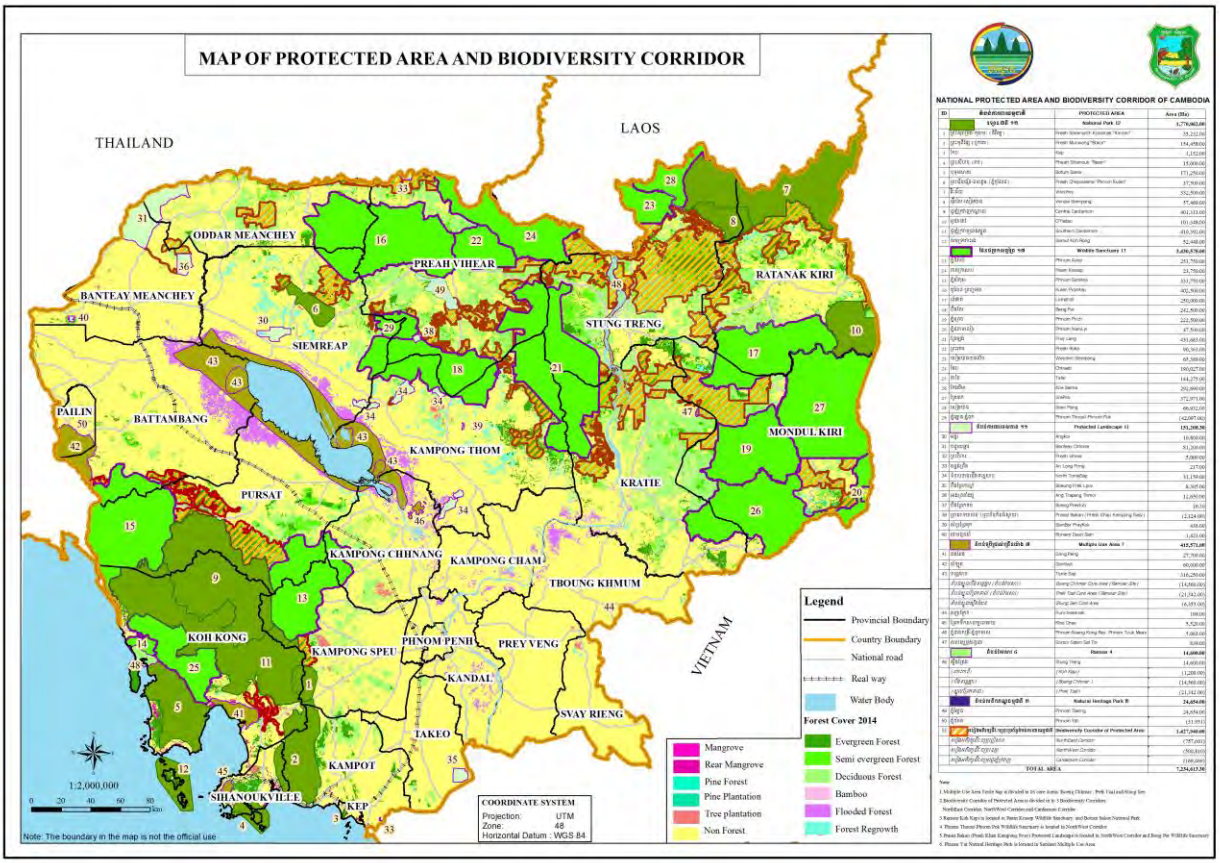
To realize haze control requirement under ASEAN Community, and to achieve forest cover protection, Cambodia needs to take further necessary measures to prevent, control, and respond to forest fire and open burning.

The RGC policy is to ensure that forest resources are managed in an efficient and highly accountable manner to support sustainable and equitable socio-economic development and strengthen the decentralization and forest co-management, and effectiveness and accountability of forest governance.

2.4.4 Protected Area System

Cambodia's protected area system (PAS), including 50 protected areas and 3 biodiversity conservation corridors, covers around 7.2 million hectares equal to 39.8% of the country's territory. Cambodia ranks the second in the world, after Bhutan in percentage territory under PAS management. It has seven ecoregions that each ecoregion has between 20% and 62% of land area under protected status, except for the Tonle Sap swamp forests of which only 0.6% is protected. The intensive agriculture, forest-fire and forest conversion are adversely affecting the native vegetation in the Tonle Sap flooded forest. This ecoregion needs to be put under protected area system.

Figure 0: Map of Protected Area Systems in Cambodia



The PAS has been under heavy pressures. Therefore we need to strengthen PAs management in safeguarding significant biodiversity values, promoting economic development, adapting to and mitigating climate change, and providing sustainable livelihood opportunities.

The RGC has undertaken an important institutional reform to address challenges associated with the development and management, and protection and conservation of natural resources and environment since 2015. As the result, the issuance of new economic land concessions (ELCs) has been halted, the progress of the existing ELCs is being examined, and the concessions' validity is reduced from 90 years to only 50 years. The RGC amended and clarified the roles and responsibilities of MAFF and MoE related to the development and conservation of the forest areas. MoE previously transferred approved 74 ELCs to MAFF, and in return the latter transferred 18 forest protected areas and production forests to MoE to be included in the existing PAS for conservation and co-management.

This momentum needs to be sustained and strengthened by addressing those key capacity gaps in mapping, demarcating, and effectively managing PAS; planning and implementing rehabilitation and restoration of degraded forest; determining potential carbon stock areas; monitoring and ensuring compliance of the concession agreements by the ELCs; and patrolling and enforcing against illegal encroachment. Both MoE and MAFF, and their sub-national departments urgently need for an increased budget support, and human resources and their capacities in order to respond to the increasing roles, responsibilities and scope of works.

The RGC has recently approved the measures for strengthening capacity of the forest rangers through proper training, and increasing necessary resources for them to perform their task effectively. These measures include: integrating over 960 rangers in the official government pay-roll; recruiting additional 300 rangers per recent decision of

the Samdech Techo Prime Minister at the National Forum on Protection and Conservation of Natural Resources on 22 August 2016; and providing more financial resources and means for their daily patrolling works. Obviously, their capacity need to be further strengthened.

2.4.5 Marine and Coastal Zone

Cambodia's coastal zone extends over 443 km covering four provinces namely Kep, Kampot, Preah Sihanouk, and Koh Kong whose total population is over one million. The marine and coastal zone including coastal zone, territorial waters, contiguous zone, Exclusive Economic Zone (EEZ), and continental shelf, constitute ecologically and biologically rich areas. There are 72 islands and groups of islet and atoll within Cambodia's marine zone.

Cambodia's marine and coastal natural resources are invaluable and constitute a rich ecological system and biodiversity that serve as a source of food, employment, and livelihoods. They inter-link with and influence on the social, cultural, and economic patterns of the country. These resources and system play an increasingly important role in the country's socio-economic development, supporting infrastructure development – road, bridge and ports, transportation, trade, industrial development, agriculture and fisheries, oil and gas refinery, and offering growing attraction for recreation and tourism. Along the coastline, there is one deep seaport located in Sihanouk-Ville, which is considered to be one of the economic centres of Cambodia.

The coastal and marine areas are under a lot of pressure due to population growth, watershed clearing, land encroachment, sand mining, erosion, pollution, illegal fishing practices, environmental mismanagement, loss of biodiversity, natural disasters, and unsustainable consumption and production patterns. Hence, to ensure sustainable social and economic development, it requires a coordinated and well planned response, and improvement in a responsible and good management and governance.

Moreover, we must take action in order to strengthen coordination in the oil and gas prospecting, exploration and exploitation, transportation, coordinated emergency response capacity to potential accidents including oil and dangerous goods spills. Cambodia also needs to address environmentally sound development and management of transport and tourism infrastructure in the key tourist destinations.

2.4.6 Fishery and Aquatic Animals

Over 77.5% of Cambodia's population lives in rural areas and 64% of all rural households are engaged in fishing either as primary or secondary occupation. More than six million people work full-time in fisheries and fisheries-related activities. Inland fisheries contribute 8-12% of the national GDP. Fish and rice are an integral part of the nation's staple diets. Fish and other aquatic animals provide more than 80% of the total animal protein and much of the essential minerals and vitamins in peoples' diets.

The number of fishers has increased annually, access to this common natural resource is becoming increasingly limited and there is an evidence of a significant decline in the quality of large freshwater fish species.

In 2015, the total fisheries production statistics were at 751,546 tons – 487,905 tons from fresh-water capture fisheries, 120,500 tons from marine fisheries, and 143,141 tons from aquaculture (MAFF, Annual Congress, 2016).

Table 1: Intensification of Fish Catches (tons)

Fish catches	2002	2005	2010	2014	2015
Total	136,031	354,895	550,000	679,250	751,546
Fresh-water	85,600	305,000	405,000	464,000	487,905
Marine	36,000	33,900	85,000	120,250	120,500
Aquaculture	14,431	15,995	60,000	95,000	143,141

Source: MAFF. 2016. RGC. 2015

The fresh-water and marine fishery catches remarkably increased during 2005 to 2014 due to a significant increase in the number of fishing efforts and improvement in fish catch data collection. The deployment of destructive fishing practices in marine fishery causes negative impacts on oceanic ecosystem services and functionality for supporting sustainable marine fishery.

A further decline in the overall production of fresh-water fish catches can be expected, as there are multiple threats such as changes in fish migration route/access and habitats, changes in hydrological and morphological conditions, and fishing practices and management.

Aquaculture productivity is growing, but it would not be large enough to make up for the loss in the wild catches, as it is severely constrained by the lack of technology and extension services, financing ability, and environmental issues.

The management and conservation of fresh water and marine wild fish stocks is critical to sustain continuous fish supply. We must strengthen proper management and provision of financial and technical resources for ensuring compliance and enforcement, and proactive engagement in development planning to maintain the productivity of capture fisheries.

2.4.7 Mineral and Energy

Mineral, energy, and oil and gas also play important roles in the economic development of Cambodia. In 2015, the revenue from mineral development was US$ 8,849,790 compared to US$ 4,174,546 in 2014 – an increase of over 112%. This revenue is expected to increase gradually especially when the industrial exploitation of the mineral resources is materialized.

Measures have been taken by the Ministry of Mines and Energy (MME) to effectively control unlicensed mining activities and associated destructive and harmful impacts on human health and environment. MME needs to further strengthen institutional capacity and human resources, and develop and implement laws and regulations on mines and petroleum. In 2014, MME has adopted the Mines Development Strategy (2014-2018) with “Wealth for All” as its vision. This strategy aims at transforming mining, oil, and gas sector into an important pillar of the country’s socio-economic development.

In 2015, Cambodia imported 1.55 million tons of oil – about US$ 926 million. It is expected that Cambodia will potentially cease its oil import and the national revenue will increase once the country starts exploiting its oil and gas resources – especially from Bloc A in 2018 or 2019, depending on the commodity prices. The RGC expects that the oil and gas revenue will help the country in increasing investment; improving human resources; strengthening public health; reducing poverty; reducing the oil and gas cost

for consumers; investing in infrastructure development; generating employment opportunities; and improving key public services.

Despite considerable progress in expanding the capacity and coverage of electricity supply in recent years, Cambodia has low electrification rates with 55.37% of its population having access to electricity in 2015, with a total energy supply of 1,985.61 MW. Cambodia has significantly moved away from a high dependence on the electric energy importation from its neighbouring countries (its share is now reduced to about 20.96% of the total electric energy supply in 2015). It has now moved to a more mixed supply of energy sources including 18.61% from coal-fired, 12.95% from diesel power plants, 46.63% from renewable sources (hydropower), and 0.83% from biomass. These factors will help reduce the electricity cost and will also promote Cambodia's competitiveness edge and attractiveness for external direct investment.

The main energy source for cooking in Cambodia is wood – firewood and charcoal (74.8% for the whole country, and over 88.9% in rural areas). It is forecasted that wood-derived fuels will remain the main source of cooking energy in rural areas until 2030. The use of wood for cooking and dying and washing industry is contributing to deforestation and significant indoor air pollution.

To respond to the environmental and health risk mentioned above, MME has continued the implementation of Energy Sector Development Plan, 2005-2024. It envisages diversifying energy supply sources (green energy options) in order to mitigate reliance on fossil fuels through developing renewable energy and promoting the exploration of energy sources such as hydropower, natural gas, and coal. It also plans to increase electricity supply capacity and reduce tariff, encourage the efficient use of energy and mitigate the adverse effects on environment. MME encourages private sector to invest in energy, including generation, transmission, and distribution. As a result, the RGC will be able to effectively implement the planned electrification strategy - "by 2020, all villages in the Kingdom of Cambodia will have access to electricity supplied by the national grid and other sources."

2.4.8 Water Resources

Water is present on this Earth in liquid, solid, and gaseous form. Water is the blood of the Earth and sustains life. As a natural resource, it is present in the earth and in the atmosphere, in plants, animals and humans.

Since the beginning of time, water bodies such as rivers and lakes have been the places where civilizations were established and people have prospered. A Chinese historian and envoy, Zhou Daguon, visited ancient Angkor Empire in late 13th century located on the bank of the Tonle Sap Great Lake in Cambodia, described the 9th – 15th century Khmer civilization as a civilization built on the great success in the water resources management and drainage.

The water – both surface and underground water - and related resources are central to the economic development in Cambodia, namely the energy sector (hydropower); agricultural development (irrigation, fisheries, and forest growth); construction (e.g. sand and gravel); water-way and transport; water supply; and tourism and recreation. Water is fundamental to the basics of human well-being, health, culture, and ways of life.

Cambodia's rivers, lakes, and other water bodies support exceptionally rich and diverse animals and plants. However, these rich water resources are not evenly distributed both in time (wet and dry seasons) and location. During the wet season from May to October, the average amount of water in the Mekong during the peak month of September is 25-35 times larger than during the dry season. In dry season, some locations along the river experience water shortage. During the wet season, the river becomes immense,

flooding those that provide many benefits. These abnormal floods and drought cause severe damages to economy, people's lives, and property.

Cambodia is known for its abundant water resources – both surface water and groundwater resources. Agriculture accounts for 95% of the total water use in Cambodia. It is projected to grow to 10,380 million m^3 by 2025 or about 13% of the total surface water availability. The water use of industries is projected to increase by around 15% in 2025.

Despite abundant water resources, many of Cambodia's catchments are being constrained by:

(i) extreme fluctuation of water resources in wet and dry seasons, and in different locations (e.g. upstream and downstream);
(ii) lack of capacity for effectively storing, regulating, and draining extra water resources;
(iii) rapid development in the Mekong region such as dam construction, large scale water diversions, flood-plain development, and land-based pollution. These all put pressures on water and related resources in the Mekong Basin of which 86% of Cambodian territory is located (about 74% of actual water resources in Cambodia, i.e. groundwater and surface water, come from upstream countries); and
(iv) the short-term climate variability and long-term climate change trends, which include more frequent and abnormal flooding, drought, storms, heat waves, and change in rainfall patterns and intensity.

Climate change induced drought is the main strategic and operational issue for the water resources management during this millennium. Drought incidence has doubled in the last decade compared with pre-millennium. In some instances, irrigation systems have been called upon not only to supply water for crops but also for supplying domestic water needs. Expanding the numbers of reservoirs and storage capacity is the top strategic focus for Ministry of Water Resources and Meteorology (MOWRAM) and other concerned institutions.

Groundwater is used throughout Cambodia, particularly for drinking water and irrigation. We still have limited information on its potential - availability and quality - and the extraction sustainable level.

Water quality faces two kinds of threats: i) natural present arsenic contamination, iron and manganese, and salt water intrusion; and ii) liquid waste discharge from point-source such as industry, mining, other manufacturing sectors and households, and non-point source pollution – from agriculture. Development of comprehensive water quality management plan is an urgent and necessary work to ensure the protection, preservation and improvement of water quality and water resources.

MoWRAM has been implementing series of measures for developing and completing the irrigation system. These measures include water storage and flood control infrastructure; strengthening technical and management capacity; promoting an integrated water resources management, climate change adaptation and disaster risk reduction; and improving early flood warning and promoting long and medium term forecasting and dissemination.

2.5 POLLUTION IMPACTS

The relationship between key economic sectors and the natural resources in Cambodia is now better understood. On one hand, economic production and service delivery depend heavily on natural resources as inputs; while on the other, if not properly managed, these activities may cause substantive impacts on the quantity and quality of

environment and natural resources, in particular through various forms of in-door and outdoor air, soil, water and noise pollutions and land degradation.

In terms of waste management and pollution, key constraints include lack of awareness; limited effluent/emission treatment capacity by factories and absence of sound disposal options; ineffective enforcement and compliance with the law; and no engineered landfill sites or low-emission incineration facilities available. Therefore, it is important to provide an assessment on the different levels of pollution and their subsequent impacts on biodiversity and human health as well as current and anticipated needs and capacity gaps so that proper actions can be taken effectively.

2.5.1 Air and Noise Pollution

The ambient air quality and noise pollution are caused by a number of factors such as industrial and handicraft, transportation, construction, and infrastructure sectors. The increased use of vehicles; transportation means; and fossil fuels such as coals, fuel oils and diesels for electricity production; the continued use of firewood for cooking and industrial enterprises; and solid and agricultural wastes burning practices are major causes of air pollution. Air pollution causes a series of significant health problems especially on respiratory system, e.g. asthma, chronic bronchitis, decreased lung function, and premature death.

Noise pollution can have an effect on health, wellbeing, productivity, and the social and natural environment. Some economic analysis in major industrial countries identified noise pollution as one of the largest environmental health risks and its cost is at a similar magnitude to road accidents and the impact of climate change. It is important for Cambodia to pay attention to prevent and mitigate the noise pollution.

The impacts of air and noise pollution should be fully considered in decision making for development of relevant policies, programs, projects and action plans to prevent and reduce air and noise pollution from the sub-national to the national level.

The RGC has adopted a Sub-Decree on Air Pollution and Noise Disturbances Control in 2000. The air quality monitoring conducted by the MoE was started in 1998 in Phnom Penh. Until 2015, MoE had expanded air quality monitoring activities to four capital city and provinces including Phnom Penh, Siem Reap, Preah Sihanoukville, and Battambang by focusing on key parameters such as carbon monoxide, sulphur dioxide, nitrogen dioxide and particulate matters in ambient air. The monitoring confirms that most of the pollutants are still below the national standards.

However, there is an increasing trend of air pollution due to emissions from electric generators, boilers, power-plants, cement production plants, waste discharges, open burning, kerosene for light, bio-fuel for cooking, and emission from mobile sources. Therefore, attention should be given to control and prevent these emission sources through amendment of standards of the Sub-Decree on Air Pollution and Noise Disturbances Control, formulation of related regulations, and establishment of air monitoring stations in urban areas, capital city and other major provinces. In addition, MoE must also strengthen the inspection and control of air pollution sources. Moreover, MoE needs to pay more attention to the in-door air-quality monitoring including public buildings, residences and work-places.

2.5.2. Solid Waste Pollution

With rapid population growth and urbanization, solid waste is increasing exponentially at a rate of approximate 10% annually. Without effective and timely management of rapid growing solid waste, they will negatively affect public health, ecological systems, and contribute to climate change. Most importantly, it will negatively impact the quality of

water, soil, air, and ground water, and threaten the sustainability of the natural resources and economic development as well as impact tourism.

Solid waste collection in some key urban areas has been improved recently through delegation of functions for municipal solid waste management and a timely transfer of much needed resources to sub-national level. Much more effort is required to further improve the solid waste management in all municipalities and localities, especially in addressing hazardous waste, persistent organic pollutants and newly emerging electronic and electrical wastes, as well as plastic waste.

It is extremely critical to take further immediate actions to manage (sort, collect and transport, treat and dispose) solid waste generated by households, industrial centres, manufacturers, enterprises, and hospitals and so on. It is important to construct sanitary land-fills so that these wastes are collected and treated instead of being disposed at open dumping sites or burned without proper control measures. Actions must be undertaken to achieve modernization and decentralization of integrated solid waste management through promoting 3Rs (reduce, reuse, and recycle) as well as weight-based or volume-based waste collection fee and extended producers' responsibility measures in order to encourage recycle.

2.5.3. Liquid Waste Pollution

Liquid waste generated in urban areas and industry has increased significantly by 8.65% annually. Domestic and industrial liquid wastes are commonly collected by public sewerage system and run off to drainage and retention pond or lake and wetland afterward for bio-purification, and finally it runs off to the rivers, ground-waters and/or into the sea. The most critical industrial pollution sources may potentially be from dyeing and washing factories; factories that use chemical compounds; power plants; cement production plants; factories with poor energy efficiency; factories with sup-optimal waste management; factories with poor emission control; and factories without proper treatment facilities. The pollution will need to be monitored and prevented more vigorously and systematically.

The natural swamps, used as lagoon systems for liquid waste treatment, are gradually converted into residential and industrial areas. Battambang, Siem Reap, and Preah Sihanouk provinces are few places in Cambodia that have some forms of liquid waste treatment plant or system. A number of central domestic wastewater treatment plants are being planned for other provincial urban areas.

Urban development must be strategically planned and allocated properly according to "liveable and green" urban/city principles, additional investments for maintenance or improvement of urban environment and sanitation, liquid waste facilities, and separate sewage water discharge and rain-fall drainage.

2.5.4. Chemical Waste Pollution

The management of chemical risks is one of the high-priority issues for environmental protection, public health, and occupational health and safety in Cambodia. The country has imported several chemicals, including agricultural chemical fertilizers, pesticides, insecticides such as DDT, for eradicating diseases such as malaria and dengue fever, industrial chemical raw materials (industrial organic chemicals, inorganic chemicals, dyeing chemicals, and other chemical substances), as well as chemicals for mining purposes.

There are laws, policies, and strategies for dealing with chemical substances and issues in Cambodia. The RGC continues to profile and manage agriculture, industry, mining, and health sectors, especially in agrochemical inputs, industrial chemical raw materials for the leather and sludge treatment, textile and garment production, and medical waste.

The use of fertilizers in Cambodia is low, but the rapid growing trend of their use needs to be properly managed to avoid negative impacts on environment, such eutrophication and poisoning of water, soil pollution, and related impacts on human health. The biggest impacts to human health include direct contact with the used chemicals.

The facilities for chemical management, including waste destruction capacity (incinerators), waste disposal (landfills), and laboratories for environmental testing is insufficient. In addition, people are not fully aware of the health hazards caused by different types of chemical products. Improper application of chemicals in agriculture and industries must be addressed through introducing Khmer language labelling, proper warning of health hazards, and providing training on hazardous material application and personal protection gears. The quantitative assessment of the chemical impacts on human health and environment has to be conducted and disseminated widely.

2.5.5. Environmental and Social Impact Assessment

Environmental and Social Impact Assessments (ESIA) are conducted for public and private development projects in order to ensure harmonization with environment, social and culture as well as to contribute to sustainable development.

The Strategic Plan on Environmental Impact Assessment 2016-2018 was developed for promoting the development of regulations and law enforcement, enhancing the efficiency in reviewing and commenting on ESIA reports for development projects and strengthening the efficiency in monitoring and evaluating of the implementation of projects.

2.6 CLIMATE CHANGE AND OTHER NATURAL HAZARDS

Cambodia has limited contribution on GHG emissions to global climate change, but is very vulnerable to its impacts due to its low adaptation capacity and still dependence on the natural resources and susceptibility to natural disasters. The country ranks first among the top 10 countries in the region for the proportion of population at risk of being affected by floods. The 2015 Asia and Pacific Disaster Report found that Cambodia is located in the world's most disaster-prone region of Asia and the Pacific. Over the period 2005-2014, the region had 1,625 reported disaster events including floods, storms, drought, and earthquakes and tsunamis– over 40% of the global total.

According to the Cambodia's Second National Communication to UNFCCC, the climate variability and extreme weather events are projected to increase, causing more frequent floods, droughts, storms, increased coastal erosion, heat waves, and outbreaks of pests and diseases. These will cause significant impacts on agriculture, water resources, forestry, fisheries, coastal zones, tourism, infrastructures, human health, and livelihoods.

Increasing temperature, rising sea level, and changing rain patterns pose significant risks to agriculture and fisheries, and other rural livelihoods. Negative impacts are also observed in infrastructure and tourism development. These are detrimental to Cambodia's economy because of its limited adaptive capacity to these on-going changes.

Many of the country's population are precariously on the margins of the poverty line and are vulnerable to falling below the poverty line jolted by a natural disaster or international shocks (rise in food and fuel prices). The most vulnerable groups include women, children, elderly, handicaps, and ethnic minorities. Climate change impacts human health directly and indirectly (death, injury, psychological disorders, and damage to public infrastructure), and increases incidence of vector-borne diseases and infectious diseases - malaria, dengue fever, diarrhoea, and other water- and food-borne diseases, malnutrition, and hunger.

In response to climate change and related issues, a number of actions have been undertaken by the RGC, development partners, civil society, and local stakeholders. For instance, in 2014, the RGC announced the official promulgation of the Cambodia Climate Change Strategic Plan 2014-2023 (CCCSP). A number of sectoral strategies and action plans have also been developed to improve the country adaptation and mitigation capacity.

2.7 ECONOMIC AND SOCIAL SECTOR DEPENDING ON AND AFFECTING ENVIRONMENT AND NATURAL RESOURCES

The key sectors driving economic growth and livelihoods in Cambodia such as agriculture, industry, mining, energy, tourism, transportation, urban development, and external trade remain highly dependent on natural resources and environment.

2.7.1 Agriculture

Agriculture (farming, fisheries, forestry and animal husbandry) remains important in Cambodia. The share of agriculture sector as a percentage of national GDP has declined, falling from 55% in 1990 to about 28.6% in 2015 due to higher growth in other sectors such as manufacturing (29.7%), and services (41.7%) (MAFF, 2016). However, it is still a major source of employment, income, and livelihoods provision.

Promotion of agriculture sector is one of the four pillars of RSIII as it continues to play an important role in supporting economic growth, ensuring equity, reducing poverty, securing food security, and promoting development of the rural economy.

Despite recent growth in rural to urban migration, agricultural development has continued based on its intensification and the expansion of cropping areas through forest conversion mainly for rubber, cassava, sugar cane, and other commercial crops.

Several constraining factors in agriculture sector need to be urgently addressed in a coordinated manner. These constraints include i) predominance of rain-fed agriculture which is highly vulnerable to climate change; ii) underdevelopment of irrigation and drainage; iii) lack of detailed soil classification and land use spatial planning, and lack of clear procedures for forest and land use; iv) limited access to extension services and agricultural skills including soil management, selection of seed varieties, fertilizer and other technologies; v) limited access to rural credit; and vi) inadequate post-harvest process management and market.

2.7.2 Tourism

Tourism is considered as “green gold” for its role in contributing to the national economic growth. It generates employment opportunity and income, promotes livelihoods and poverty reduction, conserves culture, historical, and natural heritage, and contributes to mitigating or reducing global climate change. Tourism is also considered important in the promotion of the regional integration and globalization.

In 2015, Cambodia welcomed around 4.77 million international visitors, increased by about 6.1% comparing to that of 2014. It created around 620,000 jobs and generated over US$ 3,012 million in the national economy - it can be doubled if this included the double economic efficacy multiplier.

Cambodia’s cultural and eco-tourism steps up and forward remarkably and contributes over 10% to the annual GDP. It is projected that by 2020, the international tourists’ arrivals will increase to approximately seven million and will generate over US$ 5,000 million and create around one million jobs.

Tourism is being further developed proudly in conjunction with the promotion campaign of “Cambodia – Kingdom of Wonders and Warm Hospitality”, and the competition

campaign for “Clean City and Touristic Sites, Impeccable Services and Hospitality.” These campaigns have contributed to public awareness-raising and marketing.

Cambodia has a great potential for promoting an efficient, responsible, and sustainable tourism, including cultural and historical heritage, natural/eco-tourism (coast, beaches, and biodiversity) and relevant infrastructures and human resources development (tourism and hospitality). Hence, Cambodia’s sustainable tourism relies greatly on the protection and preservation of the country’s socio-cultural heritage, environment and biodiversity, the development of environment-friendly infrastructures and hospitable and capable human resources. In addition, we need to involve private sector, development partners, and local communities to contribute to the development of tourism, raise public awareness and training on the principles of sustainable and responsible tourism, and strengthening peace, political stability, safety, security, and public order.

2.7.3 Urbanization

Present urban growth process is characterized by both population growth (natural birth and in-migration) and physical expansion. Nearly 22.5% of the total national population of 15.2 million lives in cities, - over 11.3% of them are residing in Phnom Penh, and the remaining 11.2% are reportedly living in other 24 cities. The number of urban households is growing at a rate of 3% or higher due to both natural population increase and rural-urban migration. The urban population number can be much higher if the non-registered residents, boat people and seasonal migrants are included. Increased urbanization rate puts great pressure on land, water, and energy supply and public facilities (e.g. schools and hospitals) to accommodate influx population. It also causes environmental pollution.

It is expected that land-use change and global warming on the hydrograph with combined effects of dams and other major urban and rural infrastructure development, may result in increased flood discharges and changes in morphological processes, potentially making the cities more vulnerable.

2.7.4 Transport

Transportation plays an important role in promoting growth and facilitating access to public facilities and markets for the people. In 2015, the national roads and provincial roads have a total length of 15,376.24 km with Alpha pavement and 6,626.78 km with concrete pavement. Two railway networks include a fully operational southwest line for over 266 km from Phnom Penh to Sihanoukville and the 2nd northwest line for 386 km from Phnom Penh to Poipet to be completed. There are over 40,000 km long rural roads connecting the national and provincial roads to city, district and commune centers and to villages.

Since 1990 to 2013, Cambodia’s vehicle registration totaled 2.45 million. The GHG emissions are expected to increase in the coming years due to the growing number of vehicles with a growth rate of 8% from 2010 to 2013. Moreover, the majority of vehicles is second-hand and has poor efficiency and consequently high CO2 emissions.

Urban areas experience heavy traffic during rush hour causing higher amount of emission from mobile source. Therefore, it is important to curb pollution from the transport and promote climate resilience in transport infrastructure and low-carbon transport sector.

The 2014-2018 Climate Change Action Plan (CCAP) for the Transport Sector states that transport infrastructure is vulnerable to climate change – natural disasters including heat, flooding, drought and storms but at the same time is also a source of GHG emissions.

2.7.5 Industry and Handicraft

Cambodia's industry sector is just developing and remains narrow based on low level of sophistication and manufacturing that mainly concentrates on garments and food processing with some technical capacity and technological infrastructure for waste, sewage, and pollution management. It remains highly energy inefficient, with energy consumption per unit of output being two times higher than some countries in the region.

Of the manufacturing enterprises, 68% are mainly located in Phnom Penh and other major provinces such as Kandal, Kompong Cham, Kompong Speu, Preah Sihanouk, and Svay Rieng. Such concentration of manufacturing enterprises may cause concerns over negative impacts on key natural resources such as land use, water supply and sanitation, waste treatment, and air pollution. Furthermore, the areas needed for new factories are projected to substantially increase in the future.

The situation poses an urgent need for undertaking integrated spatial planning to identify suitable location for responding such rapid expansion and high concentration of manufacturing enterprises. It is utterly important to link the provision of adequate physical infrastructure, such as waste management, transportation, and other public utilities to the new factory and economic zones.

2.7.6 Regional and International Trade

Strategically located in the centre of this dynamic and growing Asia, in particular South East Asia, Cambodia is well-positioned to play an active role in the global and regional trade. Cambodia can be an attractive investment destination, especially with the ASEAN Economic Community (AEC) establishment in 2015. Inflow of capital would imply larger demands on land and natural resource base.

Most of the fast-growing exports (garments, footwear, light manufacturing, processed food, milled rice, cassava, rubber, tourism, and silks) rely heavily on imported raw materials and local natural resources. Their resource and energy efficiency is low, and solid waste including hazardous substances, and waste water management are also areas that need attention as a means to mitigate early on the possible negative impacts of some of the activities associated with various exports.

It is important to be conscious of its environmental impact and reputational risk that potentially affect trade, products' competitiveness, and the consumers' reaction.

2.8 GOVERNANCE

Good governance is critical for achieving sustained and stable social and economic growth, and a shift toward sustainable and green economy in Cambodia. The governance covers both the institutional aspect such as sets of legal rules and procedures, organizational arrangements - state, non-state, and informal actors whose activities are supposed to be guided by the rules of the game of the institutions in which they participate, and the quality process for communication and knowledge management, fair allocation and access to key assets, decision making, implementation, accountability, and collective learning.

Many sustainable development problems are caused by poor "enabling" factors such as ineffective cross-sector coordination among key line ministries and institutions and other key actors, incomplete legitimate tenure rights system, inadequate recognition of rights, and law and policy enforcement and compliance, and the lack of information provision and public awareness on issues at stake.

Cambodia's governance for environment and natural resources has significantly improved overtime. A stronger and more modernized environment and natural resources governance is needed by encouraging and promoting cross-sectoral institutional arrangements, delegation and decentralization, improved accountability, information sharing and participation, effective legitimate tenure rights regime and accelerating innovation, strengthening land use planning and classification, natural resources management and application of polluters, and user pays principles.

It is important to strengthen the integration and interaction among institutions or architecture of governance by improving merger and demarcation of responsibilities and accountability, and coherence among relevant policies, strategies, action plans, and programs.

Some remarkable inter-ministerial collaboration, institutional reforms and environmental governance modernization have been carried out in the areas of coastal zone, forest and biodiversity management by MoE, MAFF, Ministry of Tourism, NCSD, and so on. The environment and natural resources code development process has progressed well and is expected to result in an improved enabling environment for achieving pro-poor and sustainable environment and natural resources development and management.

Another spectrum of good institutional challenge affecting capacity and efficiency is the pace and quality of cross-sectoral coordination and integration, and decentralization and de-concentration (D&D). Further attention to the transferring of functions and responsibilities and financial resources allocation as well as technical and managerial capacity to subnational levels of administration – municipality, provinces, cities, districts and communes are needed. The current efforts by relevant line ministries in delegating certain functions such as solid waste and water-waste management must be further scaled out and intensified.

It is important to overcome the constraints and capacity issues at the sub-national level to plan and manage effective work with a more impact-based training and resource mobilization support for the key institutions (national and sub-national) to sharpen their priorities.

In addition, the recognition of procedural rights in particular the access to information, participation in decision making, and legitimate tenure rights are also key factors for improving governance. It will be also crucial to address inconsistency and gaps in laws, policies and strategies, as well as strengthen law compliance and enforcement.

2.9 SOCIOECONOMIC RESPONSES TO IMPROVE STATE OF ENVIRONMENT

The sustainable development principles are enshrined in the 1993 Constitution. The RGC has adopted a number of laws, strategies, policies, and major programs focusing on promoting sustainable development, green growth, and environmental management.

2.9.1 Rectangular Strategy Phase III and NSDP Environmental Priorities

The RS Phase III identified "environment and natural resources management and managing impacts of climate change on Cambodia's ecological systems and socio-economic development" as key challenges to be addressed in a collaborative manner. It requires all subsequent strategic plans, action plans, and programs to be sensitive and responsive to all these issues by putting forth actionable proposals for achieving the intents.

Environmental sustainability was identified as one key aspect of the overarching environment for the sustainability of Cambodia's economic growth and social development. RS Phase III and NSDP identified the following environmental priorities:

(i) sustainable management of natural resources;
(ii) intensifying efforts to reduce impacts of climate change by strengthening adaptation capacity and resilience to climate change and green development;
(iii) strengthening technical and institutional capacity to promote their mainstreaming into the policies, laws, and plans at national and sub-national levels; and
(iv) continuing to introduce measures to conserve environment and ecosystems.

2.9.2 Other Sectoral and Thematic Responses

Series of laws, policies, strategies and action plans have been adopted to respond to urgent needs. Based on recent review, majority of them were developed and implemented mainly based on the sectoral approach, sponsored by concerned ministries in collaboration with other line ministries and institutions.

Strategies and Action Plans Related to Sustainable Development

A series of strategies and action plans for promoting environment and natural resources sustainability were adopted and implemented, for instance, the 2009 Cambodia National Sustainable Development Strategy (NSDS), National Strategy and Action Plan – Mangroves for the Future 2014-2016, National Policy and National Strategic Plan on Green Growth (2013-2030), and the 2014 National Protected Area System Strategic Management Framework. All of them are intended for ensuring environmental sustainability, human wellbeing, and social and economic development, and for guiding sustainable development goals and meeting international obligations. Their success in the implementations is remarkable in spite of the challenges in financing and resource mobilization and the technical and institutional capacity limitations.

Climate Change and Disaster Risk Reductions

Remarkable progress has been made in developing policy responses to climate change. This mainly due to vast public interest and financial and technical support from development partners. A series of national and sectoral strategies and action plans related to climate change have been adopted, for instance, National Adaptation Plan of Action to Climate Change (NAPA), Strategic National Action Plan (SNAP) for disaster risk reduction, Cambodian Climate Change Strategic Plan (CCCSP), 15 sector level CCSPs, and Climate Change Action Plans 2016-2018. The climate change responses seem to be well-developed through dual-track planning approach – CCCSP and Sector CCSPs.

Cambodia's Intended Nationally Determined Contribution (INDC) Report was submitted in December 2015. It maps out the steps to address climate change adaptation and mitigation in different sectors (e.g., agriculture, infrastructure, forestry, human health, and coastal zones) and mitigation of climate change in renewable energy and energy efficiency.

Cambodia has to ensure a high momentum in sustaining the interest and meeting the expectation through successful resource mobilization, and delivering high performance for all climate change related strategies and action plans.

Climate Change Mitigation from Deforestation and Forest Degradation

The RGC has considered REDD+ as an effective global initiative that will contribute to mitigating impacts of climate change in agriculture, forestry and related sectors. Cambodia REDD+ Strategy provides an opportunity to support the Ministry of Agriculture, Forestry and Fisheries, the Ministry of Environment, and relevant stakeholders, including local communities and indigenous people in their efforts to sustainably manage forest resources.

The vision of Cambodia's National REDD+ Strategy is to contribute to national and global climate change mitigation by improving the management of its natural resources and forest lands.

Biodiversity and Ecosystem Services

The RGC's 2016 National Biodiversity Strategy and Action Plan (NBSAP) commits and guides actions for mainstreaming biodiversity considerations in the relevant policies, strategies, plans and programs, and more specifically by integrating biodiversity into economic development and legal and institutional reforms.

Recently, the RGC adopted the National Action Plan for Zero Hunger Challenge, 2016-2025, which integrates specific policies and strategies in areas such as agriculture, rural development, and health with cross-sector issues including climate change, disaster risk reduction, resilience to natural disasters, and gender equality. The plan represents a key pillar of commitment by the RGC towards achievement of the Sustainable Development Goals (SDGs). However, to achieve all those commitments, it requires a significant mobilization of the financial and human resources and a stronger cross-sectoral and inclusive institution and organization.

Other Sectoral Strategies and Action Plans

There are several sector specific strategies and action plans that need to be taken into account including the following: National Protected Area Strategic Management Plan 2017-2031; National Forest Program 2010-2029; Water Resources Policy 2003; Agricultural Sector Strategic Development Plan 2014-2018; Plan of Action for Disaster Risk Reduction in Agriculture 2014-2018; Cambodia National Policy For Fisheries 2005; Strategic Planning Framework for Fisheries 2010-2019; National Strategic Plan for Aquaculture Development in Cambodia; Industrial Development Policy 2015–2025; Mineral Resources and Petroleum Strategic Framework and Work Plan 2014-2018; Action Plan for Reduction in Electricity Price at the National and Subnational levels 2015-2020; National Strategy on Rural Water Supply; Sanitation and Hygiene 2011-2025; Rural Development Strategic Plan 2014–2018; and other relevant tourism strategy and action plans.

All of these are at different stages of implementation and achieved some remarkable success, while some of them need to be updated to reflect the recent development in the forest reforms, climate change, and the calls for mainstreaming of sustainable development, climate resilience, green economy, and pro-poor development.

2.9.3 Top Priority Issues

The RGC has taken several measures to manage and reduce environmental and natural resources pressure and loss, particularly, the designation of a wide network of protected area system and biodiversity conservation corridors, institutional reform and vigorous law enforcement against the passiveness and unsustainable management of the economic land concessions and illegal logging and wood smuggling. More concerted and well-resourced continuous efforts are necessarily required to effectively manage the drivers and impact on the natural capital, especially by addressing limited financial resources and capacities, poor awareness of the value, and vulnerability of the natural capital critical for the country's sustainable development.

The review of those strategic documents, plans, and programs shows that some of the adopted cross-cutting or sector strategies and action plans have limited success in their implementation and follow-ups, mainly due to limitation in financial, technical and management capacity, over-crowded but unrealistic or unattainable priorities being identified, and lack of effective coordination and collaboration. In some cases, the lead

ministries or institutions for cross-cutting strategies are often seen relatively "weaker" in terms of budget allocation and capacity for ensuring consistent implementation, follow-up, monitoring and evaluation compliance and enforcement, and the coordination and monitoring.

The interplay and coordination among concerned stakeholders during problem and priority identification, formulation, implementation and monitoring, and evaluation need to be further strengthened.

Other top priorities identified by the NESAP Inter-Ministerial Task Force are summarized in Table below:

Table 2: Top Priority Issues for NESAP 2016-2023

Nº	CRITICAL GAPS AND RISKS	RISK MANAGEMENT OPTIONS
1	**Political Risk**	
1.1	Political will at the sector and institutional levels to apply integrated cross-sectoral coordination and mainstreaming of sustainability in budgeting and planning.	• To focus on awareness raising and political will. • To reinforce long-term sustainability vs. short-term gain. • To promote NCSD and policy-makers as champion for sustainability and social well-being. • To support well-facilitated process involving all relevant institutions, DPs, private sector, and CSOs.
1.2	Application of integrated approach in development planning is constrained by compartmentalized institutional arrangement and lack of cross-sectoral inclusiveness.	
2	**Institutional Risk – weak cross sectoral coordination and inclusiveness**	
2.1	• Environmental and natural resources management are cross-cutting and cross-sector in nature. However, they are sub-divided or overlapped by various ministries and institutions; • Coordination and integration remain the biggest challenge; and • Difficulties in harmonizing diverse national, sectoral, and local interests affecting respond to local needs and urgency.	• To build on commitment to place environmental sustainability in the development framework and local democratic development through NCSD and NCDD. • To serve as planning and resource mobilization tools to strengthen cross-sector coordination and inclusiveness. • To promote an integrated approach and subsidiarity principle through the existing local mechanism (under NCDD).
3	**Technical and Financial Risks: Limitation in human and financial resources, and scope and continuity**	

3.1	Challenge to current structural reform efforts in forestry, eco-tourism, protection and preservation of forest, and coastal zones.	To support NCSD and others in mobilizing necessary resources and implement actions for strengthening structural reform efforts.
3.2	Scope and duration for capacity development and technology transfer are limited.	NESAP 2016-2023 supports in: • Carrying out sustainable capacity development and technology transfer, and financial mechanism from government's source. • Strengthening financial and technology transfer and public and private partnership in sustainable and green investment.
3.3	Quality of technical data and database is limited and data sharing is systematically constrained.	Support NCSD and other institutions in strengthening data collection, data exchange, knowledge base management and integrated sector analysis and communication.
3.4	• Strategies and plans often don't reinforce each other. • Competition for limited financial resources is extremely fierce. • Failure to mobilize funding and loss of momentum, political commitment, and enthusiasm.	• To develop strategy and roadmap for mobilizing financial and technical support needs for NESAP 2016-2023 implementation. • To address disconnection between support from development co-operation and national priorities. • To work closely with MEF, CDC, and others to work in a proactive manner with development partners and investors.
3.5	Too small and too fragmented intervention and too ambitious and too complex undertaking.	• NESAP 2016-2023 must be at all times practical, implementable, and flexible with a feedback mechanism. • NESAP 2016-2023 needs to generate quick wins.
3.6	Incorporation of environment and natural resources sustainability in sub-national planning and programming is still limited or absent.	Substantial resources and support to sub-national level for mainstreaming natural resources and environment sustainability are required.
4	**Low awareness and lack of technology and innovation**	
4.1	Economic and social growth outpaced capacity and awareness for ensuring long-term sustainability.	• Political commitment needs to be maintained. • Support NCSD and partners' efforts to generate evidence, dissemination, and achieve policy influence. • Support appropriate institutional structures, human and financial resources, monitoring, and oversight.
4.2	Lack of proper evidence and acceptance of the present and future economic cost from natural resources and environment degradation to human health.	

4.3	An acute shortage of both physical, financial and human resources, especially with respect to positive change in professional attitude and discipline (ownership and leadership).	Need for addressing knowledge transfer and capacity building - addressing inadequate absorbing capacity, brain-drain, and attitude of both providers and recipients regarding technology transfer and capacity development.
4.4	Lack of robust M&E, researches and learning process - the analysis and information with a robust baseline and monitoring progress in addressing identified issues.	• Functional and independent bodies or processes (NCSD, MOP) for M&E. • More investment in data collection and developing agreed indicators based on structured SDGs. • Improve analytical facility and laboratory, data, equipment, tools and methodology, and standards.

CHAPTER 3

VISION, MISION AND STRATEGIC GOALS

CHAPTER 3

VISION, MISSION, AND STRATEGIC GOALS

3.1 RATIONALE

It is evident that the rapid socio-economic development and modernization have outpaced the environment's institutional and organizational capacity. The long-term economic and social cost from the short-term economic gains needs to be properly addressed. Doing business as usual is not an option for Cambodia to develop towards a green, low-carbon, climate-resilient, equitable, sustainable and knowledge-based society.

The current state of environment is under significant pressure; and to meet the future growth, Cambodia needs a sustainable supply and benefit of the environment and natural resources, and new innovative approaches and technology to improve their efficiency and sustainability. Accordingly, NESAP 2016-2023 is to contribute to leveraging continued in-depth reform and modernization of the environmental and natural resources governance and management for a long-term growth and development.

The RGC and Cambodian people will be much better positioned to mainstream and work toward achieving balanced and long-term development if the following three Hs are secured:

1. Head – when there is strong political will starting from the highest to lower administration to commit themselves to the cross-sectoral coordination, and inclusive and sustainable development.
2. Heart – all key actors and decision-makers are committed and devoted to the common goals for moving toward pro-green and equitable development; and
3. Hands – human resources, financial resources, and science and technology are available for informing decision-making and sustaining actions to achieve the agreed vision, mission, goals, and objectives.

NESAP 2016-2023 is coherent with existing processes, strategies and international obligations, and is built upon the assessment of current policies and strategies of the RGC, development partners' support, and ongoing and planned programs to ensure that it is indeed complementing and supporting them as appropriate. It is also to contribute to the realization of Cambodia's commitments and international obligations under the bilateral and multilateral environmental agreements in climate change, sustainable development goals, biodiversity, biosafety, wet-lands, natural and cultural heritage, green growth, environmental pollutions, persistent organic pollutants, hazardous substances and wastes, ozone layer, environment and natural resources, and marine environment.

3.2 VISION

The main purpose of NESAP 2016-2023 is to identify needs and opportunities for placing the environment and natural resources sustainability as one of the centralities in the national development framework. Hence, NESAP sets its long-term vision as follows:

"To strengthen enabling conditions and leverage for the environment and natural resources management and conservation for sustainable and stable socio-economic development in Cambodia"

3.3 MISSION

In order to realize above vision, NESAP 2016-2023 focuses on putting environmental sustainability and inclusive growth that are at the heart of Rectangular Strategy, NSDP, and other sectoral policies into action.

The mission of NESAP 2016- 2023 is to:

(i) Provide a roadmap for resource mobilization and actions for ministries and institutions, private sector, civil society organizations, and development organizations to achieve sustainable and inclusive development.

(ii) Identify priority sectors and concrete programs and projects which NESAP 2016-2023 can focus on in the near term to demonstrate opportunities and benefits in shifting to sustainable and inclusive development.

The vision and mission are to be achieved through sustaining current in-depth reform and modernization of the environmental and natural resources governance to be aligned well with social and economic modernization. The focus will be placed on modernizing resources use and preservation planning, securing balanced development and conservation, improving resource efficiency and productivity, and reducing waste and pollution for improving human health and well-being.

First of all, the NESAP 2016-2023 must focus on promoting the role of the NCSD and its member institutions, and other key stakeholders to raise awareness and understanding, promote gender mainstreaming, and to work toward achieving the reflection of the inclusive and growth priorities in the national budget allocation and development framework.

By 2023, the NCSD, line ministries and institutions, and other key stakeholders are fully committed to and capable of advancing and securing cultural, economic, social, and environmental sustainability by mainstreaming it into the national development frameworks, and adopting sustainable financing mechanisms, and monitoring, evaluation, and learning process.

3.4 GOALS AND OBJECTIVES

The NESAP 2016-2023 strategic goal is to leverage in-depth reform and modernization of the management and conservation of environment and natural resources through well-planned and executed actions for improving resources use efficiency and productivity, sustainable financing mechanism, and reducing waste and pollution and improving human health and well-being.

In order to achieve the vision, mission, and goals of NESAP 2016-2023, considering the critical gaps, priorities and key principles of sustainable development, NESAP 2016-2023 has identified four major strategic objectives as follows:

Strategic Objective 1: To strengthen cross-sectoral collaboration and relevant legal instruments and guidelines to improve coordination, regulation, and delivery functions for sustainable development outcomes.

Strategic Objective 2: To improve resources use efficiency for healthy environment and social well-being, while increasing business competitiveness and incentivizing technological innovation.

Strategic Objective 3: To develop and implement financing mechanisms, benefit-sharing schemes and fund mobilization plans for investing in the modernization of the management and conservation of environment and natural resources.

Strategic Objective 4: To raise public awareness, build individual and institutional capacities, promote technology transfer and strengthen the application of monitoring

science and technology to improve the management and conservation of environment and natural resources.

3.5 STRATEGIC FRAMEWORK

The strategic framework provides an action plan on how the vision, mission, goals and strategic objectives can be achieved, and how it can be monitored, readjusted and learned from as required within the time-frame of the current NESAP 2016-2023.

2.5.1 Strategic Analysis

NESAP 2016-2023 identifies and promotes implementation of activities designed for supporting, advising, and advancing sustainability measures, and contributing to the country's performance towards achieving the SDGs. By allying closely with the overall RGC's efforts for achieving localized SDGs, NESAP 2016-2023 positioned itself well to contribute to addressing challenges and reap the opportunity from national and global efforts for SDGs.

As many environmental issues are cross-sectoral in nature, the coordination across government ministries and institutions, especially fragmentation in jurisdiction to manage, develop, and conserve the natural resources and ecosystem, must be further addressed. NESAP 2016-2023 supports the core objective of SDGs by strengthening institutional and organizational capacity along the principles of good environmental governance and rule of law, sustainable financing mechanism, and promotion of green economy.

NESAP 2016-2023 will focus more on human capital development and improved livelihoods of people, and reduced poverty incidence including those near poor and new poverty to enjoy sustainable and inclusive growth.

NESAP 2016-2023 will reap SDGs' strategic platform, global investment funds opportunity resource mobilization, public and private investment, and other revenue, as source of finance for sustainable development.

While trying to be comprehensive and overarching overtime, NESAP 2016-2023 identifies medium and short-term priorities for achieving quick wins to demonstrate and encourage innovative solutions and behavior change (visible improvements in performance, recognition and reward, and compliance and enforcement).

Moreover, the development of NESAP 2016-2023 is guided by the following guiding principles:

Emphasis on prevention and efficiency gain. In order to promote competitiveness and resource efficiency, NESAP 2016-2023 should emphasize more on prevention than restoration since restoration and end-of-pipe pollution control and abatement are costly.

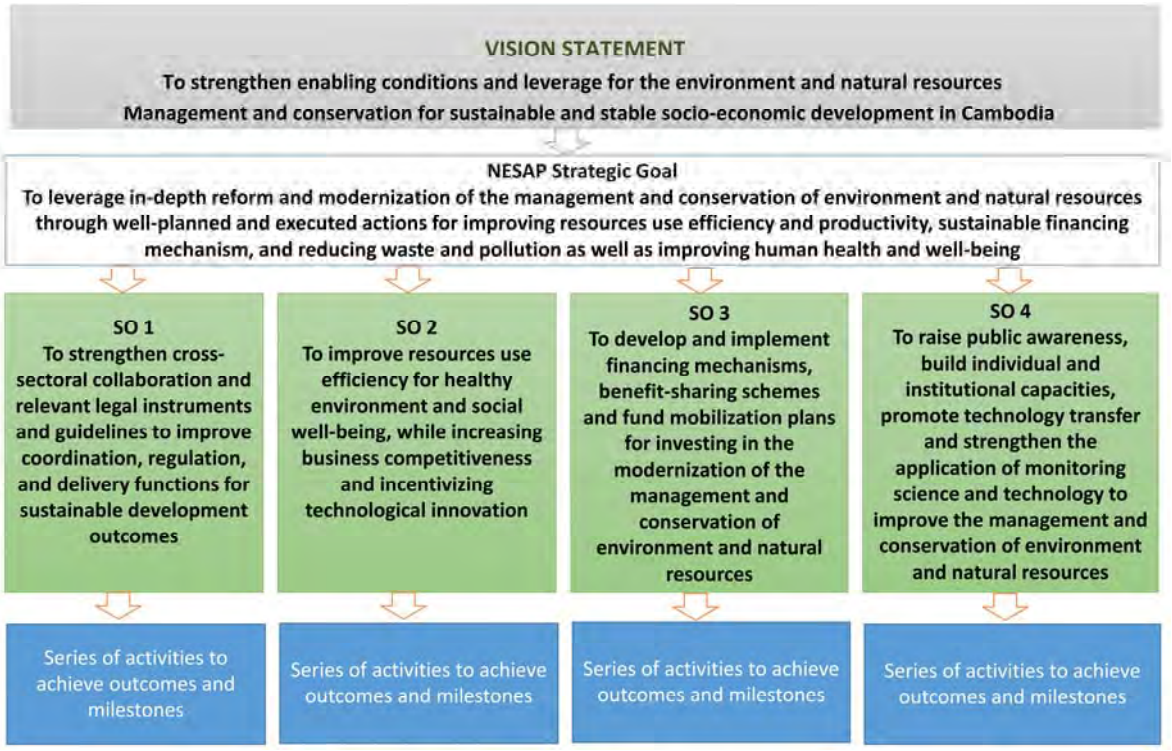
Right balance between command-and-control and other incentive instruments. Considering the current institutional capacity, it is imperative to ensure proper internalization of the management and conservation of environment and natural resources based on polluter-pays and user-pays principles, green investment incentives, and other incentive based policy instruments, public disclosure and environmentally friendly certification schemes, and related measures.

Participatory and broad-based ownership. The programs and projects should be in line with development priorities, and collective knowledge and learning experience of stakeholders to generate broad-based ownership. The interventions should also be socially and culturally sensitive.

3.6 COMPONENTS

The NESAP 2016-2023 components are designed to achieve its vision, mission, goals, and strategic objectives as shown in Figure 3.1 below.

Figure 3.1: Components of NESAP Strategic Framework



3.7 ACTION PLAN

The action plan provides specific steps and timetables to implement the strategy. It summarizes main outputs and activities with respect to each desired objectives and outcome of the NESAP 2016-2023 as shown in Appendix A1.

3.7.1 Outputs and Outcome Component of Strategic Objective 1

Outcome 1	**Cross-sectoral institutional arrangement, legal and policy instruments, finance and human resources, and engagement became highly functional and effective**

To achieve outcome 1 and strategic objective 1, the following main activities are required to be carefully planned, resourced, implemented, and monitored:

Objective 1.1: To strengthen cross-sectoral coordination for mainstreaming environment and natural resources sustainability

1.1.A. To strengthen the NCSD capacity and capability to perform effectively as an inter-ministerial and inter-agency cross-sectoral body directly accountable to the RGC.

1.1.B. To secure and strengthen political willingness and institutional capacity for improving consistency and enforcement of environmental and sector specific legislations, and strengthening access to information, ensuring public participation and promoting environmental governance.

1.1.C. To effectively communicate with the policy-makers, private sector and other key stakeholders on the socio-economic importance of environment and natural

resources, and to make sure that these benefits are considered in planning, policies, and investments.

Objective 1.2. To strengthen and scale up inter-ministerial collaboration for promoting sustainable use of environment and natural resources

1.2.A. To promote cross-sectoral collaboration for sustainable eco-tourism within the protected areas and other conservation areas.

1.2.B. To promote inter-ministerial collaboration mechanisms such as NCSD, NCDD, National Committee for Cambodian Coastal Zone Management and Development etc.

1.2.C. To promote cross-sectoral collaboration for preventing and responding to disasters from oil and dangerous cargo spills, forest conversion and forest fires in key watersheds of Tonle Sap and coastal zone.

Objective 1.3. To strengthen and scale up land-use spatial planning and classification for promoting land productivity and sustainability, and reduced poverty

1.3.A.To promote technical coordination and development of practical guidelines in line with existing commune land-use mapping guidelines, and international standards such as the FAO Voluntary Guidelines on Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security.

1.3.B. To develop participative soil mapping and land use classification and zoning tools to rationalize land allocation for agricultural and other economic activities in all key eco-agricultural zones.

1.3.C. To set up and apply related land use planning and zoning policy and guidelines.

Objective 1.4. To promote good environmental governance for halting the loss of biodiversity and sustaining ecosystem services and functions

1.4.A. To conduct collaborative institutional and organizational capacity assessment, and to improve harmonization and collaboration mechanisms.

1.4.B. To promote participatory management of forestry and PAs and state land registration to ensure sustainability of biodiversity and ecosystem services and functions.

1.4.C. To render technical assistance and support to the rehabilitation and reforestation in the confiscated Economic Land Concession (ELC) areas and coordinating efforts to curb illegal logging and smuggling of forest products and wildlife through appropriate law reform and enforcement.

1.4.D. To curb encroachment into the PAs and to promote participatory, sustainable and equitable land and forest management.

1.4.E. To strengthen regulatory and policy compliance and law enforcement for the forestry and PAs.

1.4.F. To promote collaboration and partnership with civil society organizations (CSOs), local communities and key stakeholders in curbing illegal logging and land encroachment, monitoring and patrolling the protected areas and other forest areas.

Objective 1.5. To build institutional and human resources capacity for applying appropriate environmental policy tools and instruments and support implementation of environmental and natural resources code

1.5.A. To strengthen technical capacity and guidelines to apply Strategic Environment and Social Assessment (SESA), Cumulative Impact Assessment (CIA), Integrated Impact Assessment Process, Multi-criteria Assessment, and Costs

and Benefits Analysis to assess impacts and identify alternative development scenarios.

1.5.B. To build technical capacity in making the economic case on the management, conservation and mainstreaming of environment and natural resources, and policy enforcement.

1.5.C. To promote multi-sectoral collaboration and dependency of economic sectors.

1.5.D. To improve harmonization and collaboration in addressing impacts of economic development on environment and natural resources.

1.5.E. To promote the development and effective implementation of environment and natural resources legislations.

The implementation of these activities is designed to contribute to achieving and responding against the following SDGs:

SDG Goal 1. End poverty in all its forms everywhere – as environmental and natural resources degradation affect human health and poverty as significant number of Cambodians living just around the poverty lines, and **Goal 3. Ensure healthy lives and promote well-being for all at all age**s.

Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

Goal 17. **Strengthen the means of implementation and revitalize the Partnership for Sustainable Development**, **Goal 15**. **Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss; and, Goal 5. Achieve gender equality and empower all women and girls.**

3.7.2 Outputs and Outcome Component of Strategic Objective 2

Outcome 2	**Resources use efficiency measures are applied resulting in minimizing production inputs and pollution from air, solid, and liquid sources from industrial, urban, and agriculture for healthy environment and social well-being while increasing business competitiveness and incentivizing technological innovation.**

Cambodia depends on imported materials such as metals, minerals, fuels, and chemical substances, and on local natural resources such as water, land, forest, timber, clean air, and biodiversity which constitute vital inputs for keeping Cambodia's economy functioning. Becoming more resource efficient will contribute to delivering the RGC's objective of sustainable growth by boosting productivity and minimizing waste.

The pollution control improvement is also another part of the RGC Strategy to shift towards sustainable growth and social-well-being, since health and environmental issues caused by air, solid, and liquid waste from urban centers and industrial establishments are growing.

To achieve outcome 2 and strategic objective 2, the following main activities are required to be carefully planned, resourced, implemented, and monitored:

Objective 2.1: To promote development and application of innovative technology, products and services

2.1.A. To conduct sectors and issues analysis of resource use efficiency and potentials for taking concrete actions.

2.1.B. To investigate and apply policy design and technical measures for reducing production inputs consumption and waste reduction.

2.1.C. To promote effective measures in the better use of eco-design and the application of reduce, reuse and recycle (3Rs) principle.

2.2.D. To develop “Roadmap to a Resource Efficient” to generate political attention and stimulate specific policies and action with selected private sector.

2.1.E. To promote public awareness on the root-cause of low efficiency and means for improving resource efficiency.

2.2.F. To implement and promote compliance with the “Roadmap to a Resource Efficient” on selected factories in and around key cities and sensitive eco-zones.

Objective 2.2: To promote inclusive, safe, resilient, and sustainable cities and human settlements

2.2.A. To conduct sectors, issues and potentials analysis of inclusive, safe, resilient and sustainable cities and human settlements for taking concrete actions.

2.2.B. To develop and promote the implementation of an operational and collaborative framework that help cities realize their aspirations to develop greener and more livable environments.

2.2.C. To promote and implement new thinking and innovation for the development of urban planning, engineering design and environmental management in order to achieve sustainable cities

2.2.D. To generate consensus and exchange experience for promoting green, livable, and sustainable cities.

2.2.E. To implement relevant green city development plans in major and secondary cities, support the RGC in prioritizing actions for green city, and develop the required stakeholders’ support and mobilization of investment.

Objective 2.3 To support national line institutions and sub-national administrations in improving waste management and 3R (Reduce, Reuse and Recycle) targets.

2.3.A. To conduct baseline study to help develop objectives and targets in law, policy, and relevant guidelines for a better managed and improved waste management.

2.3.B. To design and implement economic measures, including smart agriculture, instrumental in improving waste management.

2.3.C. To strengthen monitoring and compliance of relevant laws, policies and guidelines by key industries and enterprises.

2.3.D. To promote shared responsibility and understanding through promoting social responsibility for the preservation and protection of environment and natural resources starting from clean and green households and community.

2.3.E. To promote public awareness for minimizing plastic bag use and unorderly disposal.

Objective 2.4. To improve chemical and hazardous waste management

2.4.A. To conduct assessment on the capacity need of stakeholders at national and sub-national levels, especially those of entities handling or generating chemical and hazardous wastes.

2.4.B. To set up an enabling policy framework and map of vulnerable areas to chemical and hazardous wastes for improving chemical and hazard waste management, including capacity for monitoring, rewarding and enforcing environmental standards.

2.4.C. To design and deliver capacity development activities in management and use of chemical and hazardous substances and wastes, focusing on occupation health and safety guidelines, separation, storage, treatment, and disposal.

2.4.D. To design and deliver capacity development in legislating, assessing, monitor and enforcing relevant laws and policies.

2.4.E. To promote public awareness and the development of management plan for chemical and hazardous wastes, and plan for health and safety for workers, farmers and miners.

2.4.F. To develop and strengthen in-country accredited laboratories for environmental analysis and compliance promotion.

The implementation of these activities is designed to contribute to achieving and reporting against the following SDGs goals and targets:

Goal 3. Ensure healthy lives and promote well-being for all at all ages,
Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all,
Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation;
Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable; and,
Goal 12. Ensure sustainable consumption and production patterns.

3.7.3 Outputs and Outcome Component of Strategic Objective 3

Outcome 3	**Financing mechanism, benefit-sharing schemes and fund mobilization plan are adopted for investing in green economy and sustainable livelihoods**

For the strategic and action plans' implementation to be successful, funding and capacity must be mobilized from domestic revenue collection and resource mobilization. The Strategic Objective 3 is to achieve higher budget allocation and sustainable financing mechanisms for environmental and natural resource conservation and management as well as for promoting sustainable development. Long-term sustainability consideration needs to be integrated into the main steps of planning and budgeting process.

To achieve outcome 3 and Strategic Objective 3, the following main activities are required to be carefully planned for, resourced, implemented, and monitored:

Objective 3. 1: To strengthen proper internalization of environmental costs and use of fiscal, policy and economic instruments and process

3.1.A. To review existing laws and policies related to economic and fiscal instruments to raise revenues for sustainable conservation and management of natural resources and environment.
3.1.B. To conduct baseline analysis of current practices and gaps for promoting and scaling up sustainable natural resources and environment practices and tools.
3.1.C. To demonstrate the benefit and potentials for embracing and embedding the fiscal, policy and economic instruments, and process.
3.1.D. To create innovation incentives and promote fiscal consolidation through piloting fiscal measures such as forestry royalty and environmental trust fund schemes.
3.1.E. To develop a specific enabling framework for technical and grant support to local communities and small landholders in sharing economic benefits from the conservation and management of local natural resources.
3.1.F. To document and disseminate lessons-learnt.

Objective 3.2: To integrate sustainability and inclusiveness principles in budgeting, bank lending, and other financing arrangements

3.2.A. To study options and pilot concrete actions to secure higher budget allocation for sustainable conservation and management of environment and natural resources.

3.2.B. To provide technical support, capacity strengthening and tools to MOP and MEF in conducting costs and benefits analysis to screen proposed project investments.
3.2.C. To provide technical support, capacity strengthening and tools to line ministries to enable them to integrate sustainability and inclusiveness into the ministries' budget plan.
3.2.D. To conduct regular Public Environmental Expenditure Review (PEER) and costs and benefits analysis of environmental sustainability to propose the RGC and MEF to provide higher priority for the conservation and management of environment and natural resources.

Objective 3.3: To support systematic social and economic development decision making and risk management

3.3.A. To assess relevant risk management approaches for environmental decision making aimed at developing decision-making processes consistent with sustainable development principles.
3.3.B. To study and increase understanding of the impacts of changing environment on public health, poverty, gender inequality and other associated risks in a scientific and evidence-based manner.
3.3.C. To adopt and apply risk management tools and knowledge base for applying preventative and precautionary principles to decision making.
3.3.D. To develop technical capacity in risk assessment, risk prioritization, risk management and risk mitigation, and integrating the results from these technical exercises in decision making.

The implementation of these activities is designed to contribute to achieving/reporting against the following SDGs:

Goal 1. End poverty in all its forms everywhere;
Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable;
Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development.

3.7.4 Outputs and Outcome Component of Strategic Objective 4

Outcome 4	**Public awareness is raised, sound environmental management capacities are built, and science and technology are used to close gaps in environmental standards, green skills, and green employment opportunities**

The RS-Phase III and NSDP 2014-2018 set the policy targets for promoting economic growth, creating jobs, equitable distribution of the fruits of growth, and ensuring effectiveness of public institutions and management of resources in Cambodia in face of the climate change, disaster risks, and other impacts.

The Strategic Objective 4 sets priority areas to promote knowledge-based economy by strengthening skilled and productive labor through promoting private sector participation, high quality education, impact-based training, scientific research, and technology development and innovation.

To achieve outcome 4 and Strategic Objective 4, the following main activities are required to be carefully planned for, resourced, implemented, and monitored:

Objective 4.1: To develop and implement systematic program for technology development and transfer for environment and natural resources conservation and management and disaster risk management

4.1.A. To map the areas where lack of science, technology and skills in Cambodia.
4.1.B. To develop program for educational cooperation and skills and technology transfer with countries and organizations of high expertise.
4.1.C. To exchange and learn from experiences and practices from countries in adopting and promoting sustainable natural resources and environment practices and tools, sustainable financing mechanisms, and disaster risk reduction.
4.1.D. To conduct regular events and exchange visit for government officials, education establishments, and CSOs.
4.1.E. To set-up and support knowledge management (KM) network and capacity for application of sound environment science and technological monitoring.
4.1.F. To incorporate the sustainable environment and natural resources objectives into education curriculum, research and development (R&D), and innovation policies.

Objective 4.2: To strengthen public awareness and application of informed environmental decision making

4.2.A. To raise political and public awareness and response for promoting sustainable environment and natural resources conservation and management.
4.2.B. To promote application of informed environmental decision making process and tools, and proper assessment and monitoring based on scientific evidence and knowledge.
42.C. To pilot green practices for developing central assets needed for promoting green economy.
4.1.D. To conduct more regular impact-based training, capacity development events and cross-country learning for government officials, education establishments, and CSOs.
4.2.E. To increase awareness on environment and climate change topics through public outreach programs and reports on environmental performance.
4.2.F. To manage and promote broad application of knowledge, planning, monitoring and evaluation for ensuring environment and natural resources sustainability.
4.2.G. To continue building capacity and capability of relevant institutions to monitor, report, and take action based on well-informed decision.
4.2.H. To ensure free access to all information related to the environment and natural resources.

The implementation of these activities is designed to contribute to achieving/reporting against the following SDGs:

Goal 4. Ensure inclusive and equitable quality education,
Goal 6. Ensure availability and sustainable management of water and sanitation; and Goal
9. Build resilient infrastructure, inclusive and sustainable industrialization and innovation.
13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters, and 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.
It is also to contribute to: Goal 12. Ensure sustainable consumption and production patterns – Targets
Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development; Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development.

3.8 GOVERNANCE AND MANAGEMENT

The implementation of NESAP 2016-2023 will be oversighted by the NCSD in close collaboration with relevant member ministries and institutions, development partners, private sector, and CSOs. The NCSD as an inter-ministerial and inter-agency coordination body will play an active role in cross-sectoral coordination, strategic planning, and policy oversight to make sure that NESAP 2016-2023 will be implemented, followed up, and regularly reported.

The NCSD with the support from its council, executive committee, senior management and NESAP sub-committee (one of the sub-committees under NCSD) will play an active role in coordinating and mobilizing fund from relevant funding sources such as public financing, ODA, and other sources from traditional and emerging development partners, global funds, and private sources. The NCSD shall oversee and monitor the implementation of NESAP 2016-2023, provide strategic guidance, and be responsible for quality assurance. It shall meet annually to review and approve work plans and budgets and make major decisions related to NESAP 2016-2023 implementation.

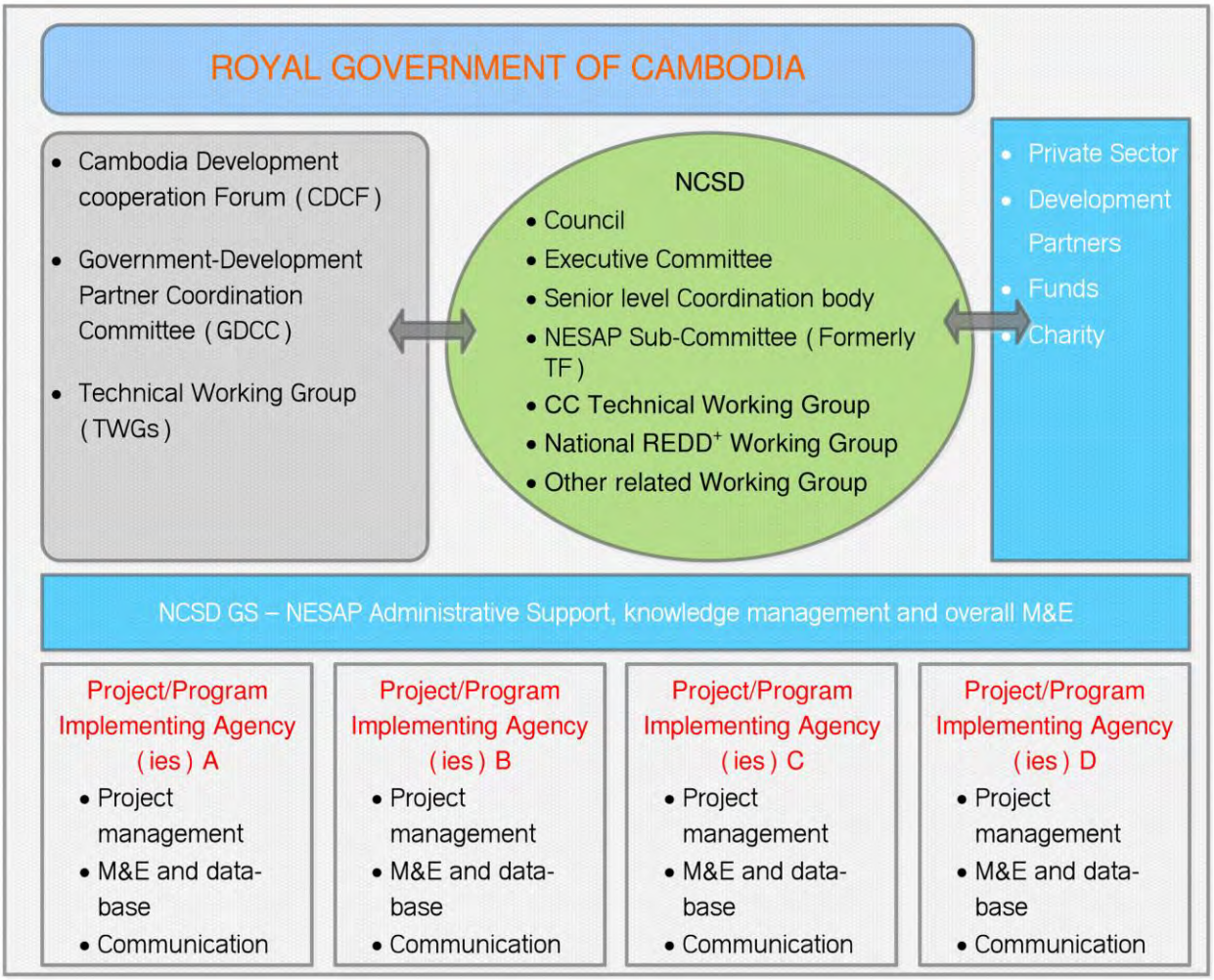
The MOE is responsible for environmental regulations and conservation, and sector ministries are responsible for sectoral development by mainstreaming natural resources and environment sustainability in their respective work plans. They will work closely with and report to NCSD in an effort to institutionalize and operationalize NESAP 2016-2023, and promote monitoring, reporting and learning process according to the overall Performance Framework for NSDP and SDGs. Hence, concerned government institutions will be responsible for developing and managing related programs and projects to achieve key outcomes, strategic objectives, and specific objectives and activities. They will also be responsible for monitoring and evaluating programs and projects under their purview, in close collaboration with relevant targeted beneficiary groups, communities, entities, development partners, and concerned CSOs.

The NCSD General Secretariat (GS) will administer the knowledge management, capacity building, and provide effective support to the coordination mechanism to help avoid duplication and capture synergies, and overall reporting, monitoring and evaluation.

Each program or project is managed and executed by relevant line agencies according to the program or project document. The national line ministries and institutions play a primary role in implementing activities to generate outputs (e.g. conducting sustainability assessments and applying good practices within planning and regulatory systems) and liaising with relevant stakeholders. Meanwhile, the national and sub-national partners will implement relevant activities.

NESAP's design also envisages increased participation of NCDD, and sub-national administrations as well as the local communities in decision making, planning, implementation as well as monitoring and evaluation (M&E) of various activities. For example, the local committees will play a leading role in site identification for the field demonstration activities, planning, and monitoring the implementation of the community based initiatives.

Figure 4: NESAP Governance and Implementation Arrangement



The national research institutes, universities, CSOs and experts will be engaged and informed where appropriate.

3.8.1 Program Formulation and Management

The program will be designed in close consultation with relevant key stakeholders and interested development partners. It is important to reach out to a number of global, regional and national partners, and to other development partners (donor organizations) active in Cambodia and the region. NCSD will work closely with relevant line ministries and institutions to maintain ongoing discussions with interested partners, identify existing and/or nascent initiatives which NESAP 2016-2023 could join, and stimulate with new energy, local expertise, and funding. Planning workshops can be organized to bring these stakeholder groups together for face-to-face program developments.

From the design, a program framework will be completed by incorporating work across scales. This framework identifies key strategies and outputs, and areas of pilot testing for influencing program and policy formulation. Indicative annual strategies, budgeting, reporting and planning cycle will be used to adjust plans to respond to changing context and opportunities.

CHAPTER 4

FINANCE AND MONITORING

CHAPTER 4

FINANCE AND MONITORING

4.1 FINANCING

The effective implementation of NESAP 2016-2023 relies strongly on the successful human and financial resources mobilization from different financing and investment channels with a special focus on the public investments.

The financial requirement for NESAP 2016-2023 are expected to be met by the RGC as cost-sharing and co-financing (in cash and kind), the development partners, relevant investment funds, and private sources for its implementation in the next seven years. As shown in Appendix A2 - MATCHING CURRENT AMD PIPELINE PROJECTS AND BUDGET WITH NESAP OBJECTIVES, over 72% of the 21 key objectives of NESAP 2016-2023 are covered or envisaged in current projects and programs and pipeline investments by key development partners and the RGC. The total available and pending budgets (mainly from grants) is around US$ 263,500,000.

The main financial critical gaps remain for key NESAP objectives such as i) cross cutting issues such as public awareness, capacity development and technology and science transfer, ii) financing sustainability and inclusiveness, and public private partnership in green and sustainable development, iii) chemical and hazardous waste management, support to solid waste and waste water management and decentralization, and iv) strengthening and scale up inter-ministerial collaboration modalities for promoting sustainable and multi-uses of environment and natural resources.

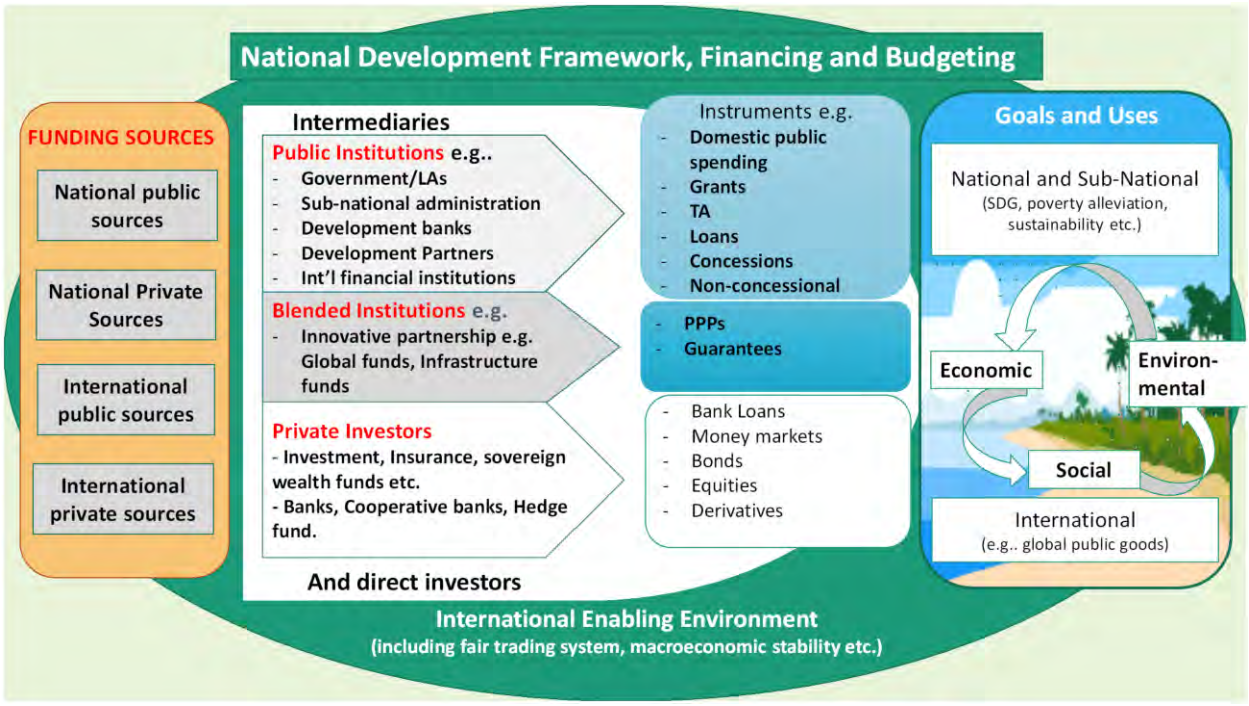
It is important to mobilize financial and technological supports. The program and project document designs will be developed in close collaboration with concerned national and international funding institutions and key stakeholders.

4.2 FINANCING MECHANISM

The national development framework is the main mechanism of which the RGC works with its development partners in setting the national development priorities. These priorities are then reflected in the 5-year National Strategic Development Plan (NSDP), 3-year rolling public investment programs (PIP), sectoral development strategies, investment programs and national budget.

There are various sources of financing in the national development framework, including 1) project and program funding, 2) trust funds 3) grant aids from donor institutions, NGOs and charities, 4) national budget derived from taxation, fees and sale of resources, goods and services, and 5) the rapidly growing private investment (domestic and international).

Figure 5: National Development Framework, Financing and Budgeting



It is extremely important that NESAP priorities and budget requirements are incorporated in the national development framework and budgeting. At the same time, it is urgent that an innovative and sustainable funding mechanism is established. Hence, NESAP 2016-2023 will rely on an improved access to and use of existing and emerging budget through the public financing, and those resources leveraged from private sector, development partners and global funds, as well as from progressive and innovative policy and fiscal instruments.

As all the potential funding vehicles and instruments will take time to materialize, it is important that the current NESAP needs to focus on quick win by delivering results in key fund mobilization and implementing high-priority activities right away. The development partners and partner organizations that involved in NESAP formulation have expressed their interests in collaboration for the implementation of NESAP 2016-2023. It is very critical to engage them in exploration for modality for funding and supporting NESAP 2016-2023 either through trust fund and basket funding or other forms, while the conditions for a sustainable financing mechanism is being established.

4.2.1 Leverage Innovative and Sustainable Funding Mechanisms

The RGC recognizes that for NESAP implementation to be successful, domestic revenue collection and resource mobilization is of number one priority. Public sector financing will be unable to fill the big financial gap in managing environmental sustainability, and constructing climate resilient low carbon infrastructure, and biodiversity conservation. To achieve innovative and sustainable funding mechanisms in Cambodia, it is important to systematically pursue the following steps:

- Better access to public financing;
- Deploying and further mobilizing economic and fiscal instruments to raise public finance and allocate them for environment and natural resources sustainability purpose;
- Incentivizing and leveraging private sector finance and reap SDGs and global funding opportunities;
- More effective use of ODA from development partners; and
- From piloting to up scaling sustainable financing mechanisms such as Payment for Ecosystem Services (PES) and biodiversity offsetting.

4.2.2 Improve Access to Public Financing

With the success in the Public Financial Management Reform Program (PFMRP) and strengthening in tax collection capacity, the RGC domestic revenue has remarkably increased. The increased state revenues on a yearly basis should be translated into higher budget allocation for sustaining environment and natural resources and increasing expenditure on air, land, noise, and water pollution control, hazardous waste management, climate change adaptation and mitigation, solid waste management, water supply, watershed management, protecting biodiversity and landscapes, and so on. The Public Environmental Expenditure Review (PEER), Climate Public Expenditure and Institutional Review (CPEIR) and costs and benefits analysis of environmental sustainability, are effective instruments to attach a higher priority to environment and natural resources management.

It is important to prove that investing in environmental sustainability is profitable in order to help NCSD and concerned line institutions to lobby for higher expenditure for the environmental sector. This can be evidenced by positive job creation, increased competitiveness in trade, and better access to global market.

Recently, the RGC has linked its public budget to prioritized policies through piloting program-based budgeting in 10 ministries. The full application of the program-based budgeting is expected in 2018 onward. It is important for the RGC, NCSD, and MEF to provide a clear guideline for all relevant ministries and institutions in mainstreaming environmental quality improvement and natural resources sustainability into sectoral strategies, action plans, and projects and programs, similar to those related to gender and climate change mainstreaming as cross-cutting themes.

As indicated in NESAP Strategic Objective 3, Objectives 3.2.B and 3.2.C, it is equally critically to provide technical support, capacity strengthening and tools to Ministry of Planning (MOP) and MEF in conducting costs and benefits analysis to screen proposed investment projects, and to support line ministries and institutions to enable them to integrate sustainability and inclusiveness components in the strategies, action plans, and programs to be included in the ministries' expenditure plan for submission to MEF with proper prioritization and costing information.

4.2.3 Deploy Economic and Fiscal Instruments

Innovative and progressive environmental tax reform has proved its effectiveness in mobilizing public financing for environment and natural capital management in our neighbouring countries by moving towards taxes and fees on natural resource consumption and pollution and green investment incentives.

PES and biodiversity or carbon offsetting are innovative approaches to the financing of natural resource conservation, green energy development, and climate change mitigation. Various PES initiatives have been taken place in Cambodia. We need to promote the implementation of innovative policy and financial tools to mobilize funding for natural resources and environment sustainability.

Cambodia's related laws stipulate the provisions for setting up the environment endowment funds and facilities for raising revenues for sustainable environment management. It is urgent to create and manage them more effectively and re-allocate some of the funds back for conservation, biodiversity habitat rehabilitation, or landscape management to bring tremendous environment and climate benefits to the society and people.

4.2.4 Incentivize and Leverage Private Sector Finance

The private sector is an important funding source. The RGC will also use development finance to unlock private sector investment. The RGC, in particular MEF, MoP, and MoE will play a more proactive role in incentivizing private sector investment in environmental protection and sustainable natural resources development. Added support from development partners are seen as catalyst to incentivize the shift from “brown” to “green” investments, including supporting R&D policies, SME skill upgrading, and public private partnership financing arrangement.

The RGC will also actively reach out to the social investors and philanthropies for promoting green development and inclusive growth.

4.2.5 More Effective Use of Finance from Development Partners

The development cooperation is also a critical source of technology transfer, capacity development, and a catalyst for regional cooperation. To date, bilateral and multilateral development finance is the largest channel to support environmental management and climate change adaptation and mitigation in Cambodia. It is critical for us to ensure environmental sustainability be further stressed as a country priority when developing country program with development partners to attract more attention to environmental issues, biodiversity conservation, protected areas management, and urban, agricultural and industrial pollution control, and gender mainstreaming.

Similar to mainstreaming environment into national policies and investments, the relevant ministries and development institutions should also build environmental considerations in their education, governance, food security, gender, tax regime, public health programs design, environmental policies, programs and projects and ensuring vulnerable communities, female and children can benefit from their implementation.

It is also important to tap in the relevant global funds such as the Climate Investment Funds (CIF), relevant Least Developed Country Fund, and Green Climate Funds.

4.3 MONITORING AND REPORTING

The purposes of monitoring, evaluation and reporting of NESAP 2016-2023 and its related projects and programs (M&E framework for NESAP 2016-2023) are:

1. To be accountable to all stakeholders, most importantly to our final beneficiaries, partners and other key stakeholders. NESAP needs evidence of its impact and its contribution to relevant SDGs and NSDP performance framework. NESAP coordinating, executing, and implementing entities must demonstrate how change is related to the outcomes; and to learn about these processes to adjust and change strategies, if necessary.

2. To support dialogue and influence the works within NESAP 2016-2023 and its programs, NESAP needs high-quality information (both baseline and periodic monitoring data) in a timely manner.

The M&E framework for NESAP 2016-2023 and its projects and programs will include a baseline assessment to be undertaken during the inception, annual internal review, a midterm strategic review, and an end of program external evaluation. Both baseline and periodic monitoring data for measuring against the agreed indicators and targets will be provided by the MoP from those set of data used for reporting against CMDGs (until 2015), SDGs, and NSDP performance framework and database.

The M&E framework for NESAP 2016-2023 encompasses several types of indicators and they will be measured on a semi-annual basis to track progress on the implementation status of NESAP 2016-2023 and its programs and projects (to be

developed) against the NESAP 2016-2023 generic indicators and targets, and specific project and programs.

An external evaluation is foreseen to be undertaken before the end of the NESAP 2016-2023. This evaluation will be designed mainly as a meta-evaluation and synthesis study, using the baseline, semi-annual, and mid-term, and annual outcome measurements. The evaluation will analyze these results and explain causal claims about the contribution to changes or achievement of set indicators and targets. The Design and Monitoring Framework for NESAP 2016-2023 is provided in Appendix A2 of this document.

The concerned project and programs proponents and key stakeholders including development partners and funding institutions will further refine those indicators and targets into their specific indicators and targets as well as means for verification. In spite of that, the projects and program specific M&E must be consistent with the overall national M&E framework for CMDGs, SDGs, and NSDP.

The NCSD with support from relevant NESAP projects and programs implementing institutions will periodically report to the RGC and concerned partners. The NCSD and concerned institutions may plan for regular NCSD Council Meetings and consultative meetings with partners to align with annual narrative and financial reports, and submission of next stage annual plan.

CHAPTER 5

CONCLUSION – WAY FORWARDS

CHAPTER 5

CONCLUSION – WAY FORWARDS

The RGC has taken several measures to manage and reduce environmental and natural resources pressure and loss. More concerted efforts with adequate resources are necessarily required to effectively manage the drivers and impact on the natural capital, especially by addressing limited financial resources and capacities, inadequate awareness of the value and vulnerability of the natural capital critical for the country's sustainable development.

The review of the strategic documents, plans, and programs show that some of adopted cross-cutting or sector strategies and action plans have limited success in their implementation and follow-ups. This is mainly due to the limitation in financial, technical and management capacity; over-crowded but unrealistic or unattainable priorities being identified; and lack of effective coordination and collaboration. In some cases, the lead ministries or institutions for cross-cutting strategies are often relatively "weaker" in terms of budget allocation and capacity for ensuring consistent follow-up, compliance, enforcement, coordination, monitoring and evaluation.

The incorporation of natural resources and environment sustainability in sectoral planning and programming, especially in sub-national planning and programming is still limited. Significant resources and support, as well as technical guidelines to national line ministries and sub-national administration for mainstreaming natural resources and environment sustainability are necessarily required.

"Doing business as usual" is not an option for Cambodia to develop towards a green, low-carbon, climate-resilient, equitable, sustainable and knowledge-based society. Accordingly, the formulation and implementation of NESAP 2016-2023 is to contribute to leveraging continued in-depth reform and modernization of the environmental and natural resources governance and management for a long-term growth and development.

NESAP 2016-2023 sets its long-term vision "**To strengthen enabling conditions and leverage for the environmental and natural resources management and conservation for sustainable and stable socio-economic development in Cambodia "** through putting the environmental sustainability and inclusive green growth at the heart of Rectangular Strategy, NSDP, and other sector policies.

The NESAP 2016- 2023 sets its mission to provide a roadmap for resource mobilization and actions. Effective dissemination and operationalization of the NESAP 2016-2023 by NCSD and concerned line ministries are of utmost importance.

As many objectives of the NESAP 2016-2023 are yet to be fully funded, operationalization of top priority and quick-win projects, follow-up and regular updates on NESAP's investment and pipeline mapping (in Appendices A2 and 2) and fund mobilization must be put into motion immediately in a very concerted manner. It is highly critical to ensure that the high priority and most feasible activities are to be funded and implemented to produce a quick result for maintaining the momentum.

Some of the top priorities areas have been formulated into Project Identification Notes (PINs) presented in Appendix A3. These PINs map relevant on-going projects, funding opportunities, and project pipelines developed by relevant line ministries and development partners.

The performance reviews will be conducted on an annual basis to review progress and provide opportunities for incorporating lessons learnt in performance plans.

In lobbying for higher expenditure on environmental sector, it is highly essential for NCSD, MoE, and concerned line institutions to make a convincing economic case that investing in environmental sustainability is profitable as evidenced by positive job creation, increased competitiveness in trade and better access to global market.

It is equally critical for MEF to focus on the resource needs of the ministries and institutions to include and implement sustainability and inclusiveness components in the strategies, action plans, and programs. It is also important for the RGC, NCSD, and MEF to provide a clear guideline for all relevant ministries and institutions in mainstreaming environmental quality improvement and natural resources sustainability into sectoral strategies, action plans, and projects and programs, similar to those related to gender mainstreaming and climate change adaptation as cross-cutting themes.

The NCSD General Secretariat in collaboration with the MoP, MEF, and other key stakeholders including development partners and funding institutions, to further refine indicators and targets listed in Appendix A1 into their specific indicators and targets in line with the SDGs localization being undertaken in 2017.

APPENDICIES

Appendix A1

NESAP DESIGN AND MONITORING FRAMEWORK

Table A.1 Design and Monitoring Frmework for NESAP 2016-2023

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
NESAP Long-term Goal				
By 2023, NCSD, all concerned line ministries, institutions and other key holders are fully committed to, and capable of advancing and securing cultural, economic, social and environmental sustainability by mainstreaming it into the national development frameworks, and adopting sustainable financial mechanisms, and the monitoring, evaluation and learning	• Higher political will and commitment, and concerted actions and resources and technology mobilization are sustained for protecting and preserving healthy environment and natural resources for social welfare, human health, and quality of life of the present and future generations; • Capacity and institutional arrangement are strengthened for country to transit to green and knowledge-based economy, for common prosperity and equality; • Awareness and access to knowledge, technology and sustainable finance/funding mechanisms are strengthened; and, • Collaboration and partnership among ministries and institutions, private sector, development partners and SCOs including environmental activists are consolidated.	Government statistics (MOP – CMDGs, SDG and NSDP performance framework and database). Project reports. NESAP/SDGs baseline data at program inception. Independent evaluation at project completion. Stakeholder satisfaction survey. **Indicator Units**: - Number of legislation, policy and institutional frameworks in Cambodia address NRE sustainability. - Total funding allocated/ mobilized for address NRE sustainability (%). - Number of NESAP NRE actions into PIPs - Number of LAs, CSOs etc. involvement in NESAP and NRE related projects implementation.	Political commitment to NESAP long-term goal will be maintained.	M&E by NCSD and concerned Las

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
process for contributing to meeting the sustainable development goals (SDGs) and related priorities and commitments.				
NESAP Overall Objective				
To provide a roadmap and resource mobilization plan for government ministries/institutions, private sector, civil society, and development organizations to mainstream environmental considerations into development policies, plans, and investments in the medium and long	▪ Degree to which ministries, private sector, civil society, and development organizations mainstream environmental considerations into development policies, plans, and investments. ▪ Extent that the ministries, private sector, civil society, and development organizations see the integrated sustainable development approaches as relevant and effective. ▪ Extent that the ministries, private sector, civil society, and development organizations in fund mobilization for promoting the sustainable economic growth.	National reports. Water and related resource strategies and policies. National Socio-economic development plans, water and related sector plans Stakeholder surveys **Indicator Units**: - Number of ministries, private sector, civil society, and development organizations in mainstreaming environmental considerations into development policies, plans, and investments. - Number of ministries, private sector, civil society, and development organizations placing higher priority on the sustainable implementation	Highest level political commitment to the NESAP long-term goal will be maintained.	M&E by NCSD and concerned LAs

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
terms. To identify priority sectors, policies, institutional arrangements and concrete programs of which NESAP can focus on in the near term to demonstrate opportunities and benefits in shifting to an inclusive and green development pathway.		of concrete and actionable programmatic efforts by concerned entities - Number of satisfied capacity building for strengthening adaptation capacity and resiliency, and technical and institutional capacity at national and sub-national levels. management and use of environmental and natural resources through an inclusive and participatory process - Total funding allocated/ mobilized for address NRE sustainability (%). - Number of LAs, CSOs etc. involvement in NESAP and NRE related projects implementation.		
Strategic Objective 1 - To strengthen cross-sectoral collaboration, and relevant instruments/guidelines, and improve coordination, regulation and delivery functions for sustainable development outcomes.				
Objective 1.1. To strengthen cross-sectoral coordination for mainstreaming environment and natural	1.1.1. Promotion of multi-sector and multi-stakeholder platforms (e.g. regular forums and events) facilitated by NCSD to promote environmental and climate change mainstreaming, i.e. through integrate environmental consideration in	- Government statistics (MOP _ SDGs, NSDP Performance). - Provincial statistics. - Project/Program reports. - NESAP/Sector evaluation studies. - Baseline data at the program inception.	▪ Political commitment to NESAP will be maintained; ▪ Coordination among institutions and local governments are	**NESAP PIN**: 1.1 **Status:** Current - 2014-2019 **Lead**: UNDP and NCSD/ Climate Change Department **Participating Institutions**: Several

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
resources sustainability	sector strategies, policies, programs, and projects. 1.1.2. Improved political willingness and institutional capacity for improving consistency and enforcement of environmental and sector specific legislations, in particular, on forestry, fisheries and land, also through strengthening access to information, ensuring public participation and promoting transparent environmental governance. 1.2.2. Improved harmonization and collaboration amongst different stakeholders, in particular in addressing concern over impacts of major economic development on environmental resources and habitats 1.1.3. Increased political willingness and institutional capacity for enforcing environmental legislation, providing information, ensuring public participation and promoting transparent environmental governance. 1.1.4. Concrete measures are continued to support	- Independent evaluation at completion. - Stakeholder surveys - List of prioritised Interventions - Progress, interim, and draft final reports. **Related SDGs Indicators** **17.14.** Coherence for sustainable development - 17.14.1 Quality and number of mechanisms to improve policy coherence of sustainable development. **16.6.** Effective, accountable and transparent institutions– 16.6.2 Population satisfied with their experience of public services (NCSD, MOE, and other line ministries etc.) and 16.6.1 Primary government expenditures as a proportion of original approved budget, by sector – environment and natural resources, and similar sectors. **16.7** Ensure responsive, inclusive, participatory and representative decision-making at all levels: 16.7.2 Proportion of population who	strengthened; ▪ Political will at the sector/ institutional level work together. ▪ National institutions have appropriate structures, human and financial resources, oversight capacity to contribute to and implement project activities ▪ Financial and technological resources are secured	**Key Development Partners**: UNDP, Sweden, EU **Funding Sources:** **Total budget**: US$ 13,189,600 (secured) **Related NESAP Objectives: 1.1, and 4.2**. **NESAP PIN**: 1.2 **Status:** Current - 2016-2018 **Lead**: UNDP, NCSD, and MOE **Participating Institutions**: Several **Key Development Partners**: UNDP, USAID, EU Switch Asia **Funding Sources:** **Total budget**: US$ 3,278,760 (secured) **Related NESAP Objectives: 1.1, and 1.5**. **NESAP PIN**: 1.3 **Status:** Current - 2015-2017 -2020 **Lead**: NCDD-S **Participating Institutions**: MAFF, NCDD, MPTC, CARD. **Key Development**

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
	improvement in cross-sectoral coordination through NCSD and NCDD: at both national and sub-national levels including cooperation with all the stakeholders.	believe decision making is inclusive and responsive. **17.16** Improve multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources - 17.16.1 Number of reporting progress in multi-stakeholder development effectiveness monitoring frameworks that support the achievement of the sustainable		**Partners**: SDC, EU and SIDA + ADB, GIZ, IFAD/ASPIRE, UNCDF, UNFPA, WB, UNICEF; IFAD, Finland **Total budget**: US$ 84,870,000 (secured) **Related NESAP Objectives: 1.1, and 2.3** **NESAP PIN**: 1.4 **Status:** Current - 2014-2018 **Lead**: UNDP, NCSD and NCDD-S **Participating Institutions**: **Key Development Partners**: GEF LDCF **Total Budget:** US$ 4,567,500 (secured) **Related NESAP Objectives: 1.1, and 2.3** **NESAP PIN**: 1.5 **Status:** Pipeline 2018-2021 **Lead**: UNDP, NCSD **Participating Institutions**: **Key Development Partners**: GEF (CBD focal

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
				area) **Total Budget:** US$ 1,000,000 **Related NESAP Objectives: 1.1, and 2.**
Objective 1. 2: To strengthen and scale up inter-ministerial collaboration modalities for promoting sustainable and multi-uses of NRE	1.2.1. Inter/cross-sectoral collaboration for promoting sustainable eco-tourism within the Protected Areas, National Parks, and Protected Forest will be strengthened. 1.2.2. Inter-ministerial collaboration modalities such as Committee for Cambodian Coastal Zone Development (MOT, MOE, MLMUPC, and National Police) are strengthened and scaled up/out to other areas and themes/sector. 1.2.3. Inter/cross-sectoral collaboration for promoting capacity and capability to prevent and to respond to forest conversions, disasters from oil spill, dangerous cargo and forest fires in key watersheds of Tonle Sap and coastal zones.	**<u>Related SDGs Indicators</u>** 12.b.1 Number of sustainable tourism strategies or policies and implemented action plans with agreed monitoring and evaluation tools. 14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution - 14.1.1. Index of coastal eutrophication and floating plastic debris density 6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes - 6.6.1. Change in the extent of water-related ecosystems over time 15.6 Fair and equitable sharing of the benefits arising from the utilization of genetic resources	▪ Political commitment to NESAP will be maintained; ▪ Coordination among sector institutions and local governments are strengthened; ▪ Political will at the sector/ institutional level work together. ▪ National institutions have appropriate structures, human and financial resources, oversight capacity to contribute to and implement project activities ▪ Financial and technological resources are	**Critical gaps – Financial and Technical Resources mobilization is needed.**

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
		and promote appropriate access to such resources - 15.6.1 Number of adopted legislative, administrative and policy frameworks to ensure fair and equitable sharing of benefits; 15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems - 15.a.1. Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems. 15.b Mobilize significant resources from all sources and to finance sustainable forest management including for conservation and reforestation- 15.b.1. Official development assistance and public expenditure on conservation and sustainable use of biodiversity and ecosystems.	secured	
Objective 1.3: To strengthen and scale up the land-use spatial	1.3.1. Inter-ministerial collaboration project among MLMUPC (overall land use policy), MOE (for PA Areas and Corridor), MAFF (for	**<u>Related SDGs Indicators</u>** **Goal 1. End poverty in all its forms everywhere** 2.4 By 2030, ensure	▪ Political commitment to NESAP will be maintained; ▪ Coordination	**NESAP PIN**: **2.1** **Status:** Current - 2015-2019 (several projects) **Lead**: FAO

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
planning and land use classification for promoting land productivity and sustainability and reduced poverty in Cambodia	agriculture and forest lands), MIH (Industry), MME (mines, sand mining, oil-gas) set up to develop and apply related land use planning and zoning policy and guidelines in line with existing commune land-use mapping guidelines of MLMUPC and MAFF, and international standards such as the FAO Voluntary Guidelines on Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security. 1.3.2. Practical guidance/guidelines for identifying the most appropriate national data, designing and development of the database and land use matrix and guidance are agreed upon and applied. 1.3.4. Soil mapping at national, regional, and local levels produced. 1.3.3. Decision support tools (i.e. land use change simulation, integrated spatial planning and ecological functional zoning) applied for providing recommendations	sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation improve land and soil quality - 2.4.1 Proportion of agricultural area under productive and sustainable agriculture. 2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment. - 2.3.1 Volume of production per labour unit by classes of farming/pastoral/forestry enterprise size. 17.18.1 Proportion of sustainable development	among sector institutions and local governments are strengthened; ▪ Political will at the sector/ institutional level work together. ▪ National institutions have appropriate structures, human and financial resources, oversight capacity to contribute to and implement project activities ▪ Financial and technological resources are secured	**Participating institutions**: FAO, MAFF, MOE, MEF, MOP, NCDD and sub-national entities, MoWA, NCDM. **Development Partners**: FAO, WFP, UNICEP **Total budget**: US$ 5,591,184 (secured) US$ 15,483,180 (to be mobilized) **Related NESAP Objectives: 1.3, and 1.4**. **NESAP PIN**: **2.2** **Status: Current -** 2016-2018 **Lead**: UNDP and MAFF **Participating Institutions**: **Funding Sources:** GEF5 **Total Budget**: US$ 1,100,000 (secured) **Related NESAP Objectives: 1.3, and 1.4**. **NESAP PIN**: 2.3 **Status: Current -** 2016-2022 **Lead**: ADB and Concerned National Institutions

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
	on sustainable land use planning and management. 1.3.5. Increased land productivity and sustainability and reduced poverty of rural farming communities.	indicators produced at the national level - availability of high-quality, timely and reliable data.		**Participating institutions**: **Development Partners**: ADB **Total budget**: US$ 425,000 (secured)
Objective 1. 4: To promote good environmental governance for halting the loss of biodiversity and sustaining ecosystem services and functions	1.4.1. Clarified roles and responsibilities, accountabilities and collaboration mechanisms among national and sub-national government institutions. 1.4.2. MOE and MAFF capacity is strengthened for regularly expanding and improving the PA system and corridors - in-depth reform of the sector specific legislation on forestry and PAS management to ensure sustainability. 1.4.3. MAFF human, institutional and financial capacity is to demarcate, enforce/patrol, conduct mapping and monitoring of the ELCs and develop plan in collaboration with MOE and MULMP for rehabilitation and restoration rehabilitation of	**Related SDGs Indicators**: 15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and dry lands - 15.1.1. Forest area as a proportion of total land area, and - 15.1.2. Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type. 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally - 15.2.1. Progress towards sustainable forest management.	▪ Political commitment to NESAP will be maintained; ▪ Coordination among sector institutions and local governments are strengthened; ▪ Political will at the sector/ institutional level work together. ▪ National institutions have appropriate structures, human and financial resources, oversight capacity to contribute to and implement project activities ▪ Financial and technological resources are	**Related NESAP Objectives:** 1.3, and 1.4 **NESAP PIN: 2.4** **Status: Pipeline -** 2018-2023 **Lead**: UNDP, NCSD, MOE and MAFF **Participating institutions**: **Total budget**: US$ 4,000,000 (to be mobilized) **Related NESAP Objectives:** 1.1. 1.3, 1.4, and 4.2 **NESAP PIN:** 2.5 **Status:** Planned - 2017-2019 **Lead**: UNDP **Development Partners**: GEF6/SGP **Total Budget**: US$ 240,000 **Related NESAP**

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
	degraded ecosystems and reclamation, through appropriate law reform and enforcement. 1.4.4. PAS management is strengthened. 1.4.5. Capacity to monitor and enforce compliance is strengthened.		secured.	**Objectives:** 1.3, and 1.4 **NESAP PIN:** 2.6 **Status: Planned -** 2017-2023 **Lead**: UNDP **Development Partners**: World Bank **Total budget**: US$ 5,000,000 **Related NESAP Objectives:** 1.3, and 1.4 **NESAP PIN:** 2.7 **Status:** Planned - 2017-2019 **Lead**: USAID and Concerned National Institutions **Development Partners**: US **Total Budget**: US$ 25,000,000 **Related NESAP Objectives:** 1.3 and 1.4

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
Objective 1.5: To build institutional and human capacity for applying environmental policy tools and instruments and support implementation of the environmental code	.5.1. Strengthened technical capacity to apply the strategic decision making support tools and alternative development scenarios etc. 1.5.2. Improved environmental and social outcomes. 1.5.3. Increased technical capacity in making the economic case 1.5.4. Reduced development conflicts and promoted multi-sector collaboration. 1.5.5. Improved harmonization and collaboration amongst different stakeholders. 1.5.6. Support to the development and implementation of an effective environmental legislation, and compliance and enforcement, and multi-sector decision making through NCSD and joint policy and program delivery are effectively supported and promoted.	**Related SDGs Indicators**: 17.14 Improve policy coherence for sustainable development - 17.14.1 Number and quality of mechanisms in place to boost policy coherence of sustainable development. 12.2 By 2030, achieve the sustainable management and efficient use of natural resources. 16.b Promote and enforce non-discriminatory laws and policies for sustainable development - 16.3 Promote the rule of law at the nationally and internationally and ensure equal access to justice for all (with specific focus on environment and natural resources). 17.15 Establish and implement policies for poverty eradication and sustainable development.	▪ Political commitment to NESAP will be maintained; ▪ Coordination among sector institutions and local governments are strengthened; ▪ Political will at the sector/ institutional level work together. ▪ National institutions have appropriate structures, human and financial resources, oversight capacity ▪ Financial and technological resources are secured	**Partially covered by PIN 1.2 above.** **Critical gaps – Financial and Technical Resources mobilization is needed.**
Strategic Objective 2: To improve resources use efficiency resulting in minimizing production inputs and prevent and minimize pollution from industrial, urban and agriculture sources - air, solid and liquid pollutants for healthy environment and social well-being, while increasing business competitiveness and incentivizing technological innovation				

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
Objective 2.1: To promote development and application of innovative technology, products and services for wasting less, and using what is available better	2.1.1. Sector and issue specific analysis of resource efficiency are documented and agreed upon with selected private and public companies. 2.1.2. Public awareness is raised on the root-cause of low efficiency and means for improving. 2.1.3. Non-binding Resource Productivity target is agreed upon and applied. 2.1.4. Policy design and technical measures for reducing production inputs (raw materials) consumption are developed and applied. 2.1.5. Concrete and concerted actions are undertaken collaboratively towards resources efficiency and waste/pollution reduction and development of innovative products and services. 2.1.6. Targets and indicators are agreed upon and applied.	**SDGs Targets and Indicators**: 12.2 By 2030, achieve the sustainable management and efficient use of natural resources. 12.a Cooperate to strengthen scientific and technological capacity to move towards more sustainable patterns of consumption and production. 6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater (quantitatively and qualitatively). 12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability - 12.6.1 Number of companies publishing sustainability reports. 9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and	▪ Political commitment to NESAP will be maintained; ▪ Coordination among sector institutions and local governments are strengthened; ▪ Political will at the sector/ institutional level work together. ▪ National institutions have appropriate structures, human and financial resources, oversight capacity to contribute to and implement project activities ▪ Financial and technological resources are secured	**Partially covered by NIP 3.2 below** **NESAP PIN**: 3.4 Energy efficiency **Status:** Baseline Study- 2016- 2018 **Lead/Participating Institutions**: UNDP and NCSD **Funding Sources:** **Total budget**: US$ 20,000,000 **Related NESAP Objectives:** 2.1 2.2 and 2.3.

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
		clean and environmentally sound technologies and processes - 9.4.1 CO2 emission per unit of value added. 9.5 Enhance scientific research, upgrade the technological capabilities of industry sectors, including, by 2030, encouraging innovation and substantially increasing the number of research and development 7.3 By 2030, double the rate of improvement in energy efficiency - 7.3.1. Energy intensity measured in terms of primary energy and GDP. 7.a By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology		
Objective 2.2: To promote	2.2.1. Sector and issue specific analysis of inclusive,	**Related SDGs Indicators**: 11.1 By 2030, ensure access	▪ Highest level political	**NESAP PIN**: **3.1** **Status: Approved -**

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
inclusive, safe, resilient and sustainable cities and human settlements	safe, resilient and sustainable cities and human settlements and potentials for concrete actions are conducted. 2.2.2. An operational and collaborative framework that help cities in Cambodia realize their aspirations to develop greener, more livable environments is in place and functional. 2.2.3. New thinking and innovation about the way cities are managed, and development of Green City Action Plans and new, innovative partnerships. 2.2.4. Exchange of experience for promoting green, livable and sustainable cities on its key elements; and 2.2.5. Relevant green city development plans in major and secondary cities implemented to support the RGC in prioritizing actions for green growth and developing the required stakeholder support and mobilization of investment for project implementation	to adequate, safe, and affordable housing and basic services and upgrade slums. 11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management. 11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety. 11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries 11.4 Strengthen efforts to	commitment to NESAP will be maintained; ▪ Coordination among sector institutions and local governments are strengthened; ▪ Political will at the sector/ institutional level work together. ▪ National institutions have appropriate structures, human and financial resources, oversight capacity to contribute to and implement project activities Financial and technological resources are secured	January 2017- December 2018 **Lead/Participating institutions**: NCSD, MOI, MPWT, GGGI. **Development Partners**: GGGI **Funding sources:** **Total budget**: US$ 1,637,000 (secured) **Related NESAP Objectives:** 2.2 and 2.3. **NESAP PIN:** 3.2 **Status: Current-** 2015-2022 **Lead/Participating institutions**: MPWT. **Development Partners**: ADB **Funding Sources:** Loan **Total budget**: US$ 23,800,000 (secured) **Related NESAP Objectives:** 2.1 2.2 and 2.3. **NESAP PIN:** 3.3 **Status: Current-** 2015-2022 **Lead/Participating institutions**: MPWT. **Development Partners**:

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
		protect and safeguard the world's cultural and natural heritage. 11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management 11.7 By 2030, provide universal access to safe, inclusive and accessible, green and public spaces. 11.a Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning 11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement.		ADB **Funding Sources: Loan** **Total Budget**: US$ 36,382,000 (US$ 31.382 million loan and US$ 5 million grant) (secured) **Related NESAP Objectives:** 2.1 2.2 and 2.3 **NESAP PIN: 3.4** **Status: Planning -** 2016-2018 **Lead/Participating Institutions**: UNDP and NCSD, NCDD-S **Development Partners**: TBC **Funding Sources:** **Total Budget**: US$ **Related NESAP Objectives:** 2.1 2.2 and 2.3

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
Objective 2.3: To support national LAs and Sub-national administration (districts) in improving waste management and 3 Rs (reuse, recycle and reduce) targets for a move to a recycling and green society.	2.3.1. Waste policy is modernized and stimulator of innovation in recycling and reuse, landfilling, reducing losses of resources and creating incentives for behavioural change is generated. 2.3.2. Economic measures instrumental in improving waste management are developed and implemented, in particular through landfill and incineration fees, pay-as-you-throw and extended producer responsibility schemes, or incentives for local authorities to promote prevention, reuse and recycling. 2.3.3. Improved monitoring and compliance of relevant law and guidelines by the key industrial plants (garment, laundry and dying, cement, and coal power-plaints etc.) that may potentially be causing air, land and water pollution through using alternative energy sources, increase energy efficiency and adopting pollution control and on-line monitoring	**Related SDGs Indicators**: 6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse nationally - 6.3.1 Proportion of wastewater safely treated; and - 6.3.2 Proportion of bodies of water with good ambient water quality. 12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse - 12.5.1 National recycling rate, tons of material recycled. 11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management - 11.6.1. Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste	▪ Political commitment to NESAP will be maintained; ▪ Coordination among sector institutions and local governments are strengthened; ▪ Political will at the sector/ institutional level work together. ▪ National institutions have appropriate structures, human and financial resources, oversight capacity to contribute to and implement project activities ▪ Financial and technological resources are secured	**Partially covered by NESAP PINs 3.4 and 1.3 above.**

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
	measures. 2.3.4. Local Cambodians accepted responsibility for sustaining the economy, the environment, human health and social well-being, with each being accountable for decisions and actions through promoting social contract for the preservation and protection of environment and natural resources starting from clean and green households and community 2.3.5. Decision-makers became green and environmentally friendly champion and role models. 2.3.6. Promoted public awareness on minimizing plastic and other wastes roaming around in the environment, and clean air, water and terrestrial environment are promoted.	generated, by cities; and - 11.6.2. Annual mean levels of fine particulate matter.		
Objective 2.4: To improve chemical and hazard waste management	2.4.1. Strengthened technical capacity for monitoring and ensuring compliance by industrial, mining and agricultural users in hazardous substances and waste separation, storage	**Related SDGs Indicators**: 12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international	▪ Political commitment to NESAP will be maintained; ▪ Coordination among sector institutions and	**Critical gaps – Financial and Technical Resources mobilization is needed.**

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
	and treatment/disposal. 2.4.2. Strengthened technical capacity by government institutions to legislate, assess and monitor chemical pollution from private sources 2.4.3. Increased public awareness on chemical wastes and ability to comply Occupational Safety and Health regulations to provide appropriate worker safety procedures and protection 2.4.4. Developed in-country accredited laboratories for environmental analysis and compliance promotion for industrial enterprises 2.4.5. Controlled and minimized chemical application in agricultural, mining and industrial practices 2.4.6. Laboratory capacity is built and sustained by strengthening technical capacity, financial resources and technology for monitoring and credibly assessing the pollution impacts on environment and human health – at provincial and	frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment - 12.4.2 Hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment. 3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination; 3.9.2 Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene; and 3.9.3 Mortality rate attributed to unintentional poisoning. 12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.	local governments are strengthened; ▪ Political will at the sector/ institutional level work together. ▪ National institutions have appropriate structures, human and financial resources, oversight capacity to contribute to and implement project activities ▪ Financial and technological resources are secured	

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
	national levels (government laboratory or partnership with private laboratories).			
<u>Strategic Objective 3</u>: To adopt and implement financing mechanism, benefit-sharing schemes and fund mobilization plan for investing in green and resilient economy and sustainable local livelihoods with special focus on women, children and other vulnerable groups				
Objective 3.1: To strengthen proper internalization of environmental costs and use of fiscal, policy and economic instruments and process	3.1.1. Innovation incentives created and fiscal consolidation delivered through piloting fiscal measures like forest or mining royalties, taxing air and water pollution emissions and charging a fair price for water use from industry, and environmental trust fund. 3.1.2. The benefit and potentials for embracing and embed the benefit-sharing; ecosystems approach; payment for ecosystem services (PES), corporate social responsibility (CSR), environmental fiscal reform, public-private partnership (PPP) and other innovative market-based policy instruments for promoting sustainable and equitable livelihoods and pro-poor development are	**<u>Related SDGs Indicators</u>**: 11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage - 11.4.1 Total expenditure (public and private) per capita spent on the preservation, protection and conservation of all cultural and natural heritage. 15.6 Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources - 15.6.1 Number of adopted legislative, administrative and policy frameworks to ensure fair and equitable sharing of benefits. 17.17 Encourage and promote effective public, public-private and civil society partnerships,	▪ Political commitment to NESAP will be maintained; ▪ Coordination among sector institutions and local governments are strengthened; ▪ Political will at the sector/ institutional level work together. ▪ National institutions have appropriate structures, human and financial resources, oversight capacity to contribute to and implement project activities ▪ Financial and technological	**NESAP PIN**: 4.1 **Status: Approved -** January 2017- December 2018 **Lead/Participating Institutions**: NCSD, MOP, MEF, SNEC, GGGI. **Development Partners**: GGGI **Funding Sources:** **Total budget**: US$ 1,485,000 (secured) **Related NESAP Objectives:** 3.1 and 3.2

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
	demonstrated. 3.1.3. Empowered local communities in negotiating a greater contraction for their income generation purpose through adoption of socially inclusive schemes such as payments for ecosystem services, landscapes and wildlife and recreation, and other benefit-sharing schemes or community-based natural resource management in Cambodia. 3.1.4. Political and public awareness raised on PES and other benefit sharing mechanisms for attracting sustainable investments by securing sustainable supply of resources needed in investment operation.	building on the experience and resourcing strategies of partnerships - 17.17.1 Amount of United States dollars committed to public-private and civil society partnerships. 1.b Create sound policy frameworks based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions. 1.5.3 Number of communities with disaster risk reduction and benefit sharing strategies and arrangement in place	resources are secured	
Objective 3.2: To integrating sustainability and inclusiveness principles in government budgeting, bank lending	3.2.1. Increased public and private financing resources to implement NESAP, and mainstreaming environmental sustainability, natural resource management and climate change consideration into the main steps of budget process, and budget monitoring and	**Related SDGs Indicators**: **15.a.** Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems; and 15.b Mobilize significant resources from all sources to finance sustainable forest management and provide	▪ Political commitment to NESAP will be maintained; ▪ Coordination among sector institutions and local governments are strengthened;	**Critical gaps – Financial and Technical Resources mobilization is needed.**

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
and other financing arrangements	accountability. 3.2.2. Promoted soft policy measures – capacity development, good governance, human resources, and collaboration. 3.2.3. Promoted actions to create legal and policy incentives **–** environmental mainstreaming at planning and sectoral level, deployment of charges / taxes, PES, labelling standards, R&D, etc.	adequate incentives to developing countries to advance such management, including for conservation and reforestation. **16.6.** Effective, accountable and transparent institutions – 16.6.1 Primary government expenditures as a proportion of original approved budget, by sector – environment and natural resources, and similar sector (or by budget codes or similar). **17.1** Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection. **1.a** Ensure significant mobilization of resources from a variety of sources, in order to provide adequate and predictable means to implement programs and policies to end poverty in all its dimensions	▪ Political will at the sector/ institutional level work together. ▪ National institutions have appropriate structures, human and financial resources, oversight capacity to contribute to and implement project activities ▪ Financial and technological resources are secured	
Objective 3.3: To support systematic social and	3.3.1. More regular impact-based training, capacity development events and cross-country learning to	**SDGs targets and Indicators**: **1.b** Create sound policy frameworks based on pro-poor and gender-sensitive	▪ Political commitment to NESAP will be maintained;	**Critical gaps – Financial and Technical Resources mobilization is needed.**

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
economic development decision making and risk management based on scientific evidence and knowledge	government officials in charge of planning, budgeting, sector strategy and policy development on sustainable environmental management and natural resource use. 3.3.2. Risk management approaches for environmental decision making aimed at developing processes consistent with sustainable management are embedded. 3.3.3. Increased understanding of the impacts of changing environment on public health, gender inequality and other associated risks. 3.3.4. Increased technical capacity in risk assessment, risk prioritization and risk management, and integrating the results from these technical exercises in decision making. 3.3.5. Increased adoption of tools and knowledge base for applying preventative and precautionary principles to decision making and defining unacceptability	development strategies, to support accelerated investment in poverty eradication actions. **1.5** By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters. **17.14.** Coherence for sustainable development - 17.14.1 Quality and number of mechanisms to enhance policy coherence of sustainable development. **16.7** Ensure responsive, inclusive, participatory and representative decision making at all levels. **17.16** Enhance the multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources. **12.b** Develop and implement tools to monitor sustainable development impacts for sustainable tourism that	▪ Coordination among sector institutions and local governments are strengthened; ▪ Political will at the sector/ institutional level work together. ▪ National institutions have appropriate structures, human and financial resources, oversight capacity to contribute to and implement project activities ▪ Financial and technological resources are secured	

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
		creates jobs and promotes local culture and products		
Strategic Objective 4: To raise public awareness, build individual, institutional and organizational capacities for sound environmental management and natural resource use, and promote technology transfer and strengthen use monitoring science and technology.				
Objective 4.1: To develop and implement systematic program for technology development and transfer for environmentally sound natural resource management and disaster risk management.	4.1.1. Increased potential for technology development, transfer and adoption; 4.1.2. Increase human capacity and potential to lower cost in environmental management through improved technology .1.3. Events and exchange for government officials, education establishments, and CSOs with countries and organizations of high expertise for educational cooperation and, skills and technology transfer and early warning and preparedness for disaster risk reduction, are conducted regularly. 4.1.4. Knowledge management (KM) network and capacity for mainstreaming use of science and technological monitoring tools to close gaps on environmental standards, for increasing training	**SDGs targets and Indicators**: 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss; 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development; 13. Take urgent action to combat climate change and its impacts; 12. Ensure sustainable consumption and production patterns 9.6.a, 7.a, and 9.5: By 2030, expand international cooperation and capacity-building in water- and sanitation-related activities and programs. 12.a.1. Amount of support to on research and development for	▪ Political commitment to NESAP will be maintained; ▪ Coordination among sector institutions and local governments are strengthened; ▪ Political will at the sector/ institutional level work together. ▪ National institutions have appropriate structures, human and financial resources, oversight capacity to contribute to and implement project activities ▪ Financial and technological resources are	**NESAP PIN**: 5.1 **Status:** Current - 2016-2020 **Lead/Participating Institutions**: MOWRAM, ITC, TSA, MOE, and Japan Science and Technology Institute. **Development Partners**: JICA **Funding Sources:** **Total Budget**: US$ 5,000,000 (secured) **Related NESAP Objectives:** 4.1 and 4.2 **NESAP PIN**: 5.2 **Status: Current -** 2014-2019 **Lead/Participating Institutions**: MOWRAM, UNDP. NCDM, MAFF **Development Partners**: UNDP **Funding Sources:** LDCF **Total Budget**: US$

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
	opportunities on environmental and green skills and employment opportunities into relevant programs, policies and legislation. 4.1.5. The capacities are sustained to support the growth of educational, academic and scientific/research communities in Cambodia and these communities are linked with international academic and R&D networks. 4.1.6. Sustainable environment and natural resources objectives are further incorporated and updated in education curriculum, R&D efforts and innovation policies, in particular for local needs such as water security, natural disaster reduction, pollution and environmental contamination and resource and energy efficiency etc.	sustainable consumption and production and environmentally sound technologies 14.a Increase scientific knowledge, develop research capacity and transfer marine technology. 17.6 Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge-sharing; 17.7 Promote the development, transfer, dissemination and diffusion of environmentally sound technologies; **17.9** Enhance international supports for implementing effective and targeted capacity-building to implement all the Sustainable Development Goals. 13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	secured	4,910,285 (secured) **Related NESAP Objectives:** 4.1 and 4.2 **NESAP PIN**: 5.3 **Status: Pipeline -** 2016-December 2023 **Lead/Participating institutions**: FAO, MOE, NCSD, MAFF/FiA. **Development Partners**: FAO **Funding Sources:** Climate funds, GEF through CBIT, GEF 5 **Total Budget**: US$ 6,548,200 **Related NESAP Objectives:** 1.3, 1.4, 4.1, and 4.2

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
Objective 4.2: To strengthen political and public awareness and application of informed environmental decision making for sustainable environment and natural resources development and management.	4.2.1. Improved sustainable NRE management tools and techniques and for up scaling training programs for targeted groups, and easy to understand knowledge package to key target groups to achieve intended impacts on awareness and skills base. 4.2.2. Central assets are created that individuals, organizations, communities, and government institutions need in order to achieve their full potential include - knowledge and technical skills, institutional and organizational capacity, - proper policy tools and models such as green economy, green finance and green infrastructure and city, - Ability to prevent, manage, and resolve issues, as well as too credibly and actively responding to development proposals, threats or incidents that pose a significant risk to the environment. - Ability to participate in the	**<u>SDGs targets and Indicators</u>**: 4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development - sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity. - 4.7.1. Extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed in: (a) national education policies, (b) curricula, (c) teacher education and (d) student assessment to allow all learners acquire the knowledge and skills needed to promote sustainable development. 12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in	▪ Political commitment to NESAP will be maintained; ▪ Coordination among sector institutions and local governments are strengthened; ▪ Political will at the sector/ institutional level work together. ▪ National institutions have appropriate structures, human and financial resources, oversight capacity to contribute to and implement project activities ▪ Financial and technological resources are secured	Partially covered by NESAP PINs 5.1, 5.2, 5.3 above.

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
	development of legislation, and supporting compliance with environmental legislation and to generate and apply science and evidence based approaches. 4.2.3. Communication campaign for promoting environment & natural resources, and green development education, and public outreach programs to build consumer awareness on green goods and services, and for corporate disclosure and transparency reporting in environmental performance are planned for and conducted. 4.2.4. Capacity and capability are strengthened to monitor, report and inform decision, and knowledge-base and sharing platform including information infrastructure and intelligence, maps and evaluation tools, and environmental foot-prints and pollution emission and information on existing techniques/technologies and	harmony with nature; 12.a Support received from developed countries to strengthen scientific and technological capacity to move towards more sustainable patterns of consumption and production; and 12.b Develop and implement tools to monitor sustainable development impacts for sustainable development and tourism that creates jobs and promotes local culture and products. 17.18 By 2020, enhance capacity-building and to increase significantly the availability of high-quality, timely and reliable data for monitoring and accountability.		

Design Summary	Impact Indicators	Indicator Unit & Source of Data	Risk and Assumptions	Status and Arrangements
	business models, scenario assessment and forecasting of trends and benchmarking information to support implementation and monitoring of the program and knowledge, attitude and practices, as well as the societal responds 4.2.5. **F**ree access to all information related to the environment as well as to the exploitation of relevant natural resources is secured.			

Appendix A1

MATCHING CURRENT AND PIPELINE PROJECTS AND BUDGET WITH NESAP OBJECTIVES

DESIGN SUMMARY	STATUS	ON-GOING	PLANNED/PIPELINE	COMMENTS
Strategic Objective 1 – Natural Resources and Environment Governance and Management				
Objective 1.1. To strengthen cross-sectoral coordination for mainstreaming environment and natural resources sustainability	NESAP PIN: 1.1 (2014-2019)	13,189,600		UNDP and NCSD/ Climate Change
	NESAP PIN: 1.2 (2016-2018)	3,278,760		UNDP, NCSD and MOE
	NESAP PIN: 1.3 (2015-2017-2020)	84,870,000		NCDD, LAs
	NESAP PIN: 1.4 (2014-2018)	4,567,500		UNDP, NCSD and NCDD-S
	NESAP PIN: 1.5 (2018-2021)		1,000,000	UNDP, NCSD
Objective 1. 2: To strengthen and scale up inter-ministerial collaboration modalities for promoting sustainable and multi-uses of NRE				Critical gaps – Financial and Technical Resources mobilization is needed
Objective 1.3: To strengthen and scale up the land-use spatial planning and land use classification for promoting land productivity and sustainability and reduced poverty in Cambodia	NESAP PIN: 2.1 (2015-2019)	5,591,184	15,483,180	FAO, MAFF, MOE, MEF, MOP
	NESAP PIN: 2.2 (2016-2018 and 2019-2023)	1,100,000		UNDP and MAFF
Objective 1. 4: To promote good environmental governance for halting the loss of biodiversity and sustaining ecosystem services and functions	NESAP PIN: 2.3 (2016- 2022)	425,000		ADB and LAs
	NESAP PIN: 2.4 (planned) 2018-2022		4,000,000	UNDP, NCSD, MOE and MAFF
	NESAP PIN: 2.5 (planned- 2017-2019)		240,000	UNDP, GEF6
	NESAP PIN: 2.6 (planned- 2017-2023)		5,000,000	UNDP, Worl Bank
	NESAP PIN: 2.7 (planned- 2017-		25,000,000	USAID

	2019)			
Objective 1.5: To build institutional and human capacity for applying environmental policy tools and instruments and support implementation of the environmental code				Partially covered by PIN 1.2 above. Critical gaps – Financial and Technical Resources mobilization is needed
		113,022,044	50,723,180	
<u>Strategic Objective 2</u>: Resources use efficiency, Green Development, and Environmental Protection				
Objective 2.1: To promote development and application of innovative technology, products and services for wasting less, and using what is available better	NESAP PIN: 3.4 (planned- 2017-2023)		20,000,000	UNDP and NCSD. Also partially covered by NIP 3.2 below.
Objective 2.2: To promote inclusive, safe, resilient and sustainable cities and human settlements	NESAP PIN: 3.1 (2017- 2018)	1,637,000		NCSD, MOI, MPWT, GGGI.
	NESAP PIN: 3.2 (2015- 2022)	23,800,000		ADB Loan
	NESAP PIN: 3.3 (2016- 2018)	36,382,000		ADB Loan + TA
	NESAP PIN: 3.4 (Planning 2016-2018)		N.A	ADB Loan
Objective 2.3: To support national LAs and Sub-national administration (districts) in improving waste management and 3 Rs (reuse, recycle and reduce) targets for a move to a recycling and green society.				Partially covered by NESAP PINs 3.4 and 1.3 above. Critical gaps – Financial and Technical Resources mobilization is needed
Objective 2.4: To improve chemical and hazard waste management				Critical gaps – Financial and Technical Resources mobilization is needed
		US$ 61,819,000	US$ 20,000,000	

Strategic Objective 3: Sustainable financing mechanism, benefit-sharing schemes and fund mobilization				
Objective 3.1: To strengthen proper internalization of environmental costs and use of fiscal, policy and economic instruments and process	NESAP PIN: 4.1 (January 2017- December 2018)	1,485,000		**NCSD**, MOP, MEF, SNEC, GGGI.
Objective 3.2: To integrating sustainability and inclusiveness principles in government budgeting, bank lending and other financing arrangements				Critical gaps – Financial and Technical Resources mobilization is needed
Objective 3.3: To support systematic social and economic development decision making and risk management based on scientific evidence and knowledge				Critical gaps – Financial and Technical Resources mobilization is needed
		US$ 1,485,000		
Strategic Objective 4: Cross Cutting: Public Awareness, Capacities and Technology Transfer				
Objective 4.1: To develop and implement systematic program for technology development and transfer for environmentally sound natural resource management and disaster risk management.	NESAP PIN: 5.1 (2016- 2020)	5,000,000		MOWRAM, ITC, TSA, MOE, and Japan Science and Technology Institute.
	NESAP PIN: 5.2 (2015- 2019)	US$ 4,910,285		MOWRAM, UNDP. NCDM, MAFF.
	NESAP PIN: 5.3 (2015-2018)		US$ 6,548,200	FAO, MOE, NCSD, MAFF/FiA.
				Development Partners: UNDP
Objective 4.2: To strengthen political and public awareness and application of informed environmental decision making for sustainable environment and natural resources development and management.				Partially covered by NESAP PINs 5.1, 5.2, 5.3 above
		US$ 9,910,285	US$ 6,548,200	

		US$ 186,236,329	US$ 77,271,380	
		US$ 263,507,709		

Appendix A2

NESAP PROJECT IDENTIFICATION NOTES

STRATEGIC FUNCTIONAL AREAS: STRENGTHENING ENVIRONMENTAL GOVERNANCE AND CROSS-SECTOR COORDINATION IN CAMBODIA

Special note: Information used in these PIN templates was collected from relevant line ministries, development partners and other partners (international and national CSOs). Most of them are still in planning, and contemplating stages that can be potentially changed and redefined.

PIN Number	NESAP 1.1
Project Title	**Cambodia Climate Change Alliance (CCCA) Program 2014-2019**
Responsible (lead) Entity	UNDP and NCSD/ Climate Change Department
Other Entities Involved	Several
Status	Implementation
Time-lines	2014-2019
Project Outline Description	The new phase (2014-2019) of the Cambodia Climate Change Alliance (CCCA) Program builds on the achievements of the first phase (2010-2014) and aims to strengthen national systems and capacities to support the implementation and coordination of Cambodia's climate change response.
Goal	To strengthen national systems and capacities to support the implementation and coordination of Cambodia's climate change response
Immediate Objective(s)	To build up climate change legal framework, national and sectoral monitoring and evaluation frameworks for climate change, testing and dissemination of adaptation/mitigation approaches, to strengthen planning and budgeting systems for the mainstreaming of climate change finance, and to support to research, development and learning on climate change
Key Deliverables	▪ Strengthening the governance of climate change ▪ Harnessing public and private, domestic and external resources in support of the Cambodia Climate Change Strategic Plan vision ▪ Developing human and technological capital for the climate change response
Tasks and Outputs Milestone Dates	**Activities** ▪ Strengthening the governance of climate change (monitoring and evaluation framework, legal framework, institutional arrangements); ▪ Public and private, domestic and external resources oriented in support of the Cambodia Climate Change Strategic Plan vision (climate-responsive planning and budgeting, policy dialogue with private sector and other partners, readiness for international climate finance); and ▪ Human and technological capital developed for the climate change response (research and development grants, curriculum

	development, linking academia and practitioners, knowledge management system on climate change).
Location	Country-wide
Consistency and Linkage with NESAP, SDGs, National Plans, etc.	
Linkage to NESAP	**Strategic Objective 1 - Objective 1.1** To strengthen cross-sectoral coordination for mainstreaming environment and natural resources sustainability (climate change and disaster risks). **Strategic Objective 4 - Objective 4.2** To strengthen political and public awareness and application of informed environmental decision making (climate change and disaster risks).
Linkage to SDGs	**SDG Goal 1. End poverty, Goal 3. Ensure healthy lives and promote well-being, Goal 16. Promote peaceful and inclusive societies for sustainable development, Goal 17. Strengthen the means of implementation and revitalize the Partnership for Sustainable Development, Goal 15. Protect, restore and promote sustainable use.**
Total Funding Required	US$ 13,189,600 (secured)
Funding Sources	
1. Donors	UNDP, Sweden, and the European Union
2. Government	Broad range of stakeholders in line with their respective roles in the climate change response, and promote innovative partnerships between government, civil society, academia, and the private sector.
3. Others	civil society, academia, and private sector

PIN Number	**NESAP 1.2**
Project Title	**Environmental Governance Reform for Sustainable Development**
Responsible (lead) Entity	UNDP, NCSD, and MOE
Other Entities Involved	Key government and non-state entities
Status	Being Implemented and Approved
Time-lines	2016-2018
Project Outline Description	Over recent years, the RGC has faced significant challenges in addressing the emerging environmental issues posed by the rapid pace of economic growth. In response, the RGC has embarked upon environmental governance reform aiming to create enabling institutional mechanisms and regulatory frameworks to enforce high environmental standards and to promote sustainable development.
Goal	To promote environmental governance reform aiming to create enabling institutional mechanisms and regulatory frameworks to

	enforce high environmental standards and to promote sustainable development
Immediate Objective(s)	The project focuses on four pillars: 1) MoE modernization; 2) Establishment of the National Council of Sustainable Development (NCSD); 3) Development of an Environmental Code; and 4) the Integrated Ecosystem Mapping.
Key Deliverables	1. New Structure of MoE Operationalized 2. New NCSD Organizational Structure and Authorities Operationalized 3. New Environmental Code (EC) Drafted 4. Integrated Ecosystem Mapping (including the Decision Support System) Developed and Operationalized
Tasks and Outputs Milestone Dates	**Proposed Activities** 1. New Structure of MoE Operationalized: a. Strategies and action plans with the focus on priority areas b. Capacity building of the ministry and departments c. Planning and supporting for the quick wins 2. New NCSD Organizational Structure and Authorities Operationalized: a. NCSD strategies and action plans b. Capacity building of NCSD and departments 3. New Environmental Code (EC) Drafted: a. Creating overarching principles b. Development of proposals for statutory changes and implementation framework c. Final drafting of the code 4. Integrated Ecosystem Mapping Developed and Operationalized a. Consolidation of existing of spatial data on ecosystems, biodiversity, rural livelihoods, development activities and energy b. Designing and establishment of a Decision support system (DSS) to be used for land use planning and decisions c. Capacity building support to enhance the institutional capacity of MoE and NCSD for data management in regularly collecting, updating and managing environment and development data.
Location	National and sub-national
Consistency and Linkage with NESAP, SDGs, National Plans, etc.	
Linkage to NESAP	**Objective 1.1** To strengthen cross-sectoral coordination for mainstreaming environment and natural resources sustainability. **Objective 1.5** To build institutional and human capacity for applying appropriate environmental policy tools and instruments
Linkage to SDGs	Goal 16. Promote peaceful and inclusive societies for sustainable development, Goal 17. Strengthen the means of implementation and revitalize the Partnership for Sustainable Development

Total Funding Required	US$ 3,278,760 (secured)
Funding Sources	
4. Donors	USAID (US$ 2,500,000), Japan-UNDP partnership fund/Embassy of Japan (US$ 300,000) and UNEP/EU Switch Asia Program (US$ 77,760).
5. Government	
6. Others	

PIN Number	**NESAP 1.3**
Project Title	1. NCDD (Local Democratic Development) 2015-2017-First three-year Implementation Plan of National Program Phase 2, and 2017-2020 Phase 3 2. 2014-2020 Tonle Sap Poverty Reduction and Smallholder Development Project (TSSD)
Responsible (lead) Entity	NCDD and concerned institutions (national and sub-national). MAFF, NCDD, MPTC, CARD.
Other Entities Involved	
Status	Being Implemented
Time-lines	2015-2017 and 2017-2020
Project Outline Description	
Goal	1. To transfer significant functions from central government to SNAs (Sub-National Administrations); place a renewed focus on service delivery and better manage the complex nature of the reforms; take a fresh approach to capacity development; and promote increased participation from civil society. 2. To improve livelihoods of about 630,000 households in the four provinces by 2020 through increased agricultural productivity and improved access to markets within the project area - foster community-driven infrastructure, and capacity development through the formation of Livelihood Improvement Groups in 1,236 villages, in 196 communes, in 28 districts in the five target provinces.
Immediate Objective(s)	
Key Deliverables	
Tasks and Outputs Milestone	**Proposed Activities**

Dates	
Location	Various provinces
Consistency and Linkage with NESAP, SDGs, National Plans, etc.	
Linkage to NESAP	**Objective 1.1 To strengthen cross-sectoral coordination for mainstreaming environment and natural resources sustainability (at national and sub-national levels)** 1.1.1. To secure and strengthen political willingness and institutional capacity for improving consistency and enforcement of environmental and sector specific legislations, in particular, on forestry, fisheries and land, and strengthening access to information, ensuring public participation and promoting environmental governance. 1.1.2. To effectively communicate with the policy-makers, private sector, and other key stakeholders on the socioeconomic importance of environment and natural resources and to make sure that these benefits along with their ecological benefits are considered in planning, policies, and investments. **Objective 2.3** To support national line institutions and sub-national administration (districts) in improving waste management and 3 Rs targets.
Linkage to SDGs	SDG Goal 1. End poverty. Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions.
Total Funding Required	1. Roughly US$ 34,500,000 (2017-2020); 2. US$ 50,370,000 (2014-2020)
Funding Sources	
Donors	1. Basket funds from SDC, EU and SIDA + other DPs' funding projects by ADB, GIZ, IFAD/ASPIRE, UNCDF, UNFPA, WB, UNICEF; and 2. ADB, IFAD, Finland.
Government	RGC contribution in cash and kind
Others	

.	NESAP 1.4
Project Title	Reducing the vulnerability of Cambodian rural livelihoods through enhanced sub-national climate change planning and execution of priority actions
Responsible (lead) Entity	UNDP, NCSD and NCDD-S
Other Entities Involved	
Status	Implementation

Time-lines	2014-2018
Project Outline Description	Approximately 70% of Cambodian households derive all or an important part of their income from agriculture and the majority of agricultural production are dependent on the monsoon rain and natural floods/recession of the Tonle Sap River and Lake. Climate change is likely to cause a significant impact on the livelihood and welfare of rural Cambodians who are dependent on agriculture for their income for several reasons. The coverage of irrigation, which would act as a buffer against fluctuations of water availability, is considerably low compared with its neighbouring countries. The Agriculture Census conducted in 2013 found that 32% of agriculture holdings use at least some irrigation. Moreover, the quality of existing irrigation schemes poses an additional challenge. These challenges shed light on the need for more resilient agriculture technology at the farm enterprise; improvement of household incomes so that households can build up assets that provide a safety cushion in case of climate related shocks; improved access to services including credit and insurance; and increased social capital through the strengthening of community organisations.
Goal	To reduce the vulnerability of rural Cambodians, especially land-poor, landless and/or women-headed households, through its support for sub-national administration system for rural livelihood improvement through climate sensitive planning, budgeting, and execution.
Immediate Objective(s) or Focus Area	Reducing climate change vulnerability at sub-national level
Key Deliverables	- Climate sensitive planning, budgeting and execution at sub-national level strengthened - Resilience of livelihoods of the most vulnerable improved against erratic rainfall, floods, and droughts - Enhanced enabling environment at the sub-national level to attract and manage greater volume of climate change adaptation finance for building resilience of rural livelihoods
Tasks and Outputs Milestone Dates	- Support the implementation of mainstreaming climate change adaptation in the plans and investment programs of 10 districts and communes. - Provision of technical capacity for climate sensitive agriculture extension and for planning and implementation of climate resilient infrastructure investments. - Support investments in small scale water management infrastructure contributing to resilient agricultural production, in particular by overcoming unpredictable rainfall during the wet season. - Provision of social capital building activities including leadership training and formation of savings groups to the poor and vulnerable women to develop livelihood activities requiring only limited amounts of land. - Capacity development of the sub-national administrations to monitor, evaluate and plan improvements in capacity and performance for climate change adaptation.

Location	Siem Reap and Kampong Thom Province
Consistency and Linkage with NESAP, SDGs, National Plans, etc.	
Linkage to NESAP	**Objective 1.1 To strengthen cross-sectoral coordination for mainstreaming environment and natural resources sustainability (at national and sub-national levels)** (climate change and disaster risks). 1.1.1 To secure and strengthen political willingness and institutional capacity for improving consistency and enforcement of environmental and sector specific legislations, in particular, on forestry, fisheries and land, and strengthening access to information, ensuring public participation and promoting environmental governance. 1.1.2 To effectively communicate with the policy-makers, private sector and other key stakeholders on the socioeconomic importance of environment and natural resources and to make sure that these benefits along with their ecological benefits are considered in planning, policies and investments. **Objective 4.2 To strengthen political and public awareness and application of informed environmental decision making** (climate change and disaster risks).
Linkage to SDGs	SDG Goal 1. End poverty. Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions.
Total Funding Proposed	US$ 4,567,500
Funding Sources	
1. Donors	GEF LDCF
2. Government	
3. Others	

PIN Number	**NESAP 1.5**
Project Title	**Developing a Comprehensive Framework for Practical Implementation of the Nagoya Protocol**
Responsible (lead) Entity	UNDP and NCSD
Other Entities Involved	

Status	Pipeline or under consideration
Time-lines	2018-2021
Project Outline Description	Cambodia became a party to the Convention on Biological Diversity (CBD) on 9 February 1995. Ever since, most attention has been directed to the two first CBD objectives i.e. the conservation of biodiversity and the sustainable use of its components. The third CBD objective – the fair and equitable sharing of the benefits arising out of the utilization of genetic resources – for long received less attention. Cambodia signed the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits arising from their utilization on 1 February 2012. The protocol was ratified on 19 January 2015. Cambodia became a member of the Nagoya Protocol on 19 April 2015. Cambodia is one of the Contracting Parties to the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) since 2002.
Goal	To strengthen the conservation and sustainable use of genetic resources and associated traditional knowledge in Cambodia by developing and implementing a national Access and Benefit Sharing (ABS) framework, policy and legislation consistent with the CBD and its Nagoya Protocol
Immediate Objective(s) or Focus Area	Address biodiversity and implementation of the UNCBD
Key Deliverables	- Developing a national framework, policy and legislation on ABS consistent with the CBD and its Nagoya Protocol - Building capacity for developing and implementing the national ABS framework, policy, and legislation
Tasks and Outputs Milestone Dates	- Developing regulatory framework for ADB law - Establishment of a system for the protection of TK, including Prior Informed Consent (PIC), Mutually Agreed Terms (MAT) and Community Protocols - Formulate financial mechanism within appropriate institutions for receiving and sharing benefits from ABS agreements for the conservation of biodiversity and the sustainable use of its components - Permitting system and check-points are established, enabling implementation of the national ABS law, providing legal certainty, clarity, and transparency for commercial and research purposes - Training for Competent Authorities (CA), Focal Points (FP), and related institutions (100 staff) on processing ABS access applications, negotiating ABS agreements, industry business models, facilitating access to genetic resources, compliance monitoring, monitoring bio-prospecting projects, handling issues under the Nagoya Protocol, and so on. - Develop communication, education, and public awareness (CEPA) strategy and action plan to raise awareness for Nagoya protocol

Location	National level
Consistency and Linkage with NESAP, SDGs, National Plans, etc.	
Linkage to NESAP	**Objective 1.1** To strengthen cross-sectoral coordination for mainstreaming environment and natural resources sustainability **Objective 1.5** To build institutional and human capacity for applying appropriate environmental policy tools and instruments (MEAs) **Objective 1. 4** To promote good environmental governance for halting the loss of biodiversity and sustaining ecosystem services and functions
Linkage to SDGs	15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and dry lands 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally 2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems that strengthen capacity for adaptation improve land and soil quality
Total Funding Proposed	US$ 1,000,000
Funding Sources	
1. **Donors**	GEF (CBD focal area)
2. **Government**	
3. **Others**	

STRATEGIC FUNCTIONAL AREAS: NATURAL RESOURCES MANAGEMENT AND LANDSCAPE MANAGEMENT

Special note: Information used in these PIN templates was collected from relevant line ministries, development partners and other partners (international and national CSOs). Most of them are still in planning, and contemplating stages that can be potentially changed and redefined.

PIN Number	NESAP 2.1
Project Title	1. GCP/CMB/036/LDF 2015 - 2019: Life and Nature Project: Communities using micro watershed approaches to climate change and variability to attain sustainable food security in Cambodia 2. FMM/GLO/112/MUL-Baby 5 (2016-2018) on Forest and Landscape Restoration (FLR) Mechanism 3. FAO CPF 2016-2018 - Equitable and sustainable management of natural resources - Output 2.1: Increased capacity of targeted stakeholders to carry out inventories and assessments of natural resources, the impact of climate change 4. FAO CPF 2016-2018 - Equitable and sustainable management of natural resources – Output 2.3: Improved capacity of Forestry, Fisheries and Protected Area Communities and other stakeholders in targeted areas to design, approve and implement natural resources management plans 5. FAO CPF 2016-2018 – Reduction of vulnerability and improved resilience to shocks at national, community, and household levels
Responsible (lead) Entity	MOE, MAFF, and FAO in cooperation other line ministries and DPs
Other Entities Involved	
Status	Being Implemented/Planned CPF
Time-lines	2016-2018
Project Outline Description	NA
Goal	1. To achieve sustainable food security in Cambodia by strengthening the adaptive capacity and resilience of rural communities using micro-watershed approaches to climate change and variability; 2. To achieve equitable and sustainable management of natural resources; 3. To support initiatives to identify, document and facilitate uptake of integrated and multi---sectoral strategies for sustainable ecosystem management, restoration and climate change adaptation and mitigation (e.g. Fisheries, Forestry and Protected Area Communities; and 4. To develop and disseminate integrated and/or sector specific standards, technologies and measures for risk prevention and mitigation in target areas.
Immediate objective(s)	1.1. To understand climate change vulnerabilities as well as to get to know the communities involved in the project; to improve the

or focus area	life of thousands of smallholder farmers through strengthening the adaptive capacity and resilience of rural communities; to adapt to extreme vulnerability to changing climate conditions which poses a significant threat to amplify existing challenges of food security and malnutrition through utilizing a micro-watershed approach to improved management of ecosystems that the farmers depend on for their livelihoods, aiming to attain sustainable food security in the four pilot sites. 1.2. To produce relevant data/information products (e.g. forest inventory, methodology for land use and agro-ecological zoning, data, emission factors, and GHG inventory and reporting); 1.3. To promote equitable and sustainable growth and development, through reduced natural resource degradation and implementation of the voluntary guidelines on tenure and small scale fisheries; and 1.4. To produce and promote best practices for preventing and mitigating threats and crises in selected communities and other stakeholders through integrated watershed management, climate smart agriculture, and Disaster Risk Reduction.
Key Deliverables	NA
Tasks and Outputs Milestone Dates	**Proposed Activities**
	NA
Location	1. Kampong Thom, Siem Reap, Preah Vihear and Ratanakiri; 2. Nation-wide; and 3. At least four provinces
Consistency and Linkage with NESAP, SDGs, National Plans, etc.	
Linkage to NESAP	**Objective 1.3** To strengthen and scale up the land-use spatial planning and land use classification for promoting land productivity and sustainability and reduced poverty in Cambodia, **Objective 1.4** To promote good environmental governance for halting the loss of biodiversity and sustaining ecosystem services and functions
Linkage to SDGs	15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and dry lands 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally 2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems that strengthen capacity for adaptation improve land and soil quality

Total Funding Required	Approved Funds: US$ 5,591,184 Planned Resource Mobilization: US$ 15,483,180
Funding Sources	
Donors	Potential funding sources for additional resource mobilization: GEF, GCF, and others
Government	
Others	

PIN Number	**NESAP 2.2**
Project Title	**Collaborative Management for Watershed and Ecosystem Service Protection and Rehabilitation in the Cardamom Mountains, Upper Prek Thnot River Basin**
Responsible (lead) Entity	UNDP and MAFF
Other Entities Involved	
Status	Implementation stage
Time-lines	2016-2018
Project Outline Description	Land degradation is a serious issue in Cambodia posing a direct threat to food and water security since it affects agriculture productivity and water retention capacity of watersheds. It is linked with deforestation and forest degradation, and exacerbated by climate change perpetuating increased vulnerability to climate related risks in turn. The project is designed to reduce pressures on upland watershed areas from competing land uses by demonstrating collaborative management and rehabilitation of agriculture lands and forest areas by promoting sustainable land management and stabilizing watershed catchment functions in a priority degraded area, Upper Prek Thnot watershed in Kampong Speu Province as identified by the draft National Action Plan to Combat Land Degradation 2011 - 2020.
Goal	To reduce pressures on upland watershed areas from competing land uses by demonstrating collaborative management and rehabilitation of agriculture lands and forest in Upper Prek Thnot River Basin
Immediate Objective(s) or Focus Area	Address biodiversity, land degradation & forestry
Key Deliverables	The project consists of three components: i) on-farm soil conservation and agro-forestry practices improved; ii) community forest areas restored and sustainably managed; and

	iii) watershed management and monitoring capacity improved.
Tasks and Outputs Milestone Dates	**Proposed Activities** - capacity building and pilot demonstrations of soil conservation and agroforestry measures designed to enhance on-farm productivity on smallholder agriculture lands and on selected economic land concession (ELC) areas - strengthening community forest (CF) management practices - support capacity of Kampong Speu administration in watershed management
Location	Kampong Speu Province
Consistency and Linkage with NESAP, SDGs, National Plans, etc.	
Linkage to NESAP	**Objective 1.3** To strengthen and scale up the land-use spatial planning and land use classification for promoting land productivity and sustainability and reduced poverty in Cambodia, **Objective 1.4** To promote good environmental governance for halting the loss of biodiversity and sustaining ecosystem services and functions
Linkage to SDGs	15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and dry lands 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally 2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems that strengthen capacity for adaptation improve land and soil quality
Total funding required	US$ 1,100,00
Funding sources	
1. Donors	GEF5 (CCD focal area)
2. Government	US$ 240,000 (in-kind co-financing)
3. Others	

PIN Number	**NESAP 2.3**
Project Title	**ADB Technical Assistance Grant Funding for the Tonle Sap Poverty Reduction and Smallholder Development Project for Seven Provinces**

Responsible (lead) Entity	ADB and concerned Cambodian ministries
Other Entities Involved	
Status	Being implemented
Time-lines	ADB 2016- 2022
Project Outline Description	ADB has approved (September 2016) additional financing of US$ 425,000 as technical assistance grant funding for the Tonle Sap poverty reduction and smallholder development project for seven provinces (Banteay Meanchey, Battambang, Kampong Chang, Kampong Thom, Siem Reap and Tboung Khmum).
Goal	
Immediate Objective(S) or Focus Area	To enhance agricultural productivity and improve access to markets in 270 target communes through investments in climate-resilient productive infrastructure, building capacity in disaster risk management of the communities and commune councils, and creating an enabled environment for agricultural productivity, diversification and climate resilience
Key Deliverables	NA
Tasks and Outputs Milestone Dates	**Proposed Activities** 1. Review and revise as necessary the environment assessment and review framework (EARF), summary poverty reduction and social strategy (SPRSS), gender action plan (GAP) and classification of social safeguards and gender. 2. Prepare climate risk and vulnerability assessment. 3. Finalize the list of additional financing communes. 4. Prepare guidelines for selection and design of subprojects, incorporating climate resilience and disaster risk reduction criteria. 5. Desktop screening of all subprojects submitted by the commune councils to prepare a preliminary list of subprojects, and select at least ten prioritized subprojects for field visit. 6. Work with the executing institutions to select two representative subprojects and prepare feasibility studies. 7. Prepare guidelines and a roll-out plan to enhance climate resilience in agricultural production practices, incorporating the use of climate smart technologies in demonstration farms. 8. Prepare DRM training program. 9. Prepare recommendations and a roll-out plan to improve livelihood improvement group (LIG) network and linkages between LIGs and demonstration farms and markets.
Location	Banteay Meanchey, Battambang, Kampong Chang, Kampong Thom, Siem Reap, and Tboung Khmum
Consistency and Linkage with NESAP, SDGs, National Plans, etc.	
Linkage to	**Objective 1.3** To strengthen and scale up the land-use spatial

NESAP	planning and land use classification for promoting land productivity and sustainability and reduced poverty in Cambodia, **Objective 1.4** To promote good environmental governance for halting the loss of biodiversity and sustaining ecosystem services and functions
Linkage to SDGs	15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and dry lands 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally 2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems that strengthen capacity for adaptation improve land and soil quality
Total Funding Required	US$ 425,000
Funding Sources	
Donors	ADB TA
Government	
Others	

PIN Number	**NESAP 2.4**
Project Title	**Integrated Natural Resource Management in the Productive, Natural and Forest Landscape of the Northern Cambodia**
Responsible (lead) Entity	UNDP, NCSD, MOE, and MAFF
Other Entities Involved	
Status	Pipeline/under consideration
Time-lines	2018-2023
Project Outline Description	Cambodia has no working model of land use planning and land allocation in a wider landscape (with multiple catchments). The project will address four issues: 1. inadequate demonstrated experiences and capacity in approaches at the landscape level, 2. weak protected area management, 3. limited capacity in increasing upland agriculture productivity and forest management, and 4. inadequate policy and legal framework for safeguarding natural resources and financing.

Goal	To conserve biodiversity and safeguard natural resources and the ecosystem services they provide through protected area management and sustainable land and forest management in the Northern Region of Cambodia
Immediate Objective(s) or Focus Area	Address biodiversity, land degradation, and forestry
Key Deliverables	Proposed activities: - Integrated landscape planning and management strengthened - Systematized demarcation and zoning established for Pas
Tasks and Outputs Milestone Dates	- Economic valuations of natural resources and systems in watersheds in order to allocate land use options - Review/update the existing watershed management plans and integrate into regional land used master plan - Capacity development of national and sub-national authorities on Land Use Planning and Protected Areas Master Plans - Monitoring and evaluation database/system developed for implementation of Watershed Management Plans - Preparing zoning system operational in the five targeted PAs consisting of the following steps: (i) Rapid assessment of biodiversity status and ecosystem system functions; (ii) zoning of protected areas; (iii) demarcation of zones; and (iv) enforcement of zones guidelines. - Development of protected area management plan
Location	Siam Reap, Preah Vihear, and Kampong Thom
Consistency and Linkage with NESAP, SDGs, National Plans, etc.	
Linkage to NESAP	**Objective 1.1** To strengthen cross-sectoral coordination for mainstreaming environment and natural resources sustainability (climate change and disaster risks) **Objective 1.3** To strengthen and scale up the land-use spatial planning and land use classification for promoting land productivity and sustainability and reduced poverty in Cambodia **Objective 1.4** To promote good environmental governance for halting the loss of biodiversity and sustaining ecosystem services and functions **Objective 4.2** To strengthen political and public awareness and application of informed environmental decision making (climate change and disaster risks)
Linkage to SDGs	15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and dry lands 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally

	2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems that strengthen capacity for adaptation improve land and soil quality
Total Funding Required	US$ 4,000,000
Funding Sources	
Donors	GEF 6 (CBD and CCD focal areas)
Government	
Others	

PIN Number	**NESAP 2.5**
Project Title	**GEF Small Grant Program for GEF 6**
Responsible (lead) Entity	UNDP/GEF/SGP
Other Entities Involved	
Status	Inception phase
Time-lines	2017-2019
Project Outline Description	The GEF SGP provides support to a series of demonstration projects for further scaling up, replication, and mainstreaming. Action at the local civil society, indigenous peoples, and communities is deemed vital for the SGP strategy.
Goal	The GEF SGP will work with local NGOs and CBOs to strengthen natural resources management of the Phnom Kulen National Park and enhance livelihood of communities within the National Park.
Immediate Objective(s) or Focus Area	Address biodiversity, land degradation & livelihood improvement
Key Deliverables	Community based natural resources management in Phnom Kulen National Park strengthened
Tasks and Outputs Milestone Dates	Activities: - demarcation and conservation of five spring water areas located inside the five CPAs. - planting trees inside five conversation zone of the five identified spring water areas - building capacity of five CPA committee members and supporting regular CPA patrolling activities - awareness raising on PA conservation and other related

	laws/regulations - introducing and implementing Climate Smart Agriculture to more than 400 householders - establishment and running CBET (organized CBET committee, support homestay facility and capacity building through training and study tour - installation of three Solar battery charging stations and organizes Committee and capacity building to run these stations. Please note 20% of income from these charging station is used to support CPA patrolling activities and conservation. - rehabilitation of two spill way and establishment of Water User Committee - establishing of one Community Forestry of Phnom Ream Community Forestry with 350 ha of forest in Svay Leu commune, Svay Leu District (at the foot of the Phnom Kulen National Park) and support CF legalization, demarcation, patrolling CF area and capacity build of the CF committee members - supporting the documentation of lesson learns and good practices from implementation those projects
Location	Siem Reap Province
Consistency and Linkage with NESAP, SDGs, National Plans, etc.	
Linkage to NESAP	**Objective 1.1** To strengthen cross-sectoral coordination for mainstreaming environment and natural resources sustainability (climate change and disaster risks, at catchment level). **Objective 1.3** To strengthen and scale up the land-use spatial planning and land use classification for promoting land productivity and sustainability and reduced poverty in Cambodia, **Objective 1.4** To promote good environmental governance for halting the loss of biodiversity and sustaining ecosystem services and functions **Objective 4.2** To strengthen political and public awareness and application of informed environmental decision making (climate change and disaster risks).
Linkage to SDGs	15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and dry lands 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally 2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems that strengthen capacity for adaptation improve land and soil quality
Total Funding required	US$ 240,000
Funding	

Sources	
Donors	GEF 6 (SGP)
Government	

PIN Number	NESAP 2.6
Project Title	**Forest Carbon Partnership Facility Phase 2 (FCPF 2)**
Responsible (lead) Entity	UNDP and Concerned National Institutions
Other Entities Involved	
Status	Preparatory phase
Time-lines	UNDP Country Pipelines 2016-2018 and 2019-2023
Project Outline Description	Cambodia has been classified as a country with “high forest cover” and “high deforestation rate.” According to FAO forest resource assessment (2010), Cambodia has approximately 10.1 million ha of forest, constituting 57% of the total land area. During recent decades Cambodia has experienced high rates of deforestation, for instance, 1.2% per year during 2005 and 2010. The RGC recognized REDD+ as a crucial strategy to tackle the alarming rates of deforestation and forest degradation in the country. To date, the RGC developed a national roadmap for REDD+ readiness in 2010. The RGC has implemented pilot REDD+ projects such as the Oddar Meanchey community forests since 2008 and the Seima protected forest since 2009. The Cambodia REDD+ national program has and is expected to be supported by numerous supporting frameworks including UN-REDD, CAM-REDD, and the proposed FCPF.
Goal	To establish effective National Management of the REDD+ Readiness process and stakeholder engagement, to develop of the National REDD+ Strategy and Implementation Framework, to improve capacity to manage REDD+ at subnational levels, and to design monitoring system for REDD+ with capacity for implementation.
Immediate Objective(s) or Focus Area	Climate change mitigation, REDD+ and institutional and capacity building to manage and monitor
Key Deliverables	1. Institutional and coordination mechanism for REDD+ are strengthened 2. National REDD+ strategy effectively implemented 3. Capacity for monitoring and reporting REDD+ is improved 4. Monitoring system for forest and safeguards are enhanced

Tasks and Outputs Milestone Dates	1. Continue to strengthen national REDD+ coordination mechanism. 2. Build capacity of stakeholders on the on-going jurisdictional changes and REDD+. 3. Mainstream understanding of drivers and REDD+ strategy into national policy framework and key government institutions. 4. Support activities to mobilize investment finance for implementation of the National REDD Strategy. 5. Strengthen capacity for monitoring and reporting REDD+ activities and critical data. 6. Produce land use and forest cover map for 2018. 7. Develop national monitoring, reporting, and verification. 8. Build capacity of government to generate more robust and representative data to improve emission factors for selected and dominant forest types.
Location	National level
Consistency and Linkage with NESAP, SDGs, National Plans, etc.	
Linkage to NESAP	**Strategic Objective 1** **Objective 1.1** To strengthen cross-sectoral coordination for mainstreaming environment and natural resources sustainability (climate change and disaster risks) **Objective 1.3** To strengthen and scale up the land-use spatial planning and land use classification for promoting land productivity and sustainability and reduced poverty in Cambodia **Objective 1.4** To promote good environmental governance for halting the loss of biodiversity and sustaining ecosystem services and functions **Strategic Objective 4** **Objective 4.2** To strengthen political and public awareness and application of informed environmental decision making (climate change and disaster risks)
Linkage to SDGs	15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and dry lands 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally 2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems that strengthen capacity for adaptation improve land and soil quality
Project Funding	
Total Funding Required	US$ 5,000,000
Funding Sources	
Donors	World Bank

Government	
Others	

PIN Number	NESAP 2.7
Project Title	**Supporting Cambodia to Protect and Benefit from Its Abundant Natural Resources**
Responsible (lead) Entity	USAID and Concerned National Institutions
Other Entities Involved	
Status	Proposal being developed
Time-lines	FAO Country Programing Framework (CPF)
Project Outline Description	USAID is going to wrap up its current Forest and Biodiversity Project (SFB) in August 2017, and prepares another 5-year program. USAID's Supporting Forests and Biodiversity project (SFB) implemented by Winrock International, empowers forest communities, government officials, NGOs, business interests, and communities to become champions for sustainable forest management practices that benefit country in general and the people in particular. Several projects were implemented under this program. A US$ 25 million program for the period 2017-2022 will focus on biodiversity (landscape management approach, co-management of natural forest, and awareness raising), climate change mitigation and adaptation, food security (fisheries and nutrition, smart agriculture, and support to sub-national and communities/farmers).
Goal	
Immediate Objective(s) or Focus Area	To protect biodiversity through landscape management approach, co-management of natural forest, awareness raising, climate change mitigation and adaptation, and food security (fisheries and nutrition, smart agriculture, and support to sub-national and communities/farmers)
Key Deliverables	NA
Tasks and Outputs Milestone Dates	Proposed Activities
	NA
Location	Prey Lang and other sensitive forest and landscape areas.
Consistency and Linkage with NESAP, SDGs, National Plans, etc.	
Linkage to NESAP	**Objective 1.3** To strengthen and scale up the land-use spatial planning and land use classification for promoting land productivity and sustainability and reduced poverty in Cambodia,

	Objective 1.4 To promote good environmental governance for halting the loss of biodiversity and sustaining ecosystem services and functions
Linkage to SDGs	15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and dry lands 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally 2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems that strengthen capacity for adaptation improve land and soil quality
Total Funding Required	US$ 25,000,000
Funding Sources	
Donors	USA
Governm ent	
Others	

STRATEGIC FUNCTIONAL AREAS: Green and Resilient Urbans and Waste Management

Special note: Information used in these PIN templates was collected from relevant line ministries, development partners and other partners (international and national CSOs). Most of them are still in planning, and contemplating stages that can be potentially changed and redefined.

PIN Number	NESAP 3.1
Project Title	**Cambodia Green Urban Development Program: Phase 2**
Responsible (lead) Entity	NCSD, Ministry of Interior, Ministry of Public Works and Transport, and Global Green Growth Institute (GGGI)
Other Entities Involved	National Committee for Sub-National Democratic Development (NCDD), several sub-national administrations and organizations Agence française de développement (AFD) and Japan International, Cooperation Agency (JICA); ADB, UNESCAP, and UNDP; and NGOs and academia, including People in Need and the Cambodian Institute for Urban Studies
Status	Approved and to be implemented
Time-lines	January 2017- December 2018
Project Outline Description	Unstructured urbanization in Cambodia is already beginning to result in the economic, social and environmental costs outweighing the benefits, placing a heavy burden on economic growth, poverty reduction and social inclusion, and environmental sustainability. The pressure of urbanization is most acutely felt in Phnom Penh and it surrounding region, which is home to more than half of Cambodian urban residents. Cambodia's secondary cities are also beginning to experience the stress of urban growth, including a lack of power, informal settlements, deficient water supplies, urban flooding, air pollution and insufficient solid waste management. Cambodia's secondary cities such as Battambang, Siem Reap, Sihanouk Ville, Poipet, and Kep are undergoing rapid urban growth but there is a lack of development resources, infrastructure and facilities, including a lack of wastewater treatment facilities.
Goal	A green and sustainable Phnom Penh and secondary cities in Cambodia, which will provide higher opportunities for economic growth, ecological resilience and increased poverty reduction, and social inclusion.
Immediate Objective(s)	To address the challenges of comprehensive urban planning, green transport planning and mobilization of investment for green growth projects to deliver basic services (e.g. waste water treatment, renewable energy supply, waste management, and public transport) are urgently required in Cambodia in secondary cities, and are a fundamental prerequisite to green city development.
Key Deliverables	**Stakeholders, components, infrastructure requirements and enhancements, capacity building, cross-cutting sectors, scaling**

	up and replication potential, etc. Major Outputs: 1. National Strategic Plan for Green Secondary Cities 2. List of prioritized green growth investment opportunities in secondary cities 3. Policy recommendations for green transport in Phnom Penh, building on the Green City Strategic Plan for Phnom Penh (2015-16)
Tasks and Outputs Milestone Dates	**Activities**
Location	Selected Primary and Secondary Urban Centres
Consistency and Linkage with NESAP, SDGs, National Plans, etc.	
Linkage to NESAP	**Strategic Objective 2** **Objective 2.2** To promote inclusive, safe, resilient and sustainable cities and human settlements, and **Objective 2.3** To support national Line Institutions and Sub-national administration (districts) in improving waste management and 3 Rs targets.
Linkage to SDGs	11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries 13.2 Integrate climate change measures into national policies, strategies and planning 7.9 Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the SDGs 1.5.3 Number of communities with disaster risk reduction and benefit sharing strategies and arrangement in place
Total Funding Required	US$ 1,637,000 (secured)
Funding Sources	
Donors	**GGGI**
Government	
Others	

PIN Number	**NESAP 3.2**
Project Title	**ADB funded Second Greater Mekong Sub-region (GMS) Corridor Towns Development Project**
Responsible (lead) entity	RGC: MPWT

Other Entities Involved	
Status	Being Implemented
Time-lines	GMS Strategic Framework 2012-2022
Project Outline Description	The ADB funded Second Greater Mekong Sub region (GMS) Corridor Towns Development Project (the project) represents the second phase of the ongoing GMS Corridor Towns Development Project in Cambodia, Lao PDR, and Viet Nam. The participating corridor towns in Cambodia, Kampot, and Sihanoukville continue to face the urgent task of coping with the demands of expanding urban areas. The local authorities want to plan and manage urban growth using an integrated approach, operate and maintain urban environmental and economic infrastructure, and efficiently deliver municipal services. ADB and the RGC have approved a US$ 23.8 million loan project for promoting growth that is sustainable, inclusive, equitable and resilient; creating employment, including through improving competitiveness; promoting equity through reducing poverty and improving environmental sustainability, and promoting efficiency through further strengthening institutional capacity and governance in the two towns of Kampot and Sihanoukville.
Goal	The corridor town development follows an approach that will maximize the economic benefits of increased trade and traffic flows along the major transport corridors in the GMS with the expected positive impacts resulting from accelerated investments in towns along the Southern Economic Corridor (SEC) which links Thailand with southern Viet Nam through Cambodia.
Immediate Objective(s)	To strengthen competitiveness of the GMS economic corridors through environmental infrastructure as access to markets will provide many incentives for local economies in the hinterlands of the corridor towns: (i) strengthen infrastructure linkages; (ii) facilitate cross-border trade, investment, and tourism; (iii) enhance private sector participation and competitiveness; and (iv) develop human resources.
Key Deliverables	1. construction of a new wastewater treatment plant and wastewater collection system in Kampot 2. closure of current dump site and construction of a new managed landfill site in Kampot 3. construction of new primary storm water drains in priority urban areas in Kampot 4. rehabilitation of the existing dump site to a managed landfill in Sihanoukville 5. construction of new primary storm water drains in priority urban areas in Sihanoukville
Tasks and Outputs Milestone Dates	**Proposed Activities**
	NA
Location	GMS Corridor Towns in Cambodia (Kampot, Sihanouk Ville)
Consistency and Linkage of the project with NESAP, SDGs, National Plans, etc.	
Linkage to	**Objective 2.2** To promote inclusive, safe, resilient and sustainable

NESAP	cities and human settlements **Objective 2.3** To support national LAs and Sub-national administration (districts) in improving waste management and 3 Rs (reuse, recycle and reduce) targets for a move to a recycling and green society **Objective 2.1** To promote development and application of innovative technology, products and services for wasting less, and using what is available better
Linkage to SDGs	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and clean and environmentally sound technologies and processes - 9.4.1 CO2 emission per unit of value added 11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums. 11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety 11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management 11.7 By 2030, provide universal access to safe, inclusive and accessible, green and public spaces 11.a Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning
Total Funding Required	
Funding Sources	US$ 23,800,000
Donors	Loan from ADB
Government	
Others	

PIN Number	**NESAP 3.3**
Project Title	**ADB Funded Integrated Urban Environmental Management in the Tonle Sap Basin Project**
Responsible (lead) Entity	RGC: MPWT
Other Entities Involved	
Status	Being Implemented
Time-lines	GMS Strategic Framework 2015-2022
Project Outline	

Description	
Goal	To improve urban services, provide environmental improvements, and enhance climate change resilience in Kampong Chhnang and Pursat municipalities
Immediate Objective(s)	
Key Deliverables	
Tasks and Outputs Milestone Dates	**Proposed Activities** 1. In Kampong Chhnang, it includes flood protection along Tonle Sap riverbank through improvements of the existing embankment, construction of new controlled landfill site, provision of solid waste management equipment, and capacity strengthening for landfill management services. 2. In Pursat, it will include construction of primary and secondary drains, associated road improvements, and improved wastewater treatment, provision of solid waste equipment for collection, landfill management and riverbank erosion protection initiatives. 3. Community mobilization and environmental improvements to address climate change and environmental needs of the urban poor and vulnerable through a Poor Households Program and climate change and hygiene awareness and action will be undertaken. 4. Sector coordination will be enhanced by strengthened climate change regulations focusing on improved building codes in provincial towns and decentralization of urban services by establishing pilot urban service units. **5.** Strengthening capacity for project management, operations, and maintenance.
Location	Kampong Chhnang and Pursat municipalities
Consistency and Linkage of the project with NESAP, SDGs, National Plans, etc.	
Linkage to NESAP	**Objective 2.1** To promote development and application of innovative technology, products and services for wasting less, and using what is available better **Objective 2.2** To promote inclusive, safe, resilient and sustainable cities and human settlements **Objective 2.3** To support national LAs and Sub-national administration (districts) in improving waste management and 3 Rs (reuse, recycle and reduce) targets for a move to a recycling and green society.
Linkage to SDGs	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and clean and environmentally sound technologies and processes - 9.4.1 CO2 emission per unit of value added 11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums 11.2 By 2030, provide access to safe, affordable, accessible and

	sustainable transport systems for all, improving road safety 11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management 11.7 By 2030, provide universal access to safe, inclusive and accessible, green and public spaces 11.a Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning
Total funding required	
Funding sources	US$ 36,382,000 (US$ 31.382 million loan and US$ 5 million grant) approved in December 2015
Donors	Loan and grant from ADB
Government	
Others	

PIN Number	**NESAP 3.4**
Project Title	**Expanding the Access to Electricity Sustainably: A Market-Oriented Decentralized Approach to Promoting Solar Energy in Cambodia**
Responsible (lead) entity	UNDP and NCSD
Other Entities Involved	
Status	Baseline study for proposal preparatory
Time-lines	2016-2018
Project Outline Description	Ensuring access to sustainable access to electricity requires a thorough long term plan as well as takes into account many development challenges such as population growth, migration to urban areas, and rapid economic developments with a large increase in demand for electricity. External factors such as volatility in fossil fuel prices, a continuing drop price of renewable energy technologies, large divestments from fossil fuel industries leading to stranded assets and reduction in interest from financial institutions to finance large fossil fuel based energy generation, rapid advancements in energy storage technologies, the effects of climate change, and a paradigm shift in the views on optimal energy mix are affecting Cambodia's electricity expansion.
Goal	Climate change mitigation, promoting solar energy efficiency
Immediate Objective(s)	To expanding electricity access through the market-based promotion of solar energy

Key Deliverables	1. Business models study 2. Bankable projects 3. Proposals for the GCF and other sources as well as impact investment
Tasks and Outputs Milestone Dates	**Proposed Activities** 1. Conduct a comprehensive study focusing on viable business models for enterprises, due diligence of potential enterprises and different financial instruments for solar business. 2. Design and implement the following: i) challenge prize mechanism to generate solutions and mobilize potential impact investments; ii) trying out the rapid prototyping of solutions (e.g. rooftop solar for garment factories as a means to reduce reliance on fuel wood). 3. Design a portfolio of bankable projects 4. Mobilize funding from climate change funding (GCF) and impact investment.
Location	TBD
Consistency and Linkage of the project with NESAP, SDGs, National Plans, etc.	
Linkage to NESAP	**Strategic Objective 2:** To improve resources use efficiency resulting in minimizing production inputs and prevent and minimize pollution.
Linkage to SDGs	Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all
Total funding required	
Funding Sources	TBC
Donors	TBC
Government	
Others	

PIN Number	**NESAP 3.5**
Project Title	**Towards a Social Innovation Based Solid Waste Management Policy and Strategy in Cambodia**
Responsible (lead) Entity	UNDP and NCSD, NCDD-S
Other Entities Involved	
Status	Baseline study for proposal preparatory
Time-lines	2016-2018
Project Outline Description	Solid waste management (SWM) is considered one of the government's priorities. The RGC is very interested in making waste collection a more efficient and decentralized service, which could also

	be a business opportunity for local and foreign entrepreneurs. For this purpose, the RGC issued a sub-decree in August 2015 to delegate functions for solid waste management (i.e. collection transport, recycle and landfill management) to the sub-national administration (SNAs). Since the government embarked on the environmental reform in 2014, SWM was identified as part of the quick win solutions. The importance of SWM has been reiterated by the Prime Minister in February 2016. This involved the transfer of responsibilities function and budget for SWM to sub-national administrations (SNAs), as well as an allocation of US$ 5 million which has yet to be fully utilized. For now, market engagement has been limited to contracting private enterprises to undertake collection services in urban centers. Opportunities to increase value-added and generate decent employment have not been considered.
Goal	Waste management and environmental quality control
Immediate Objective(s)	To explore how policy could be used to create sustainable, inclusive and scalable business models in the areas of the 3Rs (reduce, reuse, recycle) to complement traditional state-based delivery systems.
Key Deliverables	1. Business models study 2. Bankable projects 3. Proposals for mobilizing government cost sharing, external support and impact investment
Tasks and Outputs Milestone Dates	**Proposed Activities** 1. policy review to examine the solid waste management ecosystem and value chains to seize business best solutions to switch from a disposal to a recovery system in urban centers 2. modelling recycling business opportunities through a challenge mechanism 3. launching a national program based successful prototypes
Location	TBD
Consistency and Linkage of the Project with NESAP, SDGs, National Plans, etc.	
Linkage to NESAP	**Objective 2.2** To promote inclusive, safe, resilient and sustainable cities and human settlements **Objective 2.3** To support national LAs and Sub-national administration (districts) in improving waste management and 3 Rs (reuse, recycle and reduce) targets for a move to a recycling and green society **Objective 2.1** To promote development and application of innovative technology, products and services for wasting less, and using what is available better
Linkage to SDGs	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and clean and environmentally sound technologies and processes - 9.4.1 CO2 emission per unit of value added. 11.1 By 2030, ensure access for all to adequate, safe and affordable housing, and basic services and upgrade slums. 11.2 By 2030, provide access to safe, affordable, accessible and

	sustainable transport systems for all, improving road safety. 11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management. 11.7 By 2030, provide universal access to safe, inclusive and accessible, green and public spaces. 11.a Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning.
Total Funding Required	TBC
Funding Sources	
Donors	TBC
Government	Government cost sharing for solid waste
Others	

STRATEGIC FUNCTIONAL AREAS: SUSTAINABLE FINANCING MECHANISMS AND FUND MOBILIZATION

Special note: Information used in these PIN templates was collected from relevant line ministries, development partners and other partners (international and national CSOs). Most of them are still in planning, and contemplating stages that can be potentially changed and redefined.

PIN Number	NESAP 4.1
Project Title	**Green Growth Policy Alignment and Investment Prioritization Within Cambodia's National Development Plan in the period 2019-2023**
Responsible (lead) Entity	**GGGI** partners with **NCSD** and **MOP** on proving inputs into the NSDP, and with **NCSD**, **MEF** and **SNEC** on inputs to the Rectangular Strategy. GGGI also coordinates its inputs through the existing **TWG on Poverty Reduction and Planning** as a platform for sharing technical inputs and policy recommendations for the next NSDP.
Other Entities Involved	
Status	Approved and soon to be Implemented
Time-lines	January 2017 – December 2017
Project Outline Description	Cambodia is one of the first countries to establish a National Green Growth Roadmap (2010), National Green Growth Policy (2013), and National Green Growth Strategic Plan (2013-2030). These initiatives have helped Cambodia to make a number of significant international commitments related to green growth, including its Intended Nationally Determined Contribution (INDC), the Sustainable Development Goals (SDGs), and its regional economic integration commitments in ASEAN. The analysis of the policy gaps, implementation capacities, and potential in-coherence between domestic policies and its international commitments, and the development of an integrated monitoring plan will support Cambodia to allocate its resources effectively to fast-track the implementation of key policies and initiatives for green growth. The Global Green Growth Institute (GGGI) is developing a Policy Alignment Service Offering and the Green Growth Potential Assessment (GGPA) tool to shape the next Cambodia's Rectangular Strategy and National Strategic Development Plan (NSDP) for the period 2019-2023.
Goal	Cambodia will be on track to meet its international and domestic commitments related to green growth (i.e. INDC, SDGs, national green growth policy, climate change strategic plan etc.) through improved coherency, alignment, prioritization and integration of green growth actions in the next Rectangular Strategy (Phase IV) and National Strategic Development Plan (NSDP) in the period 2019-2023.
Immediate Objective(s)	To utilize GGGI's Policy Alignment Service Offering and the Green Growth Potential Assessment (GGPA) tool to shape the Royal Government of Cambodia's development of its next Rectangular Strategy and National Strategic Development Plan (NSDP) for the

	period beyond 2018, by identifying its priority policies and initiatives to maximize its alignment with its international commitments and domestic policies for green growth.
Key Deliverables	
Tasks and outputs Milestone dates	**Proposed Activities** 1. Undertake assessment of the green growth potential of Cambodia. GGGI's Green Growth Potential Assessment (GGPA) tool will be utilized to identify green growth priority sectors through a comprehensive situational analysis and review of Cambodia's targets reflected in various relevant plans and strategies. 2. Develop recommended policy priorities for the successor documents to the 'Rectangular Strategy 2014-18' and 'National Strategic Development Plan 2014-18' which support Cambodia's domestic green growth agenda whilst also meeting its international commitments. 3. Develop monitoring arrangements to track progress. GGGI will propose an integrated monitoring plan to track progress against the international commitments for the priority green growth sectors and develop an implementation plan for the policy reforms required to address the gaps identified in priority sectors. 4. Develop an investment plan on how for how these recommended policy priorities could be financed. GGGI will identify and prioritize green growth projects for incorporation into the NSDP, which is a critical step toward mobilizing resources from development partners for green growth projects.
Location	Nation-wide
Consistency and Linkage of the Project with NESAP, SDGs, National Plans, etc.	
Linkage to NESAP	**Strategic Objective 3** To adopt and implement financing mechanism, benefit-sharing schemes and fund mobilization plan for investing in green and resilient economy and sustainable local livelihoods with special focus on women, children and other vulnerable groups **Objective 3.1** To strengthen proper internalization of environmental costs and use of fiscal, policy and economic instruments and process **Objective 3.2** To integrating sustainability and inclusiveness principles in government budgeting, bank lending and other financing arrangements
Linkage to SDGs	15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems; and 15.b Mobilize significant resources from all sources to finance sustainable forest management. 16.6 Effective, accountable and transparent institutions – 16.6.1 Primary government expenditures as a proportion of original approved budget, by sector – environment and natural resources, and similar sector (or by budget codes or similar). 1.a Ensure significant mobilization of resources from a variety of sources, in order to provide adequate and predictable means to

	implement programs and policies to end poverty in all its dimensions.
Total Funding Required	US$ 1,485,000 (secured)
Funding Sources	
Donors	**GGGI**
Government	
Others	

CROSS-CUTTING: LOCAL DEMOCRATIZATION, PUBLIC AWARENESS, CAPACITY DEVELOPMENT, AND SCIENCE AND TECHNOLOGY TRANSFER

Special note: Information used in these PIN templates was collected from relevant line ministries, development partners and other partners (international and national CSOs). Most of them are still in planning, and contemplating stages that can be potentially changed and redefined.

PIN Number	NESAP 5.1
Project Title	**JICA 2016-2021 R&D – Understanding Tonle Sap Great Lake**
Responsible (lead) Entity	MOWRAM, ITC, TSA, MOE, and Japan Science and Technology Institute
Other Entities Involved	
Status	Being Implemented
Time-lines	2016-2020
Project Outline Description	The Tonle Sap Lake is one of the world's most precious ecosystems and an important aquatic environment. However, this environment is changing due to the deterioration of water quality and the decline in biological resources. The Tokyo Institute of Technology in Japan in collaboration with the Institute of Technology in Cambodia is investigating Tonle Sap Lake and its surrounding area to develop a hydraulic/water quality model (water environment analytical tool) for the lake and propose environmental conservation plans focusing on health and ecological risks. It is also establishing the Tonle Sap Water Environmental Platform through which researchers, administrative organizations, and citizens can co-work and co-design for conserving the lake environment. Utilizing a water environment analytical tool, water environment conservation plans will be designed to maintain health and ecological risks sufficiently low, taking into account factors such as population growth and climate change.
Goal	Tonle Sap Basin: scientific research, knowledge sharing, policy communication
Immediate Objective(s)	To conduct collaborative research on key characteristics of Tonle Sap (hydrology, morphology, water quality etc.), to promote Tonle Sap Information platform/gateway, and science-policy exchange and deliberation
Key Deliverables	By 2021: 1. Quantify environmental impacts on Tonle Sap Lake and its marginal regions. 2. Support the establishment of environmental quality standards of the lake. 3. Support the establishment of effluent standards around the lake.
Tasks and Outputs	**Proposed Activities**

Milestone Dates	
Location	Tonle Sap Basin and six surrounding provinces
Consistency and Linkage with NESAP, SDGs, National Plans, etc.	
Linkage to NESAP	**Strategic Objective 4** To raise public awareness, build individual, institutional and organizational capacities for sound environmental management and natural resource use, and promote technology transfer and strengthen use monitoring science and technology **Objective 4.1** To develop and implement systematic program for technology development and transfer for environmentally sound natural resource management **Objective 4.2** To strengthen political and public awareness and application of informed environmental decision making for sustainable environment and natural resources development and management
Linkage to SDGs	**96.a, 7.a and 9.5** By 2030, expand international cooperation and capacity-building in water- and sanitation-related activities and programs **12.a.1** Amount of support to on research and development for sustainable consumption and production and environmentally sound technologies **14.a** Increase scientific knowledge, develop research capacity and transfer marine technology **17.7** Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms **17.9** Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the Sustainable Development Goals
Total Funding Required	US$ 5,000,000
Funding Sources	JICA
Donors	Science and Technology Research Partnership for Sustainable Development Program (SATREPS)
Government	
Others	

PIN Number	**NESAP 5.2**
Project Title	**Strengthening Climate Information and Early Warning Systems in Cambodia Project (2015-2019**)
Responsible (lead) Entity	MOWRAM, United Nations Development Program (UNDP)
Other Entities Involved	The National Committee for Disaster Management (NCDM) and the Ministry of Agriculture, Forestry and Fisheries (MAFF)

Status	Implementation
Time-lines	2014-2018
Project Outline Description	Cambodia is facing mounting development challenges due to climate change. Damage related to the October 2013 flooding alone, caused by heavy rain and the seasonal swell of the Mekong River, is estimated at US$ 356 million, having affected 20 out of 24 provinces and 1.7 million people; 297,600 hectares of rice paddies were inundated and more than 28,100 hectares of rice were immediately destroyed. Despite such risk of disasters, at present, there is insufficient data and limited human resources such as qualified forecasters and modellers to refine predictions based on sector, geographic areas, or vulnerability. Furthermore, institutions such as MOWRAM and the National Committee for Disaster Management (NCDM) have experienced difficulty in disseminating information related to climate and weather, including natural hazards and extreme weather events in a timely and understandable manner.
Goal	Through this project, MOWRAM will generate and effectively disseminate early warning messages for both, planning purposes, and for disaster preparedness and emergency response. The customized weather and climate information, generated with the support of the project, will focus on communities prone to natural hazards and in agriculture – agriculture is Cambodia's most vulnerable economic sector, representing 85% of all households and contributing 34% of the gross domestic product.
Immediate Objective(s)	To conduct collaborative research on key characteristics of Tonle Sap (hydrology, morphology, water quality etc.), to promote Tonle Sap Information platform/gateway, and science-policy exchange and deliberation
Key Deliverables	1. increased institutional capacity to forecast weather, hydrological, climate and environmental information 2. climate and weather information available and utilized for national, sectoral and sub-national planning as well as for transboundary communication in the region 3. strengthened institutional capacity to operate and maintain EWS and climate information infrastructure, both software and hardware, in order to monitor weather and climate change
Tasks and Outputs Milestone Dates	**Proposed Activities** 1. Strengthens links to available sources of information and related forecast capacity. 2. Developing the capacity to generate daily and seasonal climate, floods and water resource forecasts. 3. Develop new tailored products. 4. Retention of knowledge within the ministry by providing continued access to training, but can also exposes those outside the ministry, or a new generation, to the field of forecasting. 5. Develop a central archive facility as a basis for undertaking the risk and vulnerability mapping. 6. Improve the dissemination and timeliness of communication to enable more climate-resilient planning as well as

	preparation and response. 7. Provide training programs for planning/line ministry staff to apply climate information to inform climate resilient planning. 8. Provide regular exchange of climate and weather information on transboundary issues as well as best practices and lessons learned. 9. Upgrade of up to 25 sites with automatic meteorological stations, establish telemetry and data quality & control systems for centralized access by all CI/EWS institutions. 10. Upgrade of 55 sites with automatic hydrological stations, establish telemetry and data quality & control systems for centralized access by all CI/EWS institutions. 11. Conduct training-of-trainers program for DOM and DHRW. 12. Establish sustainable financing for the long-term O&M of the equipment, including private and public financing arrangements.
Location	Nation-wide: Tonle Sap Basin and six surrounding provinces
Consistency and Linkage with NESAP, SDGs, National Plans, etc.	
Linkage to NESAP	**Strategic Objective 4** To raise public awareness, build individual, institutional and organizational capacities for sound environmental management and natural resource use, and promote technology transfer and strengthen use monitoring science and technology **Objective 4.1** To develop and implement systematic program for technology development and transfer for environmentally sound natural resource management and disaster risk management **Objective 4.2** To strengthen political and public awareness and application of informed environmental decision making for sustainable environment and natural resources development and management
Linkage to SDGs	**13.1** Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters **13.3** Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning **17.7** Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms
Total Funding Required	US$ 4,910,285
Funding Sources	UNDP
Donors	Least Developed Countries Fund (LDCF)
Government	
Others	
PIN Number	**NESAP 5.3**
Project Title	1. **Strengthening Cambodian LULUCF and REDD+ Reporting Capacity (2016-2017)** 2. **Strengthening capacity in the agriculture and land-use**

	sectors in Cambodia for enhanced transparency in implementation and monitoring of Cambodia's Nationally Determined Contribution (NDC) under the Paris Agreement (2017-2021) 3. **Climate Adaptation and Resilience in Cambodia's Coastal Fisheries Dependent Communities (2017-2023)**
Responsible (lead) Entity	FAO in cooperation with Ministry of Environment/ National Council for Sustainable Development, MAFF, FiA
Other Entities Involved	
Status	PIPELINE – being formulated for 1 and 2, and approval by GEF Technical Committee for # 3 project above
Time-lines	2016-2023
Project Outline Description	With the Paris Agreement the Parties to the UNFCCC coming into force, the need for action to address climate change in agriculture and land-use is urgent. Food production systems and the agro-ecosystems that underpin them are intricately linked to the climate. Cambodia released its Second National Communication in November 2015 to the UNFCCC. The Land Use and Land Use Change and Forestry (LULUCF) has typically played a major role in, both as a large source of emissions (land use change) and by functioning as a large sink able to absorb greenhouse gasses from the atmosphere (sequestration for CO2 by forests). To reduce the emissions and seek result based payments, Cambodia is in preparation of REDD+ (Reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests, and enhancement of forest carbon stocks in developing countries). REDD+ activities have specific reporting requirements to the UNFCCC. Climate variability and climate change is one of the root causes of many of the challenges facing coastal areas and their populations in Cambodia, directly and indirectly contributing to the destruction and modification of ecosystems, salt water intrusion, to water shortages, impact on freshwater ecosystems and agriculture mostly the fertility of farming areas in the low lying and flood prone coastal areas, posing threats to food security and livelihood resilience of the local population
Goal	By 2020 Cambodia is preparing reports to the UNFCCC under the Paris Agreement Enhanced Transparency Framework (ETF) with strengthened agriculture and land use components including inventories of emissions sources and sinks and information necessary to track progress against priority actions identified in Cambodia's NDC for these sectors. To build capacity and readiness to cope with the problems and challenges faced by the coastal communities due to loss and degradation of mangrove ecosystems; limited and declining access to freshwater for domestic and agricultural use; sea water intrusion, storms damaging land and threatening at-sea fishing activities, declining fish catch and the need for increased effort, poor infrastructure, for example electricity supply and water supply and sanitation, expansion of urban land and land-grabbing, and level of

	individual debts (to micro-finance organizations).
Immediate Objective(s) or Focus Area	1. To contribute to strengthening the capacity of the government of Cambodia in reporting for LULUCF and REDD+, outlining the differences in requirements for reporting both on LULUCF and REDD+; and to enhance the overall consistency of data and methodologies used emission estimates, providing initial emission estimates in templates, support the government to prepare a plan of action for reporting on REDD+ and LULUCF to the UNFCCC. 2. To support the Royal Government of Cambodia to enhance management and monitoring practices in agriculture and land-use with the requirement of an enhanced transparency framework (ETF) including inventories of emissions sources and sinks and information necessary to track progress against priority actions identified in Cambodia's NDC. 3. To support the coastal fishery dependent communities to adapt to climate change through strengthening coastal ecosystem and adapting their livelihoods, where women frequently bear the heaviest labor burdens while enduring unequal access to education, health, and decision-making opportunities.
Key Deliverables	**Outputs to be achieved by LULUCF and REDD+ reporting capacity (2016-2017):** **Output 1:** GHG-I estimates in LULUCF sector and REDD+ prepared and capacity to conduct reporting strengthened **Output 2**: Plan of action BUR and REDD+ technical annex preparations **Outcome to be achieved by Strengthening capacity in the agriculture and land-use sectors 2017-2021:** **Outcome 1:** Institutional arrangements to coordinate preparation of ETF reports from agriculture and land-use enhanced **Outcome 2:** Capacity to assess and report emissions and removals from the agriculture and land-use sectors and to design and monitor related emission reduction activities strengthened **Outcome 3:** Capacity to monitor and report adaptation activities in the agriculture and land-use strengthened. **Outcome to be achieved by** Climate Adaptation and Resilience in Cambodia's Coastal Fisheries Dependent Communities (2017-2023) **Outcome 1:** Capacity development thru assessment of the vulnerability, Joint (FiA/MoE) strategy to support PAs Communities and Fishing Communities; Technical guidelines for implementing environmental friendly aquaculture, restoring coastal habitat and replanting mangroves; training in climate-sensitive fisheries and mangrove/coastal habitat restoration; and mainstreaming climate change into Commune Development Plans (CDP) and Commune Investment Plans (CIP) for coastal communes. **Outcome 2:** Sustainable ecosystem management thru Community Protected Area Management Plan (CPAMP) in six PA Communities in the three coastal protected areas, 65 hectares of mangrove sustainably planted (inside protected areas); 11,000 hectares of

	existing coastal mangrove ecosystems protected and naturally regenerating (inside protected areas). **Outcome 3:** Fishery community adaptation capacity thru achieving 500 hectares of coastal mangrove sustainably planted or naturally regenerating (outside protected areas), 10,000 fishers adopts climate resilient fishery practices and technologies etc. **Outcome 4:** Knowledge management
Tasks and Outputs Milestone Dates	**Proposed Activities**
	See deliverables above
Location	Prey Lang and other sensitive forest and landscape areas
Consistency and Linkage with NESAP, SDGs, National Plans, etc.	
Linkage to NESAP	**Objective 1.3** To strengthen and scale up the land-use spatial planning and land use classification for promoting land productivity and sustainability and reduced poverty in Cambodia **Objective 1.4** To promote good environmental governance for halting the loss of biodiversity and sustaining ecosystem services and functions
Linkage to SDGs and other National Plans	SDG (Goal 13): Take urgent action to combat climate change and its impacts 15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and dry lands 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally 2.4: By 2030, ensure sustainable food production systems and implement resilient agricultural practices that strengthen capacity for adaptation improve land and soil quality Strategic objective 3 of the RGC's Climate Change Strategic Plan that refers to ensuring climate resilience of critical ecosystems (Tonle Sap Lake, Mekong River, coastal ecosystems, highlands, etc.), biodiversity, protected areas and cultural heritage sites. Priorities outlined in Cambodia's INDC. Mangroves for the Future: National Strategy and Action Plan, 2014 – 2016.
Total Funding Required	US$ 6,548,200
Funding Sources	
Donors	Climate funds, GEF through CBIT, 2,200,200, GEF 5: 4,300,000
Government	
Others	





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