



PROJECT DOCUMENT
[Regional Project]

Project Title: Enhancing Integrated Water Management and Climate Resilience in Vulnerable Urban Areas of the Mekong River Basin

Project Number: 00112026 (Output 00126694)

Implementing Partner: UNDP

Start Date: September 2021

End Date: September 2025

PAC Meeting date: 27 July 2021

Brief Description

The project's objective is to strengthen the climate and disaster resilience of people and communities in vulnerable regions of Lao PDR and Cambodia through improved risk and vulnerability assessment and advancing an integrated approach to water resources management.

The project comprises of a set of measures that span three key outputs:

- 1) Inclusive assessment of water-related climate risks completed in the priority river basins.
- 2) Enabling environment for gender-responsive climate risk-informed integrated water resources management developed.
- 3) Funding proposal for priority risk reduction measures developed.

Each country presents its own set of activities under these shared thematic outputs that are suitable and tailored to their own specific contexts, needs and barriers.

The Mekong River and its tributaries are waterways critical to the economy and food supply chains of both Lao PDR and Cambodia. However, these waterways also present a great risk posed by flooding and dry periods – events that are becoming more erratic, longer, and more intense with the compounding effects of anthropogenic climate change.

The frequency and intensity of extreme weather events in both Cambodia and Lao PDR may increase due to changing climatic conditions, with water resources affected in various ways. Across Southeast Asia, the mean annual temperature is expected to rise by the year 2100 from 0.8°C in the optimistic emissions scenario to 3.2°C in the pessimistic emissions scenario. A moderate increase in precipitation is also projected in this region, from 1% to 8% by the end of 21st century but this increase won't spread out evenly throughout the year – increasing rainfall, river discharge and flooding are predicted during the wet season, while extended droughts are likely to occur during the dry season.¹

¹ Intergovernmental Panel on Climate Change (IPCC). Climate Change 2013: The Physical Science Basis.

Increasing extreme weather events and the variability of precipitation in the region will continue to result in economic losses and loss of life due to water-related disasters. As of 2018, the damages associated with flooding in the region are expected to rise by a factor of 5-10 annually

given the rate of proposed and existing development in the basin, often in the floodplain areas.² The effects of flooding related disasters in particular are quite severe in both countries, with Lao PDR especially seeing many areas hard hit in the severe 2018 and 2019 flooding events.

Though both Lao PDR and Cambodia have made investments in recent years in increasing the capacity of their hydrometeorological data and early warning systems, there is a remaining need to downscale data, take a more integrated approach to water resources management, and mainstream climate risks into local decision making and planning at the city scale. And, as recent years' flooding has shown, there is a need to invest in connectivity of early warning systems (EWS) between countries and scale risk reduction measures to protect lives and livelihoods in the Lower Mekong Basin.

This project seeks to address the critical need for risk data to inform integrated water resources management and, in so doing, enable increased investment in risk reduction measures. Both Cambodia and Lao PDR face similar challenges and contextual conditions in addressing climate risks associated with water. And, as has been seen in recent flooding events³, there is a strong connection between the upstream and downstream impacts associated with floods and water availability in the transboundary region. As such, the proposal seeks to address these similar problems faced by both countries in one project while acknowledging the transboundary nature of the challenge and making adjustments as necessary to tailor for the variances of each country.

Taking a barrier-removal approach, the project seeks to address gaps in data collection, management and analysis, enhance institutional and technical capacity at the subnational level for integrated climate and flood risk management, enhance availability of resources for investment in water-related risk reduction, and aid the flow of risk knowledge and coordination across borders.

The project will be implemented in close partnership with the governments of Cambodia and Lao PDR and the donor. Implemented under UNDP's direct implementation modality, the project utilizes a joint regional implementation structure: the first two outputs will be implemented at the country level, while the third will be led by the regional office.

² http://www.fao.org/nr/water/aquastat/basins/mekong/mekong-CP_eng.pdf

³ A recent transboundary risk for the two countries is captured here: <https://reliefweb.int/disaster/ff-2018-000118-lao>


Contributing Outcome (UNDAF/CPD, RPD or GPD):
 (Outcome 1: Advance poverty eradication in all its forms and dimensions)
RPD Outcome 2: Accelerate structural transformations for sustainable development
RPD Output 2.4 Climate Change

Indicative Project Output(s) with gender marker⁴:
 Output 1: Water-related climate risks assessed in the priority river basins. (GEN1)
 Output 2: Enabling environment for climate risk-informed integrated water resources management developed. (GEN1)
 Output 3: Funding proposal for priority risk reduction measures developed. (GEN1)

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|--|------------------------|---|
| Total resources required (USD): | \$ 4,286,730.85 | |
| | UNDP TRAC: | |
| | Donor ROK MOE | \$ 4,286,730.85 (5,000,000,000 KRW)* |
| | Government: | |
| | In-Kind: | |
| Unfunded: | | |

* UN exchange rate as of 1 September 2021, 1 USD = 1166.39 KRW

Agreed by (signatures):

| | |
|--|-------------------------------|
| UNDP | |
|  | |
| Print Name: | Jaco Cilliers |
| Title: | Manager, Bangkok Regional Hub |
| Date: | 16-Sep-2021 |

⁴ The Gender Marker measures how much a project invests in gender equality and women's empowerment. Select one for each output: GEN3 (Gender equality as a principle objective); GEN2 (Gender equality as a significant objective); GEN1 (Limited contribution to gender equality); GEN0 (No contribution to gender quality).

I. DEVELOPMENT CHALLENGE

Cambodia and Lao PDR have similar development challenges and contextual conditions. As such, the project seeks to address these similar problems faced by both countries in one project while making adjustments as necessary to tailor for the variances of each country.

Cambodia has a population of ~16 million that is predominantly rural but with a strong urbanization trend. Cambodia's GDP has been growing at greater than 5% above for 20 years. Despite the country's steady economic growth and the reduction of the national poverty rate from 50% in 2002 to 17% in 2012, more than 70% of Cambodians still live on less than \$3 a day, making them vulnerable to slipping back into poverty in situations of economic or climate shocks.

Cambodia is highly vulnerable to both climate variability and climate change because of its low capacity to adapt and its heavy reliance on climate-sensitive sectors such as water resources and agriculture. Livelihood activities and economic sectors dependent on these resources have traditionally been highly sensitive due to the country's unique geographic conditions and hydrological system.

The Mekong River and its tributaries are waterways critical to the economy and food supply chains of Cambodia. 155,000 km² of the Mekong basin lies within the country, encompassing an area in which about 90% of the population of Cambodia lives.⁵ Though rainfall rates vary by country and region, the entirety of the Lower Mekong Basin (Lao PDR, Thailand, Cambodia, Viet Nam) experiences heavy rainfall during the monsoon period from May until late September every year. The volume of water in the river during these periods can change flows in peripheral areas of the country: During the end of the dry season (March-April) water flows into the Mekong River from the Tonle Sap lake, however during the wet season the volume of water in the Mekong is so increased that it reverses the flow of the Tonle Sap outflow and triples the size of the lake, adding critical water resources that fish stocks and agriculture in the region depend upon.

Flooding in the Mekong River basin is a frequent and naturally occurring process that brings the benefits of sediment deposition but also the negative impacts of damages to infrastructure, lives and livelihoods. The complex hydrological system of the basin means that rainfall in different parts of the catchment can result in varying downstream effects, and local floodplains play a key role in mitigating flood waters. As of 2018, the damages associated with flooding are expected to rise by a factor of 5-10 annually given the rate of proposed and existing development in the basin, often in the floodplain areas.⁶

Historical temperature records show an approximate increase of 0.18°C per decade since 1960. According to different climate models, these observed trends will continue, with the average annual temperature rising by 0.7-2.7°C by the 2060s and 1.4-4.3°C by the 2090s. While historical records of rainfall do not show any consistent increase or decrease since 1960, climate models predict an increase in annual rainfall and more specifically the proportion of total rainfall falling under heavy events is projected to increase.

⁵ http://www.fao.org/nr/water/aquastat/basins/mekong/mekong-CP_eng.pdf

⁶ http://www.fao.org/nr/water/aquastat/basins/mekong/mekong-CP_eng.pdf

Observed impacts of climate change trends in recent years have been marked by more intense rains over shorter periods of time leading to floods, delayed onset of the rainy season (preventing any early wet season crops), longer dry seasons and more intense El Niño related droughts, unexpected dry periods during the rainy season, and untimely rains spoiling ready to harvest or drying crops. The observed impacts and projections of climate change highlight the increasing vulnerability of Cambodia to climate change, particularly in areas adjacent to waterways including the Mekong River.

The Lao People's Democratic Republic (Lao PDR) has a population of approximately 7 million, around 35% of which live in urban areas. The rate of urbanization per annum is around 3.5% and the GDP per capita has been rising at a rate of around 5% for the past 30 years. However, the national poverty rate hovers around 23% and 20% of the population still lives on under \$3 per day.⁷

The Mekong River is a defining landscape feature as 60% of its length runs through Lao PDR. There is seasonal flooding every year in the central and southern parts of the country. Flooding is a major cause of disasters in the country – both in terms of frequency and intensity as well as impacts. In 2018, Lao PDR saw the largest floods it has seen in a decade, with Tropical Storm Son-Tihn on July 18-19, followed by flash flooding on July 23-24 caused by a breach in the Xepien-Xenamnoy saddle hydropower dam. This dam breach affected nearly 7,000 people downstream and displaced more than 1,000. In August of the same year, Tropical Storm Bebinca hit and caused further flooding with widespread damage, destroying livelihoods and disrupting economic activity and social conditions and affecting 17 provinces as well as the capital. The southern provinces of Khammuone, Champasak, and Saravane, with a combined population of over 1 million, were the hardest hit during the 2018 flooding events.

And, from January to August 2019, multiple flooding disasters occurred again across the country affecting 10 provinces. As per available estimates from NDMO on 8 Sept 2019, a total of 396,806 persons were affected by floods with estimated capital exposure is of about USD \$753.4 million. According to assessments from UNITAR-UNOSAT, within 60,000 sq.km. of southern Lao PDR, about 1,000 sq.km. was flooded – an area home to about 1,606,500 people.

Recent climate projections for Lao PDR show increasing temperatures, higher intensity of rainfall and longer dry periods which can give rise to more severe droughts and flooding. Early warning systems and data management are limited, and climate risks are not well integrated into rural and agricultural development policies. Persistence of monoculture, lack of livelihood diversity, low levels of disaster preparedness, and limited infrastructure mean that resilience to the risks posed by this climate change at the community level remains low.

The frequency and intensity of extreme weather events in both Cambodia and Lao PDR may increase due to changing climatic conditions, with water resources affected in various ways. Across Southeast Asia, the mean annual temperature is expected to rise by the year 2100 from 0.8°C in the optimistic emissions scenario to 3.2°C in the pessimistic emissions scenario. A moderate increase in precipitation is also projected in this region, from 1% to 8% by the end of 21st century but this increase won't spread out evenly throughout the year – increasing rainfall,

⁷ <https://data.worldbank.org>

river discharge and flooding are predicted during the wet season, while extended droughts are likely to occur during the dry season.⁸

Increasing extreme weather events and the viability of precipitation in the region will continue to result in economic losses and loss of life due to water-related disasters. Though both Lao PDR and Cambodia have made investments in recent years in increasing the capacity of their hydrometeorological data and early warning systems, there is a remaining need to downscale data, take a more integrated approach to water resources management, and mainstream climate risks into local decision making and planning at the city scale.

Both Lao PDR and Cambodia are countries with high poverty rates experiencing increasing risks from climate impacts. In particular, the increased frequency and intensity of extreme rainfall events is leading to more frequent and severe flooding in vulnerable cities along the Mekong River and its tributaries. In 2018 alone, more than 40,000 families living along the Mekong in Cambodia were affected by extreme flooding.¹ At the same time, cities along the river are growing – exposing further populations to the dangerous impacts of flooding.

In addition to floods, recent years have brought record low water levels in the dry season as monsoon rains begin later and end earlier. In 2019, a shortened monsoon season has led to severe drought conditions and brought the water levels of the Mekong to their lowest point in 60 years, threatening agricultural productivity across the lower Mekong River basin.⁹

And, ongoing dam construction in the basin alters seasonal flows further from year to year and threatens downstream communities when the structures are stressed by high precipitation events. The tragic impacts of this were seen in July 2018 when the Xepian Xe Nam Noy Dam collapsed in Laos, displacing thousands in the resulting floods downstream in Stung Treng, Cambodia.¹⁰ The additional pressures on the Mekong and its tributaries posed by dam construction and drought highlights the need for an integrated and transboundary approach to water resources management that accounts for the entire catchment system – in both times of excess water as well as times of scarcity.

Despite recent advances in early warning systems capacity development, national and sub-national entities in Cambodia and Lao PDR lack the high-quality risk and vulnerability data infrastructure needed to prioritize and facilitate key investments in risk reduction measures or enable development of risk transfer mechanisms at the urban scale. In Cambodia in particular, the country as a whole does not have the strategy or policies in place to manage the financial impacts of climate-related disasters such as floods.

And, in addition to flooding challenges, communities in the Mekong basin also face seasonal water shortages. These are also intensifying due to precipitation pattern changes, exacerbated by recent dam construction along the river. Thus, an integrated approach to water resources management planning is necessary, however doing so necessitates improvements in available data and capacity.

⁸ Intergovernmental Panel on Climate Change (IPCC). Climate Change 2013: The Physical Science Basis.

⁹ <http://www.mrcmekong.org/news-and-events/news/drought-continues-to-hit-mekong-countries-risking-stress-on-crop-production-water-shortage/>

¹⁰ <https://www.voacambodia.com/a/thousands-of-cambodians-displaced-after-laos-dam-collapse/4503890.html>

This project will be catalytic in mobilizing partnerships and critical financing for furthering climate risk reduction measures in both countries that are otherwise cost-prohibitive.

II. STRATEGY

This project seeks to address the critical need for risk data to inform integrated water resources management and, in so doing, enable increased investment in risk reduction measures. Both Cambodia and Lao PDR face similar challenges and contextual conditions in addressing climate risks associated with water. And, as has been seen in recent flooding events¹¹, there is a strong connection between the upstream and downstream impacts associated with floods and water availability in the transboundary region. As such, the proposal seeks to address these similar problems faced by both countries in one project while acknowledging the transboundary nature of the challenge and making adjustments as necessary to tailor for the variances of each country.

Both countries face a variety of barriers to achieving water-related climate risk reduction. This project will address the following:

1. Gaps in Data Collection, Management and Analysis and Integrated Information Systems

Though each country has data collection, management, and analysis protocols in place to track climate information, the hydrological station network in both countries is not sufficient enough to provide basic data for risk-informed technical planning at the local level. Early warning systems (EWS) exist in each country and there are many regional efforts underway to connect such systems, however warnings and risk information are not clearly linked or communicated at the community level across the border.

In support of the Integrated Water Resource Management (IWRM) in the Mekong river basin, appropriate data collection, integrated management of data and proper analysis are certainly crucial as a basis for decision-making and policy development. There have been numerous efforts in data collection, analysis and monitoring by the Mekong River Commission (MRC), governments of MRC member countries (Ministry of Water Resources and Meteorology in Cambodia and Ministry of Natural Resources and Environment in Lao PDR) and the National Mekong Committees of Cambodia, Lao PDR, Thailand and Vietnam. For instance, the MRC has established the Water Quality Monitoring Network (WQMN) that has provided a continuous record of water quality at 99 sites across the lower Mekong basin and its tributaries since 1985. The data and results of the water quality analysis, as well as other hydrological data of the lower Mekong basin are readily available through various publications and databases at the Mekong River Commission website.

At present, however, the hydrological station network both in Cambodia and Lao PDR is still not sufficient enough to provide basic data for technical planning, especially at the catchment or municipal level. Not only is data availability a challenge, but the ways that it can be accessed are limited and often in inconsistent formats. In addition, existing stations in both countries do not necessarily cover the whole country. Both of these are true within the target countries, and data sharing across borders or in a regional way is very limited.

¹¹ A recent transboundary risk for the two countries is captured here: <https://reliefweb.int/disaster/ff-2018-000118-lao>

Although the data from the existing stations in both Cambodia and Lao PDR provide real-time information on various hydro-meteorological parameters; the data only display real time or with monthly data in the case for Cambodia's meteorological data. There is still a challenge in accessing the historical data for both countries.

This lack of data – especially important for contextualizing information at the local level – leads to the persistence of misinformation and misunderstanding of risks associated with living near the Mekong River and its tributaries. Several research reports on the Mekong basin have indicated mismatches between perception and actual conditions such as lower dry season flow rates. Scientifically sound evidence would support or disprove “common beliefs” and could serve as a strong basis for citizen-and country-wide agreement among users. Furthermore, information management and evaluation of water sector both in Cambodia and Lao PDR is still in an early stage of development. Sector performance indicators have not yet been established specifically for tracking and assessing of the performance of the water sector and sub-sectors. It will be critical to develop indicators for the water sector and its sub-sectors and the integrated information system to support qualification of the indicators. Information systems that embrace cutting-edge technologies such as remotely sensed information and web-based GIS would also enhance efficiency and effectiveness of MOWRAM (Cambodia) and MONRE (Lao PDR) in water resources management.

2. Limited institutional and technical capacity at the subnational level for integrated climate and flood-risk management

In addition to the limited availability of climate and flood risk data, there is limited technical capacity among municipal or provincial level staff to calibrate, analyze, and utilize data and package and present the information for decision-makers so that risk information can inform policy and investment. Capacity needs include the need for additional and well-trained human resources / staff, equipment to analyze and store data, and the skills necessary for dissemination of information and communicating about risks between political and implementation levels. Specifically, skills in geographic information systems (GIS) and analysis of hydro-meteorological data are limited, and further training in implementation of disaster risk reduction practices including early warning systems is necessary.

In addition to these short-term technical capacity needs, the capacity of municipal institutions to engage in long-term climate-resilient urban planning and development practices is limited. In Lao PDR and Cambodia decentralization processes are ongoing, and the ways that policy and planning decisions are made are often not fully informed by local needs. Comprehensive, integrated approaches to development planning that consider growth patterns and risks associated with disasters and long-term climate change are not common. Governments at all scales, particularly in Lao PDR, have focused more on disaster response than a preventative approach to risk-informed planning. In addition to this lack of capacity for proactive, climate risk-informed planning those plans that do exist to reduce flood and climate risk are not always implemented due to lack of financing, uncoordinated institutions, and competing development pressures.

3. Scarce public resources for investment in water-related risk reduction.

Both countries have limited public funds to invest in water related disaster risk reduction. In Lao PDR, the government is allocating some funds towards this effort, but the approach is fragmented

by ministries and still largely focused on recovery rather than long-term risk reduction and preparedness. And, investment has focused on some watersheds more than others that also demonstrate need. In Cambodia, the country does not have a strategy or policies to manage financial impacts of disasters; the country relies largely on the overall contingency budget to provide financing in the event of disasters, which is not exclusively reserved for such usage. In the past, the process of covering disaster costs has been supported by donor assistance, but the affected populations have still absorbed the costs which has resulted into increased debts and poverty.¹²

This limited public finance is compounded by the challenges associated with ongoing decentralization processes in both countries and lack of coordination between ministries.

4. Lack of risk knowledge and information sharing and coordination across borders.

Though both Cambodia and Lao PDR have made progress in developing national flood EWS, there remains a gap in transboundary collaboration. It is well recognized that the Mekong River Commission has a mandate for regional data sharing related to the Mekong and both countries have sovereignty on their own hydrometeorological data. However, the ways in which communication happens across the border could be strengthened by more informal peer-to-peer networks that include relevant government agencies, MRC, the private sector, and development partners all at the table.

This issue has been discussed at a regional conference of Early Warning System held by UNDP Cambodia in December 2019 where sharing of best practices and data across borders was recognized as a way to enhance long-term resilience.¹³

5. Complexity of water resources management and fragmentation of jurisdiction and institutions.

In both Lao PDR and Cambodia there are multiple government ministries at the national level that work on water-related risk management. In Lao PDR this institutional fragmentation is an issue not only between, but also within ministries and with other development stakeholders who are not well coordinated in their approach. In both countries, the ongoing decentralization process means that it may not always be clear as to what is the technical jurisdiction of municipal and provincial governments. More consistent coordination and technical capacity building across levels of governance and ministries is necessary to have an integrated approach to water resources management.

The project seeks to address the above barriers to enable an integrated approach to water resources management.

This project will be carried out in close coordination with government priorities and complementary efforts underway in Lao PDR and Cambodia with support from the ROK, UNDP, and other development partners.

¹² https://www.unisdr.org/files/68249_682301cambodiaupdaed16oct2019.pdf

¹³ <https://www.kh.undp.org/content/cambodia/en/home/presscenter/pressreleases/2019/regional-collaboration-focus-of-lower-mekong-early-warning-syste.html>

In addition, the proposed project is in alignment with the development strategies and policies of both Cambodia and Lao PDR. The project supports the implementation of the Government of Cambodia's nationally focused **Rectangular Strategy Phase-IV (RS4)** which puts forth a strategic goal to minimize environmental impacts, enhance the capacity to adapt to and mitigate climate change and advance on a path towards sustainable development. Inclusive and sustainable development that strengthens the sustainable management of natural and cultural resources, strengthens the management of urbanization, and ensures environmental sustainability and readiness for climate change is one of the four priority strategic areas in the RS4. Notably, the RS4 cites improvement in the management of water resources of the Tonle Sap Lake and Mekong River as a key step in this process.

The Lao PDR **Vision 2030** and ten-year **Socio-Economic Development Strategy 2016-2025** both prioritize modernization and sustainable development in both urban and rural areas of the country, including via ensuring that there is environmental protection via efficient utilization of natural resources.

MOE's contribution to this project is critical to enabling investments in making communities and people in the Cambodia – Lao PDR border regions climate-resilient. It will enhance the data and evidence base to help both countries develop integrated water resource management approaches to identify and fund solutions to address water-related climate risks.

Further specific policy and project alignments include:

Cambodia

Strategic Objective 2 of the **Cambodian Climate Change Strategic Plan - 2014-2023** has a goal of reducing sectoral, regional, and gender vulnerability and health risks to climate change impacts. This will be achieved via increased utilization of existing vulnerability and risk assessments, conducting new vulnerability and risk assessments, and prioritizing adaptation measures for key regions of Cambodia – including urban areas. Key aspects to achieving this goal will be the introduction of technologies in water work development and rehabilitation of key water infrastructure as well as the prioritization and enhancement of early warning systems.

Strategic Objective 3, "Ensure climate resilience of critical ecosystems, biodiversity, protected areas, and cultural heritage sites," encourages promotion and use of community-based, ecosystem-based approaches to address climate change.

Expanding opportunities for sub-national climate finance as well as mainstreaming climate change within sub-national policies, plans and budgets is a key component of the mid- and long-term operationalization of the Cambodian Climate Change Strategic Plan.

This project is in line with one of the five strategic outcomes of **The National Strategic Development Plan, 2019-2023**, which states that national and subnational institutions will have strengthened capacities to mitigate risks and lead coordinated shock preparedness and response efforts by 2025.

National Action Plan for Disaster Risk Reduction (NAP-DRR) 2019-2023, part of broader Cambodia's DRR Framework 2019-2030, serves as the primary document that guides national

efforts to achieve the national vision of “safe and resilient communities for sustainable national development”. The framework articulates the country’s long-term goals for disaster risk reduction and management, promote the systematic management of hazards, and inform and guide the development of policies and programs of line ministries, development partners and all other stakeholders.

The proposed activities would contribute to the five (5) strategic objectives with actionable priority programs that will provide a solid foundation for longer-term efforts for risk reduction and climate adaptation in Cambodia. The five (5) distinct but mutually reinforcing strategic objectives are (1) Increased Awareness and Understanding of Climate and Disaster Risks, (2) Conducted National and Subnational Disaster Risk assessments (3) Strengthened Disaster Risk Governance, (4) Invested in Disaster Risk Reduction and (5) Enhanced Preparedness for Effective Response & Recovery.

The **National Policy on Spatial Planning**, adopted in 2011, sets out government objectives for spatial planning country-wide, including prioritization of sustainability and SDGs.

The **National Adaptation Plan Financing Framework and Implementation Plan (NAPFFIP), 2017**, examined the financial demand and gaps for climate adaptation action in Cambodia based on the sectoral Climate Change Action Plans (CCAPs) of 14 relevant line ministries. It identifies 40 priority climate change actions as well as medium- and long-term recommendations. This project contributes to several of the identified priority actions, including: improving capacity for flood and drought forecasting and modelling for technical offices at the national and sub-national levels, piloting community-based disaster reduction, preparedness, and response plans, and building awareness and capacity at the sub-national level for mainstreaming climate change into rural development planning.

The **National Strategic Plan for Rural Water Supply, Sanitation and Hygiene (RWSSH) 2014-2025** sets a target that all Cambodian villages will have access to electricity (including off-grid supplies) by 2020, while 70% of households would have power by 2025. This project is aligned with the RWSSH as it seeks to establish solar-powered energy that will be used for irrigation and market facilities.

In addition, this project is in line with the 2015 draft **National Urban Development Strategy Framework**’s stated vision of climate resilient and sustainable urban centers that balance economic opportunities, a healthy environment, and high-quality services in an inclusive manner. This strategy is under development and seeks to harmonize existing policies including the National Housing Policy, National Land Policy, and National Green Growth Policy to have a unified approach to urban development.

The **UN Development Assistance Framework (UNDAF) for Cambodia for 2019-2023** includes five focus areas, including managing urbanization and improving sustainable living patterns.

Lao PDR

The **8th Five-Year National Socio-Economic Development Plan (NSEDP), 2016-2020**, is the guiding sustainable development strategy that details the country’s intended pathway towards

LDC status graduation. It is aligned with the long-term plans **Vision 2030**, and **Strategy 2025**. This project supports the key government directions for the 8th NSEDP, including the priority to ensure sustainable development that balances economic and socio-cultural development with environmental protection while ensuring preparedness for natural disasters. In particular, Outcome 3 of the NSEDP sets targets for implementation of efforts that manage natural resources and environment in accordance to green-growth and sustainable principles as well as advancing readiness to cope with natural disasters and the effects of climate change.

The Law on Urban Planning (1999), under revision as of 2019, sets forth the rules and regulations for the classification and management of urban planning, land use, and construction – including the master planning process.

The **Urban Development Strategy 2030** sets forth the MPWT's vision on urban development and investment priorities, including areas for the country's integration into the main transport and development corridors of the region. In addition to the above, nearly all provincial and district towns in Lao PDR have an urban development plan that details the individual development strategy of each town. However, many of these plans date from the 1990s and early 2000s and adherence to the goals set forth is not widely upheld.

Lao PDR has a **National Strategic Disaster Risk Management Plan** from 1999 and draft laws on disaster risk management are being developed by the government. In August 2019 the consultation process began to lay the foundation for development of a national disaster risk reduction strategy, and in October 2019 the **Disaster Management Law** was passed.

The **National Strategy on Climate Change, 2010**, sets forth the vision and goals for addressing climate change in Lao PDR in a way that promotes sustainable development and reduces poverty while enhancing the natural environment and quality of life for all. Included in the strategic priorities are adaptation options for water resources and urban development, supported by the cross-cutting implementation principle that “awareness, education, and community participation [should] lead the way” in adaptation and mitigation processes. Developing climate change scenarios and hydrological models for river basins, enabling reliable early warning systems, downscaling climate and hydrological models to watershed levels, and integrating climate change measures into current risk management and planning processes are approaches identified as priority adaptation options under water resources, while developing climate risk-informed urban development plans is a priority under urban development.

Other relevant policies include: The **Law on Water and Water Resources**, approved in 2017, and the **National Strategy on Water Resources**, which is under development and aims to be finalized in 2020.

In addition to the National Strategy on Climate Change, as of 2018 Lao PDR is in the process of developing a **National Adaptation Plan** with assistance from the Global Environment Facility and UNEP. UNEP is also the implementing partner for the country's first Green Climate Fund project, **“Building Resilience of Urban Populations with Ecosystem-Based Solutions in Lao PDR.”** This project, beginning implementation in 2020, aims to shift the paradigm of urban flood management in Lao PDR from a limited, hard infrastructure approach towards an integrated approach that enhances climate resilience via mainstreaming integrated flood management strategies into planning frameworks and implementing urban ecosystem-based adaptation (EbA)

to decrease climate-induced flooding. The project will be implemented in four of the cities that are most vulnerable to climate change (Pakse, Vientiane, Paksan, Savannakhet). Close coordination with this UNEP effort is ongoing and will be necessary throughout project implementation as many project outcomes are complementary.

Cambodia and Lao PDR experience regular damages from flooding, the severity and instance of which is expected to increase due to the impacts of climate change. As urban development continues in proximity to the rivers and streams in the Mekong River Basin, economic and social development gains are threatened by the damages associated with flooding events. As such, improvements in risk and vulnerability data, local capacity to understand this data and plan for climate smart, resilient cities, and further investment in flood risk reduction measures will significantly improve urban conditions and help maintain progress towards SDGs in the cities in the Mekong River Basin. Korea's contribution to narrow the development gap and build urban resilience will help both countries improve lives and opportunities for citizens and is in alignment with the Prosperity aspect of ROK New Southern Policy.

The Bangkok Regional Hub will ensure consolidation of results/impacts and reporting to the donor on a regular basis. It will also ensure value-addition through knowledge management experience sharing across participating countries and dissemination of lessons to other countries in the region. Based on lessons and best practices, BRH will support countries to mobilize additional resources through similar arrangements in the future.

III. RESULTS AND PARTNERSHIPS (1.5 - 5 PAGES RECOMMENDED)

Expected Results

The project comprises of a set of measures that span across three key outputs with corresponding country-level outputs, as follows:

1. Inclusive assessment of water-related climate risks completed in the priority river basins.
2. Enabling environment for gender-responsive climate risk-informed integrated water resources management developed.
3. Funding proposal for priority risk reduction measures developed.

The project will be carried out by UNDP both at the regional level and in each country. Most activities will be carried out directly by UNDP, while some activities under 1.2 and 2.1 will be carried out the Asia Water Council (AWC) as a technical partner – as detailed below and in the management arrangements.

OUTPUT 1: Inclusive assessment of water-related climate risks completed in the priority river basins.

In both Lao PDR and Cambodia, there is limited hydrological risk and vulnerability data, especially at downscaled levels relevant for provincial and municipal decision-making or detailed development projections. The objective of this output is to expand the risk and vulnerability data available to decision makers in the priority watersheds.

This output's first activity (**Activity Result 1.1: Climate risk and water resources management baseline examined**) will facilitate an examination of the baseline resulting in the compilation of a stocktaking report for each country that takes into account the existing and completed projects relevant to this effort as well as status of climate risk and vulnerability data in the provinces targeted by the project as well as neighboring regions as relevant.

In addition, ROK funds will facilitate development of a Stakeholder Engagement Plan and Gender Action Plan for each country that assesses the stakeholders necessary to include in project implementation and how project activities can have gender mainstreamed.

Informed by this stocktaking and stakeholder analysis, detailed climate and disaster risk assessments will be completed for the priority catchments of Xe Bang Fai and Xe Don in Lao PDR and the 4Ps and 3Ss catchments in Cambodia under **Activity Result 1.2: Detailed climate vulnerability and disaster risk assessments completed with a focus on two priority urban areas**. Under this Activity result, flood propagation models and impact-based forecasting models will be developed for two cities in each country – one in each catchment, illustrating the projected level of impact and the likelihood of occurrence for hydrometeorological disasters in the targeted areas and their peripheries. This work will be separately funded by RoK and facilitated by the Asia Water Council coordinating technical support from KWater in collaboration with the UNDP project teams and government partners.

In addition, to ensure community engagement in the risk identification process and comprehensive understanding of vulnerabilities, community-based vulnerability analysis and mapping exercises will be completed for each urban area. To further examine the way that water-related climate hazards are affecting livelihoods, markets, and supply chains, market-based assessments will be conducted to articulate risks and barriers. These latter two studies will be facilitated by UNDP with funding support from RoK.

Preliminary cities in each catchment have been identified, but these will be finalized during the project's inception period based on further consultation.

This Output comprises the following activity results in the project structure:

CAMBODIA:

Activity Result C1.1: Climate risk and water resources management baseline examined.
(See description as above)

Activity Result C1.2: Detailed climate vulnerability and disaster risk assessments completed for the 4Ps and 3Ss river basins with a focus on two priority urban areas. (See description as above)

Lao PDR:

Activity Result L1.1 Climate risk and water resources management baseline examined.
(See description as above). In addition to the baseline study and gender and stakeholder engagement plans for Lao PDR, under this Activity a Regional Indigenous Peoples Planning Framework will be completed for the project.

Activity Result L1.2 Detailed climate and disaster risk assessments completed for Xe Bang Fai and Xe Don river basins, with focus on two priority urban areas. (See description as above)

OUTPUT 2: Enabling environment for gender-responsive climate risk-informed integrated water resources management developed.

In Cambodia and Lao PDR there are substantial barriers to integrating climate risk information into water resources management. Both countries face limited capacity of technical staff in affected provinces and municipalities to analyze and utilize climate risk data. There is nascent understanding of the options and feasibility of integrated water resources management approaches to long-term risk reduction. Beyond the individual level, there is limited institutional capacity to plan for, finance, and implement long-term climate resilience measures. And, at a regional/transboundary level, there is limited connectivity of early warning systems across borders and little to no flow of risk information in the border regions.

The objective of Output 2 is to enhance the enabling environment to facilitate risk-informed integrated water resources management. This output will consist of activities at the country and regional levels. In each country, planned activities include a capacity assessment of both short-term training and skill needs at the local and provincial government levels, but also of the long-term institutional, financing, and policy frameworks necessary for sustained urban climate and disaster resilience and effective early warning systems.

Under **Activity Result 2.1, the Institutional and technical capacity for long-term climate resilience and integrated water resource management will be assessed for two priority urban areas** in each country. This will include a capacity assessment conducted via desk review and consultation with the municipalities and relevant local and provincial institutions. This area of work will be completed by the Asia Water Council facilitating technical support from KWater with allowance for technical review and comment by UNDP project team. The assessment will focus on evaluating long-term policy and planning frameworks, municipal financing options, and decentralization of institutional responsibilities. RoK funds, under the facilitation of the AWC, will also be utilized to assess the effectiveness of the climate and disaster risk monitoring systems in the respective river basins in each country.

Informed by this capacity assessment, **Activity Result 2.2 will Identify and prioritize adaptation and DRR actions to build preparedness and reduce long-term water-related climate risks.** This will include a series of consultations with a wide range of stakeholders in both countries in order to develop an integrated water resources management feasibility study for each catchment that identifies risk mitigation options – with a focus on the priority urban areas. Transformative risk reduction measures to be considered will include structural and non-structural measures as well as innovative policy, planning and financing mechanisms. This work will inform future investments and provide the basis for development of project proposal(s) under Outcome 3.

Activity Result 2.3 aims to Carry out capacity building to enhance risk-informed, gender-responsive integrated water resources management and strengthen community disaster preparedness and EWS systems. This will take a more short-term approach to assessing and addressing immediate technical capacity needs at the municipal and provincial levels to help advance risk-informed integrated water resources management in the priority catchments. Based on a short-term capacity assessment, trainings and activities will be held to improve capacity of local governments and stakeholders to understand and utilize risk data. In addition, steps will be taken to set up local relief funds in the target communities via the Disaster Management

Committees. And, in the case of Lao PDR, specific measures to enhance the utilization of the EWS already in place (LaoDi database and “Text to Talk” program) will be carried out.

At the regional or transboundary scale, Outcome 2 includes initiation of a knowledge exchange and working group between the border provinces focused on strengthening cross-border communication on climate risks and linking transboundary EWS. This will take place under **Activity Result 2.4: Transboundary EWS systems strengthened in the border region between Cambodia and Lao PDR**. Validation of local tools that enable post disaster needs assessment will be carried out (where it has not already taken place). Further Capacity building will improve preparedness for members of the Provincial Disaster Management Committees in these neighboring regions of both countries. In addition, community awareness events will be held in border communities to strengthen transboundary communications on disaster events, share lessons learned and best practices and engage stakeholders from both countries. This Output will not take on the work of integrating the two country’s EWS systems but will focus on development of skills and communications channels between and among groups across the border. Though this output will have joint benefits for both countries, implementation will be led by the Cambodia project team in collaboration with regional partners such as the Mekong River Commission.

Activity Result 2.4 will be facilitated by the Cambodia project team, including actors from Lao PDR. The RoK funds will be utilized to hold annual meeting/knowledge exchange of transboundary EWS working group, conduct joint capacity building training to enhance preparedness for recovery for officials of Provincial Disaster Management Committees, and conduct community-based awareness events to develop communications pathways and facilitate sharing of best-practices in the border communities.

This Output comprises the following activity results in the project structure:

CAMBODIA:

Activity Result C2.1: Institutional and technical capacity for long-term climate resilience and integrated water resource management assessed.

Activity Result C2.2: Identify and prioritize adaptation and DRR actions to build preparedness and reduce long-term water-related climate risks.

Activity Result C2.3: Carry out capacity building to enhance risk-informed integrated water resources management and strengthen community disaster preparedness and EWS systems.

Activity Result C2.4: Transboundary EWS systems strengthened in the border region between Cambodia and Lao PDR. This Activity is administered by the Cambodia team, but will include beneficiaries in both countries as well as potential regional entities.

Lao PDR:

Activity Result L2.1: Institutional and technical capacity for long-term climate resilience and integrated water resource management assessed for two priority urban areas.

Activity Result L2.2: Identify and prioritize adaptation and DRR actions to build preparedness and reduce long-term water-related climate risks.

Activity Result L2.3: Carry out capacity building to enhance risk-informed, gender-responsive integrated water resources management and strengthen community disaster preparedness and EWS systems. Beyond those activities that will be carried out in both countries, this Activity includes activities focused on strengthening LaoDi database and strengthening disaster preparedness EWS via piloting use of “Text to Talk” system.

OUTPUT 3: Funding proposal for priority risk reduction measures developed.

In both Cambodia and Lao PDR there is limited availability of public finance for climate adaptation and also limited understanding of and engagement with the private sector in financing climate and disaster risk reduction. This Output seeks to catalyze further investment in future flood and climate risk-reduction measures in the vulnerable areas via mobilizing large-scale financing. This Output will facilitate the steps necessary to develop a full-size Green Climate Fund (or similar) proposal informed by the results of Outputs 1 & 2 to enable future risk reduction measures. All feasible funding opportunities will be explored, including mobilizing bi-lateral funds and utilizing public climate finance to leverage additional private capital via blended financing mechanisms.

Carried out at the regional level, **Activity Result 3.1** will include the completion of necessary **consultations to inform development of regional, multi-city approach to increasing resilience in the urban areas of the transboundary region**. This will include consultations with relevant partners, governments, private sector entities, communities and vulnerable populations (including women’s groups and indigenous populations) to inform project design. During project site selection, preparation of required safeguards assessments and management measures will be conducted in line with UNDP’s Social and Environmental Standards. **Activity 3.2** will include the refinement of feasibility studies for specific project interventions and development and submission of the project proposal(s). Though at least one proposal will be completed, it is possible that multiple projects may also be pursued.

This Output comprises the following activity results in the project structure:

Regional

Activity Result R3.1: Consultations to inform development of regional, multi-city approach to increasing resilience in the urban areas of the transboundary region completed.

Activity Result R3.2: Develop and submit project proposal(s) for submission to Green Climate Fund or similar, including development of necessary feasibility assessments.

Resources Required to Achieve the Expected Results

The project will be implemented directly by UNDP, with UNDP Bangkok Regional Hub (BRH) providing coordination and oversight support and UNDP Cambodia and UNDP Lao PDR executing activities on the ground in collaboration with the respective governments.

At the regional level, a technical advisor and a project assistant will provide project implementation support. UNDP Cambodia and UNDP Lao PDR will make use of project grant resources from ROK to implement the project through recruitment of project personnel.

UNDP will provide project oversight and quality assurance at the regional and country office levels. The mandatory general management service (GMS) costs of 8% of the budget will be required by UNDP.

In addition to the project coordination and implementation by UNDP, the AWC will be delivering technical risk assessments under Activity Result 1.2 and 2.1 as detailed above through AWC technical platform including experts from its Special Committees in consultation with relevant Korean authorities such as K-water. In conducting the risk assessments and capacity assessments, AWC will liaise with national authorities from MOWRAM in Cambodia and MONRE in Lao PDR as part of the knowledge transfer and government's engagement in conducting technical assessments. MOWRAM and MONRE will be involved during data collection and analysis.

The total financing required for the project is 5 billion Korean Won @ 1117.6 Won per US\$ as of June 1, 2021). A detailed breakdown of the project budget is included in the table below:

Detailed Project Budget with Budget Notes:

| Outcome | Output | Responsible Parties | Fund ID | Financing Source | Account Code | Description | Amount Year 1 (USD) | Amount Year 2 (USD) | Amount Year 3 (USD) | Amount Year 4 (USD) | TOTAL (USD) | Budget Notes |
|---|--|---------------------|---------|------------------|---|-------------------------------|---------------------|---------------------|---------------------|---------------------|-------------------|--------------|
| Cambodia | | | | | | | | | | | | |
| 1. Water-related climate risks assessed in the priority river basins | 1.1 Climate risk and water resources management baseline examined. | UNDP | | ROK | 71200 | International Consultants | 40,000.00 | 40,000.00 | | | 80,000.00 | 1 |
| | | | | | 71300 | Local Consultants | 80,000.00 | 40,000.00 | - | | 120,000.00 | 2 |
| | 61300 | | | | Salary and Post Adj-IP staff | 30,000.00 | 20,000.00 | 20,000.00 | 20,000.00 | 90,000.00 | 3 | |
| | 71600 | | | | Travel | 1,099.14 | 1,151.07 | | | 2,250.21 | 4 | |
| Sub-total for Output 1 | | | | | | | 151,099.14 | 101,151.07 | 20,000.00 | 20,000.00 | 292,250.21 | |
| 2. Enabling environment for climate risk-informed integrated water resources management developed | 2.1 Institutional and technical capacity for long-term climate resilience and integrated water resource management assessed in two priority urban areas. | UNDP | | ROK | 71200 | International Consultants | 21,600.00 | 34,900.00 | | - | 56,500.00 | 5 |
| | | | | | 71300 | Local Consultants | 60,000.00 | 60,000.00 | 45,000.00 | 40,000.00 | 205,000.00 | 6 |
| | 75700 | | | | Training, Workshops and Conference | 16,000.00 | 41,000.00 | 23,000.00 | 18,000.00 | 98,000.00 | 7 | |
| | 74200 | | | | Audio Visual and Print Production Costs | 1,500.00 | 1,500.00 | | | 3,000.00 | 8 | |
| | 61300 | | | | Salary and Post Adj-IP staff | 20,000.00 | 85,000.00 | 75,000.00 | 30,000.00 | 210,000.00 | 3 | |
| | 72100 | | | | Contractual Services - Companies | | 70,000.00 | 70,000.00 | | 140,000.00 | 9 | |
| | 72600 | | | | Grants | | | 50,000.00 | 50,000.00 | 100,000.00 | 10 | |
| | 71600 | | | | Travel | 18,000.00 | 16,560.00 | 20,880.00 | 16,560.00 | 72,000.00 | 11 | |
| Sub-total for Output 2 | | | | | | | 137,100.00 | 308,960.00 | 283,880.00 | 154,560.00 | 884,500.00 | |
| Project Management | | UNDP | | ROK | 72500 | Supplies | 1,000.00 | 1,000.00 | 1,000.00 | 1,000.00 | 4,000.00 | 12 |
| | | | | | 73100 | Rental & Maintenance-Premises | 8,000.00 | 8,000.00 | 8,000.00 | 8,000.00 | 32,000.00 | 13 |

| | | | | | | | | | | | | |
|---|--|------|-----|-------|-------------------------------|---|-------------------|-------------------|-------------------|---------------------|------------|----|
| | | | | 71400 | Contractual services-Indiv | 66,210.00 | 66,210.00 | 66,210.00 | 66,210.00 | 264,840.00 | 14 | |
| | | | | 71600 | Travel | 2,000.00 | 2,000.00 | 2,000.00 | 2,000.00 | 8,000.00 | 15 | |
| | | | | 75700 | Training/workshops | 5,000.00 | 1,000.00 | 1,000.00 | 1,000.00 | 8,000.00 | 16 | |
| | | | | 74500 | Services to project - GOE | 30,000.00 | 30,000.00 | 30,000.00 | 30,000.00 | 120,000.00 | 17 | |
| | | | | 74100 | Professional Fees | 5,000.00 | 5,000.00 | 5,000.00 | 5,000.00 | 20,000.00 | 18 | |
| Sub-total for Project Management Costs | | | | | | 117,210.00 | 113,210.00 | 113,210.00 | 113,210.00 | 456,840.00 | | |
| Total budget for Cambodia | | | | | | 405,409.14 | 523,321.07 | 417,090.00 | 287,770.00 | 1,633,590.21 | | |
| Lao PDR | | | | | | | | | | | | |
| 1. Water-related climate risks assessed in the priority river basins | 1.1 Climate risk and water resources management baseline examined. 1.2 Detailed climate vulnerability and disaster risk assessments completed for the Xe Bang Fai and Xe Don river basins with a focus on two priority urban areas. | UNDP | | ROK | 71200 | International Consultants | 66,000.00 | 44,000.00 | | | 110,000.00 | 19 |
| | | | | | 71300 | Local Consultants | 85,000.00 | 40,000.00 | - | | 125,000.00 | 20 |
| | | | | | 61300 | Salary and Post Adj-IP staff | 35,000.00 | 20,000.00 | 20,000.00 | 15,000.00 | 90,000.00 | 21 |
| | | | | | 71600 | Travel | 2,750.00 | 2,750.00 | | | 5,500.00 | 22 |
| Sub-total for Output 1 | | | | | | 188,750.00 | 106,750.00 | 20,000.00 | 15,000.00 | 330,500.00 | | |
| 2. Enabling environment for climate risk-informed integrated water resources management developed | 2.1 Institutional and technical capacity for long-term climate resilience and integrated water resource management assessed in two priority urban areas. 2.2 Identify and prioritize adaptation and DRR actions to build preparedness and reduce long-term water-related climate risks. 2.3 Carry out capacity building to enhance risk-informed integrated water resources management and strengthen community disaster preparedness and EWS systems. | UNDP | | ROK | 71200 | International Consultants | | | 30,000.00 | 30,000.00 | 60,000.00 | 23 |
| | | | | | 71300 | Local Consultants | - | 70,000.00 | 55,000.00 | 30,000.00 | 155,000.00 | 24 |
| | | | | | 75700 | Training, Workshops and Conference | | 23,000.00 | 28,000.00 | 10,000.00 | 61,000.00 | 25 |
| | | | | | 74200 | Audio Visual and Print Production Costs | | 1,430.00 | 3,420.00 | 917.00 | 5,767.00 | 26 |
| | | | | | 61300 | Salary and Post Adj-IP staff | 20,000.00 | 75,000.00 | 85,000.00 | 30,000.00 | 210,000.00 | 21 |
| | | | | | 72100 | Contractual Services - Companies | | 65,000.00 | 65,000.00 | | 130,000.00 | 27 |
| | | | | | 72600 | Grants | | | 50,000.00 | 50,000.00 | 100,000.00 | 28 |
| | | | | | 71600 | Travel | | 4,000.00 | 8,000.00 | 8,000.00 | 20,000.00 | 29 |
| Sub-total for Output 2 | | | | | | 20,000.00 | 238,430.00 | 324,420.00 | 158,917.00 | 741,767.00 | | |
| Project Management | UNDP | | ROK | 72500 | Supplies | 850.00 | 850.00 | 850.00 | 850.00 | 3,400.00 | 30 | |
| | | | | 73100 | Rental & Maintenance-Premises | 8,000.00 | 8,000.00 | 8,000.00 | 8,000.00 | 32,000.00 | 31 | |

| | | | | | | | | | | | | |
|--|---|------|--|-------|-------------------------------|------------------------------------|---------------------|---------------------|-------------------|---------------------|------------|----|
| | | | | 71400 | Contractual services-Indiv | 57,589.00 | 57,589.00 | 57,589.00 | 57,590.00 | 230,357.00 | 32 | |
| | | | | 71600 | Travel | 1,500.00 | 1,500.00 | 1,500.00 | 1,500.00 | 6,000.00 | 33 | |
| | | | | 75700 | Training/workshops | 5,000.00 | 1,000.00 | 1,000.00 | 1,000.00 | 8,000.00 | 34 | |
| | | | | 74500 | Services to project - GOE | 25,750.00 | 25,750.00 | 25,750.00 | 25,750.00 | 103,000.00 | 35 | |
| | | | | 74100 | Professional Fees | 5,000.00 | 5,000.00 | 5,000.00 | 5,000.00 | 20,000.00 | 36 | |
| Sub-total for Project Management Costs | | | | | | 103,689.00 | 99,689.00 | 99,689.00 | 99,690.00 | 402,757.00 | | |
| Total budget for Lao PDR | | | | | | 312,439.00 | 444,869.00 | 444,109.00 | 273,607.00 | 1,475,024.00 | | |
| Regional | | | | | | | | | | | | |
| 3. Investments in priority risk reduction measures to improve climate and disaster resilience in the Lower Mekong River Basin facilitated. | 3.1 Identify bankable, integrated climate adaptation and disaster risk reduction programming options for a regional, multi-city approach to increasing resilience in the urban areas of the transboundary region. | UNDP | | ROK | 71200 | International Consultants | 20,000.00 | 20,000.00 | 75,000.00 | 105,000.00 | 220,000.00 | 37 |
| | | | | | 71300 | Local Consultants | - | - | 36,750.00 | 68,250.00 | 105,000.00 | 38 |
| | | | | | 75700 | Training, Workshops and Conference | - | - | 8,778.00 | 5,000.00 | 13,778.00 | 39 |
| | | | | | 61300 | Salary & Post Adj. Cost - IP Staff | 26,000.00 | 26,000.00 | 18,000.00 | 10,000.00 | 80,000.00 | 40 |
| | | | | | 72100 | Contractual Services - Companies | - | - | 45,000.00 | 45,000.00 | 90,000.00 | 41 |
| Sub-total for Output 3 | | | | | | 46,000.00 | 46,000.00 | 183,528.00 | 233,250.00 | 508,778.00 | | |
| | | | | 61100 | Salary Cost - NP Staff | 55,480.00 | 56,582.00 | 56,023.00 | 56,023.00 | 224,108.00 | 42 | |
| | | | | 71200 | International Consultants | - | - | - | 30,000.00 | 30,000.00 | 43 | |
| | | | | 73100 | Rental & Maintenance-Premises | 7,500.00 | 7,500.00 | 7,500.00 | 7,500.00 | 30,000.00 | 44 | |
| | | | | 71600 | Travel | 1,500.00 | 1,500.00 | 1,500.00 | 1,500.00 | 6,000.00 | 45 | |
| | | | | 74500 | Services to project - GOE | 2,600.00 | 2,600.00 | 2,600.00 | 2,600.00 | 10,400.00 | 46 | |
| | | | | 74100 | Professional fees | 3,000.00 | 3,000.00 | 3,000.00 | 3,000.00 | 12,000.00 | 47 | |
| Sub-total for Regional Project Management Costs | | | | | | 70,080.00 | 71,182.00 | 70,623.00 | 100,623.00 | 312,508.00 | | |
| Total Budget for Regional Component | | | | | | 116,080.00 | 117,182.00 | 254,151.00 | 333,873.00 | 821,286.00 | | |
| Total project without GMS | | | | | | 833,928.14 | 1,085,372.07 | 1,115,350.00 | 895,250.00 | 3,929,900.21 | | |
| GMS fee (8%) | | | | | | 66,714.00 | 86,830.00 | 89,228.00 | 71,620.00 | 314,392.00 | | |
| Total project with GMS Fee | | | | | | 900,642.14 | 1,172,202.07 | 1,204,578.00 | 966,870.00 | 4,244,292.21 | | |

| | | | | | |
|------------------------|------------|--------------|--------------|------------|--------------|
| Coordination Levy (1%) | 42,438.64 | - | - | - | 42,438.64 |
| GRAND TOTAL | 943,080.78 | 1,172,202.07 | 1,204,578.00 | 966,870.00 | 4,286,730.85 |

| Budget Note No. | Comment | Total Amount (USD) |
|-----------------|--|--------------------|
| Cambodia | | |
| 1 | International consultant(s) to develop market-based assessment of supply chains. 160 days at \$500/day over two years. | 80,000 |
| 2 | National consultant to develop stocktaking report. 100 days at \$250/day. | 20,000 |
| | National consultant to develop Gender Action Plan and Stakeholder Engagement Plan. 80 days for each plan at \$250/day. | 40,000 |
| | National consultant to lead community-based problem analysis. 200 days at \$300/day. | 60,000 |
| 3 | Chief Technical Advisor to support project technical outputs across all outcomes. Assume one IC at average of 125 days/year averaged over the project at \$600/day for total contract value of \$300,000 over the course of the project, or average \$75,000/year. Costs are split between outcomes 1 & 2 and across years based on activities (not entirely evenly year by year). | 300,000 |
| 4 | Travel costs for consultants to visit project sites during community-based problem analysis | 2,250 |
| 5 | International consultant to support capacity building training at regional level. Assume one contract at \$15,000 inclusive of travel. | 15,000 |
| | International consultant(s) to implement 2.4.3 - awareness raising of transboundary communication on flood/climate risk for border regions. Assume one contract, inclusive of travel. Climate Information Services specialist. | 41,500 |
| 6 | National consultant(s) for implementation of 2.3.1 - capacity assessment of short-term capacity needs. Assume 100 days at \$300/day. | 30,000 |
| | National consultant for implementation of provincial training program on GIS and hydrological models. Assume contract value of \$30,000 inclusive of travel costs. | 30,000 |
| | National consultant to support implementation of 6 community-level DRR and CCA actions. Assume 200 days at \$300/day split over three years. | 60,000 |
| | National consultant to help facilitate community mobilization of relief funds. Assume 100 days at \$300/day. | 30,000 |
| | National consultant to implement transboundary knowledge exchange. Assume 160 days at \$250/day over four years. | 40,000 |
| | National consultant to conduct joint capacity building training to enhance preparedness for recovery for officials of Provincial Disaster Management Committee in both Lao PDR and Cambodia including validation and strengthening of existing localized tools on Post Disaster Needs Assessment and Recovery Framework. | 15,000 |
| 7 | Space rental and logistics for consultations with stakeholders to identify DRR and adaptation actions. Assume four workshops at \$2500 each. | 10,000 |
| | Space rental and logistics for 6 community-level DRR and CCA actions/trainings (two-days each @5000 per training) | 30,000 |
| | Space rental and logistics for training program on GIS and hydrological models. Assume two workshops of one week long at \$8000 each. | 16,000 |
| | Workshop costs for annual meeting/knowledge exchange. Assume one week event each year. | 32,000 |
| | Workshop costs for capacity building trainings for Provincial Disaster Management Committees. Assume two events of \$5000 each. | 10,000 |
| 8 | Costs for printing of training materials, manuals, for GIS-based integrated hydrological model training | 3,000 |
| 9 | Expertise to develop detailed risk-informed watershed management feasibility studies for 4Ps and 3Ss river catchments | 140,000 |
| 10 | Grant funding to develop seed funding facilities with local disaster management committees | 100,000 |
| 11 | Travel costs for consultants and experts to visit project sites during implementation of 6 community-level DRR and CCA actions | 12,000 |

| | | |
|-------------|--|---------|
| | Travel costs for consultants and CTA to visit communities during facilitation of community mobilization of relief funds design | 10,000 |
| | Travel costs for regional stakeholders to attend annual knowledge exchange. Assume at least 20 participants. | 50,000 |
| 12 | Misc. supplies for project operations - Cambodia | 4,000 |
| 13 | Rental costs for project office space - Cambodia | 32,000 |
| 14 | National Project Manager (averaged cost over four years, assuming 2% inflation) | 206,080 |
| | National Project Assistant (averaged cost over four years, assuming 2% inflation) | 58,760 |
| 15 | Travel costs for project team to travel to project sites during activity implementation | 8,000 |
| 16 | Project inception workshop (\$4000 in Y1) | 4,000 |
| | costs associated with other coordinating meetings (\$1000/year) | 4,000 |
| 17 | Support to project administrative services including procurement, HR, IT, finance services | 120,000 |
| 18 | Audit fees for any HACT assessments necessary. | 20,000 |
| LAOS | | |
| 19 | International consultant(s) to develop market-based assessment of supply chains. 160 days at \$500/day over two years. | 80,000 |
| | International consultant to develop Indigenous People's Planning Framework for the project (at the regional level - for both countries). Assume one contract inclusive of missions. | 30,000 |
| 20 | National consultant to develop stocktaking report. 100 days at \$250/day. | 25,000 |
| | National consultant to develop Gender Action Plan and Stakeholder Engagement Plan. 80 days for each plan at \$250/day. | 40,000 |
| | National consultant to lead community-based problem analysis. 200 days at \$300/day. | 60,000 |
| 21 | Chief Technical Advisor to support project technical outputs across all outcomes. Assume one IC at 125 days/year averaged over the project at \$600/day for total contract value of \$300,000 over the course of the project, or average \$75,000/year. Costs are split between outcomes 1 & 2 and across years based on activities. | 300,000 |
| 22 | Travel costs for consultants to visit project sites during community-based problem analysis | 5,500 |
| 23 | International consultant for implementation of 2.3.6 - "text to talk" program. Assume 100 days at \$600/day. | 60,000 |
| 24 | National consultant(s) for implementation of 2.3.1 - capacity assessment of short-term capacity needs. Assume 100 days at \$300/day. | 30,000 |
| | National consultant for implementation of provincial training program on GIS and hydrological models. Assume contract value of \$35,000 inclusive of travel costs. | 35,000 |
| | National consultant to support implementation of 6 community-level DRR and CCA actions. Assume 200 days at \$300/day split over three years. | 60,000 |
| | National consultant to help facilitate community mobilization of relief funds. Assume 100 days at \$300/day. | 30,000 |
| 25 | Space rental and logistics for consultations with stakeholders to identify DRR and adaptation actions. Assume four workshops at \$2500 each. | 10,000 |
| | Space rental and logistics for 6 community-level DRR and CCA actions/trainings (two-days each @5000 per training) | 30,000 |
| | Space rental and logistics for training program on GIS and hydrological models. Assume two workshops of one week long at \$8000 each. | 16,000 |
| | Workshop costs associated with regional training on LaoDi database | 5,000 |
| 26 | Costs for printing of training materials, manuals, for GIS-based integrated hydrological model training | 2,767 |
| | Training materials and printing costs for training LaoDi database | 1,000 |
| | Printing costs and manuals associated with Text To Talk program pilot | 2,000 |
| 27 | Expertise to develop detailed risk-informed watershed management feasibility studies for 4Ps and 3Ss river catchments | 130,000 |

| | | |
|----------------------------|--|---------|
| 28 | Grant funding to develop seed funding facilities with local disaster management committees | 100,000 |
| 29 | Travel costs for consultants and experts to visit project sites during implementation of 6 community-level DRR and CCA actions | 10,000 |
| | Travel costs for consultants and CTA to visit communities during facilitation of community mobilization of relief funds design | 10,000 |
| 30 | Misc. supplies for project operations - Lao PDR | 3,400 |
| 31 | Rental costs for project office space - Lao PDR | 32,000 |
| 32 | National Project Manager (averaged cost over four years, assuming 2% inflation) | 176,747 |
| | National Project Assistant (averaged cost over four years, assuming 2% inflation) | 53,610 |
| 33 | Travel costs for project team to travel to project sites during activity implementation | 6,000 |
| 34 | Project inception workshop (\$4000 in Y1) | 4,000 |
| | costs associated with other coordinating meetings (\$1000/year) | 4,000 |
| 35 | Support to project administrative services including procurement, HR, IT, finance services | 103,000 |
| 36 | Audit fees for any HACT assessments necessary. | 20,000 |
| Regional Management | | |
| 37 | International consultant(s) to identify and finalize selection of GCF project ideas and hold consultations with partners. Assume approx. 70 days at \$500/day. | 35,000 |
| | International consultant to provide technical support to project development process and liaise with Korean Government throughout project process. Assume \$20,000 value per year (approx. 60 days/yr.). | 80,000 |
| | International consultant(s) to develop funding proposal for GCF submission or similar, inclusive of feasibility assessments (can be split across multiple contracts). Assume total of 210 days for \$500/day. | 105,000 |
| 38 | National consultant(s) to identify and finalize selection of GCF project ideas and hold consultations with partners. Note: could be in Lao PDR or Cambodia, but would be hired via Regional Hub. Assume 75 days at \$200/day. | 15,000 |
| | National consultant to complete feasibility assessment(s) for GCF proposal. Note: could be in Lao PDR or Cambodia, but would be hired via Regional Hub. Assume one contract inclusive of travel. | 45,000 |
| | National consultant to develop funding proposal for GCF submission or similar. could be in Lao PDR or Cambodia, but would be hired via Regional Hub. Assume one contract to be inclusive of travel. | 45,000 |
| 39 | Workshop and consultation costs associated with finalizing project ideas. Assume one full-day consultation. | 5,000 |
| | Workshop and consultation costs associated with finalizing GCF or similar proposal. Assume several consultations. | 8,778 |
| 40 | Salary costs associated with technical support from UNDP's NCE team to guide assessment of climate adaptation and DRR interventions and innovative and nature-based solutions. Assume \$20,000 per year on average, spread across the project with focus on more support in first few years. | 80,000 |
| 41 | Firm to complete private sector engagement feasibility assessment under 3.1.3. | 45,000 |
| | Firm to complete consultations for proposal development | 45,000 |
| 42 | Regional project coordinator. Assume 29% of NOC position in Bangkok (averaged). | 221,708 |
| | Regional project analyst support costs. Assume approx. 2 days in total of NOB position in Bangkok (averaged based on proforma) per year for the first two years of the project to support the project. | 2,400 |
| 43 | Project Terminal Evaluation | 30,000 |
| 44 | Costs for rental of premises. | 30,000 |
| 45 | Travel costs for regional project staff for oversight and project implementation support visits. | 6,000 |
| 46 | Support to project administrative services including procurement, HR, IT, finance services | 10,400 |
| 47 | Audit Fees | 12,000 |

Partnerships

In order to achieve the expected outcomes of the project, UNDP will establish technical non-financial partnerships with key entities as follows:

This project will be carried out in collaboration with the Asia Water Council (AWC), a leading water platform that aims to provide tangible solutions to water issues in Asia and beyond, and support achieving sustainable development with clean and sufficient water in the region. The AWC consists of 144 members from 27 countries, and actively cooperating with other water-related organizations including the World Water Council, International Water Resources Association, OECD, ADB, etc.

The AWC will provide technical expertise to this project through the AWC technical platform mentioned above, in particular, for the implementation of activities under results area 1.2 and 2.1 at the country level. This will be carried out as a technical partnership, not a responsible party modality and no money will be paid from UNDP to the AWC.

As an external facing agency in Korea, AWC will help to coordinate the technical support from relevant Korean authorities for the project in each country and utilize its existing relationships with MOWRAM and other agencies to facilitate transfer of skills and capacity building with government agencies while the project is underway.

Since its establishment in 2016, the AWC has operated a number of joint projects with international organisations such as the OECD, IWRA, etc., and has implemented 18 demand-driven water projects that provide technical and policy solutions to the identified water issues. The projects in the 4Ps basin in Cambodia and the Xe Bang Fai basin in Laos have been developed through this program.

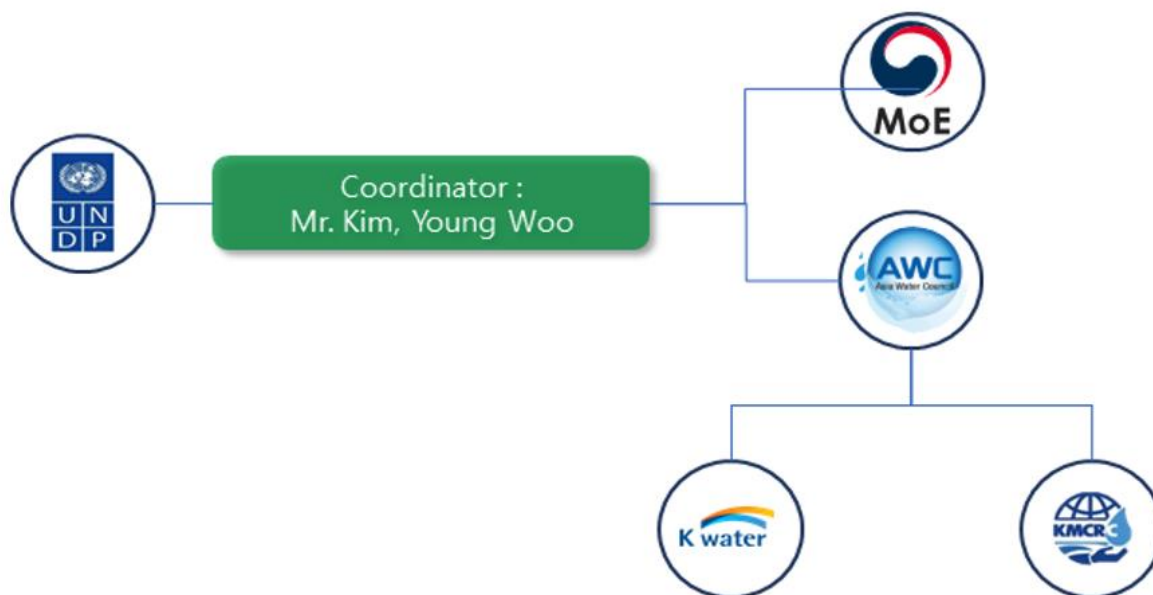
2016~2021 AWC Water Projects

| No. | Country | Project Title |
|-----|------------|---|
| 1 | Laos | Establishment of a plan for an IWRM system in Xe Bang Fai river basin, LAO PDR |
| 2 | Uzbekistan | Scientific platform to address ecosystem recreation around the western part of the Aral Sea |
| 3 | Cambodia | Integrated Flood and Drought Management in the 4 Ps Basin for Climate Resilience |
| 4 | | IWRM MP project in Cambodia 4Ps basin for future climate change resilience and disaster alleviation |
| 5 | | Development of Water Purifying System Using a Ceramic Filter for the Purification of High-turbidity Surface Water Resources in Cambodia |
| 6 | | Development of the master plan for Water Security in Kongpisey, Cambodia |
| 7 | | Master plan on Sangke river Integrated management |
| 8 | Georgia | Future development project of sewerage network and water supply of Makhinjauri and the Green Cape Settlement in Batumi City |
| 9 | Bangladesh | Implementation of Smart Meters for Smart Water Management in Dakar City |
| 10 | Nepal | Support water and sanitation policy-related SDGs and rights in Nepal – Phase 1 |
| 11 | Mongolia | The national water quality information database |
| 12 | | Update and develop national water policy in line with SDGs, Paris declaration and |

| | | |
|----|------------|---|
| | | long-term development policy of Mongolia |
| 13 | Bangladesh | Capacity Enhancement and Exploration of Research Opportunities |
| 14 | Indonesia | Development of Cloud Computing Based Water Risk Management System for Asian Country |
| 15 | | Smart Water Management Project in Denpasar, Indonesia |
| 16 | Vietnam | SWM Micro Pilot Project for Vietnam |
| 17 | | Establishment of decision support system (DSS) for efficiency water resources management |
| 18 | Thailand | Comprehensive study for additional water supply from nearby basins to Chao Phraya river basin |

In addition, the AWC will collaborate with the Korean Water Resources Corporation (K-water) and the Korea-Mekong Water Resources Management Collaborative Research Center (KMCR). K-water, specialized in providing comprehensive water resource development expertise, is a public agency under the umbrella of the Korean Ministry of Environment. Recently, K-water has been working with the MoE on a variety of overseas technical assistance projects, including some of those as listed below. Established in 2019, the KMCR is a cooperative entity that seeks to share information and joint research on water resources management with the aim to reduce water related disasters and enabling communication and exchange between regional countries and experts.

The working relationship between these entities can be illustrated as below:



In **Cambodia**, the **Ministry of Water Resources and Meteorology (MOWRAM)** will be the key partner for the project – as it is the principal ministry mandated to oversee water resources management and development, flood and drought management, water-related legislation and regulation and water resources information management. MoWRAM and its provincial branches also monitor, collect and circulate data and information on weather forecasts in collaboration with the **National Committee for Disaster Management (NCDM)** and the **Ministry of Information**

to broadcast relevant information to provincial, district, commune and village levels for preparing and or mitigating the possible disaster.

The project will collaborate with the **Ministry of Public Works and Transport (MPWT)**, which manages, monitors, researches, plans and evaluates the construction, development and maintenance of major infrastructure, including riverbanks, bridges and other related works related to public works and transport. Due to its role in drainage, the MPWT is responsible for urban drainage and urban sanitation through its provincial departments. This includes coordination, policy, and regulation. While in rural areas, it is the **Ministry of Rural Development (MRD)** – another key partner in the project - that is responsible for water supply, sanitation and land drainage.

The **Ministry of Environment (MoE)** will be an important partner, responsible for protecting water resources and coordinating government efforts on environmental issues including climate change. With its designated department, the department of climate change (DCC), it will coordinate in learning, M&E and document good practices for feeding into policy and climate change related programs. Although Cambodia's climate risk assessment and adaptation falls primarily within the portfolio of the MoE, climate risk is also understood to be an important element of managing disaster risk in Cambodia. For the cross-sectoral cooperation in climate risk and disaster management, the National Committee for Disaster Management (NCDM) coordinates all disaster management activities and implement its hazard risk prevention programs in collaboration with the MoE.

In addition to the above, the project expects to collaborate with the following ministries: The **Ministry of Industry, Mines and Energy (MIME)**, responsible for water supply provision to cities and provincial towns as well as for hydropower. The **Ministry of Agriculture, Forests and Fisheries (MAFF)** is responsible for implements with implications for irrigation and catchments, both in forests and fisheries areas. The **Ministry of Health (MoH)** is responsible for controlling water quality, including outflows of stormwater. The **Ministry of Planning (MoP)** is accountable for general development plans and the **Ministry of Finance (MoF)** is responsible for harmonizing the diverse proposals on water management, while matching the Government's priority.

The project will seek guidance and coordination support of the **National Committee for Sub-national Democratic Development Secretariat (NCDDS)** – which is an inter-ministerial coordination mechanism to promote the D&D reform agenda and is responsible for strengthening institutions at sub-national levels – provinces, districts/municipalities, and communes/sankgats. And, the National Council on Sustainable Development will provide similar coordination and policy integration support, as it is currently making efforts to improve the coordination of climate change activities in Cambodia and to encourage a better, more detailed and efficient response to climate change, including the preparation of the Cambodian Climate Change Strategic Plan 2014-2023, the Sectoral Climate Change Action Plans and the Climate Change Financing Framework.

Finally, the project will be implemented in close partnership with **the Cambodia National Mekong Committee**. Operating under direct supervision of the Royal Government of Cambodia, the committee plays a secretarial role for the Royal Government in coordinating the management, preservation, conservation and development of water and other related resources in the Mekong River Basin. It coordinates and cooperates with the national line agencies as well as Mekong River Commission member countries, development partners and various international organizations in water and water-related resources management of the Mekong River Basin.

CSOs including the **Cambodia Humanitarian Response Forum** and the **Joint Action Group for Disaster Risk Reduction** will be consulted throughout the project and will be valuable partners at the local level in ensuring an equitable and inclusive approach to project implementation. They can be partners specifically in the dissemination of knowledge products and capacity building/training outputs from the project.

In **Lao PDR**, the project will partner with the **Ministry of Natural Resources and Environment (MONRE)**, the ministry with the mandate for management, development, conservation, rehabilitation, and utilization of water resources throughout the country. The MONRE is also the key ministry for coordination and the implementation of Laos' Nationally Determined Contribution. Under the MONRE, the Department of Meteorology and Hydrology of Lao PDR (DMH) is responsible for the collection and analysis of hydro-meteorological data and the provision of water supply conditions, weather forecasts, and issuing early warnings. Technical guidance will be sought from the ministry for the formulation and vetting of advisories, training modules and materials for capacity development. And, the Department of Water Resources (DWR) within MONRE has branches at the province and district levels which will be engaged in implementation.

The project will collaborate with the **Ministry of Agriculture and Forestry (MAF)**, specifically the Integrated Watershed Management Unit which assists MAF in watershed management and rural development planning on a sub-watershed (sub-basin) level. Further, the Department of Irrigation (DoI) carries out the testing and analyses of water quality and develops irrigated agriculture and drainage, flooding and drought prevention plans.

The **National Disaster Prevention and Control Committee (NDPCC)** will be a key partner, and is responsible for defining the DRM strategy, facilitating international support, and cooperating on joint-rapid assessment, incident reporting, and implementation of DRM. At the national level, this Committee will be involved with the transboundary discussions with Cambodian counterparts. At the sub-national level, the NDPCC committees at the provincial, district and village levels will all be engaged in project implementation.

In addition, the **Lao National Mekong Committee (LNMC)** will be consulted as it is the agency responsible for coordination with the Mekong River Commission, and for supervising the planning and management of river basins in Lao PDR as well as formulating policy, strategic plans, projects and programs related to water resources development.

In both countries, **private sector** companies in the field of ICT and mobile technology will also be important partners. They will play the lead in the design and deployment of the mobile applications, networks and services which will be used by the project to power its sensory and information delivery ICT needs (this can include companies like **ThinkWhere**, a web-based mapping technology for visualizing disaster data, active in Cambodia). In addition, considering the critical importance of SMEs to the Cambodian and Lao PDR economies as well as the relative vulnerability of smaller businesses to the impacts of disasters, chambers of commerce and SME groups will be strong private sector partners.

In addition, the project will also partner with **Financial Institutions** in the insurance sector including government and private banks, micro-finance institutions and insurance agencies and create the much-needed network for financing resilience to disaster and climate hazards and building adaptive capacity at the local level moving forward.

Risks and Assumptions

This project relies on stakeholder engagement, training, and field site visits. As such, some activities may be affected by the ongoing COVID-19 pandemic, which has limited travel and disrupted workflows in both Cambodia and Lao PDR. The ability to access international experts will be hindered until current outbreaks in each country subside, vaccination is widely available and/or travel restrictions are lifted. The project's management team at the regional and country levels will need to employ adaptive management techniques to maintain delivery of the expected outcomes.

In addition to the risks associated with the COVID pandemic, the major risk factors in both countries that could result in the project not producing the expected results are the following:

- **Strategic risks:** Power dynamics and political and economic structures at the regional and sub-national level may undermine the implementation and impact of the project and lead to resources being allocated to in a manner that is not consistent with the project objective.
- **Organizational risks:** Successful implementation will depend on careful coordination with various levels of government as well as complementary regional and national initiatives.
- **Implementation capacity risks:** Inadequate and/or non-capacitated human resources to successfully implement the project are a risk. This includes potential insufficient availability of technical capacity necessary to complete the project at a high level of rigor. Current levels of capacity to understand risk data and implement EWS are low and it will be necessary to hire firms/consultants that have necessary skills to complete capacity building as well as the necessary studies
- **Currency/market risks:** Though this project does not include construction or purchase of goods and the risk of impact of currency or price fluctuation is low, if the value of the local currencies falls the budgeted costs for project implementation may prove insufficient and necessitate an adjustment in the workplan.
- **Project management risks:** A committed project management team with adequate outreach and networking skills are essential for the success of the activities. The team will need to have the ability: i) to engage the key stakeholders in constructive discussion about water management, risks, and development needs; ii) to guide and supervise the studies undertaken and effectively cooperate with the international and Korean experts who are engaged to support this work; iii) to present their findings and recommendations in a convincing manner to key policy-makers and opinion leaders; iv) to coordinate capacity building and training activities with a wide variety of stakeholders; and iv) to identify areas of future work. During project implementation, the management team also needs to be supported by required technical experts.
- **Social and environmental risks:** This project is planned in a region with many indigenous and vulnerable communities. There is a risk that the voices of women, youth, people living with disabilities, and indigenous and/or marginalized communities may not be represented in the project activities and studies that will be carried out. Every effort will be made to include these communities in ways that will be identified during the development of the stakeholder engagement plans during project inception.

Risks to the project are further detailed in the Annexes.

Stakeholder Engagement

Cambodia:

The proposed project sites in Cambodia lie in the 4Ps and 3Ss basins.

The 4- Ps Basin is located in two provinces (Kratie and Mondulki) in the Northeastern part of Cambodia. It is formed by four tributaries (*preks: Prek Preah, Prek Krieng, Prek Kampii and Prek Te*) and their separate watersheds on the eastern bank of the Mekong. The basin area is 12,500 km² and the population is around 170,000 persons. The 4-Ps Basin is the least developed area in the country. Most people are subsistence farmers depending principally on natural resources such as agriculture, often conducted on a subsistence basis, timbers and nontimber products and fisheries. The biggest urban area that will be the focus of this study is Kratie.¹⁴

The Sekong, Sesan, and Sre Pok River Basins (3S Basins) are the three largest trans-boundary tributaries to the Mekong River. Located to the east of the Mekong mainstream, they are shared by Cambodia, Lao PDR, and Viet Nam. In total the three basins cover 78,645 square kilometers (km²), roughly evenly divided between the Sekong in the north at 28,815 km², the Sesan in the center covering 18,800 km², and the Sre Pok to the south, which is the largest at 30,942 km². Although the three basins share common characteristics, they are distinct enough to warrant separate consideration, especially with regard to differences in terrain and the different states of development and interests between basins and countries. The Sekong is the most administratively unique: 78% of its watershed falls within Lao PDR. A smaller area (19%) of the lower basin is part of Cambodia, while just 2.4% in the uppermost basin crosses into Viet Nam. In contrast, the Sesan.¹⁵ Stung Treng is the biggest urban area in Cambodia where this work will be focused.

The total number of direct beneficiaries is approximately 46,055 residents of the cities of Kratie (29,033) and Stung Treng (17,022). These cities lie where the 4Ps and 3Ss rivers meet the Mekong River and will be the focus of the detailed flood and water risk and vulnerability assessments and capacity building activities. The selection of these cities as project sites will be confirmed during the project document development process based on further consultation in the country.

However, the integrated water resource management planning, early warning system strengthening, and risk assessment activities are planned via a catchment-wide approach and will encompass the 4Ps and 3Ss river catchments. Therefore, the residents of the provinces of Kratie, Mondulki, Stung Treng, and Ratanakiri where these rivers flow are all indirect beneficiaries of the project, placing the overall beneficiaries (direct + indirect) at over 825,000 people.

Table 1: Project Beneficiaries - Cambodia

| Catchment | Province | Population (2019 est.) | Urban Center | Population (2019 est.) |
|-----------|-------------|------------------------|--------------|------------------------|
| 3Ss | Stung Treng | 159,565 | Stung Treng | 17,022 |
| 3Ss | Ratanakiri | 204,027 | | |

¹⁴ Extracted from <https://www.riversnetwork.org/>, accessed on 21 February 2020.

¹⁵ Derived from Atlas of the 3S River Basin, International Union for Conservation of Nature and Natural Resources/ IUCN, 2015

| | | | | |
|---|------------|---------|----------------------|--------|
| 4Ps | Kratie | 372,825 | Kratie | 29,033 |
| 4Ps | Mondulkiri | 88,649 | | |
| Total Beneficiaries (Indirect + Direct) | | 825,066 | Direct Beneficiaries | 46,055 |

This target group/region was identified in consultation with the Ministry of Environment, ROK, and the UNDP country office in Cambodia with input from the national stakeholders in Cambodia.

At country level, discussions regarding this project design were held with various ministries and the Regional Flood and Drought Forecasting Center of the Mekong River Commission, which is hosted at the Cambodia's National Mekong River Commission.

The position of UNDP's EWS project at the Ministry of Water Resources and Meteorology benefits the consultation process since this discussion is integrated into the regular project meeting with Ministry. In addition, the following stakeholders were consulted in the project design:

1. Ministry of Water Resources and Meteorology's Department of Hydrology, Department of Meteorology as well as Department of Water Supply and Sanitation
2. Ministry of Agriculture, Forestry and Fisheries' General Directorate of Agriculture.
3. National Committee for Disaster Management
4. Provincial Department of Meteorology and Water Resources of Provinces of Kratie and Stung Treng.
5. Regional Flood and Drought Forecasting Center of Mekong River Commission.

In addition, review of national and UNDP strategic priorities as well as the existing and planned projects underway (including those detailed above) was completed to identify areas that are complementary to existing initiatives.

Lao PDR:

The Xe Bang Fai and Xe Don catchments will be the focus of the Lao PDR portion of this project. The Xe Don catchment is 6,170 km² in area. The river flows 1,574 km through the Saravane and Champasak Provinces, emptying into the Mekong at Pakse. The Xe Bang Fai river is further north, primarily in Khammouane Province.

The total number of direct beneficiaries is approximately 106,481 residents of the cities of Thakek (38,388) and Pakse (68,093). These cities lie where the Xe Bang Fai and Xe Don rivers meet the Mekong River, respectively, and will be the focus of the detailed flood and water risk and vulnerability assessments and capacity building activities. The selection of these cities as project sites will be confirmed during the project document development process based on further consultation in the country.

However, the integrated water resource management planning, early warning system strengthening, and risk assessment activities are planned via a catchment-wide approach and will encompass much of the Xe Bang Fai and Xe Don river catchments. Therefore, the residents of the provinces of Khammouane, Saravane, and Champasack where these rivers flow will be indirect beneficiaries of the project, placing the overall beneficiaries (direct + indirect) at over 1,600,000 people.

Table 2: Project Beneficiaries - Lao PDR

| Catchment | Province | Population (2019 est.) | Urban Center | Population (2019 est.) |
|---|------------|------------------------|----------------------|------------------------|
| Xe Bang Fai | Khammouane | 427,400 | Thakek | 38,388 |
| Xe Don | Champasack | 743,200 | Pakse | 68,093 |
| | Saravane | 434,700 | | |
| Total Beneficiaries (Indirect + Direct) | | 1,605,800 | Direct Beneficiaries | 106,481 |

These target regions were identified in consultation with the Ministry of Environment, ROK, and the UNDP country office in Lao PDR with input from the national government and the Mekong River Commission. In addition, review of national and UNDP strategic priorities as well as the existing and planned projects underway (including those detailed above) was completed to identify areas that are complementary to existing initiatives. In particular, the project sites selected in Lao PDR have been selected to provide additional geographic coverage to the activities planned under the Green Climate Fund project starting in the country this year, implemented by UNEP.

In both countries, the project will particularly emphasize the following groups of beneficiaries:

- **Municipal planners and officials**
- **Local Disaster Management Committees**
- **Provincial planners and technical personnel** (including those involved in EWS systems)
- **National ministries and National Disaster Management Authorities** (including those involved with the LaoDi database in Lao PDR and CamDi database in Cambodia)

It is important to note that the project will build enabling environments for climate and disaster risk informed integrated water resources management while building knowledge sharing and strengthening early warning systems across the Lao PDR-Cambodia border region. And, the project is designed to scale these efforts via pursuit of further funding opportunities. Multiplication effects expected from the project are not taken into consideration when calculating the number of direct beneficiaries.

The Royal Government of Cambodia (RGC) and the Government of the Lao PDR both indirect beneficiaries from this project as it contributes towards the targets of national planning frameworks, particularly those related to climate change and disaster risk reduction.

This project has been developed in consultation with a variety of stakeholders working on regional and country water resources management and climate adaptation, including the Mekong River Commission, the Cambodian Ministry of Water Resources and Meteorology, the Ministry of Natural Resources and Environment in Lao PDR, and the Korean Water Resources Corporation (K-Water). As the project moves forward, it will be critical to continue to closely engage with both national and local governments, regional entities, CSOs, and development partners active in the project areas to ensure complementarity of project activities. A full stakeholder engagement plan will be developed during the project inception phase to further guide coordination.

South-South and Triangular Cooperation (SSC/TrC)

This proposal in alignment with the Republic of Korea's New Southern Policy Strategy (2018) which articulates South Korea's commitment to expanding its ties with ASEAN countries and India. The Strategy aims at building and contributing to a community with human-centered prosperity and peace.

The guiding principles of the New Southern Policy are building a community of people, prosperity and peace.

People: Boost people-to-people and cultural exchanges between Korea and Southern countries. Increase tourism, enhance cultural exchanges, support human capacity building of youth, teachers, government officials, etc., improve transparent and effective governance, protect the rights of immigrants and visitors, and assisting in improving the quality of life of people (e.g. especially those working in agriculture, fisheries, environment).

Prosperity: Establish a mutually beneficial and future-oriented economic cooperation mechanism. Strengthen the trade and investment system; increase investment in infrastructure on transportation, energy and water resources; mutually beneficial cooperation between SMEs of Korea and Southern countries; expand cooperation in technology and innovation including smart cities/factories/farms and develop economic cooperation models tailored to country needs.

Peace: Ensure a peaceful and safe secure environment in the region. Strengthen strategic relationships with Southern countries through summits and high-level talks and visits; secure support on ROK government's work toward a complete denuclearization and peace on the Korean peninsula; deepen strategic partnership on military and defense; work closely together in new challenges including cyber security, terrorism and ocean security; and improve resilience from violent conflicts, climate change and natural disasters.

Cambodia and Lao PDR experience regular damages from flooding, the severity and instance of which is expected to increase due to the impacts of climate change. As urban development continues in proximity to the rivers and streams in the Mekong River Basin, economic and social development gains are threatened by the damages associated with flooding events. As such, improvements in risk and vulnerability data, local capacity to understand this data and plan for climate smart, resilient cities, and further investment in flood risk reduction measures will significantly improve urban conditions and help maintain progress towards SDGs in the cities in the Mekong River Basin. Korea's contribution to narrow the development gap and build urban resilience will help both countries improve lives and opportunities for citizens and is in alignment with the Prosperity aspect of ROK New Southern Policy.

The Korean Ministry of Environment (MOE) and other Korean public agencies have implemented a number of Official Development Assistance (ODA) projects in Cambodia and Lao PDR over the past two decades. This project was designed with these projects in consideration. Table 3 below summarizes the past and on-going both ODA grant and loan projects in both countries that are relevant baseline or concurrent effort to this project.

Table 3: Republic of Korea ODA Projects in Lao PDR/Cambodia

| Country/ geographical focus | Project title | Implementing agency | Type of Financial Assistance | Start Year |
|--|---|------------------------------------|---|-----------------------|
| Cambodia/ national level | Establishment of a Comprehensive Master Plan on Water | Korea: K-Water Cambodia: MOWRAM | ODA Grants (KOICA) ~US\$ 1.1M | 2006 |

| | | | | |
|--------------------------------|---|---|------------------------------------|----------------|
| | Resources Development | | | |
| Lao PDR/ Vientiane | Feasibility Studies on River Banks Repair and Ecological Parks Development Along the Riverside in Vientiane | Korea: Namwon E&C and others Lao: MPWT | ODA Grants (KOICA) ~US\$ 800K | 2006-07 |
| Lao PDR/ national level | Flood Damage Mitigation Master Plan of the Mekong River in Lao PDR | Korea: K-Water, Isan Lao: MPWT | ODA Grants (MOLIT) ~US\$ 700K | 2015 |
| Lao PDR/ Nam Ngum River | Integrated Water Resources Management of Nam Ngum River | Korea: K-Water, Dohwa Engineering Lao: MEM | ODA Grants (KOICA) ~US\$ 2.2M | 2016-19 |
| Lao PDR/ Champasak province | Comprehensive Management of Mekong Riverside in Champasak Province | Korea: Hanshin E&C Lao: MPWT | ODA Loans (EXIM Bank) ~US\$ 55M | 2017-21 |
| Lao PDR/ Vientiane | Comprehensive Management of Riverside – Phase II | Korea: Saman E&C Lao: Vientiane City | ODA Loans (EXIM Bank) ~US\$ 56M | Approval: 2016 |

The **Asia Water Council (AWC)** will be key technical partners in the implementation this project, providing technical support to the vulnerability and risk assessments under Activity Results 1.2 and 2.1 as described above. For further information, please see Management Arrangements.

Knowledge

The results and lessons of the project will be consolidated and disseminated as part of the project implementation strategy and collaboration/support will be sought through national-level knowledge management platforms so that similar approaches can be implemented elsewhere. Overall, aspects related to knowledge management and communications will be based on respective UNDP country office strategies to improve awareness of government officials, stakeholders and communities in the respective countries.

The knowledge generated during project implementation will be linked with the project M&E system and used for assessing impacts of project activities, facilitate feedback on project activities, and enable timely adjustment and course corrections. This will help to ensure project impact and adaptive management, as well as ensure results are delivered, as intended.

Knowledge Management will contribute to learning and advance replication and scaling up of solar irrigation technology elsewhere in the country and in the region. This will be essentially done through (i) documentation and dissemination of case studies and lessons; (ii) development of policy guidance based on project lessons; (iii) technical reports, publication and knowledge management products; (iv) national and provincial workshops to enhance information sharing; (v) institutionalizing and upscaling best practices through capacity building and technical support; (vi) public engagement pages; (vii) replication and scaling-up strategy; and (viii) Implementers' manual and lessons learned guide to facilitate scaling up.

Sustainability and Scaling Up

This project is designed to develop the enabling environment to enable future risk reduction activities beyond the scope of the project timeline. Activities will fill data gaps, advance local capacities, and enable the design of a risk-reduction project and development of a proposal for future financing. This subsequent project will, in turn, allow the prioritized climate adaptation and DRR interventions identified by communities during this project to be implemented in the future. Private sector actors will be made aware of climate risks and feasibility of their investment in identified risk-reduction measures will be assessed.

At the regional level, successful implementation of the activities planned to strengthen transboundary early warning systems will develop informal cross-border networks and relationships between provincial and municipal technical staff. In addition, the transboundary working group will define a framework for sustaining future communication and collaboration to enable further integration of the EWS.

Within each country, the capacity building efforts carried out under this project will be delivered utilizing a training-of-trainers approach enable further sharing of knowledge and skills beyond the scope of this project and institutionalization of the processes of risk data validation and analysis. Data collection and studies will involve local technical staff where feasible to provide hands-on training and encourage replication and scaling up in other locations in the target provinces beyond the priority urban areas.

To facilitate local financing of community-led relief and/or risk-reduction efforts in the future, local funds will be set up with the help of finance experts and the Disaster Management Committees. These funds will be designed to be sustainable beyond the project lifetime.

Finally, the project will capture and consolidate findings and results via communications materials and a final report of the identified prioritized adaptation and DRR needs that will be aimed at encouraging additional investments from national government budgets, private actors, and development partners. This will inform development of the project proposal under Outcome 3, but also can facilitate other investment opportunities.

Lessons Learned and UNDP as a Delivery Partner

The project builds on UNDP's lessons learned and results from many projects in both countries. However, in order to ensure greater impact of the project on beneficiaries and minimize potentially overlapping areas with past and on-going projects in two countries, major water resource management projects in the Lower Mekong River Basin have been thoroughly reviewed beyond those implemented by UNDP and are detailed in the proposal.

In Cambodia, UNDP has established relationships with governments stakeholders and worked to advance early warning systems via supporting the "Strengthening Climate Information and Early Warning Systems in Cambodia" project: a 4-year project from 2015-2019 implemented by MOWARM. It was financed by the Least Developed Countries Fund (LDCF), with a total budget of 4.9 million USD. Through this project, UNDP supported MOWARM in installation of 24 Automatic Weather and Stations (AWS) and 29 Automatic Hydrological Stations/ AHS (covering surface and ground water). MOWARM uses the information obtained from the established

stations to inform public on the climate information¹⁶ and distribute early warning messages for both planning purposes and for disaster preparedness and emergency response. Though the main objective of the project was to provide more climate data to Cambodia, the project also established a system that is capable of analyzing the data from the AWS and AHS, coupled with technical training on climate forecasting. Among others, community-level climate adaptation practices are implemented under the project, including establishment of Provincial Drought Information Hub¹⁷, introducing to / training of farmers on Drought Resistance Agriculture Techniques¹⁸, as well as SMS-based Early Warning System¹⁹.

The project has successfully added significant numbers of observation stations in the country, recording real-time climate data and banking the future 'historical data' for Cambodia, necessary for climate monitoring and modeling.

A similar project "Installation of an Automated Weather Observation System in Cambodia" was initiated in 2020. The project is funded by the Government of Korea. Under the supervision of MOWRAM Cambodia and with technical support from the Korea Meteorological Administration, 27 automated weather stations will be installed in areas that do not have enough meteorological stations. In order to strengthen linkages between past and new projects regardless of sources of funding and ensure the consistency of projects in alignment with both sub-national and national policy in water resources management, it would be imperative for all the stakeholders and partners of the project to take stock of current situations and co-design the project based on the in-depth analysis of past experience.

Lao PDR is implementing a resilient recovery project, "Building Capacities for Resilient Recovery "BCRR" – phase II". Using in-depth expertise and know-how in recovery from UNDP, this project aims to build the resilience of countries in the face of disasters by strengthening national capacities to prepare and manage recovery processes in a more sustainable and inclusive way. The project is funded by Luxembourg Aid & Development and target countries are Burkina Faso, Lao PDR, Myanmar and Niger. The target countries, including Lao PDR, have already initiated the adaptation of the guidelines of the Post Disaster Needs Assessment (PDNA) to the national context. As the PDNA methodology has already been established in Lao PDR, the focus in the country is on developing specific methodologies for assessing the Human Impacts, Gender and other cross cutting issues. Additionally, databases of PDNA will be linked to disaster loss databases already established with UNDP support. The sustainability of the project has been highlighted in all target countries. For example, the project in Lao PDR will have to focus on the sustainability of the early warning text messaging once the funds run out. Some difficulties such as slow pace of the project implementation and the fragmentation of the national institutional framework have been addressed in the project mid-term report 2019. However, these issues have mainly been addressed from the project in Niger and Burkina Faso.

The Lao Disaster Management Information System (LaoDi) was developed in partnership with the Ministry of Natural Resources and Environment (MONRE) within the larger UNDP support to the country on ongoing disaster risk and recovery projects. LaoDi holds significant data collected

¹⁶ The translated climate bulletin is presented regularly on MOWRAM's website: <http://www.cambodiameteo.com/forecast?menu=116&lang=en>

¹⁷ <https://www.adaptation-undp.org/node/5715>

¹⁸ <https://www.adaptation-undp.org/node/5551>

¹⁹ <https://www.adaptation-undp.org/node/5539>

about past disasters and their impacts on human population and sectors and is housed at the National Disaster Management Office (NDMO) in the Ministry of Labour and Social Welfare. However, though a good start to tracking disaster information in Lao PDR, the decentralization of Ministries in the country has impacted the output and effectiveness of the LaoDi to track ongoing crises and provincial data is not well integrated into the system. Significant data collection as well as training on use of the data is necessary in order to strengthen and institutionalize LaoDi. While UNDP is providing ongoing support to NDMO for this work at the national level, provincial and local data collection and capacity building remains necessary.

In addition to the foundation of these projects and the relationships and lessons learned, UNDP is well suited to implement this project due to their understanding of and work with the Green Climate Fund as accredited entity and success at leveraging other climate adaptation finance resources for the most vulnerable communities worldwide.

IV. PROJECT MANAGEMENT

Cost Efficiency and Effectiveness

Cost efficiency and effectiveness in the project management will be achieved through adherence to the UNDP Programme and Operations Policies and Procedures (POPP) and reviewed regularly through the governance mechanism and UNDP's Asia and the Pacific Regional Programme 2018-2020. In addition, there are specific measures for ensuring cost-efficient use of resources through using a portfolio management approach.

This project will leverage on existing related activities as well as partnerships to improve cost-effectiveness. Procurement costs will be reduced through joint operations with other related projects in the region.

Cambodia

The project builds on lessons learned and results from many projects, most notably the "Strengthening Climate Information and Early Warning Systems in Cambodia" and the on-going ADB-project on "Localizing Global Framework of Post Disasters Needs Assessment and Recovery Framework in Cambodia." Cambodia has been included as one of the four countries (along with Armenia, Fiji and Sri Lanka) to deliver the resilient recovery capacity on the ADB funded project of Building Disaster-Resilient Infrastructure in the above four countries.

In order to ensure greater impact of the project on beneficiaries and minimize potentially overlapping areas with past and on-going projects in two countries, major water resource management projects in the Lower Mekong River Basin have been thoroughly reviewed. The reviewed projects include the World Bank's "Mekong Integrated Water Resources Management" project, ADB's "Provincial Water Supply and Sanitation Project" and other initiatives led by MRC.

"Strengthening Climate Information and Early Warning Systems in Cambodia" is a 4-year project from 2015-2020 and is implemented by UNDP in collaboration with MOWRAM. It is financed by the Least Developed Countries Fund (LDCF), with a total budget of 4.9 million USD. The project is also implemented with the Ministry of Agriculture, Forestry and Fisheries (MAFF) and The National Committee for Disaster Management (NCDM). Through this project, UNDP supported MOWRAM in installation of 24 Automatic Weather and Stations (AWS) and 29 Automatic Hydrological Stations/ AHS (covering surface and ground water). MOWRAM uses the information obtained from the established stations to inform public on the climate information and distribute early warning messages for both planning purposes and for disaster preparedness and emergency response. Though the main objective of the project was to provide more climate data to Cambodia, the project also established a system that is capable of analyzing the data from the AWS and AHS, coupled with technical training on climate forecasting. Among others, community-level climate adaptation practices are implemented under the project, including establishment of Provincial Drought Information Hub²⁰, introducing to / training of farmers on Drought Resistance Agriculture Techniques²¹, as well as SMS-based Early Warning System²².

²⁰ <https://www.adaptation-undp.org/node/5715>

²¹ <https://www.adaptation-undp.org/node/5551>

²² <https://www.adaptation-undp.org/node/5539>

The project has successfully added significant numbers of observation stations in the country, recording real-time climate data and banking the future 'historical data' for Cambodia, necessary for climate monitoring and modeling.

A similar project "Installation of an Automated Weather Observation System in Cambodia" was initiated in 2020. The project is funded by the Government of Korea. Under the supervision of MOWRAM Cambodia and with technical support from the Korea Meteorological Administration, 27 automated weather stations will be installed in areas that do not have enough meteorological stations. In order to strengthen linkages between past and new projects regardless of sources of funding and ensure the consistency of projects in alignment with both sub-national and national policy in water resources management, it would be imperative for all the stakeholders and partners of the project to take stock of current situations and co-design the project based on the in-depth analysis of past experience.

Cambodia has also conducted multiple projects in both water and water-related sectors with support from multilateral development banks. In accordance with ADB's Water Operational Plan 2011-20 to improve the efficiency of water services, the "Provincial Water Supply and Sanitation Project" supports the Government of Cambodia to facilitate private sector partnerships, strengthen the management of publicly owned waterworks, and integrate urban water supply with urban environmental management. A strategy and roadmap for Cambodia's urban water and sanitation sector were also provided based on detailed technical studies for selected towns, including preliminary engineering designs and cost estimates. The four selected towns are Sihanoukville (sanitation), Battambang (water supply and sanitation), Siem Reap (sanitation), and Kampong Cham (water supply and sanitation). The project does not focus on other smaller towns in Cambodia that may be more affected by poor water sanitation and wastewater issues. Furthermore, the department of Potable Water Supply (DPWS) under the Ministry of Industry and Handicraft (MIH) that is responsible for the coordination, policy, and regulation of urban water supply in Cambodia and the Ministry of Public Works and Transport (MPWT) that is primarily in charge of water sanitation in urban areas are the main executing agencies. Although the problem tree of the project includes all interconnected issues, other agencies such as MOWARM are not included in the project which may limit the establishment of effective IWRM in Cambodia in a long-term perspective.

Lao PDR

UNDP has extensive experience designing and managing similar projects in Lao PDR and specifically implementing projects that try and address disaster risk management.

This includes a resilient recovery project, "Building Capacities for Resilient Recovery "BCRR" – phase II". Using in-depth expertise and know-how in recovery from UNDP, this project aims to build the resilience of countries in the face of disasters by strengthening national capacities to prepare and manage recovery processes in a more sustainable and inclusive way. The project is funded by Luxembourg Aid & Development and target countries are Burkina Faso, Lao PDR, Myanmar and Niger. The target countries, including Lao PDR, have already initiated the adaptation of the guidelines of the Post Disaster Needs Assessment (PDNA) to the national context. As the PDNA methodology has already been established in Lao PDR, the focus in the country is on developing specific methodologies for assessing the Human Impacts, Gender and other cross cutting issues. Additionally, databases of PDNA will be linked to disaster loss databases already established with UNDP support. The sustainability of the project has been highlighted in all target countries. For example, the project in Lao PDR will have to focus on the sustainability of the early warning text messaging once the funds run out. Some difficulties such

as slow pace of the project implementation and the fragmentation of the national institutional framework have been addressed in the project mid-term report 2019. However, these issues have mainly been addressed from the project in Niger and Burkina Faso.

The Lao Disaster Management Information System (LaoDi) was developed in partnership with the Ministry of Natural Resources and Environment (MONRE) within the larger UNDP support to the country on ongoing disaster risk and recovery projects. LaoDi holds significant data collected about past disasters and their impacts on human population and sectors and is housed at the National Disaster Management Office (NDMO) in the Ministry of Labour and Social Welfare. However, though a good start to tracking disaster information in Lao PDR, the decentralization of Ministries in the country has impacted the output and effectiveness of the LaoDi to track ongoing crises and provincial data is not well integrated into the system. Significant data collection as well as training on use of the data is necessary in order to strengthen and institutionalize LaoDi. While UNDP is providing ongoing support to NDMO for this work at the national level, provincial and local data collection and capacity building remains necessary.

Cambodia & Lao PDR

The World Bank group's on-going 9-year project (2012-21), "Mekong Integrated Water Resources Management" of which the total cost is 26.59 million USD is one of the most comprehensive IWRM projects in the Lower Mekong River Basin. The development objective of the project is to establish key examples of integrated water resource management practices in the Lower Mekong River Basin at the regional, national, and sub-national levels, thus contributing to more sustainable river basin development in the Lower Mekong. The Mekong River Commission (MRC) is mandated to guide its member countries (Cambodia, Lao PDR, Thailand and Vietnam) in the implementation of IWRM in the Lower Mekong Basin. The project aims to enable MRC's continued technical and financial support to closely coordinate with three member countries, Lao PDR, Cambodia, and Vietnam on hydrometeorology and water quality data collection and dissemination, fisheries and institutional arrangements for the river management at the basin level. Therefore, it seems to be critical to ensure that the goals for this proposed project by UNDP and the "Mekong Integrated Water Resources Management" project are aligned.

Project Management

In Cambodia, the project will be implemented in the 4Ps and 3Ss basins. The total number of direct beneficiaries is approximately 46,055 residents of the cities of Kratie (29,033) and Stung Treng (17,022). These cities lie where the 4Ps and 3Ss rivers meet the Mekong River and will be the focus of the detailed flood and water risk and vulnerability assessments and capacity building activities. The selection of these cities as project sites will be confirmed during the project document development process based on further consultation in the country.

However, the integrated water resource management planning, early warning system strengthening, and risk assessment activities are planned via a catchment-wide approach and will encompass the 4Ps and 3Ss river catchments. Therefore, the residents of the provinces of Kratie, Monduliri, Stung Treng, and Ratanakiri where these rivers flow are all indirect beneficiaries of the project, placing the overall beneficiaries (direct + indirect) at over 825,000 people.

The Bangkok Regional Hub will ensure consolidation of results/impacts and reporting to the donor on a regular basis. It will also ensure value-addition through knowledge management experience sharing across participating countries and dissemination of lessons to other countries in the region. Based on lessons and best practices, BRH will support countries to mobilize additional resources through similar arrangements in the future.

V. RESULTS FRAMEWORK²³

| |
|---|
| <p>Intended Outcome as stated in the UNDAF/Country [or Global/Regional] Programme Results and Resource Framework:</p> <p>Outcome 2: Accelerate structural transformations for sustainable development</p> <p>Outcome 3: Strengthen resilience to shocks and crisis</p> |
| <p>Outcome indicators as stated in the Country Programme [or Global/Regional] Results and Resources Framework, including baseline and targets:</p> <p>Outcome Indicator 2.7: Number of countries that have communicated the establishment or operationalization of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (Strategic Plan 2.7, SDG Indicator 13.2.1)</p> <p>Outcome indicator 3.1 Number of people per 100,000 that are covered by early warning information through local governments or through national dissemination mechanisms (disaggregated by sex) (Strategic Plan 3.1, SDG 13.1)</p> |
| <p>Applicable Output(s) Indicator from the UNDP Strategic Plan:</p> <p>Output 1.3: Number of countries with development, risk reduction and recovery interventions informed by multi-hazard and other risk assessments.</p> |
| <p>Project title and Atlas Project Number: Enhancing Integrated Water Management and Climate Resilience in Vulnerable Urban Areas of the Mekong River Basin (Cambodia and Lao PDR)</p> |

| EXPECTED OUTPUTS | OUTPUT INDICATORS ^[1] | DATA SOURCE | BASELINE | | TARGETS | | | | | | | | | | | | | | | | DATA COLLECTION METHODS & RISKS |
|--|--|------------------------|----------|------|---------|----|----|----|--------|----|----|----|--------|----|----|----|--------|----|----|----|---------------------------------|
| | | | Value | Year | Year 1 | | | | Year 2 | | | | Year 3 | | | | Year 4 | | | | |
| | | | | | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | |
| Output 1: Inclusive assessment of Water-related climate risks completed in the priority river basins. | % of the 4 target municipalities in Xe Bang Fai and Xe Don river catchment areas (Lao PDR) and 4Ps and 3Ss river catchment areas (Cambodia) having enhanced data illustrating water-related climate risks and vulnerabilities. | <i>Monitoring data</i> | 0 | 2020 | | | | | | | | | | | | | | | | | <i>Monitoring data</i> |
| | # of stakeholders involved in community-based mapping exercises (disaggregated by sex, and including information on age, persons with | <i>Monitoring data</i> | 0 | 2020 | | | | | | | | | | | | | | | | | <i>Monitoring data</i> |

²³ UNDP publishes its project information (indicators, baselines, targets and results) to meet the International Aid Transparency Initiative (IATI) standards. Make sure that indicators are S.M.A.R.T. (Specific, Measurable, Attainable, Relevant and Time-bound), provide accurate baselines and targets underpinned by reliable evidence and data, and avoid acronyms so that external audience clearly understand the results of the project.

| | | | | | | | | | | | | | | | | | | | | |
|--|---|--|-----|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | disabilities, ethnic minorities) | | | | | | | | | | | | | | | | | | | |
| | # of impact-based forecasting models and flood propagation models developed focused on the target municipalities in the Xe Bang Fai and Xe Don river catchment areas (Lao PDR) and 4Ps and 3Ss river catchment areas (Cambodia). | Monitoring data | 0 | 2020 | | | | | | | | | | | | | | | | Monitoring data |
| | # of market-based assessment of supply chains at risks and barriers related to climate change risk completed focused on the target municipalities in the Xe Bang Fai and Xe Don river catchment areas (Lao PDR) and 4Ps and 3Ss river catchment areas (Cambodia). | Monitoring data | 0 | 2020 | | | | | | | | | | | | | | | | Monitoring data |
| Output 2: Enabling environment for gender-responsive climate-risk informed integrated water resources management developed. | % of target stakeholders (disaggregated by sex) from number of institutions reporting increased capacity to perform integrated water resources management planning and implementation | Pre-and post training/workshop surveys | TBD | 2020 | | | | | | | | | | | | | | | | Pre-and post training/workshop surveys |
| | # of DRM and EWS systems assessed for effectiveness in priority areas of the transboundary region of Cambodia and Lao PDR | Monitoring data | 0 | 2020 | | | | | | | | | | | | | | | | Monitoring data |
| | # and types of stakeholders included in capacity assessment for climate risk-informed planning (disaggregated by sex) – focused on the provincial and municipal level in the Xe Bang Fai and Xe Don river catchment areas (Lao PDR) and 4Ps and 3Ss | Monitoring data | 0 | 2020 | | | | | | | | | | | | | | | | Monitoring Data |

| | | | | | | | | | | | | | | | | | | | | |
|--|--------------------------------|---|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--------------------------------|
| river catchment areas (Cambodia). | | | | | | | | | | | | | | | | | | | | |
| # of water resources management feasibility studies developed for the target areas in the Xe Bang Fai and Xe Don river catchment areas (Lao PDR) and 4Ps and 3Ss river catchment areas (Cambodia). | <i>Monitoring data</i> | 0 | 2020 | | | | | | | | | | | | | | | | | <i>Monitoring Data</i> |
| <i>Number and % of risk mitigation options prioritized and costed focused on the target municipalities in the Xe Bang Fai and Xe Don river catchment areas (Lao PDR) and 4Ps and 3Ss river catchment areas (Cambodia).</i> | <i>Monitoring data</i> | 0 | 2020 | | | | | | | | | | | | | | | | | <i>Monitoring Data</i> |
| Number of users of GIS-based integrated hydrological modelling (disaggregated by sex) | <i>System generated data</i> | 0 | 2020 | | | | | | | | | | | | | | | | | <i>System generated data</i> |
| # of newly mobilized relief funds in target communities in the Xe Bang Fai and Xe Don river catchment areas (Lao PDR) and 4Ps and 3Ss river catchment areas (Cambodia). | <i>Monitoring data</i> | 0 | 2020 | | | | | | | | | | | | | | | | | <i>Monitoring Data</i> |
| % increase in monthly users of LaoDi in priority project areas (Lao PDR only) (disaggregated by sex) | <i>System generated data</i> | 0 | 2020 | | | | | | | | | | | | | | | | | <i>System generated data</i> |
| # new users in "Text to Talk" program (Lao PDR only) – disaggregated by sex | <i>Monitoring data</i> | 0 | 2020 | | | | | | | | | | | | | | | | | <i>Monitoring Data</i> |
| # of meetings of transboundary EWS working group during project period | <i>Meeting minutes</i> | 0 | 2020 | | | | | | | | | | | | | | | | | <i>Meeting minutes</i> |
| % of Provincial Disaster Management Committee | <i>Pre- and post-training/</i> | 0 | 2020 | | | | | | | | | | | | | | | | | <i>Pre- and post-training/</i> |

| | | | | | | | | | | | | | | | | | | | |
|--|--|-----------------------------------|---|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-----------------------------------|
| | members reporting increased capacity and understanding of preparedness protocols | <i>workshop surveys</i> | | | | | | | | | | | | | | | | | <i>workshop surveys</i> |
| | % of contacted vulnerable border communities in priority regions reporting additional knowledge of EWS and willingness to share best practices in communities in Champassack Province (Lao PDR) and Stung Treng Province in Cambodia where awareness events were conducted | <i>Pre- and post-event survey</i> | 0 | 2020 | | | | | | | | | | | | | | | <i>Pre- and post-event survey</i> |
| | # of AWC and/or KWater engagements with local governments as part of risk and vulnerability assessment and capacity assessment work and throughout the project. | <i>Monitoring data</i> | 0 | 2021 | | | | | | | | | | | | | | | <i>Monitoring data</i> |
| Output 3: Funding proposal for priority risk reduction measures developed | Amount of additional financing leveraged for water related risk reduction measures in Lao PDR and Cambodia | <i>Monitoring data</i> | 0 | 2020 | | | | | | | | | | | | | | | <i>Monitoring Data</i> |

[1] It is recommended that projects use output indicators from the Strategic Plan IRRF, as relevant, in addition to project-specific results indicators. Indicators should be disaggregated by sex or for other targeted groups where relevant.

VI. MONITORING AND EVALUATION

In accordance with UNDP's programming policies and procedures, the project will be monitored through the following monitoring and evaluation plans: *[Note: monitoring and evaluation plans should be adapted to project context, as needed]*

Monitoring Plan

| Monitoring Activity | Purpose | Frequency | Expected Action | Partners (if joint) | Cost (if any) |
|---|---|---|---|---------------------|---|
| Inception Workshop | Present project overview, governance structure, roles and responsibilities, monitoring and reporting requirements, review work plan and budget and approve the work plan for the 1 st year | Within 3 months after project signature | <u>Inception Workshop Report</u> prepared and shared with participants to formalize various agreements and plans decided during the meeting. | | US\$ 10,000 |
| Track results progress | Progress data against the results indicators in the RRF will be collected and analysed to assess the progress of the project in achieving the agreed outputs. | Quarterly | Slower than expected progress will be addressed by project management. | | |
| Monitor and Manage Risk | Identify specific risks that may threaten achievement of intended results. Identify and monitor risk management actions using a risk log. This includes monitoring measures and plans that may have been required as per UNDP's Social and Environmental Standards. Audits will be conducted in accordance with UNDP's audit policy to manage financial risk. | Quarterly | Risks are identified by project management and actions are taken to manage risk. The risk log is actively maintained to keep track of identified risks and actions taken. | | |
| Learn | Knowledge, good practices and lessons will be captured regularly, as well as actively sourced from other projects and partners and integrated back into the project. | At least annually | Relevant lessons are captured by the project team and used to inform management decisions. | | |
| Annual Project Quality Assurance | The quality of the project will be assessed against UNDP's quality standards to identify project strengths and weaknesses and to inform management decision making to improve the project. | Annually | Areas of strength and weakness will be reviewed by project management and used to inform decisions to improve project performance. | | |
| Periodic Monitoring | Internal review of data and evidence from monitoring actions to inform decision making. | Quarterly | Performance data, risks, lessons and quality will be discussed by the project board and used to make course corrections. | | 0 (pre/post-workshop surveys that will be |

| | | | | | |
|------------------------------|--|----------|--|--|--------------------------------------|
| | | | | | accommodated within activity budget) |
| Project Board Meeting | Review and assess performance of project and review Multi-Year Work Plan to ensure realistic budgeting over the life of the project. | Annually | Any quality concerns or slower than expected progress should be discussed by the project board and management actions agreed to address the issues identified. | | US\$ 5,000 |

Evaluation Plan

| Evaluation Title | Partners (if joint) | Related Strategic Plan Output | CPD Outcome | Planned Completion Date | Key Evaluation Stakeholders | Cost and Source of Funding |
|-------------------------|----------------------------|--------------------------------------|--------------------|--------------------------------|--|-----------------------------------|
| Terminal Evaluation | n/a | 1.4 | | 6 months before project end | UNDP, Government of Cambodia and Lao PDR | US\$ 30,000 (ROK) |

VII. MULTI-YEAR WORK PLAN ²⁴²⁵

All anticipated programmatic and operational costs to support the project, including development effectiveness and implementation support arrangements, need to be identified, estimated and fully costed in the project budget under the relevant output(s). This includes activities that directly support the project, such as communication, human resources, procurement, finance, audit, policy advisory, quality assurance, reporting, management, etc. All services which are directly related to the project need to be disclosed transparently in the project document.

Lao PDR:

| Description | 2021 | | 2022 | | | | 2023 | | | | 2024 | | | | 2025 | |
|---|----------------|----|------|----|----------------|----|------|----|----------------|----|------|----|----------------|----|------|----|
| | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| | Project Year 1 | | | | Project Year 2 | | | | Project Year 3 | | | | Project Year 4 | | | |
| Activity Result L1.1: Climate risk and water resources management baseline examined | | | | | | | | | | | | | | | | |
| Activity 1.1.1 Baseline information and relevant studies on climate risk, water resources management, EWS, and ecosystem-based adaptation relevant for long-term, gender-responsive and inclusive integrated water resource management in the priority basins of Lao PDR gathered into a consolidated stocktaking report. | | | | | | | | | | | | | | | | |
| Activity 1.1.2 Gender action plan and stakeholder engagement plans developed for the project. Regional Indigenous Peoples Planning Framework completed for the project. | | | | | | | | | | | | | | | | |
| Activity Result L1.2 Detailed climate and disaster risk assessments completed for Xe Bang Fai and Xe Don river basins, with focus on two priority urban areas. | | | | | | | | | | | | | | | | |
| Activity 1.2.1 Flood propagation model developed for the two cities. [To be implemented by AWC/KWater] | | | | | | | | | | | | | | | | |
| Activity 1.2.2 Two city-based, impact-based forecasting models completed illustrating the projected level of impact and the likelihood of occurrence for hydro-meteorological disasters in the targeted areas. [To be implemented by AWC/ KWater] | | | | | | | | | | | | | | | | |
| Activity 1.2.3 Inclusive community-based problem analysis and mapping exercise completed for the two priority urban areas. | | | | | | | | | | | | | | | | |

²⁴ Cost definitions and classifications for programme and development effectiveness costs to be charged to the project are defined in the Executive Board decision DP/2010/32

²⁵ Changes to a project budget affecting the scope (outputs), completion date, or total estimated project costs require a formal budget revision that must be signed by the project board. In other cases, the UNDP programme manager alone may sign the revision provided the other signatories have no objection. This procedure may be applied for example when the purpose of the revision is only to re-phase activities among years.

| Description | 2021 | | 2022 | | | | 2023 | | | | 2024 | | | | 2025 | |
|---|----------------|----|------|----|----------------|----|------|----|----------------|----|------|----|----------------|----|------|----|
| | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| | Project Year 1 | | | | Project Year 2 | | | | Project Year 3 | | | | Project Year 4 | | | |
| Activity 1.2.4 Market-based assessment of supply chains related to food, water, and other goods for risks and barriers related to climate change completed. | | | | | | | | | | | | | | | | |
| Activity Result L2.1 Institutional and technical capacity for long-term climate resilience and integrated water resource management assessed for two priority urban areas. | | | | | | | | | | | | | | | | |
| Activity 2.1.1 Capacity assessment conducted via desk review and consultation with municipality and relevant local and provincial institutions focused on evaluating long-term policy and planning frameworks, municipal financing options, and decentralization of institutional responsibilities. Opportunities for capacity improvement identified. <i>[To be implemented by AWC/KWater]</i> | | | | | | | | | | | | | | | | |
| Activity 2.1.2 Effectiveness of climate and disaster risk monitoring systems and EWS assessed in Xe Bang Fai and Xe Don river basins. <i>[To be implemented by AWC/KWater]</i> | | | | | | | | | | | | | | | | |
| Activity Result L2.2 Identify and prioritize adaptation and DRR actions to build preparedness and reduce long-term water-related climate risks. | | | | | | | | | | | | | | | | |
| Activity 2.2.1 Integrated water resources management feasibility studies developed for each catchment that identify risk mitigation options, with a focus on the priority urban areas and vulnerable communities. | | | | | | | | | | | | | | | | |
| Activity 2.2.2 Consultations with stakeholders to review outputs from Outcome 1, 2.1, and 2.2.1, and identify gender-responsive mid- to long-term adaptation and DRR actions and develop prioritization criteria. Include development of barrier removal strategies for supply chain risks as well as review of policy measures and PDNA from 2018 and Situational Analysis recommendation | | | | | | | | | | | | | | | | |
| Activity 2.2.3 Develop prioritized list of gender-responsive adaptation and DRR options for the priority catchments. | | | | | | | | | | | | | | | | |
| Activity Result L2.3 Carry out capacity building to enhance risk-informed, gender-responsive integrated water resources management and strengthen community disaster preparedness and EWS systems. | | | | | | | | | | | | | | | | |
| Activity 2.3.1 Capacity assessment conducted to determine short-term capacity needs regarding use of disaster and climate risk data. | | | | | | | | | | | | | | | | |
| Activity 2.3.2 Implementation of a provincial training program on implementation of GIS-based integrated hydrological models and use of risk data in decision-making. | | | | | | | | | | | | | | | | |
| Activity 2.3.3 Implementation of 6 community-level DRR and CCA actions, including gender aspects, children-focused risk reduction and CC education. | | | | | | | | | | | | | | | | |

| Description | 2021 | | 2022 | | | | 2023 | | | | 2024 | | | | 2025 | |
|--|----------------|----|------|----|----------------|----|------|----|----------------|----|------|----|----------------|----|------|----|
| | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| | Project Year 1 | | | | Project Year 2 | | | | Project Year 3 | | | | Project Year 4 | | | |
| Activity 2.3.4 Facilitate regional training with provincial leadership/focal points and representatives of national ministries on use of LaoDi database to expand capacity to utilize in catchment-wide disaster management in the transboundary region. | | | | | | | | | | | | | | | | |
| Activity 2.3.5 Strengthen disaster preparedness and EWS in the priority provinces via piloting use of Mobile Technology Initiative of "Text to Talk" in partnership with Telecommunication Networks and Department of Meteorology and Hydrology. | | | | | | | | | | | | | | | | |
| Activity 2.3.6 Facilitate community mobilization of relief funds (such as pilot revolving funds and seed funds) in the target communities through the Disaster Management Committees. | | | | | | | | | | | | | | | | |

Cambodia:

| Description | 2021 | | 2022 | | | | 2023 | | | | 2024 | | | | 2025 | |
|--|----------------|----|------|----|----------------|----|------|----|----------------|----|------|----|----------------|----|------|----|
| | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| | Project Year 1 | | | | Project Year 2 | | | | Project Year 3 | | | | Project Year 4 | | | |
| Activity Result C1.1: Climate risk and water resources management baseline examined | | | | | | | | | | | | | | | | |
| Activity 1.1.1 Baseline information and relevant studies on climate risk, water resources management, EWS, and ecosystem-based adaptation relevant for long-term, gender-responsive and inclusive integrated water resource management in the priority basins of Cambodia gathered into a consolidated stocktaking report. | | | | | | | | | | | | | | | | |
| Activity 1.1.2 Gender action plan and stakeholder engagement plans developed for the project. | | | | | | | | | | | | | | | | |
| Activity Result C1.2 Detailed climate and disaster risk assessments completed for 3Ss and 4Ps river basins, with focus on two priority urban areas. | | | | | | | | | | | | | | | | |
| Activity 1.2.1 Flood propagation model developed for the two cities. [To be implemented by AWC/KWater] | | | | | | | | | | | | | | | | |
| Activity 1.2.2 Two city-based, impact-based forecasting models completed illustrating the projected level of impact and the likelihood of occurrence for hydro-meteorological disasters in the targeted areas. [To be implemented by AWC/KWater] | | | | | | | | | | | | | | | | |
| Activity 1.2.3 Inclusive community-based problem analysis and mapping exercise completed for the two priority urban areas. | | | | | | | | | | | | | | | | |

| Description | 2021 | | 2022 | | | | 2023 | | | | 2024 | | | | 2025 | |
|---|----------------|----|------|----|----------------|----|------|----|----------------|----|------|----|----------------|----|------|----|
| | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| | Project Year 1 | | | | Project Year 2 | | | | Project Year 3 | | | | Project Year 4 | | | |
| Activity 1.2.4 Market-based assessment of supply chains related to food, water, and other goods for risks and barriers related to climate change completed. | | | | | | | | | | | | | | | | |
| Activity Result C2.1 Institutional and technical capacity for long-term climate resilience and integrated water resource management assessed for two priority urban areas. | | | | | | | | | | | | | | | | |
| Activity 2.1.1 Capacity assessment conducted via desk review and consultation with municipality and relevant local and provincial institutions focused on evaluating long-term policy and planning frameworks, municipal financing options, and decentralization of institutional responsibilities. Opportunities for capacity improvement identified. <i>[To be completed by AWC/KWater]</i> | | | | | | | | | | | | | | | | |
| Activity 2.1.2 Effectiveness of climate and disaster risk monitoring systems and EWS assessed in 3Ss and 4Ps river basins. <i>[To be completed by AWC/KWater]</i> | | | | | | | | | | | | | | | | |
| Activity Result C2.2 Identify and prioritize adaptation and DRR actions to build preparedness and reduce long-term water-related climate risks. | | | | | | | | | | | | | | | | |
| Activity 2.2.1 Integrated water resources management feasibility studies developed for each catchment that identify risk mitigation options, with a focus on the priority urban areas and vulnerable communities. | | | | | | | | | | | | | | | | |
| Activity 2.2.2 Consultations with stakeholders to identify gender-responsive adaptation and DRR actions and develop prioritization criteria, include identification of policy measures and barrier removal strategies for supply chain risks | | | | | | | | | | | | | | | | |
| Activity 2.2.3 Develop prioritized list of gender-responsive adaptation and DRR options for the priority catchments. | | | | | | | | | | | | | | | | |
| Activity Result C2.3 Carry out capacity building to enhance risk-informed, gender-responsive integrated water resources management and strengthen community disaster preparedness and EWS systems. | | | | | | | | | | | | | | | | |
| Activity 2.3.1 Capacity assessment conducted to determine short-term capacity needs regarding use of disaster and climate risk data. | | | | | | | | | | | | | | | | |
| Activity 2.3.2 Implementation of a provincial training program on implementation of GIS-based integrated hydrological models and use of risk data in decision-making. | | | | | | | | | | | | | | | | |
| Activity 2.3.3 Implementation of 6 community-level DRR and CCA actions, including gender aspects, children-focused risk reduction and CC education. | | | | | | | | | | | | | | | | |
| Activity 2.3.4 Facilitate community mobilization of relief funds (such as pilot revolving funds and seed funds) in the target communities through the Disaster Management Committees. | | | | | | | | | | | | | | | | |
| Activity Result C2.4 Transboundary EWS systems strengthened in the border region between Cambodia and Lao PDR. | | | | | | | | | | | | | | | | |

| | 2021 | | 2022 | | | | 2023 | | | | 2024 | | | | 2025 | |
|--|----------------|----|------|----|----------------|----|------|----|----------------|----|------|----|----------------|----|------|----|
| Description | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| | Project Year 1 | | | | Project Year 2 | | | | Project Year 3 | | | | Project Year 4 | | | |
| Activity 2.4.1 Hold annual meeting/knowledge exchange of transboundary EWS working group with representatives from city, regional (and national, as relevant) planning and disaster management stakeholders to facilitate local government knowledge exchange and strengthening cross-border communication. | | | | | | | | | | | | | | | | |
| Activity 2.4.2 Conduct joint capacity building training to enhance preparedness for recovery for officials of Provincial Disaster Management Committee in both Lao PDR and Cambodia including validation and strengthening of existing localized tools on Post Disaster Needs Assessment and Recovery Framework. | | | | | | | | | | | | | | | | |
| Activity 2.4.3 Conduct community-based awareness events to develop communications pathways and facilitate sharing of best-practices between border communities in priority regions of Lao PDR and Cambodia, with particular focus on Champassack Province (Lao PDR) and Stung Treng Province in Cambodia. | | | | | | | | | | | | | | | | |

Regional

| | Year One | | | | Year Two | | | | Year Three | | | | Year Four | | | |
|---|----------|----|----|----|----------|----|----|----|------------|----|----|----|-----------|----|----|----|
| Description | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Activity Result T3.1 Consultations to inform development of regional, multi-city approach to increasing resilience in the urban areas of the transboundary region completed. | | | | | | | | | | | | | | | | |
| Activity 3.1.1 Building on L2.2 and C2.2, assess climate adaptation and DRR interventions for bankability and feasibility and identify potential funding sources (including private sector investment) and development partners for the prioritized, gender-responsive adaptation and DRR actions. Include innovative and nature-based solutions and structural and non-structural interventions in consideration. | | | | | | | | | | | | | | | | |
| Activity 3.1.2 Hold consultations with key donors, potential private sector funding entities, national stakeholders, regional entities, and multi-national development banks and partners. | | | | | | | | | | | | | | | | |
| Activity 3.1.3 For selected priority actions, complete private sector engagement feasibility assessment to build business case and assess potential partnerships. | | | | | | | | | | | | | | | | |
| Activity 3.1.4 Hold consultations with relevant stakeholder groups, including vulnerable and indigenous communities. | | | | | | | | | | | | | | | | |
| Activity Result T3.2 Develop and submit project proposal(s) for submission to Green Climate Fund or similar, including development of necessary feasibility assessments. | | | | | | | | | | | | | | | | |

| Description | Year One | | | | Year Two | | | | Year Three | | | | Year Four | | | |
|---|----------|----|----|----|----------|----|----|----|------------|----|----|----|-----------|----|----|----|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Activity 3.2.1 Complete feasibility assessments for Green Climate Fund proposal(s) or similar identified under 3.1. | | | | | | | | | | | | | | | | |
| Activity 3.2.2 Develop funding proposal(s) and submit to donor(s). | | | | | | | | | | | | | | | | |

VIII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

The project will be implemented following UNDP's the Direct Implementation Modality (DIM). The Implementing Partner for the project is the UNDP Bangkok Regional Hub (BRH). The Project will be managed at the regional level with regional and country-level implementation. Both in Cambodia and Lao PDR, the funding from RoK will be channelled, via the UNDP Bangkok Regional Hub, to UNDP Country Offices in Cambodia and Lao PDR for the implementation of the country level workplans.

The regional platform provides greater space for government and CSO to work more closely on sensitive issues that may be challenging to full explore at the national level and facilitates cross-country coordination and learning. The direct implementing modality (DIM) of the regional programme under UNDP Bangkok Regional Hub (BRH) also allows UNDP greater flexibility to work directly with CSOs and the private sector.

The current UNDP Asia Pacific Regional Programme Document's Advisory Board will serve as the highest level Board and provides strategic direction and executive management decisions and meets once a year. A project specific **Project Board** will be set up at regional level to provide overall oversight to the planning, implementation and reporting of the project. This board meets at least once a year and can be called upon any time to meet on a needs basis. It will be chaired by UNDP and include UNDP Bangkok Regional Hub (BRH), target UNDP Country Offices as well as relevant donor representatives as needed. In addition, the Country Offices will convene other partners, including donors and beneficiaries of the project specific to the country for technical consultation and reporting on the project as needed.

The **Project Board** is responsible for making, by consensus, management decisions when guidance is required by the Project Coordinator, including recommendations for approval of the country-level Annual Work Plans (AWPs) and revisions, and addressing any project level grievances. In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance with standards that ensure management for development results, best value money, fairness, integrity, transparency and effective international competition.

Specific responsibilities of the Project Board include:

- Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
- Address project issues as raised by the project manager;
- Provide guidance on project risks, and agree on possible countermeasures and management actions to address specific risks;
- Agree on project manager's tolerances as required;
- Review the project progress, and provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans;
- Appraise the annual project implementation report, including the quality assessment rating report; make recommendations for the work-plan;
- Provide ad hoc direction and advice for exceptional situations when the project manager's tolerances are exceeded; and
- Assess and decide how to proceed on project changes through appropriate revisions.

The Project will be Managed by a **Project Coordinator** based in BRH, under the supervision of the NCE Team Lead/Advisor especially on substantive issues, who will manage day-to-day activities of the project and coordinate closely with the participating Country Offices.

To elaborate, at the regional level, The Bangkok based Project Coordinator will provide project implementation support. The Project Coordinator will act as regional project manager and will coordinate activities between both countries and at Bangkok level and will report to the PB and be responsible for quality assurance of the implementation of the project's technical components. Substantive progress reports and financial reports will be consolidated at the regional level to ensure that a single window of communication is maintained throughout the duration of the project.

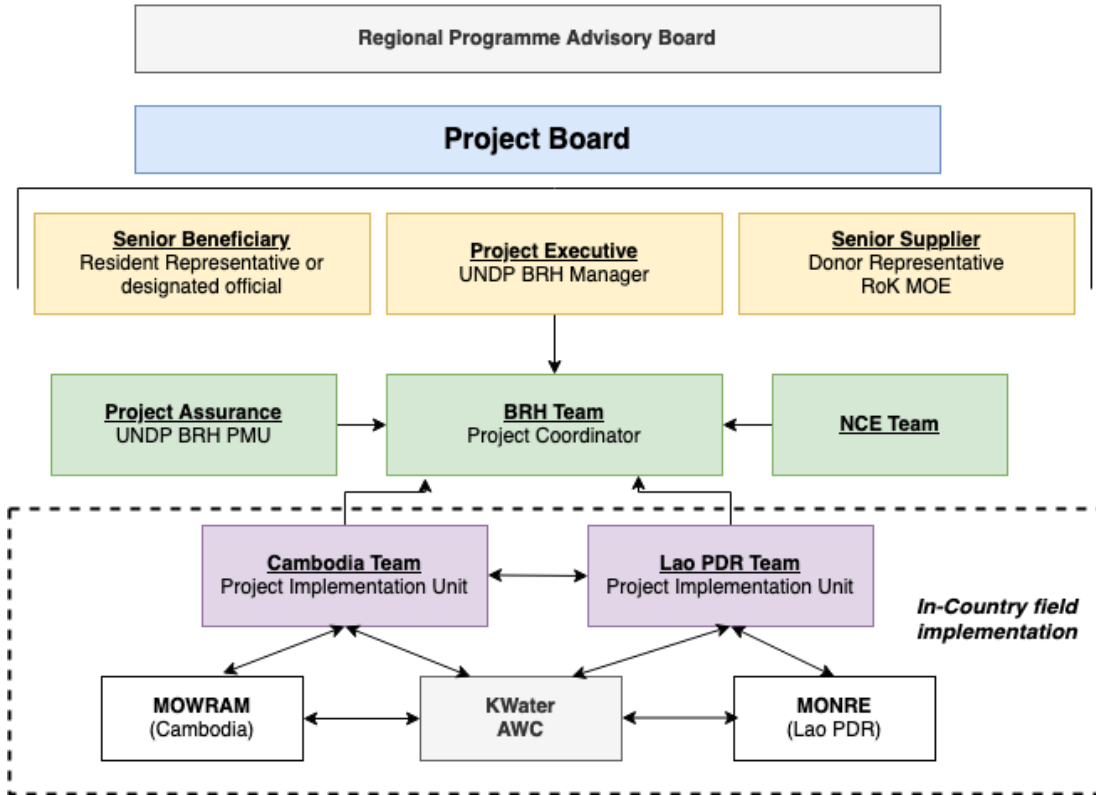
The day-to-day management of the project, including work and budget planning, will be carried out by the **Project Implementation Unit (PIU)** within each country. The PIU will be staffed with dedicated personnel hired with RoK funding in line with the agreed workplan and budget. The PIU will be comprised of a **Project Manager** and **Project Assistant** in each country, who will report to the respective UNDP Country Office and the PB and be responsible for implementation of the project's technical components. A **technical advisor** will also be hired in each country to assist with project implementation and technical quality assurance of deliverables.

Several activities under 1.2 and 2.1 will be carried out by KWater and the Asia Water Council in technical partnership with UNDP. In this case, responsibility for the financial management and development of deliverables will fall with KWater and the Asia Water Council. The KWater and Asia Water Council technical teams will regularly communicate with UNDP country teams regarding progress and coordination of in-country missions and allow for UNDP and government partner review of workplans and deliverables before they are finalized.

In addition, a member from KWater and Asia Water Council will sit on the Project Board for the project.

Day-to-day project oversight will be carried out at the country level by the UNDP Country Office teams. The overall Project Assurance role will be carried out by UNDP BRH's Programme Coordinator under the overall direction of the Hub Manager. The UNDP BRH's Programme Coordinator, through the Regional Programme Management Unit (RPMU) will carry out objective and independent programme oversight and monitoring functions and supports the Project Coordinator to ensure compliance. In addition to meeting the donor monitoring and evaluations requirement, an annual report will be produced to showcase progress made and a final project report will be produced followed by an independent evaluation of the project.

Project Organization Structure



IX. LEGAL CONTEXT

This project forms part of an overall programmatic framework under which several separate associated country level activities will be implemented. When assistance and support services are provided from this Project to the associated country level activities, this document shall be the “Project Document” instrument referred to in: (i) the respective signed SBAA’s for the specific countries; or (ii) in the [Supplemental Provisions to the Project Document](#) attached to the Project Document in cases where the recipient country has not signed an SBAA with UNDP, attached hereto and forming an integral part hereof. All references in the SBAA to “Executing Agency” shall be deemed to refer to “Implementing Partner.”

This project will be implemented by UNDP (“Implementing Partner”) in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

X. RISK MANAGEMENT

1. UNDP as the Implementing Partner will comply with the policies, procedures and practices of the United Nations Security Management System (UNSMS.)
2. UNDP as the Implementing Partner will undertake all reasonable efforts to ensure that none of the [project funds]²⁶ [UNDP funds received pursuant to the Project Document]²⁷ are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.
3. Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (<http://www.undp.org/ses>) and related Accountability Mechanism (<http://www.undp.org/secu-srm>).
4. UNDP as the Implementing Partner will: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.
5. In the implementation of the activities under this Project Document, UNDP as the Implementing Partner will handle any sexual exploitation and abuse (“SEA”) and sexual harassment (“SH”) allegations in accordance with its regulations, rules, policies and procedures.
6. All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.

²⁶ To be used where UNDP is the Implementing Partner

²⁷ To be used where the UN, a UN fund/programme or a specialized agency is the Implementing Partner

7. UNDP as the Implementing Partner will ensure that the following obligations are binding on each responsible party, subcontractor and sub-recipient:
- a. Consistent with the Article III of the SBAA [*for the Supplemental Provisions to the Project Document*], the responsibility for the safety and security of each responsible party, subcontractor and sub-recipient and its personnel and property, and of UNDP's property in such responsible party's, subcontractor's and sub-recipient's custody, rests with such responsible party, subcontractor and sub-recipient. To this end, each responsible party, subcontractor and sub-recipient shall:
 - i. put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
 - ii. assume all risks and liabilities related to such responsible party's, subcontractor's and sub-recipient's security, and the full implementation of the security plan.
 - b. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the responsible party's, subcontractor's and sub-recipient's obligations under this Project Document.
 - c. In the performance of the activities under this Project, UNDP as the Implementing Partner shall ensure, with respect to the activities of any of its responsible parties, sub-recipients and other entities engaged under the Project, either as contractors or subcontractors, their personnel and any individuals performing services for them, that those entities have in place adequate and proper procedures, processes and policies to prevent and/or address SEA and SH.
 - d. Each responsible party, subcontractor and sub-recipient will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, subcontractors and sub-recipients in implementing the project or programme or using the UNDP funds. It will ensure that its financial management, anti-corruption and anti-fraud policies are in place and enforced for all funding received from or through UNDP.
 - e. The requirements of the following documents, then in force at the time of signature of the Project Document, apply to each responsible party, subcontractor and sub-recipient: (a) UNDP Policy on Fraud and other Corrupt Practices and (b) UNDP Office of Audit and Investigations Investigation Guidelines. Each responsible party, subcontractor and sub-recipient agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at www.undp.org.
 - f. In the event that an investigation is required, UNDP will conduct investigations relating to any aspect of UNDP programmes and projects. Each responsible party, subcontractor and sub-recipient will provide its full cooperation, including making available personnel, relevant documentation, and granting access to its (and its consultants', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with it to find a solution.
 - g. Each responsible party, subcontractor and sub-recipient will promptly inform UNDP as the Implementing Partner in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality.

Where it becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, each responsible party, subcontractor and sub-recipient will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). It will provide regular updates to

the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

- h. Option 1:* UNDP will be entitled to a refund from the responsible party, subcontractor or sub-recipient of any funds provided that have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of this Project Document. Such amount may be deducted by UNDP from any payment due to the responsible party, subcontractor or sub-recipient under this or any other agreement. Recovery of such amount by UNDP shall not diminish or curtail any responsible party's, subcontractor's or sub-recipient's obligations under this Project Document.

Note: The term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors and sub-recipients.

- i.* Each contract issued by the responsible party, subcontractor or sub-recipient in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from it shall cooperate with any and all investigations and post-payment audits.
- j.* Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project or programme, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.
- k.* Each responsible party, subcontractor and sub-recipient shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to its subcontractors and sub-recipients and that all the clauses under this section entitled "Risk Management Standard Clauses" are adequately reflected, *mutatis mutandis*, in all its sub-contracts or sub-agreements entered into further to this Project Document.

XI. ANNEXES

1. **Project Quality Assurance Report**
2. **Social and Environmental Screening Template** [\[English\]](#) including additional Social and Environmental Assessments or Management Plans as relevant.
3. **Risk Analysis.** Use the standard [Risk Register template](#). Please refer to the [Deliverable Description of the Risk Register](#) for instructions

Annex 1: Project Quality Assurance Report

PROJECT QA ASSESSMENT: DESIGN AND APPRAISAL

OVERALL PROJECT

| EXEMPLARY (5) ●●●●● | HIGHLY SATISFACTORY (4) ●●●●○ | SATISFACTORY (3) ●●●○○ | NEEDS IMPROVEMENT (2) ●●○○○ | INADEQUATE (1) ●○○○○ |
|---|--|--|--|--|
| At least four criteria are rated Exemplary, and all criteria are rated High or Exemplary. | All criteria are rated Satisfactory or higher, and at least four criteria are rated High or Exemplary. | At least six criteria are rated Satisfactory or higher, and only one may be rated Needs Improvement. The Principled criterion must be rated Satisfactory or above. | At least three criteria are rated Satisfactory or higher, and only four criteria may be rated Needs Improvement. | One or more criteria are rated Inadequate, or five or more criteria are rated Needs Improvement. |

DECISION

- **APPROVE** – the project is of sufficient quality to be approved in its current form. Any management actions must be addressed in a timely manner.
- **APPROVE WITH QUALIFICATIONS** – the project has issues that must be addressed before the project document can be approved. Any management actions must be addressed in a timely manner.
- **DISAPPROVE** – the project has significant issues that should prevent the project from being approved as drafted.

RATING CRITERIA

For all questions, select the option that best reflects the project

STRATEGIC

| | | |
|---|-----------------|----------|
| <p>1. Does the project specify how it will contribute to higher level change through linkage to the programme's Theory of Change?</p> <ul style="list-style-type: none"> • 3: The project is clearly linked to the programme's theory of change. It has an explicit change pathway that explains how the project will contribute to outcome level change and why the project's strategy will likely lead to this change. This analysis is backed by credible evidence of what works effectively in this context and includes assumptions and risks. • 2: The project is clearly linked to the programme's theory of change. It has a change pathway that explains how the project will contribute to outcome-level change and why the project strategy will likely lead to this change. • 1: The project document may describe in generic terms how the project will contribute to development results, without an explicit link to the programme's theory of change. <p><i>*Note: Projects not contributing to a programme must have a project-specific Theory of Change. See alternative question under the lightbulb for these cases.</i></p> | 3 | <u>2</u> |
| | 1 | |
| | Evidence | |
| <p>2. Is the project aligned with the UNDP Strategic Plan?</p> | <u>3</u> | 2 |
| | 1 | |
| | Evidence | |

| | | | | | | | | |
|--|--|-----------|----------|---|--|-----------------|--|--|
| <ul style="list-style-type: none"> • 3: The project responds to at least one of the development settings as specified in the Strategic Plan²⁸ and adapts at least one Signature Solution²⁹. The project's RRF includes all the relevant SP output indicators. (<i>all must be true</i>) • 2: The project responds to at least one of the development settings as specified in the Strategic Plan⁴. The project's RRF includes at least one SP output indicator, if relevant. (<i>both must be true</i>) • 1: The project responds to a partner's identified need, but this need falls outside of the UNDP Strategic Plan. Also select this option if none of the relevant SP indicators are included in the RRF. | | | | | | | | |
| 3. Is the project linked to the programme outputs? (i.e., UNDAF Results Group Workplan/CPD, RPD or Strategic Plan IRRF for global projects/strategic interventions not part of a programme) | <u>Yes</u> | No | | | | | | |
| RELEVANT | | | | | | | | |
| 4. Does the project target groups left furthest behind? <ul style="list-style-type: none"> • 3: The target groups are clearly specified, prioritising discriminated and marginalized groups left furthest behind, identified through a rigorous process based on evidence. • 2: The target groups are clearly specified, prioritizing groups left furthest behind. • 1: The target groups are not clearly specified. <p><i>*Note: Management Action must be taken for a score of 1. Projects that build institutional capacity should still identify targeted groups to justify support</i></p> | <table border="1" style="width: 100%;"> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;"><u>2</u></td> </tr> <tr> <td colspan="2" style="text-align: center;">1</td> </tr> <tr> <td colspan="2" style="text-align: center;">Evidence</td> </tr> </table> | 3 | <u>2</u> | 1 | | Evidence | | |
| 3 | <u>2</u> | | | | | | | |
| 1 | | | | | | | | |
| Evidence | | | | | | | | |
| 5. Have knowledge, good practices, and past lessons learned of UNDP and others informed the project design? <ul style="list-style-type: none"> • 3: Knowledge and lessons learned backed by credible evidence from sources such as evaluation, corporate policies/strategies, and/or monitoring have been explicitly used, with appropriate referencing, to justify the approach used by the project. • 2: The project design mentions knowledge and lessons learned backed by evidence/sources, but have not been used to justify the approach selected. • 1: There is little or no mention of knowledge and lessons learned informing the project design. Any references made are anecdotal and not backed by evidence. <p><i>*Note: Management Action or strong management justification must be given for a score of 1</i></p> | <table border="1" style="width: 100%;"> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;"><u>2</u></td> </tr> <tr> <td colspan="2" style="text-align: center;">1</td> </tr> <tr> <td colspan="2" style="text-align: center;">Evidence</td> </tr> </table> | 3 | <u>2</u> | 1 | | Evidence | | |
| 3 | <u>2</u> | | | | | | | |
| 1 | | | | | | | | |
| Evidence | | | | | | | | |
| 6. Does UNDP have a clear advantage to engage in the role envisioned by the project vis-à-vis national/regional/global partners and other actors? <ul style="list-style-type: none"> • 3: An analysis has been conducted on the role of other partners in the area where the project intends to work, and credible evidence supports the proposed engagement of UNDP and partners through the project, including identification of potential funding partners. It is clear how results achieved by partners will complement the project's intended results and a communication strategy is in place to communicate results and raise visibility vis-à-vis key partners. Options for south-south and triangular cooperation have been considered, as appropriate. (<i>all must be true</i>) • 2: Some analysis has been conducted on the role of other partners in the area where the project intends to work, and relatively limited evidence supports the proposed engagement of and division of labour between UNDP and partners through the project, with unclear funding and communications strategies or plans. • 1: No clear analysis has been conducted on the role of other partners in the area that the project intends to work. There is risk that the project overlaps and/or does not coordinate with partners' interventions in this area. Options for south-south and triangular cooperation have not been considered, despite its potential relevance. <p><i>*Note: Management Action or strong management justification must be given for a score of 1</i></p> | <table border="1" style="width: 100%;"> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;"><u>2</u></td> </tr> <tr> <td colspan="2" style="text-align: center;">1</td> </tr> <tr> <td colspan="2" style="text-align: center;">Evidence</td> </tr> </table> | 3 | <u>2</u> | 1 | | Evidence | | |
| 3 | <u>2</u> | | | | | | | |
| 1 | | | | | | | | |
| Evidence | | | | | | | | |
| PRINCIPLED | | | | | | | | |

²⁸ The three development settings in UNDP's 2018-2021 Strategic Plan are: a) Eradicate poverty in all its forms and dimensions; b) Accelerate structural transformations for sustainable development; and c) Build resilience to shocks and crises

²⁹ The six Signature Solutions of UNDP's 2018-2021 Strategic Plan are: a) Keeping people out of poverty; b) Strengthen effective, inclusive and accountable governance; c) Enhance national prevention and recovery capacities for resilient societies; d) Promote nature based solutions for a sustainable planet; e) Close the energy gap; and f) Strengthen gender equality and the empowerment of women and girls.

| | | | | | | | |
|--|--|------------|----------|----------------|--|----------|--|
| <p>7. Does the project apply a human rights-based approach?</p> <ul style="list-style-type: none"> 3: The project is guided by human rights and incorporates the principles of accountability, meaningful participation, and non-discrimination in the project's strategy. The project upholds the relevant international and national laws and standards. Any potential adverse impacts on enjoyment of human rights were rigorously identified and assessed as relevant, with appropriate mitigation and management measures incorporated into project design and budget. <i>(all must be true)</i> 2: The project is guided by human rights by prioritizing accountability, meaningful participation and non-discrimination. Potential adverse impacts on enjoyment of human rights were identified and assessed as relevant, and appropriate mitigation and management measures incorporated into the project design and budget. <i>(both must be true)</i> 1: No evidence that the project is guided by human rights. Limited or no evidence that potential adverse impacts on enjoyment of human rights were considered. <p><i>*Note: Management action or strong management justification must be given for a score of 1</i></p> | <table border="1"> <tr> <td>3</td> <td><u>2</u></td> </tr> <tr> <td colspan="2">1</td> </tr> <tr> <td colspan="2">Evidence</td> </tr> </table> | 3 | <u>2</u> | 1 | | Evidence | |
| 3 | <u>2</u> | | | | | | |
| 1 | | | | | | | |
| Evidence | | | | | | | |
| <p>8. Does the project use gender analysis in the project design?</p> <ul style="list-style-type: none"> 3: A participatory gender analysis has been conducted and results from this gender analysis inform the development challenge, strategy and expected results sections of the project document. Outputs and indicators of the results framework include explicit references to gender equality, and specific indicators measure and monitor results to ensure women are fully benefitting from the project. <i>(all must be true)</i> 2: A basic gender analysis has been carried out and results from this analysis are scattered (i.e., fragmented and not consistent) across the development challenge and strategy sections of the project document. The results framework may include some gender sensitive outputs and/or activities but gender inequalities are not consistently integrated across each output. <i>(all must be true)</i> 1: The project design may or may not mention information and/or data on the differential impact of the project's development situation on gender relations, women and men, but the gender inequalities have not been clearly identified and reflected in the project document. <p><i>*Note: Management Action or strong management justification must be given for a score of 1</i></p> | <table border="1"> <tr> <td>3</td> <td><u>2</u></td> </tr> <tr> <td colspan="2">1</td> </tr> <tr> <td colspan="2">Evidence</td> </tr> </table> | 3 | <u>2</u> | 1 | | Evidence | |
| 3 | <u>2</u> | | | | | | |
| 1 | | | | | | | |
| Evidence | | | | | | | |
| <p>9. Did the project support the resilience and sustainability of societies and/or ecosystems?</p> <ul style="list-style-type: none"> 3: Credible evidence that the project addresses sustainability and resilience dimensions of development challenges, which are integrated in the project strategy and design. The project reflects the interconnections between the social, economic and environmental dimensions of sustainable development. Relevant shocks, hazards and adverse social and environmental impacts have been identified and rigorously assessed with appropriate management and mitigation measures incorporated into project design and budget. <i>(all must be true)</i>. 2: The project design integrates sustainability and resilience dimensions of development challenges. Relevant shocks, hazards and adverse social and environmental impacts have been identified and assessed, and relevant management and mitigation measures incorporated into project design and budget. <i>(both must be true)</i> 1: Sustainability and resilience dimensions and impacts were not adequately considered. <p><i>*Note: Management action or strong management justification must be given for a score of 1</i></p> | <table border="1"> <tr> <td><u>3</u></td> <td>2</td> </tr> <tr> <td colspan="2">1</td> </tr> <tr> <td colspan="2">Evidence</td> </tr> </table> | <u>3</u> | 2 | 1 | | Evidence | |
| <u>3</u> | 2 | | | | | | |
| 1 | | | | | | | |
| Evidence | | | | | | | |
| <p>10. Has the Social and Environmental Screening Procedure (SESP) been conducted to identify potential social and environmental impacts and risks? The SESP is not required for projects in which UNDP is Administrative Agent only and/or projects comprised solely of reports, coordination of events, trainings, workshops, meetings, conferences and/or communication materials and information dissemination. [if yes, upload the completed checklist. If SESP is not required, provide the reason for the exemption in the evidence section.]</p> | <table border="1"> <tr> <td><u>Yes</u></td> <td>No</td> </tr> <tr> <td colspan="2">SESP completed</td> </tr> </table> | <u>Yes</u> | No | SESP completed | | | |
| <u>Yes</u> | No | | | | | | |
| SESP completed | | | | | | | |
| MANAGEMENT & MONITORING | | | | | | | |
| <p>11. Does the project have a strong results framework?</p> <ul style="list-style-type: none"> 3: The project's selection of outputs and activities are at an appropriate level. Outputs are accompanied by SMART, results-oriented indicators that measure the key expected development changes, each with credible data sources and populated baselines and targets, including gender sensitive, target group focused, sex-disaggregated indicators where appropriate. <i>(all must be true)</i> 2: The project's selection of outputs and activities are at an appropriate level. Outputs are accompanied by SMART, results-oriented indicators, but baselines, targets and data sources may not yet be fully specified. Some use of target group focused, sex-disaggregated indicators, as appropriate. <i>(all must be true)</i> | <table border="1"> <tr> <td><u>3</u></td> <td>2</td> </tr> <tr> <td colspan="2">1</td> </tr> <tr> <td colspan="2">Evidence</td> </tr> </table> | <u>3</u> | 2 | 1 | | Evidence | |
| <u>3</u> | 2 | | | | | | |
| 1 | | | | | | | |
| Evidence | | | | | | | |

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|--|--|--------------------|-----------|---|--|----------|--|
| <ul style="list-style-type: none"> • 1: The project's selection of outputs and activities are not at an appropriate level; outputs are not accompanied by SMART, results-oriented indicators that measure the expected change and have not been populated with baselines and targets; data sources are not specified, and/or no gender sensitive, sex-disaggregation of indicators. <i>(if any is true)</i> <p>*Note: Management Action or strong management justification must be given for a score of 1</p> | | | | | | | |
| <p>12. Is the project's governance mechanism clearly defined in the project document, including composition of the project board?</p> <ul style="list-style-type: none"> • 3: The project's governance mechanism is fully defined. Individuals have been specified for each position in the governance mechanism (especially all members of the project board.) Project Board members have agreed on their roles and responsibilities as specified in the terms of reference. The ToR of the project board has been attached to the project document. <i>(all must be true).</i> • 2: The project's governance mechanism is defined; specific institutions are noted as holding key governance roles, but individuals may not have been specified yet. The project document lists the most important responsibilities of the project board, project director/manager and quality assurance roles. <i>(all must be true)</i> • 1: The project's governance mechanism is loosely defined in the project document, only mentioning key roles that will need to be filled at a later date. No information on the responsibilities of key positions in the governance mechanism is provided. <p>*Note: Management Action or strong management justification must be given for a score of 1</p> | <table border="1"> <tr> <td data-bbox="1304 373 1360 415">3</td> <td data-bbox="1360 373 1422 415">2</td> </tr> <tr> <td colspan="2" data-bbox="1304 415 1422 457">1</td> </tr> <tr> <td colspan="2" data-bbox="1304 457 1422 772">Evidence</td> </tr> </table> | 3 | 2 | 1 | | Evidence | |
| 3 | 2 | | | | | | |
| 1 | | | | | | | |
| Evidence | | | | | | | |
| <p>13. Have the project risks been identified with clear plans stated to manage and mitigate each risk?</p> <ul style="list-style-type: none"> • 3: Project risks related to the achievement of results are fully described in the project risk log, based on comprehensive analysis drawing on the programme's theory of change, Social and Environmental Standards and screening, situation analysis, capacity assessments and other analysis such as funding potential and reputational risk. Risks have been identified through a consultative process with key internal and external stakeholders. Clear and complete plan in place to manage and mitigate each risk, reflected in project budgeting and monitoring plans. <i>(both must be true)</i> • 2: Project risks related to the achievement of results are identified in the initial project risk log based on a minimum level of analysis and consultation, with mitigation measures identified for each risk. • 1: Some risks may be identified in the initial project risk log, but no evidence of consultation or analysis and no clear risk mitigation measures identified. This option is also selected if risks are not clearly identified and/or no initial risk log is included with the project document. <p>*Note: Management Action must be taken for a score of 1</p> | <table border="1"> <tr> <td data-bbox="1304 772 1360 814">3</td> <td data-bbox="1360 772 1422 814">2</td> </tr> <tr> <td colspan="2" data-bbox="1304 814 1422 856">1</td> </tr> <tr> <td colspan="2" data-bbox="1304 856 1422 1192">Evidence</td> </tr> </table> | 3 | 2 | 1 | | Evidence | |
| 3 | 2 | | | | | | |
| 1 | | | | | | | |
| Evidence | | | | | | | |
| EFFICIENT | | | | | | | |
| <p>14. Have specific measures for ensuring cost-efficient use of resources been explicitly mentioned as part of the project design? This can include, for example: i) using the theory of change analysis to explore different options of achieving the maximum results with the resources available; ii) using a portfolio management approach to improve cost effectiveness through synergies with other interventions; iii) through joint operations (e.g., monitoring or procurement) with other partners; iv) sharing resources or coordinating delivery with other projects, v) using innovative approaches and technologies to reduce the cost of service delivery or other types of interventions.</p> <p><i>(Note: Evidence of at least one measure must be provided to answer yes for this question)</i></p> | <table border="1"> <tr> <td data-bbox="1304 1255 1360 1507" style="text-align: center; vertical-align: middle;">Yes (3)</td> <td data-bbox="1360 1255 1422 1507" style="text-align: center; vertical-align: middle;">No (1)</td> </tr> </table> | Yes (3) | No (1) | | | | |
| Yes (3) | No (1) | | | | | | |
| <p>15. Is the budget justified and supported with valid estimates?</p> <ul style="list-style-type: none"> • 3: The project's budget is at the activity level with funding sources, and is specified for the duration of the project period in a multi-year budget. Realistic resource mobilisation plans are in place to fill unfunded components. Costs are supported with valid estimates using benchmarks from similar projects or activities. Cost implications from inflation and foreign exchange exposure have been estimated and incorporated in the budget. Adequate costs for monitoring, evaluation, communications and security have been incorporated. • 2: The project's budget is at the activity level with funding sources, when possible, and is specified for the duration of the project in a multi-year budget, but no funding plan is in place. Costs are supported with valid estimates based on prevailing rates. • 1: The project's budget is not specified at the activity level, and/or may not be captured in a multi-year budget. | <table border="1"> <tr> <td data-bbox="1304 1507 1360 1549">3</td> <td data-bbox="1360 1507 1422 1549">2</td> </tr> <tr> <td colspan="2" data-bbox="1304 1549 1422 1591">1</td> </tr> <tr> <td colspan="2" data-bbox="1304 1591 1422 1824">Evidence</td> </tr> </table> | 3 | 2 | 1 | | Evidence | |
| 3 | 2 | | | | | | |
| 1 | | | | | | | |
| Evidence | | | | | | | |

| | | |
|--|--------------------------------------|-------------------------|
| <p>16. Is the Country Office/Regional Hub/Global Project fully recovering the costs involved with project implementation?</p> <ul style="list-style-type: none"> 3: The budget fully covers all project costs that are attributable to the project, including programme management and development effectiveness services related to strategic country programme planning, quality assurance, pipeline development, policy advocacy services, finance, procurement, human resources, administration, issuance of contracts, security, travel, assets, general services, information and communications based on full costing in accordance with prevailing UNDP policies (i.e., UPL, LPL.) 2: The budget covers significant project costs that are attributable to the project based on prevailing UNDP policies (i.e., UPL, LPL) as relevant. 1: The budget does not adequately cover project costs that are attributable to the project, and UNDP is cross-subsidizing the project. <p>*Note: Management Action must be given for a score of 1. The budget must be revised to fully reflect the costs of implementation before the project commences.</p> | 3 | <u>2</u> |
| 1 | | |
| Evidence | | |
| EFFECTIVE | | |
| <p>17. Have targeted groups been engaged in the design of the project?</p> <ul style="list-style-type: none"> 3: Credible evidence that all targeted groups, prioritising discriminated and marginalized populations that will be involved in or affected by the project, have been actively engaged in the design of the project. The project has an explicit strategy to identify, engage and ensure the meaningful participation of target groups as stakeholders throughout the project, including through monitoring and decision-making (e.g., representation on the project board, inclusion in samples for evaluations, etc.) 2: Some evidence that key targeted groups have been consulted in the design of the project. 1: No evidence of engagement with targeted groups during project design. | 3 | <u>2</u> |
| 1 | | |
| Evidence | | |
| <p>18. Does the project plan for adaptation and course correction if regular monitoring activities, evaluation, and lesson learned demonstrate there are better approaches to achieve the intended results and/or circumstances change during implementation?</p> | <u>Yes</u> <u>s</u> <u>(3)</u> | No (1) |
| <p>19. The gender marker for all project outputs are scored at GEN2 or GEN3, indicating that gender has been fully mainstreamed into all project outputs at a minimum.</p> | Yes s (3) | <u>No</u> <u>(1)</u> |
| *Note: Management Action or strong management justification must be given for a score of “no” | | |
| Evidence | | |
| SUSTAINABILITY & NATIONAL OWNERSHIP | | |
| <p>20. Have national/regional/global partners led, or proactively engaged in, the design of the project?</p> <ul style="list-style-type: none"> 3: National partners (or regional/global partners for regional and global projects) have full ownership of the project and led the process of the development of the project jointly with UNDP. 2: The project has been developed by UNDP in close consultation with national/regional/global partners. 1: The project has been developed by UNDP with limited or no engagement with national partners. | 3 | <u>2</u> |
| 1 | | |
| Evidence | | |
| <p>21. Are key institutions and systems identified, and is there a strategy for strengthening specific/comprehensive capacities based on capacity assessments conducted?</p> <ul style="list-style-type: none"> 3: The project has a strategy for strengthening specific capacities of national institutions and/or actors based on a completed capacity assessment. This strategy includes an approach to regularly monitor national capacities using clear indicators and rigorous methods of data collection, and adjust the strategy to strengthen national capacities accordingly. 2: A capacity assessment has been completed. There are plans to develop a strategy to strengthen specific capacities of national institutions and/or actors based on the results of the capacity assessment. 1: Capacity assessments have not been carried out. | <u>3</u> | 2 |
| 1 | | |
| Evidence | | |
| <p>22. Is there is a clear strategy embedded in the project specifying how the project will use national systems (i.e., procurement, monitoring, evaluations, etc.) to the extent possible?</p> <p>N/A, this is DIM project, procurement, M&E will be handled by UNDP COs and UNDP BRH.</p> | Yes s (3) | <u>No</u> <u>(1)</u> |
| <p>23. Is there a clear transition arrangement/ phase-out plan developed with key stakeholders in order to sustain or scale up results (including resource mobilisation and communications strategy)?</p> | <u>Yes</u> <u>s</u> <u>(3)</u> | No (1) |

ANNEX 2. SOCIAL AND ENVIRONMENTAL SCREENING TEMPLATE (2021 SESP TEMPLATE, VERSION 1)

The completed template, which constitutes the Social and Environmental Screening Report, must be included as an annex to the Project Document at the design stage. Note: this template will be converted into an online tool. The online version will guide users through the process and will embed relevant guidance.

Project Information

| Project Information | |
|--|--|
| 1. Project Title | Enhancing Integrated Water Management and Climate Resilience in Vulnerable Urban Areas of the Mekong River Basin |
| 2. Project Number (i.e. Atlas project ID, PIMS+) | PIMS: 6546 |
| 3. Location (Global/Region/Country) | Lao PDR and Cambodia |
| 4. Project stage (Design or Implementation) | Post- RPAC – Design Stage |
| 5. Date | July 29, 2021 |

Part A. Integrating Programming Principles to Strengthen Social and Environmental Sustainability

QUESTION 1: How Does the Project Integrate the Programming Principles in Order to Strengthen Social and Environmental Sustainability?

Briefly describe in the space below how the project mainstreams the human rights-based approach

This project includes a variety of activities that will expand the local municipalities' understanding of risks posed by climate change in high-risk areas of the Mekong River Basin and take steps to reduce these risks in the future. In so doing, the project utilizes an inclusive and human rights-based approach. The needs of the most vulnerable populations in the project areas (including many different local indigenous populations) will be examined with the end goal of improving availability of risk information, reducing impacts of flood and drought events, and enhancing overall adaptive capacity. Project activities such as risk and vulnerability assessments, capacity building and training, and enhancing early warning systems are planned to be carried out in a way that supports and enables the meaningful participation and contribution of all in the affected area – including potentially marginalized communities such as indigenous populations, women, disabled, and youth. From the project inception, a Stakeholder Engagement Plan will guide this process, while activities will be designed in a way that enables consultation and facilitates wide participation. In addition, this project includes development of a further funding proposal for future risk-reduction activities. This proposal process will include consultations and full participation from vulnerable and marginalized populations according to UNDP's SES Policies – to be determined during that process as needed depending on the scope of the proposed project.

Briefly describe in the space below how the project is likely to improve gender equality and women's empowerment

This project is likely to improve gender equality and women’s empowerment via enabling municipal and provincial governments in Lao PDR and Cambodia to have access to improved risk and vulnerability data that is, where possible, sex disaggregated to inform future decision-making and investment. In addition, the long-term capacities of the government institutions to implement plans, policies, and investments that are risk-informed and account for the needs of all – including women – will be assessed, with a project proposal developed based on the outcomes of this capacity assessment to enable future resilience-building and risk reduction measures. The project will be guided by a Gender Action Plan developed during the inception phase, and the proposal developed under Outcome 3 will include a full gender assessment as part of the development process as needed per UNDP’s SES policy.

Briefly describe in the space below how the project mainstreams sustainability and resilience

This project will strengthen the environmental management capacities of local municipal and provincial governments in Lao PDR and Cambodia by performing assessments that will enable a holistic, integrated approach to water resources management that protects the natural ecosystems of the Mekong River Basin. This will have effects beyond the project sites and help advance this approach in both countries at large, while also having benefits for downstream communities in the greater Mekong River Basin. This project also directly addresses the nexus between environmental protection and poverty in both countries: by taking steps to reduce the impacts of flooding and drought on urban and rural landscapes, the project will enable the target regions of Cambodia and Lao PDR to maintain progress towards poverty reduction and advancing the Sustainable Development Goals. In addition, during the project’s Outcome 3 (development of a project proposal for subsequent risk reduction activities), the potential environmental impacts of proposed interventions will be fully assessed, and steps will be taken to mitigate any adverse effects. In this project development process, measures that utilize nature-based approaches and/or enhance the ecosystem services of the region (such as ecosystem-based adaptation approaches) will be fully considered alongside any structural or “hard” risk reduction measures.

This project contributes to the Lao PDR 8th Five-Year National Socio-Economic Development Plan that sets forth priorities and targets to ensure sustainable development that balances economic and socio-cultural development with environmental protection while ensuring preparedness for natural disasters. In addition, this project is in line with Cambodia’s National Strategic Development Plan 2019-2023 and the Cambodian Climate Change Strategic Plan 2014-2023, which aims to “ensure the climate resilience of critical ecosystems, biodiversity, and protected areas,” and encourages community-based, ecosystem-based approaches to address climate change.

Briefly describe in the space below how the project strengthens accountability to stakeholders

Throughout the project implementation a wide variety of stakeholders – including local, provincial, and national government entities - will be engaged in capacity building on climate adaptation and disaster risk reduction and resilience efforts that assess and address the risks to the most vulnerable local populations in the project area. The project will conduct a stakeholder analysis and develop an engagement plan that details how to include stakeholder institutions and involve women, indigenous and vulnerable populations in the project activities and consultations.

Part B. Identifying and Managing Social and Environmental Risks

| | | |
|--|---|---|
| <p>QUESTION 2: What are the Potential Social and Environmental Risks?</p> <p><i>Note: Complete SESP Attachment 1 before responding to Question 2.</i></p> | <p>QUESTION 3: What is the level of significance of the potential social and environmental risks?</p> <p><i>Note: Respond to Questions 4 and 5 below before proceeding to Question 5</i></p> | <p>QUESTION 6: Describe the assessment and management measures for each risk rated Moderate, Substantial or High</p> |
|--|---|---|

| Risk Description (broken down by event, cause, impact) | Impact and Likelihood (1-5) | Significance (Low, Moderate, Substantial, High) | Comments (optional) | Description of assessment and management measures for risks rated as Moderate, Substantial or High |
|--|------------------------------------|--|---|--|
| <p>Risk 1: Project activities could be carried out in a way that does not include or represent the needs and voices of marginalized and vulnerable populations, including women.</p> <p><i>(Overarching Principle: Leave No One Behind; P.10, P.13)</i></p> | <p>I = 4 P = 2</p> | <p>Moderate</p> | <p>Indigenous populations and women are historically underrepresented in political and decision-making processes in both Lao PDR and Cambodia.</p> | <p>Activities have been designed to be inclusive and participatory. During the inception phase of the project a Stakeholder Engagement Plan and a Gender Action Plan will be developed to detail ways in which the project will mainstream participation of vulnerable communities. Further to this, an Indigenous Peoples Planning Framework is planned under Activity 1.1.2 that will guide the project's implementation.</p> |
| <p>Risk 2: Climate change is expected to increase the frequency and severity of floods in the project area, potentially impacting the studies and capacity building activities planned and delaying or inhibiting project progress.</p> <p><i>(SES Standard 2 – Climate Change Mitigation and Adaptation; 2.1)</i></p> | <p>I = 3 P = 1</p> | <p>Low</p> | <p>Seasonal floods are common in the project area. Though floods of the severity that may inhibit project progress are rare, more severe floods caused by heavy precipitation exacerbated by the ongoing effects of global climate change are becoming more common. Such floods could destroy sensory equipment, isolate communities that may</p> | <p>During project inception, the workplan and sequencing of activities will be designed to schedule potentially flood-sensitive activities during the dry season where possible. Care will be taken to plan consultations and workshops in areas that are not at particular risk from flooding (i.e. not in identified flood plain). During the design of the subsequent project (under Outcome 3), the potential ongoing impacts of floods, droughts, and other climate-related risks to any construction or activities will be assessed and accounted for in the risk mitigation plan.</p> |




| | | | | |
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| | | | be involved in consultation, and cause delays in project implementation. | |
| <p>Risk 3: Data collected during the project that details at risk areas and populations may be misused in the future to target or exclude vulnerable populations.</p> <p><i>(SES Standard 6 – Indigenous Peoples; 6.1, 6.2)</i></p> | I = 3 P = 1 | Low | <p>Though the probability of misuse of the vulnerability data collected during this project is low, there is potential that it could be used by public or private entities that may wish to exclude certain populations or areas from future development. This would potentially erode trust by vulnerable communities who may have contributed to the project's activities via consultations, etc.</p> | <p>During project inception and delineation of workplans in each country there will be further consideration for the collection and storage of the risk and vulnerability data collected. During the procurement processes for consultants/firms involved in data collection and dissemination, this will be a consideration.</p> |
| <p>Risk 4: Duty bearers (local, provincial, and national government stakeholders and partners) may not have the capacity to meet their obligations to the project – potentially resulting in delays and/or missed project targets.</p> <p><i>(Overarching Principle: Leave No One Behind; P.2, P.3)</i></p> | I=2 L=2 | Low | | <p>Project has been designed in consultation with government partners. During project inception processes in each country, representatives from the provincial and municipal governments in the priority catchment areas will also be engaged to ensure ownership over project activities and workplan.</p> |
| QUESTION 4: What is the overall project risk categorization? | | | | |

| | | | | |
|--|--|-------------------------------------|--|--|
| | Low Risk | <input checked="" type="checkbox"/> | <i>Overall, this project has low risk of adverse environmental and social impact. Main considerations are the involvement of vulnerable populations and women and the location in areas of with many indigenous communities.</i> | |
| | Moderate Risk | <input type="checkbox"/> | | |
| | Substantial Risk | <input type="checkbox"/> | | |
| | High Risk | <input type="checkbox"/> | | |
| QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are triggered? (check all that apply) | | | | |
| Question only required for Moderate, Substantial and High Risk projects | | | | |
| | <u>Is assessment required? (check if "yes")</u> | <input type="checkbox"/> | | Status? (complete, planned) |
| | <i>if yes, indicate overall type and status</i> | <input type="checkbox"/> | Targeted assessment(s) | |
| | | <input type="checkbox"/> | ESIA (Environmental and Social Impact Assessment) | |
| | | <input type="checkbox"/> | SESA (Strategic Environmental and Social Assessment) | |
| | Are management plans required? (check if "yes") | <input type="checkbox"/> | | |
| | <i>If yes, indicate overall type</i> | <input type="checkbox"/> | Targeted management plans (e.g. Gender Action Plan, Emergency Response Plan, Waste Management Plan, others) | |
| | | <input type="checkbox"/> | ESMP (Environmental and Social Management Plan which may include range of targeted plans) | |

| | | | | |
|--|--|--------------------------|--|--|
| | | <input type="checkbox"/> | ESMF (Environmental and Social Management Framework) | |
| | Based on identified <u>risks</u>, which Principles/Project-level Standards triggered? | | Comments (not required) | |
| | Overarching Principle: Leave No One Behind | | | |
| | Human Rights | X | Yes – P.2 and P.3 | |
| | Gender Equality and Women's Empowerment | X | Yes – P.10 | |
| | Accountability | X | Yes – P.13 | |
| | 1. Biodiversity Conservation and Sustainable Natural Resource Management | <input type="checkbox"/> | | |
| | 2. Climate Change and Disaster Risks | X | Yes – 2.1 | |
| | 3. Community Health, Safety and Security | <input type="checkbox"/> | | |
| | 4. Cultural Heritage | <input type="checkbox"/> | | |
| | 5. Displacement and Resettlement | <input type="checkbox"/> | | |
| | 6. Indigenous Peoples | X | Yes – 6.1 and 6.2 | |
| | 7. Labour and Working Conditions | <input type="checkbox"/> | | |
| | 8. Pollution Prevention and Resource Efficiency | <input type="checkbox"/> | | |

Final Sign Off

Final Screening at the design-stage is not complete until the following signatures are included

| Signature | Date | Description |
|--|-------------|---|
| QA Assessor  Ms. Bushra Hassan | 16-Sep-2021 | UNDP staff member responsible for the project, typically a UNDP Programme Officer. Final signature confirms they have “checked” to ensure that the SESP is adequately conducted. |
| QA Approver  Ms. Karin Takeuchi | 16-Sep-2021 | UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD), Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have “cleared” the SESP prior to submittal to the PAC. |
| PAC Chair  Mr. Jaco Cilliers | 16-Sep-2021 | UNDP chair of the PAC. In some cases PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC. |

SESP Attachment 1. Social and Environmental Risk Screening Checklist

| Checklist Potential Social and Environmental Risks | |
|---|------------------------|
| INSTRUCTIONS: The risk screening checklist will assist in answering Questions 2-6 of the Screening Template. Answers to the checklist questions help to (1) identify potential risks, (2) determine the overall risk categorization of the project, and (3) determine required level of assessment and management measures. Refer to the SES toolkit for further guidance on addressing screening questions. | |
| Overarching Principle: Leave No One Behind | Answer (Yes/No) |
| Human Rights | |
| P.1 Have local communities or individuals raised human rights concerns regarding the project (e.g. during the stakeholder engagement process, grievance processes, public statements)? | No |
| P.2 Is there a risk that duty-bearers (e.g. government agencies) do not have the capacity to meet their obligations in the project? | Yes |
| P.3 Is there a risk that rights-holders (e.g. project-affected persons) do not have the capacity to claim their rights? | Yes |
| <i>Would the project potentially involve or lead to:</i> | |
| P.4 adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups? | No |
| P.5 inequitable or discriminatory impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups, including persons with disabilities? ³⁰ | No |
| P.6 restrictions in availability, quality of and/or access to resources or basic services, in particular to marginalized individuals or groups, including persons with disabilities? | No |
| P.7 exacerbation of conflicts among and/or the risk of violence to project-affected communities and individuals? | No |
| Gender Equality and Women's Empowerment | |
| P.8 Have women's groups/leaders raised gender equality concerns regarding the project, (e.g. during the stakeholder engagement process, grievance processes, public statements)? | No |
| <i>Would the project potentially involve or lead to:</i> | |
| P.9 adverse impacts on gender equality and/or the situation of women and girls? | No |

³⁰ Prohibited grounds of discrimination include race, ethnicity, sex, age, language, disability, sexual orientation, gender identity, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to "women and men" or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender and transsexual people.

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| P.10 reproducing discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits? | Yes |
| P.11 limitations on women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? <i>For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being</i> | No |
| P.12 exacerbation of risks of gender-based violence? <i>For example, through the influx of workers to a community, changes in community and household power dynamics, increased exposure to unsafe public places and/or transport, etc.</i> | No |
| Sustainability and Resilience: Screening questions regarding risks associated with sustainability and resilience are encompassed by the Standard-specific questions below | |
| Accountability | |
| <i>Would the project potentially involve or lead to:</i> | |
| P.13 exclusion of any potentially affected stakeholders, in particular marginalized groups and excluded individuals (including persons with disabilities), from fully participating in decisions that may affect them? | Yes |
| P.14 grievances or objections from potentially affected stakeholders? | No |
| P.15 risks of retaliation or reprisals against stakeholders who express concerns or grievances, or who seek to participate in or to obtain information on the project? | No |
| Project-Level Standards | |
| Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management | |
| <i>Would the project potentially involve or lead to:</i> | |
| 1.1 adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services? <i>For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes</i> | No |
| 1.2 activities within or adjacent to critical habitats and/or environmentally sensitive areas, including (but not limited to) legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities? | No |
| 1.3 changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5) | No |
| 1.4 risks to endangered species (e.g. reduction, encroachment on habitat)? | No |

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| 1.5 | exacerbation of illegal wildlife trade? | No |
| 1.6 | introduction of invasive alien species? | No |
| 1.7 | adverse impacts on soils? | No |
| 1.8 | harvesting of natural forests, plantation development, or reforestation? | No |
| 1.9 | significant agricultural production? | No |
| 1.10 | animal husbandry or harvesting of fish populations or other aquatic species? | No |
| 1.11 | significant extraction, diversion or containment of surface or ground water? <i>For example, construction of dams, reservoirs, river basin developments, groundwater extraction</i> | No |
| 1.12 | handling or utilization of genetically modified organisms/living modified organisms? ³¹ | No |
| 1.13 | utilization of genetic resources? (e.g. collection and/or harvesting, commercial development) ³² | No |
| 1.14 | adverse transboundary or global environmental concerns? | No |
| Standard 2: Climate Change and Disaster Risks | | |
| <i>Would the project potentially involve or lead to:</i> | | |
| 2.1 | areas subject to hazards such as earthquakes, floods, landslides, severe winds, storm surges, tsunami or volcanic eruptions? | Yes |
| 2.2 | outputs and outcomes sensitive or vulnerable to potential impacts of climate change or disasters? <i>For example, through increased precipitation, drought, temperature, salinity, extreme events, earthquakes</i> | No |
| 2.3 | increases in vulnerability to climate change impacts or disaster risks now or in the future (also known as maladaptive or negative coping practices)? <i>For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding</i> | No |
| 2.4 | increases of greenhouse gas emissions, black carbon emissions or other drivers of climate change? | No |
| Standard 3: Community Health, Safety and Security | | |
| <i>Would the project potentially involve or lead to:</i> | | |
| 3.1 | construction and/or infrastructure development (e.g. roads, buildings, dams)? (Note: the GEF does not finance projects that would involve the construction or rehabilitation of large or complex dams) | No |

³¹ See the [Convention on Biological Diversity](#) and its [Cartagena Protocol on Biosafety](#).

³² See the [Convention on Biological Diversity](#) and its [Nagoya Protocol](#) on access and benefit sharing from use of genetic resources.

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| 3.2 | air pollution, noise, vibration, traffic, injuries, physical hazards, poor surface water quality due to runoff, erosion, sanitation? | No |
| 3.3 | harm or losses due to failure of structural elements of the project (e.g. collapse of buildings or infrastructure)? | No |
| 3.4 | risks of water-borne or other vector-borne diseases (e.g. temporary breeding habitats), communicable and noncommunicable diseases, nutritional disorders, mental health? | No |
| 3.5 | transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)? | No |
| 3.6 | adverse impacts on ecosystems and ecosystem services relevant to communities' health (e.g. food, surface water purification, natural buffers from flooding)? | No |
| 3.7 | influx of project workers to project areas? | No |
| 3.8 | engagement of security personnel to protect facilities and property or to support project activities? | No |
| Standard 4: Cultural Heritage | | |
| <i>Would the project potentially involve or lead to:</i> | | |
| 4.1 | activities adjacent to or within a Cultural Heritage site? | No |
| 4.2 | significant excavations, demolitions, movement of earth, flooding or other environmental changes? | No |
| 4.3 | adverse impacts to sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts) | No |
| 4.4 | alterations to landscapes and natural features with cultural significance? | No |
| 4.5 | utilization of tangible and/or intangible forms (e.g. practices, traditional knowledge) of Cultural Heritage for commercial or other purposes? | No |
| Standard 5: Displacement and Resettlement | | |
| <i>Would the project potentially involve or lead to:</i> | | |
| 5.1 | temporary or permanent and full or partial physical displacement (including people without legally recognizable claims to land)? | No |
| 5.2 | economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)? | No |
| 5.3 | risk of forced evictions? ³³ | No |

³³ Forced eviction is defined here as the permanent or temporary removal against their will of individuals, families or communities from the homes and/or land which they occupy, without the provision of, and access to, appropriate forms of legal or other protection. Forced evictions

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| 5.4 | impacts on or changes to land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources? | No |
| Standard 6: Indigenous Peoples | | |
| <i>Would the project potentially involve or lead to:</i> | | |
| 6.1 | areas where indigenous peoples are present (including project area of influence)? | Yes |
| 6.2 | activities located on lands and territories claimed by indigenous peoples? | Yes |
| 6.3 | impacts (positive or negative) to the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples (regardless of whether indigenous peoples possess the legal titles to such areas, whether the project is located within or outside of the lands and territories inhabited by the affected peoples, or whether the indigenous peoples are recognized as indigenous peoples by the country in question)? <i>If the answer to screening question 6.3 is "yes", then the potential risk impacts are considered significant and the project would be categorized as either Substantial Risk or High Risk</i> | No |
| 6.4 | the absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned? | No |
| 6.5 | the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples? | No |
| 6.6 | forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources? <i>Consider, and where appropriate ensure, consistency with the answers under Standard 5 above</i> | No |
| 6.7 | adverse impacts on the development priorities of indigenous peoples as defined by them? | No |
| 6.8 | risks to the physical and cultural survival of indigenous peoples? | No |
| 6.9 | impacts on the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices? <i>Consider, and where appropriate ensure, consistency with the answers under Standard 4 above.</i> | No |
| Standard 7: Labour and Working Conditions | | |
| <i>Would the project potentially involve or lead to: (note: applies to project and contractor workers)</i> | | |

constitute gross violations of a range of internationally recognized human rights.

| | | |
|---|--|----|
| 7.1 | working conditions that do not meet national labour laws and international commitments? | No |
| 7.2 | working conditions that may deny freedom of association and collective bargaining? | No |
| 7.3 | use of child labour? | No |
| 7.4 | use of forced labour? | No |
| 7.5 | discriminatory working conditions and/or lack of equal opportunity? | No |
| 7.6 | occupational health and safety risks due to physical, chemical, biological and psychosocial hazards (including violence and harassment) throughout the project life-cycle? | No |
| Standard 8: Pollution Prevention and Resource Efficiency | | |
| <i>Would the project potentially involve or lead to:</i> | | |
| 8.1 | the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts ? | No |
| 8.2 | the generation of waste (both hazardous and non-hazardous)? | No |
| 8.3 | the manufacture, trade, release, and/or use of hazardous materials and/or chemicals? | No |
| 8.4 | the use of chemicals or materials subject to international bans or phase-outs? <i>For example, DDT, PCBs and other chemicals listed in international conventions such as the Montreal Protocol, Minamata Convention, Basel Convention, Rotterdam Convention, Stockholm Convention</i> | No |
| 8.5 | the application of pesticides that may have a negative effect on the environment or human health? | No |
| 8.6 | significant consumption of raw materials, energy, and/or water? | No |

ANNEX 3. RISK ANALYSIS

Guidance to project developer: Complete the table below. Please refer to the [UNDP Enterprise Risk Management guide](#) for further information.

| # | Description | Date Identified | Risk Category | Impact & Probability | Risk Treatment / Management Measures | Risk Owner | Status |
|---|--|-----------------|--------------------------|----------------------|---|------------|--------|
| 1 | Project activities could be carried out in a way that does not include or represent the needs and voices of marginalized and vulnerable populations, including women. | February 2020 | Social and Environmental | I = 4 P = 2 | Activities have been designed to be inclusive and participatory. During the inception phase of the project a Stakeholder Engagement Plan and a Gender Action Plan will be developed to detail ways in which the project will mainstream participation of vulnerable communities. The need for a full Indigenous Peoples Plan (IPP) and the application of an FPIC process will be further explored at that stage, and carried out if required by the SES. Further to this, an Indigenous Peoples Planning Framework is planned under Activity 1.1.2 that will guide the project's implementation. | | |
| 2 | Climate change is expected to increase the frequency and severity of floods in the project area, potentially impacting the studies and capacity building activities planned and delaying or inhibiting project progress. | February 2020 | Social and Environmental | I = 3 P = 1 | During project inception, the workplan and sequencing of activities will be designed to schedule potentially flood-sensitive activities during the dry season where possible. Care will be taken to plan consultations and workshops in areas that are not at particular risk from flooding (i.e. not in identified flood plain). During the design of the subsequent project (under Outcome 3), the potential ongoing impacts of floods, droughts, and other climate-related risks to any construction or activities will be assessed and accounted for in the risk mitigation plan. | | |
| 3 | Data collected during the project that details at risk areas and populations may be misused in the future to target or | February 2020 | Social and Environmental | I = 3 P = 1 | During project inception there will be further consideration for the collection and storage of the risk and vulnerability data collected. During the procurement processes for consultants/firms involved in data collection and dissemination, this will be a consideration. | | |

| | | | | | | | |
|---|---|-----------|--------------------------|------------|--|--|--|
| | exclude vulnerable populations. | | | | | | |
| 4 | Duty bearers (local, provincial, and national government stakeholders and partners) may not have the capacity to meet their obligations to the project – potentially resulting in delays and/or missed project targets. | July 2021 | Social and Environmental | I=2 P=2 | Project has been designed in consultation with government partners. During project inception processes in each country, representatives from the provincial and municipal governments in the priority catchment areas will also be engaged to ensure ownership over project activities and workplan. | | |
| 5 | The local, provincial, and national government partners in the project may not remain committed or have appropriate ownership over project processes. | July 2021 | Political | I=2 P=2 | Project has been designed with national government stakeholder input and further collaboration will be sought during the project implementation. In addition, a stakeholder engagement plan will be developed as part of the project inception process that will outline how government stakeholders can be engaged at every step of the project implementation. | | |
| 6 | Project implementation is dependent on variety of partners. The project may experience delayed implementation in subsequent stages of the work plan if early activities are not conducted on time. | July 2021 | Operational | I=3 P=2 | During project inception the workplan will be discussed with all partners (including ROK MOE and AWC) to ensure it is realistic and achievable. Adaptive management techniques will be employed along the way aided by regular communication between the project partners. | | |
| 7 | The ongoing COVID-19 pandemic may result in delays to project delivery given travel restrictions in both countries. | July 2021 | Operational | I=3 P=3 | During project inception the project activities will be assessed to determine feasibility of delivery in the first year of the project and some delivery timelines may be readjusted accordingly. This will be repeated throughout the project process. | | |