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MINISTRY OF WATER RESOURCES AND METEOROLOGY

Climate Adaptive Irrigation and Sustainable Agriculture for Resilience Project

ENVIRONMENTAL, SOCIAL AND CLIMATE MANAGEMENT FRAMEWORK

Draft for Disclosure

December 2024

ACKNOWLEDGEMENTS

The CAISAR project is composed of three sub-project command areas – Ou Ta Paong, in Pursat Province, Lum Hach, in Kampong Chhnang Province and Krang Ponley in Kampong Chhnang, Kapong Speu and Kandal This ESCMF report was submitted by the Cambodia Ministry of Water Resources and Meteorology (MOWRAM) (Accredited Entity) for GCF financing under the CAISAR project. The report was prepared by Ron Livingston (CAISAR SECAP Team Leader) with key inputs from Tuan Anh Le (CAISAR SECAP Gender and Social Safeguards Expert); Sopheak Kong (CAISAR SECAP National Deputy Team Leader) and Socheat Penh (CAISAR SECAP National Environmental Expert under the overall guidance of his H.E. Chann Sinath, MOWRAM AIIB Project Director; Ms. Bo Zhang, CAISAR Project Team Leader, Investment Operations Officer, AIIB; and Mr. Frew Behabtu, Country Director for Cambodia, IFAD.

The ESCMF report should be read in conjunction with the other safeguards documents (Stakeholder Engagement Plan, Resettlement Planning Framework, Indigenous Peoples Planning Framework, Gender Assessment & Social Action Plan, and Environmental and Social Impact Assessment).

Assessment of environmental and social risks and impacts, both inherent and project-related, was based on supporting background reports, desk reviews of literature and similar projects, and extensive consultation during the project design. Many consultations with National, Provincial and District agencies and community members in project communes have been undertaken on the various aspects of the CAISAR project. The first round of consultations specific to the ESCMF were conducted during June 2023. We are grateful to the focal points of four project provinces who worked hard to support the introduction of the planned projects and discussions on the planned objectives, outcomes and benefits. Without their commitment and active support in leading the extensive consultation effort, the consultations would not have been possible.

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ABBREVIATIONS

4P	Public–Private–Producer Partnership
AIIB	Asian Infrastructure Investment Bank
AVC	Agricultural Value Chain
BAU	Business-as-usual
CFM	Community Forest Management
CIG	Community Interest Group
COVID-19	Severe Acute Respiratory Syndrome Coronavirus 2
EM	Ethnic Minority
ESMP	Environmental & Social Management Plan
ESS	Environmental & Social Standards
FA	Farmers Association
FC	Farmers' Cooperative
FAO	Food and Agriculture Organization of the United Nations
FLA	Forest Land Allocation
FGD	Focus Group Discussion
FHH	Female-Headed Household
FPIC	Free, Prior, Informed Consent
FWUC	Farmer Water Users Community
GASIP	Gender Action and Social Inclusion Plan
GCF	Green Climate Fund
GBV	Gender Based Violence
GRM	Grievance Redress Mechanism
HHS	Household Survey
IEC	Information, Education and Communication
IFAD	International Fund for Agricultural Development
IPP	Indigenous Peoples' Plan
KII	Key Informant Interview
MOWRAM	Ministry of Water Resources and Meteorology
NDC	Nationally Determined Contribution

NTFP	Non-Timber Forest Products
OCOP	One Commune, One Product
OHS	Occupation Health and Safety
PFES	Payment for Forest Environmental Services
PMU	Project Management Unit
SDP	socio-economic development planning
SEA/SH	Sexual Exploitation and Abuse/Sexual Harassment
SECAP	Social, Environmental, and Climate Assessment Procedures
SEP	Stakeholder Engagement Plan
PMU	Project Management Board
VAC	Violence Against Children

Table of Contents

List of Figures

List of Tables

EXECUTIVE SUMMARY

1. **Project Rationale**: The CAISAR project covers a total command area of 45,000ha and is composed of three sub-project command areas – Ou Ta Paong, in Pursat Province, Lum Hach, in Kampong Chhnang Province and Krang Ponley in Kampong Chhnang, Kapong Speu and Kandal. The project objective is to improve agriculture productivity by providing irrigation and flood protection in the project areas. The project design is to increase climate adaptation, mitigate the negative impact of extreme climate events, and improve livelihoods of smallholder farmers and vulnerable rural communities in four provinces of Cambodia (Pursat, Kampong Chhnang, Kampong Speu, and Kendal). Mitigation is a co-benefit of this adaptation project, as it will also contribute to reduce GHG emissions, including methane emissions from rice fields. These objectives will be achieved by implementing three components that aim at addressing climate change vulnerabilities, increasing agriculture productivity, and developing institutional capacities. The investments to be implemented will (i) combine robust climate-resilient water management and agricultural practices at the farm level, (ii) establish climate-proofed irrigation and flood control infrastructure and (iii) develop institutional capacity to plan, maintain and operate irrigation and flood control infrastructure in a changing climate context. The CAISAR project has a broad positive impact benefitting 120,000 households (500,000 rural people) directly while its effect will propagate to over 3 million people in the region. The project will be executed through the Ministry of Water Resources and Meteorology (MOWRAM) and the National Committee for Sub-National Democratic Development Secretariat (NCDD-S), a Direct Access Accredited Entity to the GCF. The expected timelines for the approval of the co-financing by IFAD and AIIB Executive Boards are respectively September 2024 and January 2024, with the inception of the project is expected to take place in December 2024.

2. **Methodology for Risk Categorization:** Project-related and inherent environmental, social, and climate risks were determined by: (i) screening the project activities against the International Fund for Agricultural Development's (IFAD's) Social, Environmental, and Climate Assessment Procedures (SECAP) requirements, the AIIB's Environmental & Social Framework (ESF), and the Green Climate Fund's (GCF's) Environmental & Social Policy; (ii) considering the findings of desk research on risks associated with similar projects and relevant background papers; and (iii) incorporating findings from the first round of ESCMF stakeholder consultations and previous stakeholder engagement efforts in the form of household surveys (630 households in total), 100 focus group discussions, and 100 key informant interviews. Numerous missions to the project areas and discussions with provincial and district agencies and communes enhanced understanding of project objectives.

3. The initial SECAP review identified patterns of existing issues inherent to the project area which could increase risk to the project, its personnel, and/or beneficiaries. Additional desk research highlighted further areas of potential inherent risk and lessons-learned from other projects. The screening of CAISAR project activities, together with the ESCMF stakeholder meetings, household survey responses, focus group discussions, key informant interviews, and field visits with consultations provided insight on the latest conditions which could affect the success of the project and the potential project-specific impacts (both positive and negative).

4. **Framework Approach:** Given that site locations for project implementation have not been finalized, the design team agreed to use a framework approach consistent with IFAD's SECAP and GCF's ESS. Documentation is based on the format typically provided for a GCF project, rather than the typical IFAD SECAP note format, to simplify the approval process. This was agreed upon with AIIB and IFAD headquarters prior to development of this ESCMF.

5. **Project Impacts & Inherent Risks:** The safeguards categorization for CAISAR is high for both social and environmental impacts and risks. To address issues of climate-induced risks and impacts, the CAISAR project will apply several climate resilience measures and adaptation strategies including climate-informed planning, integrated water resources management, efficient irrigation practices, water storage and reservoir management, ecosystem-based approaches, early warning systems, climate-resilient

infrastructure, capacity building and awareness, stakeholder engagement and participatory approaches, and monitoring and evaluation. These measures will be financed under the project, as the project explicitly targets climate mitigation and adaptation by design.

6. **Key social impacts to be considered as part of the ESCIA** include: (i) potential contraction of diseases (e.g. sexually transmitted diseases such as HIV/AIDS, and/or other communicable diseases) due to labor influx; (ii) potential conflict with local communities due to construction workers who work and stay near the community; (iii) potential labour-related accidents for persons hired by the project construction companies to support seasonal construction work; (iv) gender based violence and/or sexual harrassment and abuse (e.g. verbal and physical abuse, sexual harrassment, violence against children) due to the influx of labour; (v) child labour/age inappropriate work, (vi) forced labour (e.g. coerced to work through the use of violence/intimidation, or by more subtle means such as debt manipulation, retention of identity papers, or similar threats); (vii) possible social exclusion (due to vulnerability, land tenure issues, disability, etc.); and (viii) lack of contract for EM workers, particularly for seasonal works of less than one month's duration.

7. The above risks to be evaluated as part of the ESCIA are not considered to be serious in nature and mitigation measures will be included in the ESCMP. General mitigation measures are provided within Chapter IV of this Environmental, Social and Climate Management Framework (ESCMF).

8. **Key environmental impacts to be considered as part of the ESCIA include:** The project is expected to have largely positive environmental impacts, including improved ecosystem services, soil fertility/soil health, forest health, and natural resources management. Potential negative environmental impacts to be mitigated include are related to small-scale infrastructure (e.g. construction/repair of small-scale rural roads, irrigation channels, small-scale reservoirs, etc.). These impacts may include: (i) erosion and run-off to water bodies during earthworks/construction; (ii) temporary traffic blocks and related safety issues during construction and operation; (iii) temporary pollution from construction (e.g. dust, noise, vibration, waste & wastewater generation from workers' campsites); (iv) potential water pollution from sourcing aggregates/construction materials (soil, gravels); and (v) increased water consumption. Additional environmental risks (not explicitly linked to construction activities) include: (i) presence of unexploded ordinances (UXOs) at project sites (an inherent risk listed below); and (ii) increased use of pesticides due to crop intensification/improved crop yields. As with the social risks and impacts, mitigation measures for the environmental risks and impacts are provided in Chapter IV of this ESCMF.

9. To mitigate issues pertaining to social exclusion and conflict over land use/land tenure/land management, related safeguards documents, like the Stakeholder Engagement Plan (SEP), Indigenous Peoples' Plan (IP Plan), and Gender Assessment and Action Plan (GAP), have been developed to supplement this ESCMF and improve overall project design. The Grievance Redress Mechanism (GRM) is also available for any project affected persons who feel they have been negatively impacted or excluded and is detailed in Chapter IX of this ESCMF.

10. **Inherent Risks:** There are inherent risks pertaining to presence of landmines and unexploded ordinances (UXOs) if construction occurs in new areas (i.e., areas without existing construction/infrastructure/activities). Inherent risks are addressed with project-related impacts under Chapter IV of the ESCMF.

11. **Implementation:** The ESCMF will be implemented with the support of two safeguards specialists with MOWRAM Project Management Unit. Further support at the commune level will be determined by inclusion of safeguards-related obligations within the Terms of Reference of the project staff/implementing agencies. For construction financed under the project, contractors will be obliged to abide by the GCF and AIIB and IFAD safeguards requirements, in addition to national legislation/regulations, and commit to Environmental and Social Management Plans (ESCMPs) and Environmental Codes of Practices (ECOPs) as part of their contract. Independent ESC monitoring will be conducted over the life of the project construction and implementation phase. A socio-economic and census survey will be conducted to support the development of the Resettlement Plan.

1. INTRODUCTION

1.1 Project Rationale

1 The CAISAR project covers a total command area of 45,000ha and is composed of three sub-project command areas – Ou Ta Paong, in Pursat Province, Lum Hach, in Kampong Chhnang Province and Krang Ponley in Kampong Chhnang, Kapong Speu and Kandal. The project objective is to improve agriculture productivity by providing irrigation and flood protection in the project areas. The project design is to increase climate adaptation, mitigate the negative impact of extreme climate events, and improve livelihoods of smallholder farmers and vulnerable rural communities in four provinces of Cambodia, including Pursat, Kampong Chhnang, Kampong Speu, and Kendal provinces. Mitigation is a co-benefit of this adaptation project, as it will also contribute to reduce GHG emissions, including methane emissions from rice fields. These objectives will be achieved by implementing three components that aim at addressing vulnerabilities of farming communities to climate change, increasing agriculture productivity, and developing institutional capacities. The investments to be implemented will (i) combine robust climate- resilient water management and agricultural practices at the farm level, (ii) establish climate-proofed irrigation and flood control infrastructure and (iii) develop institutional capacity to plan, maintain and operate irrigation and flood control infrastructure in a changing climate context. The CAISAR project has a broad positive impact 'enefitting 120,000 household (500,000 people) directly while its effect will propagate to over 3 million people in the region. The project will be executed through the Ministry of Water Resources and Meteorology (MOWRAM) and the National Committee for Sub-National Democratic Development Secretariat (NCDD-S), a Direct Access Accredited Entity to the GCF. The expected timelines for the approval of the co-financing by IFAD and AIIB Executive Boards are respectively September 2024 and January 2024, with the inception of the project is expected to take place in December 2024.

1.2 Country & Project Context

2 The CAISAR Feasibility Study noted that Cambodia is highly vulnerable to climate change and natural disaster risks. It is ranked 151 out of 181 countries in the 2020 ND-GAIN Index, was the 12th most disaster-prone country among 172 countries for 1999–2018 and remains one of the few Least Developed Countries (LDCs) in Asia. Annual economic losses resulting from natural disasters in the country were estimated at 0.7% of GDP in 2011. The World Risk Index of 15.8% indicates a very high risk of disaster because of extreme natural events, with an exposure index of 27% and a vulnerability index of 59%. Approximately 80% of the country is within the Mekong River and Tonle Sap basins, increasing exposure to floods, storms, and droughts. Identified hazards are assessed as high across the whole country for river floods and coastal floods, cyclones, extreme heat, and wildfires. By mid-century, climate change will result in more frequent heavy precipitation days, from 2.4 days to 4.9 days in the rainy season, and an increase in the number of consecutive dry days in the same season from 0.8 days to 4.4 days. The median temperature is projected to increase by 1.6°C by 2060.

3 Cambodia has approximately 4.5 million ha of cultivated land, 70% of which is rice production, as well as industrial crops (20%), rubber plantations (7%), and permanent crops (4%). Cambodia maintains a high reliance on the agriculture sector, which accounts for nearly 22% of the country's GDP while the rural population represents 75.8% of the national population[1]. In Cambodia, relatively low yields, coupled with frequent natural disasters, contribute to temporary food shortages for vulnerable communities. Based on food availability and food access, a mapping of food security has been conducted for the country. Seven of Cambodia's 25 provinces (including Phnom Penh) are classified as acutely food insecure, and an additional seven are moderately insecure. Livelihoods rely heavily on rain-fed agriculture and non-poor households are vulnerable to falling back into poverty in the event of extreme or frequent climate shocks[2].

[1] UNDESA (2018) The Least Developed Country Category: 2018 Country Snapshots. Available at: https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/Snapshots2018.pdf.

[2] https://docs.wfp.org/api/documents/WFP-0000147767/download/?_ga=2.188002408.1116277075.1681899242-636470978.1669479646

4 Women and children are among the most vulnerable groups to climate change. Climate adaptation among rural populations and national institutions remains low as many households face rising debt caused by coping with natural disasters and the COVID-19 pandemic. Since 2020, the negative impacts of climate change and the pandemic led to a 10% loss in Gross Domestic Product (GDP). In addition to negative climate impacts, the stagnating global agricultural commodity prices, rising labor costs and the limited scope for cropland expansion in the country will challenge the agriculture sector (WB, 2015)[3].

5 Farming remains mostly subsistence-based and rain-fed, with low productivity. Only 7 – 8% of the total potential agricultural land area is under full irrigation in Cambodia. Further, only 15% of the cultivated rice area is irrigated (compared to 28% in Thailand and 46% in Viet Nam), and 85% of the rice cropping area is vulnerable to changing rainfall patterns[4]. Therefore, while rice accounts for 50% of agricultural GDP, yields are lower than neighboring countries. The lack of water for irrigation is a crucial barrier for farmers to deal with climate change-induced water shortages, and to cultivate more than a single crop per year – limiting their resilience and adaptive capacity. Studies suggest that shifting to irrigated cultivation could result in annual overall production increases of up to 40%. The lack of timely information on droughts and floods (seasonal forecasts, the changing length) is another barrier. Furthermore, farmers lack the knowledge and tools to adapt their farming practices / production techniques to climate change; they are largely unaware of climate resilient practices (e.g., alternatives to flooded rice cultivation or application of AWD methods in rice), stress-tolerant seed varieties and improved planting materials, efficient input management, and the benefits of applying such practices. The labor shortage in rural areas has increased due to migration to urban areas, which in turn has led to a rise in agricultural wages. Other significant barriers for small-scale farmers include access to credit on attractive and appropriate terms, and market intelligence. Cambodia is unlikely to achieve 5% of their annual agricultural growth target by 2030, without more investment in climate adaptation, sustainable irrigation, and flood control and drainage schemes. Persistent poverty, limited access to finance, and insufficient institutional capacities have left the rural agrarian population vulnerable to the negative impacts of climate change, economic slowdown, and environmental degradation.

6 The local private sector also fails to offer technologies that farmers need (e.g., stress tolerant seeds, bio-inputs) and engage in value addition (e.g., rice milling prior to exports) adequately and sufficiently. Production and distribution costs of agricultural products are high compared to the neighboring countries, largely due to high energy and transport costs. Private sector investment in water saving micro technologies in irrigation and extension services remains low due to an unfavorable agri-business environment, such as access to appropriate finance, poor communication and cooperation between government and private sector, and the absence of a clear regulatory framework for the establishment, operation and pricing for the private management of water. Large agri-businesses face high costs and shortages of working capital. Many agri-business firms operate below capacity and potential new investors are reluctant to invest due to low profitability and high risk of failure.

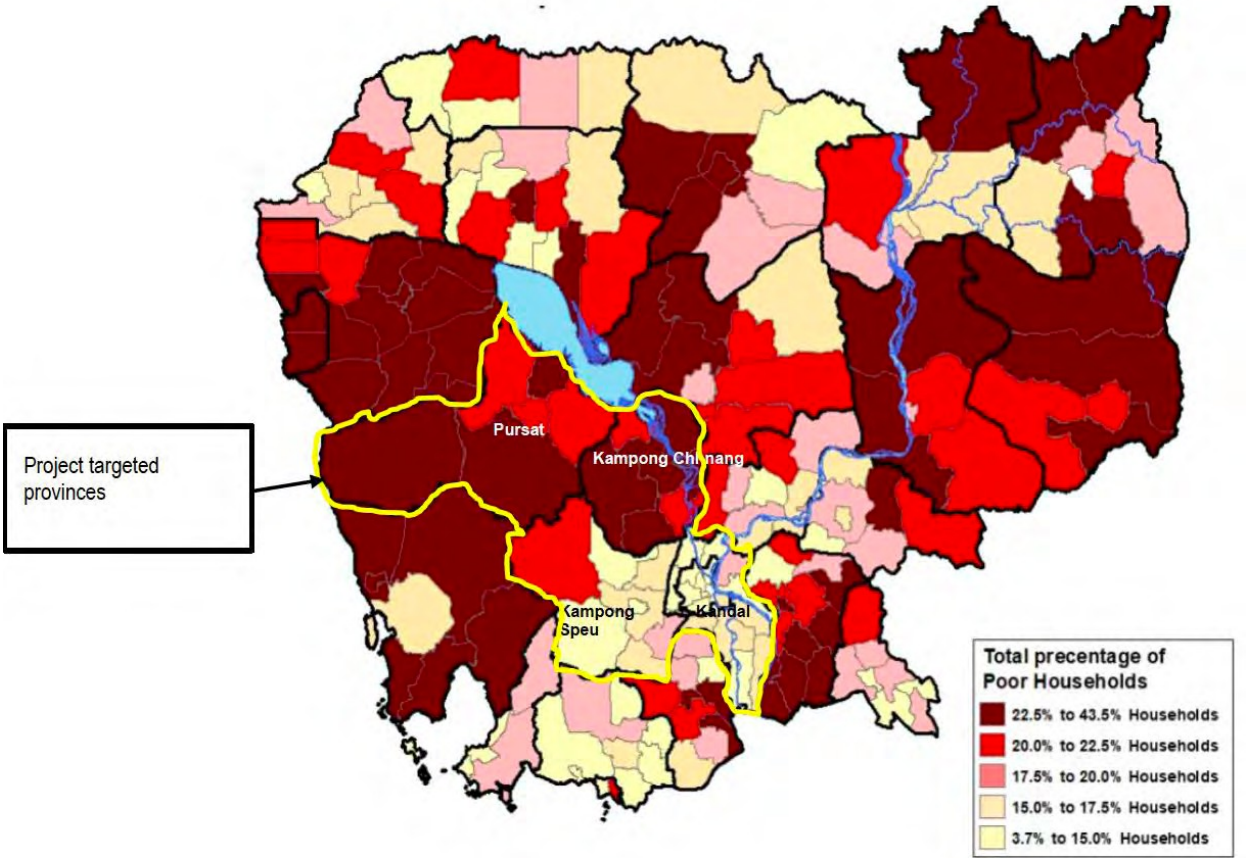
7 There are several obstacles to women's economic empowerment in Cambodia, including (i) the amount of time and responsibility for unpaid domestic and care work, (ii) low levels of literacy and education, and (iii) a lack of access to resources necessary for economic empowerment, and (iv) resilience to climate risks. Women have higher participation in agriculture than men but receive lower benefits and have lower access to land, extension services, financial services, markets, and technologies. Rural youth face difficulties in accessing land, which also limits access to credit, as financial institutions generally require land as collateral and a high proportion migrate to urban areas in search of work. Poverty incidence among ethnic minorities is not significantly higher than among the majority, but they suffer disadvantages in access to health, education and other services.

[3] https://openknowledge.worldbank.org/entities/publication/78d3d276-3a5f-5bf2-915d-2d0381a13930

[4] Kono, A. and Chey, T. 2019. Rapid assessment of upland cashew, mango, organic rice, and vegetable production. Actions for Climate-resilient and Sustainable Agricultural Production in the Northern Tonle Sap Basin. FAO.

8 In Cambodia, GHG emissions are dominated by the Forestry and Other Land Uses (FOLU) sector (60.90%) and agriculture (16.9%), followed by energy (12.10%), IPPU (7.90%) and waste (2.20%) sectors. Under a business-as-usual (BAU) scenario, Cambodia forecasts an increase in emissions from 125.2 MtCO2eq in 2016 to 155.0 MtCO2eq in 2030. While the emissions reduction scenarios (by 2030) in the NDCs largely target AFOLU and energy sectors, owing to the links between FOLU (land-use and forest conversion) and agriculture, actions to increase productivity of agricultural lands and interventions such as home gardens are likely to have indirect effect on AFOLU targets[5].

9 The CAISAR target provinces include: Kampong Speu, Kampong Chhnang, Kandal, and Pursat. These provinces[6] have the highest population density, high total percentage of poor households, and a high percentage of women-headed households (Figure 1). The livelihoods of the poorest and most vulnerable people in the region depend mainly on agricultural production and water availability through precipitation, river flow, and irrigation schemes. This area and its population is particularly vulnerable to climate risks due to changing weather patterns and flooding.



Source: CAISAR Feasibility Study

Figure 1-1 Map of the project area and total percentage of poor households by 2016 (AF, 2018)

[5] RGC, 2020. Cambodia's Updated NDC. Retrieve from: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Cambodia%20First/20201231_NDC_Update_Cambodia.pdf
[6] The Asia Foundation (2018). cambodia-atlas-on-gender-and-environment.pdf.pdf (opendevelopmentmekong.net)

10 The project area was already under stress prior to the COVID-19 pandemic with small-scale farmers and larger food producers struggling to produce food and access markets. Food shortages face, additional pressure from climate change with serious droughts[7] during the dry months and heavy monsoon during the rainfall season. Rural communities highlight major water problems with competition in irrigation due to aging/lack of infrastructure and reduced water availability in rivers and ponds, which poor communities and households depend on. The proposed underlying investment project will support the government's efforts to sustain food security and rural livelihood after the COVID-19 crisis through the restoration and enhancement of climate-smart and climate-resilient irrigation systems under the "Build Back Better" approach in the target provinces.

1.2.1 *Climate Change Impacts and Vulnerability of the Agriculture Sector*

11 The concept note stated that similar to other monsoon-dependent countries, climate change is altering Cambodia's and project areas' monsoon calendar, increasing total drought days and shifting the start of the rainy season. While annual rainfall is expected to increase, the number of days with rain is decreasing and daily rain intensity is increasing, resulting in extreme rainfall events and flooding risks. The World Resource Institute (WRI) rates the upper and lower Tonle Sap watershed as extremely high for water risk (WRI, Aqueduct). Inter-annual variability in rainfall significantly influences river discharges and between one and four million hectares of Cambodia's floodplain, of which about 25% falls in the project areas, may be submerged during the wet season, reaching critical thresholds for irrigation and ecosystem stability.

12 Flooding in the project areas generally occurs between July and October, driven by rainfall as well as high water levels in the Mekong River and Tonle Sap Lake. With the increased intensity of wet-season rainfall, the duration and extent of flooding have increased in some areas. While local rainfall patterns are important for both irrigated and rainfed agricultural systems, the Mekong-Tonle Sap flood impulse dominates the flooding pattern and hence plays an important role in the overall water management.

13 Observed impacts of climate change trends in recent years have manifested by longer dry seasons and more intense "El Niño" related droughts, delayed onset of the monsoon season, increased rain intensity and frequency, leading to floods, and unexpected dry periods during the rainy season. Annual mean temperature anomaly has increased at a rate of 0.23 °C per decade since 19508, with a stronger signal of increase during the dry season. The rate of temperature change is notable in the dry season (December, January and February) followed by pre-monsoon (March, April and May) and, to a minor extent, by wet season months (June, July and August). The increase in mean annual temperature and decrease in dry season rainfall has manifested in droughts and water shortages significantly impacting rainfed agriculture due to a late start and early ending of the wet season.9

14 On average, annual damages and loss of wet season rice caused by floods and droughts is approximately 120,501 hectares, of which 70 percent of the damage and loss is due to floods and 30 percent is the result of droughts. Flooding occurs frequently and extensively in Cambodia. The source of these floods can be the Mekong River including the Tonle Sap Great Lake, tributary flash floods, urban flooding, and failure of structures such as protection levee and storages. In terms of the population affected, Cambodia is one of the world's most flood-exposed countries in the world. By 2050, population exposed to flood is expected to reach 19% of the population. Projected climate change trend indicates more severe floods and droughts, which is expected to affect Cambodia's GDP by nearly 10% by 2050[10]

[7] Kampong Spoeu, one of the four target provinces, reported the highest number of droughts (one of the eight main natural hazards in Cambodia) between 1996 and 2013. (https://www.unccd.int/sites/default/files/country_profile_documents/1%2520FINAL_NDP_Cambodia%255B1157%255D.pdf).

[8] Thoeun, H. C. (2015) Observed and projected changes in temperature and rainfall in Cambodia. Weather and Climate Extremes. 7:61. [old reference]

[9] MAFF (2017) MAFF Annual Report 2016-17

[10] Climate risk country profile, Cambodia. 2021. https://climateknowledgeportal.worldbank.org/sites/default/files/2021-08/15849-WB_Cambodia%20Country%20Profil

15 Drought has significant social and economic impacts in Cambodia, in particular in the project areas. According to the Ministry of Environment. (2002). Report on the Impact of Drought in Cambodia, the drought in 2002 affected 43 districts in eight provinces. Some 442,419 families (2,017,340 individuals) were affected. The total estimated damage was US$ 9 million. Rice and crop production was affected in all provinces and about half a million rural people faced food insecurity. Droughts events have become more frequent as further explained in annex 1, and are expected to intensify in future. According to the International Rice Research Institute, rice grain yield will decline by 10% for each 1°C increase in growing-season minimum (night) temperature in the dry season. In Cambodia, drought has been negatively impacting rice production, and is widely recognized as one of the most serious climate risks for the agriculture sector.

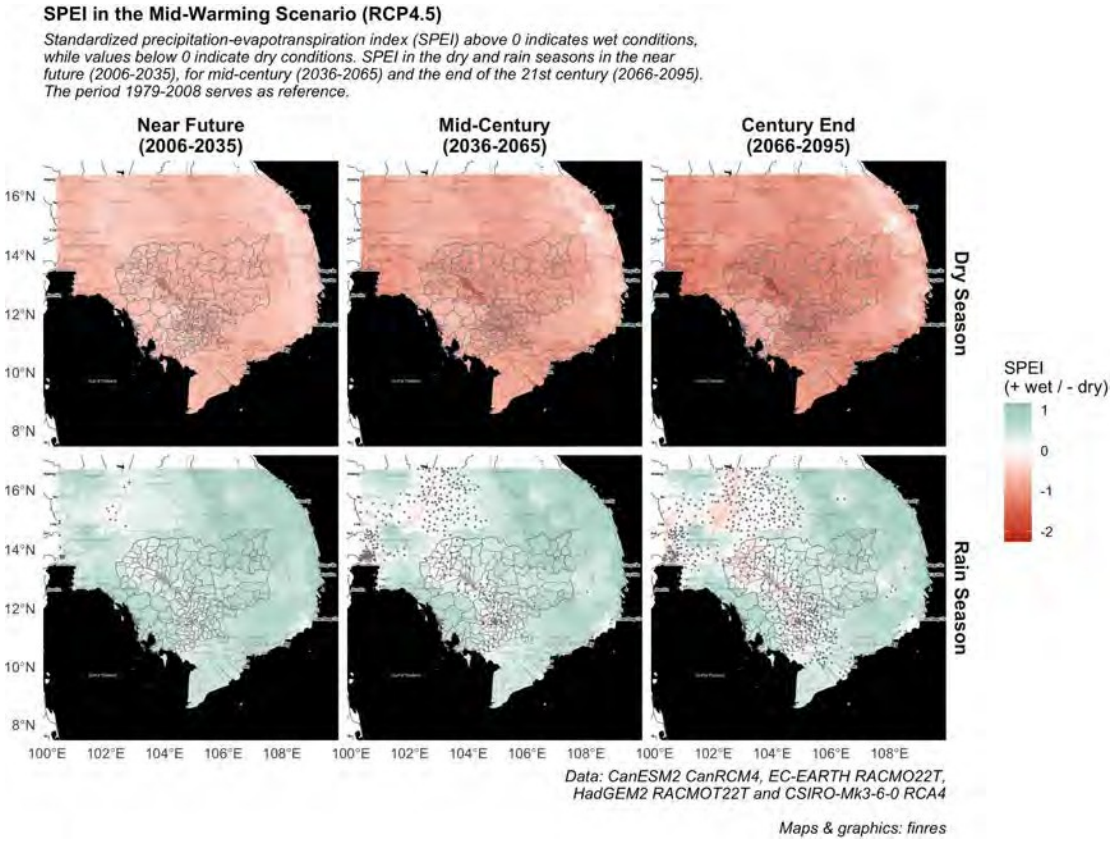
16 The Climate Risk Country Profile, Cambodia 2021 noted that future projections of climate change in the project area under the RCP4.5 scenario (Figure 1-1) indicate a temperature increase of 1.6°C by mid-century (2036-2065) and up to 2.2°C by the end of the 21st century (2066-2095)[11]. Nights exposed to high temperatures are projected to become more frequent during the 21st century (+114 nights by mid- century and +151 nights by the 2080s). Population, crop and livestock systems will also experience heat extremes more frequently in comparison to the reference period (42 days by mid-century and reaching 62 days by the 2080s) and IFAD is expecting a drastic reduction in the productivity of crops and livestock (IFAD's preliminary climate analysis). Out of all the rivers within the Mekong River Basin, the water levels of the Tonle Sap Lake tributaries are anticipated to experience the greatest water decline. These changes in water levels are attributed to shifts in seasonal rainfall distribution and prolonged dry periods (IPCC, 2021).

17 The changes in precipitation and temperature patterns induced by climate change in the project area could affect the climatic suitability of cereals, vegetables and starchy crops produced. On average, for most crops analysed for this project, the temperature suitability could progressively decrease with some crops falling outside their optimal temperature levels. Overall, this change in patterns could contribute to a reduction in crop yield for both irrigated and non-irrigated crops. For example, in the Kampong Chhang region, rice yield could decrease from 9 to 12%, with and without irrigation, respectively, by 2050 (a period of 20 years centred around 2050) compared to 2020 (Climate Risk Country Profile, Cambodia, 2021). These projections are for the RCP8.5 scenario and without CO2 fertilization. As smallholder farmers' incomes are largely dependent on their yield, it is anticipated that farmers' income could become more volatile with a decreasing trend over time. It is projected that vegetables will be increasingly exposed to heat-stress conditions during the pre-monsoon and early wet-season months (March-June). Over these months, heat-stress conditions (>36ºC) will be exceeded more than 50 days during the growing season, lasting approximately 90 days.

18 Climate change affects women, men, and vulnerable people differently, and their responses to its impacts also differ, including in relation to safeguarding food security and livelihoods and coping with hazards and risks. In the project area, women have significantly less access than men to financial instruments, land, natural resources, climate change resources and technologies, education, and other development services for successful adaptation to climate change. Cambodia's Women's Resilience Index, ActionAid, 2022 found women less resilient in times of disaster than men due to women's unstable and insecure sources of income, limited access to shelters or safe places, inadequate early warning information, poor housing, weak social safety nets and absence of emergency networks. Furthermore, women's responsibilities in household resources position them well to contribute to livelihood strategies adapted to

[11] Climate risk country profile, Cambodia. 2021. https://climateknowledgeportal.worldbank.org/sites/default/files/2021-08/15849-WB_Cambodia%20Country%20Profil

changing environmental realities. However, lack of information, access to planning processes, and care obligations, limit their ability to contribute.



Source: GCF Concept Note

Legend: Above 0 indicates wet conditions, while values below 0 indicate dry conditions.

Figure 1-2: SPEI in the high warning scenario (RCP4.5)

19 Agriculture is central to the economic and social life of Cambodia. With 76% of the population currently living in rural areas, Cambodia's populace and economy rely heavily on agriculture and fisheries, contributing 22% of GDP and employing 34% of the country's labour force[12]. As a result, Cambodia has a high dependency on natural resources and climate-sensitive sectors of the economy, which makes it particularly vulnerable to inter-annual and intra-annual changes in climatic conditions. Natural hazards have significant effects on Cambodia's population and pose a serious challenge for water resource management and poverty alleviation in the country. This vulnerability to hazards combined with high exposure to climatic extremes, means that Cambodia is faced with a heightened disaster risk from both floods and droughts.

20 Current climate models project that these climatic extremes will worsen over the coming century, meaning that they must be considered when addressing poverty reduction and economic development. The Royal Government of Cambodia is making efforts to devise strategies that decrease this vulnerability through improved flood and drought proofing, natural disaster preparedness and climate adaptation strategies to reduce risks from floods and droughts. Reducing the impacts of floods and droughts are key priorities for sustainable development (IPCC, **2021**).

[12] Data for 2020, World Bank, World Development Indicators

21 The Royal Government of Cambodia is committed to meetings its greenhouse gas emission targets and ensuring that appropriate mitigation and adaptation efforts are adopted across key sectors of the economy. The Climate Change Strategic Plan 2014 – 2023 sets out the main strategic objectives and directions for climate-smart development in Cambodia over the coming decade and the agriculture sector will be a key player to ensure that the objectives of the plan are met (National Climate Change Strategic Plan 2014-2023, Royal Government of Cambodia, 2013). The agricultural sector therefore has significant potential to reduce poverty, food insecurity and ensure rural populations are resilient and adapted to climate change.

22 The CAISAR project will support the RGC's effort to improve and strengthen the disaster resilience of the populations of four provinces in Cambodia. Through combining irrigation rehabilitation with climate smart and resilient design, the project will build a low carbon and climate resilient future, enabling rural populations to adequately adapt to current and future climate impacts and increase their food security and livelihoods whilst also enabling the RGC to meet its climate targets.

23 **Stakeholder Engagement:** To support development and design of this project, extensive stakeholder engagement was conducted to discern potential positive and negative project impacts, as well as key design opportunities to improve accessibility and participation. In July and September of 2023 stakeholder meetings were conducted with potential communities affected in each project area as well as with key NGOs. Continued stakeholder engagement must involve iterative consultations throughout the project's life cycle with particular attention to vulnerable populations and groups prone to exclusion, be that for reasons of gender, orientation, age, ability, religious beliefs, and/or ethnicity. The guidelines for stakeholder engagement are available in the Stakeholder Engagement Plan (SEP).

24 **Indigenous Peoples/Ethnic Minorites, Women, and Vulnerable, Disadvantaged Persons:** to ensure adequate inclusion of ethnic minorities, women, and other vulnerable persons, an Indigenous Peoples' Plan (IP Plan) and Gender Assessment & Action Plan (GAP) have been prepared to guide project implementers and ensure that considerations for the differentiated needs of ethnic minority (EM) communities, women, and vulnerable persons are built into the project design and monitoring indicators.

25 **Environmental, Social and Climate Management Framework (ESCMF)** serves as the primary guidance document for management and mitigation of environmental, social, and climate risks and impacts throughout the project cycle.

1.3 Purpose and Application of the ESCMF

26 The project objective is to increase climate adaptation, mitigate the negative impact of extreme climate events, and improve livelihoods of smallholder farmers and vulnerable rural communities in four provinces of Cambodia (Pursat, Kampong Chhnang, Kampong Speu, and Kendal). Mitigation is a co-benefit of this adaptation project, as it will also contribute to reduce GHG emissions, including methane emissions from rice fields. These objectives will be achieved by implementing three components that aim at addressing climate change vulnerabilities, increasing agriculture productivity, and developing institutional capacities. The investments to be implemented will (i) combine robust climate-resilient water management and agricultural practices at the farm level, (ii) establish climate-proofed irrigation and flood control infrastructure and (iii) develop institutional capacity to plan, maintain and operate irrigation and flood control infrastructure in a changing climate context.

27 The CAISAR project involves numerous subprojects and activities where specific locations are still to be identified during further design and implementation. Based on the inability to confirm specific sub-projects prior to project appraisal, this Environmental and Social Management Framework (ESCMF) has been prepared. Given small discrepancies in the format of the environmental, social, and climate risks/impacts documentation required for IAAB, FAO, IFAD and GCF funded projects, the Government of Cambodia agreed with IFAD's SECAP specialists based in headquarters to follow the standard GCF documentation, rather than developing two separate sets of documents. According to IFAD's Social, Environmental and Climate Assessment Procedures (SECAP) and the Green Climate Fund's (GCF's)

Environmental and Social Standards, the Lead Agency of the proposed project must prepare and disclose this ESCMF[13] before appraisal.

28 The purpose of the ESCMF is to ensure that the project has concrete plans and processes in place to avoid, minimize, and/or mitigate the risks and potentially adverse project-related environmental and social (E&S) impacts, including climate risks, once the CAISAR activities and/or subprojects are identified, planned, and implemented. This living document: (i) assesses and summarizes project-related risks and impacts; and (ii) sets out the principles, rules, guidelines, and procedures to assess any potential risks and impacts of future subproject and activities identified at a later time. It provides measures to reduce, mitigate, and/or offset those adverse risks and impacts from the project and highlights information about areas where subprojects are expected to be located (including any specific E&S-related vulnerabilities of those areas; potential impacts that may occur; and mitigation measures that might be used). Specific objectives of this ESCMF are to:

- Assess the potential environmental, social, and climate-related risks and impacts of the project, both positive and negative, and propose mitigation measures which will effectively address these risks and impacts;
- Establish clear procedures for the E&S planning, review, approval, and implementation of subprojects and other activities to be financed under the project;
- Specify appropriate roles and responsibilities and outline the necessary reporting procedures for managing and monitoring E&S issues/concerns related to subprojects, TA, and activities;
- Determine the training, capacity building, and technical assistance needed to successfully implement the provisions of this ESCMF;
- Outline and address mechanisms for public consultation and disclosure of project documents, as well as redress of possible grievances; and
- Establish the budget requirements for implementation of this ESCMF.

29 This ESCMF provides information on (i) items ineligible for Project funding; (ii) how to conduct the E&S screening; (iii) risks and impacts classifications; (iv) identification of various E&S documents to be prepared (both prior to and after project approval) and the process to be followed for their preparation (including the clearance process); (v) implementation arrangements; (vi) training and capacity building; (v) grievance redress mechanism; (vi) estimated costs and budget requirements; and (vii) guidelines and specific forms for preparation of the identified E&S documents required. This ESCMF will be applied to all subprojects and activities to be financed by CAISAR.

1.4 Scope of the ESCMF

30 This ESCMF was developed based on a review of project-relevant government laws, regulations, ordinances, and other legal documents; various background papers and reports pertaining to environmental and social conditions of the proposed project areas and potential subproject sites, including feasibility studies; as well as numerous field visits, 630 interviews through Livelihood Household Surveys, 100 focus group discussions, 100 key informant interviews, and other consultations (community meetings) in those areas. Safeguards documents prepared for similar projects and/or projects in related areas (e.g. others financed by AIIB, IFAD, World Bank, FAO, etc.) were also taken into consideration.

31 This ESCMF follows the requirements of AIIB, IFAD's SECAP and the GCF's Environmental & Social Policy, taking into consideration the related guidance notes and documents. Information is presented in ten sections, as follows:

1. Introduction
2. Project Description
3. Policy, Legal, and Administrative Framework
4. Environmental and Social Assessment and Proposed Mitigation Measures

[13] The ESCMF examines the risks and impacts when a project consists of a program and/or a series of subprojects, and the risks and impacts cannot be determined until the program or subproject details have been identified.

5. Procedures for Review, Clearance, and Implementation of Subproject E&S Instruments
6. Implementation Arrangements
7. Capacity Building, Training, and Technical Assistance
8. ESCMF Implementation Budget
9. Grievance Redress Mechanism (GRM)
10. ESCMF Consultation and Disclosure

Other information to be considered includes: (i) ineligible activities; (ii) list of banned and restricted pesticide in Cambodia; (iii) Pesticide Management plan; (iv) Chance Find Procedures; (v) List of Consultations & Attendance; (vi) ESCIA Timeline; (vii) ESCIA Budget; (viii) Environmental and Social Screening Checklist; (ix) Indigenous Peoples Planning Framework; (x) Biodiversity Management Planning Framework; (xi) Resettlement Planning Framework; (xii) Gender Assessment & Social Inclusion Plan; (xiii) Climate Management Framework; (xiv) Stakeholder Engagement Plan

32 **Associated facilities.** This ESCMF is also applied to activities or facilities that are, in the judgement of the AIIB, associated activities and/or facilities as defined in the AIIB's ESF. When this is the case, this ESCMF will be applied to such associated activities and/or facilities – to the extent that MoWRAM has influence over such activities and facilities.

2. PROJECT DESCRIPTION

2.1 Project Objective, Components, Area and Beneficiaries

33 The project's focus is on low-carbon and climate resilient at the farm-level, combined with efficient irrigation and flood control infrastructure and their climate proofing, and institutional development of the FWUCs and the government agencies to strengthen water rights, irrigation fees, and enhance sustainability. Thus, disaster resilience compensation is expected to significantly contribute towards achieving climate change adaptation policy objectives outlined in the NDC, and the individual climate change action plans of the Ministry of Water Resources and Meteorology (MOWRAM). The Project originated from the RGC's National Water Resources Management and Sustainable Irrigation Road Map and Investment Program (2019 -2023), which provides a Strategic Framework for the Irrigation Sector.

The CAISAR project is focusing on climate change adaptation with cross-cutting benefits through the reduction of GHG emissions linked to the use of high-efficiency smart irrigation systems, the use of renewable energy for pumping, and cover techniques to reduce evaporanspiration and enhance GHG reduction. While rice production is a major source of GHG emissions in the AFOLU sector in Cambodia, and the project aims to support production to achieve food security and sector growth, target GHG reduction actions in the project aim to support intensification and diversification without compromising GHG emission reduction targets. This is achieve through adoption of water saving technologies such as alternative wet dry, drip irrigation). A full greenhouse gas accounting will be prepared during the project formulation phase. However, a preliminary analysis of GHG in the target provinces has estimated a reduction of GHG of 90,000 Mt CO2-eq annually and 1,800,000 Mt CO2-eq over the life span of 20 years. The investment in agricultural practices and a whole-of-system irrigation approach will irrigate approximately 40,000 hectares (ha) in the rainy monsoon season and about 20,000 ha in the dry season and, as a result, improve energy efficiency by reducing the water and the carbon footprints.

34 The planned CAISAR project has the following planned components

2.2 Component 1: Improving Farm-level climate adaptation, resilience, and water use efficiency

35 The objective of this component is to build climate resilience (CR) of smallholder farmers and enhance sustainable production through evidence-based planning and context-relevant climate resilient practices at the farm level. This component is designed to address the lack of knowledge and skills to deploy technologies and practices at farm level by farmers and the lack of appropriate extension services to propagate them. It will introduce farmers with various climate resilient technologies and practices for both rice and non-rice activities such as vegetable production, poultry and aquaculture.

Sub-component 1.1 Deployment of farm-level climate adaptation and water use efficiency measures

Output 1.1: Increased capacity of farmers to deploy climate resilient (CR) practices at farm level

This output will focus on developing farmer's capacity in deploying CR technologies and practices to transform the agricultural production system to adapt to the changing climate context. Farmer's will be trained to first develop Action Plans (AP) to re-orient farmer behaviour and assist them in transforming the agriculture production system in a manner that is better adapted to factoring in the agro-ecological context and expected climate change impacts.

- Activity 1.1.1 Preparation of community-based action plans (AP) to transform agriculture with CR practices.
- Activity 1.1.2 Preparation of training materials to support implementation of the AP.
- Activity 1.1.3 Conduct trainings to create a pool of expertise to demonstrate and propagate the CR technologies and practices.
- Activity 1.1.4 Train farmers on applying CR technologies using the FFS approach.
- Activity 1.1.5 Strengthening and fostering tailored mechanization service providers for improved mechanization service delivery.
- Activity 1.1.6 community-based monitoring and evaluation (CBME) of implementation

Sub-Component 1.2 Climate adapted, value added, and market led agricultural investments

Output 1.2 CR value added, and market led agriculture investments secured.

This output involves improving and enhancing some value chains that are key for the project area and include rice, vegetable, chicken and aquaculture value chains, through the use of Public Private Producer Partnerships (4Ps) and increased access to finance, which will improve market access, climate adaptability, and ensure increased income for smallholders in the value chains.

- Activity 1.2.1 Value chain study and planning
- Activity 1.2.2 Establish District Multi-Stakeholder Platforms (MSPs)
- Activity 1.2.3 Public Private Producer Partnership Facility (4PF)

Sub-component 1.3 Improve enabling conditions, capacities and disaster risk management strategies

Output 1.3. Increased access to and use of climate information and advisory services for climate responsive agriculture planning

This sub-component will strengthen the production and dissemination of tailored agro-meteorological information to inform climate responsive management and planning of agriculture in the project target areas through ICT technologies. The aim is to ensure that agro-meteorological services are accessible and useful to farmers to manage climate risks, access to and use of water and efficient cropping systems.

- Activity 1.3.1 Establish ICT based multi-disciplinary platform at provincial level.
- Activity 1.3.2 Building the capacities of the platform to deliver services.
- Activity 1.3.3. Establish the agromet information systems and the outreach mechanisms.
- Activity 1.3.4 Awareness raising and capacity building of farmers and stakeholders in applying the services.

Sub-component 1.4 Rural roads

Output 1.4: Increased resilience of farm road infrastructure to climate change

- Activity 1.4.1 Initial planning and identification
- Activity 1.4.2 Technical survey and design considerations, preparation of cost estimation
- Activity 1.4.3 Improve 50 Kilometers of farm roads.
- Activity 1.4.4 Handing over of the completed works.

2.3 Component 2. Irrigation Infrastructure for increased resilience

Component 2 is linked with Component 1 such that it facilitates the implementation of CR on farm crop and water management practices through improved field level water supply delivery and drainage. It will focus on rehabilitating and modernizing of irrigation and flood protection/drainage infrastructure in the six sub-projects, including irrigation and drainage canals, flood control embankments, and ponds, to provide high-efficiency climate-resilient irrigated agriculture systems for adapting to both increasing flood and drought conditions.

Sub-Component 2.1: Modernization of irrigation scheme and ponds

Sub-Component 2.2: Flood-proofing and Drainage improvements

Sub-Component 2.3: Establishments and training of Farmers Water User Communities (FWUC)

- Activity 2.3.1 Formation of institutional strengthening of the FWUC
- Activity 2.3.2 Build technical capacities of FWCU for canal structure O&M
- Activity 2.3.3 prepare long term financing plan for O&M of the systems including the WUAS.

Sub-Component 2.4: Water information and Management (SCADA)

2.4 Component 3. Institutional Strengthening

36 This component aims to strengthen Government institutions, mainly the MoWRAM, MoE and the NCDD and local institution, the FWUC. While the focus for MoWRAM will be on upgrading technical capacity in various aspects of CR irrigation design and management, key focus area for MoE will be on strengthening climate policies and strategies and in building capacities for monitoring climate actions at national level. It will have three sub-components.

Sub-Component 3.1 MOWRAM capacity Support.

Output 3.1 Strengthened MOWRAM Capacity

Sub-Component 3.2 Strengthening of NDA and NCDD.

Output 3.2 Improved capacities for climate action monitoring

- Activity 3.2.1 Preparation of Loss and Damage Strategy
- Activity 3.2.2 Strengthen national M&E process for climate action
- Activity 3.2.3 Enhancing Capacity of NDA and other stakeholders.

37 **Proposal consistent with Government Framework and priorities and existing investments:** The proposed Project is in line with the national policies of the RGC, especially the "National Water Resources Management and Sustainable Irrigation Road Map and Investment Program 2019 - 2033" issued in July 2019 by MOWRAM with the assistance of the development partners. The proposed Project, with its disaster and climate change adaptation design features, will be upscaled to other provinces. RGC and MOWRAM appreciate that water is a limited resource and is taking an integrated water resource management (IWRM) approach to manage water nationwide. MOWRAM is establishing the Water Resources Data Management Center (NWRDMC) and a National Water Resources Information System (WRIS) with ADB assistance. WRIS is an adaptive system housed in the MWRDMC facility that integrates spatial information, CISIS and IAMS, meteorological data, hydrological data, ground measurements, satellite-derived remote sensing data, and Lidar. All data generated on the CAISAR, and all watersheds, are coalesced in WRIS and used to model water availability, use, and floods across entire watersheds.

38 For this project, AIIB requested IFAD to co-finance and assist with the project design, the project implementation, the country's knowledge to maximize people's resilience to climate change impacts and support the reduction of GHG emissions in agriculture.

3. POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

3.1 Applicable National Laws and Regulations

39 In 1993, the Royal Government of Cambodia confirmed a new Constitution in which environmental considerations were included for the first time. Specifically, Article 59 requires the State to protect the environment and balance of abundant natural resources and to establish a precise plan for the management of land, water, air, wind, geology, ecological systems, mines, energy, petrol and gas, rock and sand, gems, forests and forestry products, wildlife, and fish and aquatic resources. It was within this constitutional context that the Ministry of Environment (MOE) was established.

40 The hierarchy of legislation in Cambodia is:

- Royal Decree signed by the King;
- Sub-decree signed by the Prime Minister;
- Ministerial Decision signed by a Minister; and
- Regulation issued by Ministry.

41 A Royal Decree ratifies laws passed by parliament. These can be supplemented by "Prakas" or ministerial decisions. These laws allow sub-decrees and regulations to be passed which can stipulate procedures and standards to be met in order to ensure compliance with the law. Many sub-decrees and standards have been drafted but not yet ratified by parliament.

3.1.1 Laws/Sub-Decrees relevant to Environment and Natural Resources Management

42 The Government of Cambodia has established laws and regulations for forests, protected areas, and land management to ensure sustainable development that are relevant to environmental protection and natural resources management. The key elements of the legal and policy framework for the project are summarized in Table 3-1 below.

Table 3-1: Environmental and Natural Resource Management Policies, Laws & Guidelines

Law/Regulation/Guideline	Year	Summary
Royal Decree on the Protection of Natural Areas	1993	Classified 23 protected areas in Cambodia into four categories: (i) natural parks; (ii) wildlife sanctuaries; (iii) protected landscapes; and (iv) multiple-use areas. Designated the Tonle Sap (316,250 ha) as a multiple-use area or area necessary for the stability of the water, forestry, wildlife and fishery resources, for tourism, and for conservation of long-term existing natural resources with a view to assure sustainable economic development.
Royal Decree on the Establishment and Management of Tonle Sap Biosphere Reserve (Royal Decree No. NS/RKT/0401/070)	2001	Establishes the Tonle Sap Biosphere Reserve (TSBR) in accordance with the statutory framework of the World Network of Biosphere Reserves. Divides the TSBR into 3 zones: (i) core areas; (ii) buffer zone and (iii) flexible transition zone. Core area: set aside for long term protection, human activity is limited to monitoring and research. Buffer zone: area surrounding the core areas helping to protect the environment. It may accommodate education and training activities. Transition area: may contain a variety of agricultural activities and human settlements. Here all stakeholders have to cooperate to achieve sustainable development.

Law/Regulation/Guideline	Year	Summary
Royal Decree No. NS/RKM/0208/007 on Protected Areas	2008	Defines the framework of management, conservation & development of protected areas to ensure the conservation of biodiversity, & sustainable use of natural resources in protected areas. The Law gives the Royal Government of Cambodia the authority to establish or modify Protected Areas (Article 9 and 10). A Protected Area shall be established by sub-decree. Article 11 divides the protected area into 4 zones namely, core zone, conservation zone, sustainable use zone & community zone. Article 36 strictly prohibits all types of public infrastructure in the Core Zone & Conservation Zone; & allows development of public infrastructures in the Sustainable Use Zone & Community Zone with approval from the Royal Government at MoE's request. Article 41 provides for the protection of each protected area against destructive/harmful practices, such as destroying water quality in all forms, poisoning, using of chemical substances, disposing of solid and liquid wastes into water or on land. Article 44 requires all proposals & investments within or adjacent to protected area boundary an Environmental and Social Impact Assessment. The law defines Protected Area as **"***An area of the State's public properties in land or water territories, including coasts and sea, located in the area established by a Royal Decree or a new area established in the jurisdiction of the Ministry of Environment. These areas are of physical and biological importance which requires management by law with the purpose of protecting and maintaining biological, natural and cultural resources, and shall be sustainably managed in every generation for environmental, social and economic benefits*". Each protected area shall be divided into four (4) management zoning systems: **1. Core zone:** management area(s) of high conservation value containing threatened and critically endangered species, and fragile ecosystems. Access to the zone is prohibited except for the Nature Conservation and Protection Administration's officials and researchers who, with prior permission from the Ministry of Environment, conduct nature and scientific studies for the purpose of preservation and protection of biological resources and natural environment with the exception of national security and defence sectors. **2. Conservation zone:** management area(s) of high conservation value containing natural resources,

Law/Regulation/Guideline	Year	Summary
		ecosystems, watershed areas, and Natural landscape located adjacent to the core zone. Access to the zone is allowed only with prior consent of the Nature Conservation and Protection Administration at the area with the exception of national security and defence sectors. Small-scale community uses of Non-Timber Forest Products to support local ethnic minorities' livelihood may be allowed under strict control, provided that they do not present serious adverse impacts on biodiversity within the zone. **3. Sustainable use zone:** management area(s) of high economic value for national economic development and management, and conservation of the protected area(s) itself thus contributing to the local community, and indigenous ethnic minorities' livelihood improvement. After consulting with relevant ministries and institutions, local authorities, and local communities in accordance with relevant laws and procedures, the Royal Government of Cambodia may permit development and investment activities in this zone in accordance with the request from the Ministry of Environment. **4. Community zone:** management area(s) for socio-economic development of the local communities and indigenous ethnic minorities and may contain existing residential lands, paddy field and field garden or swidden (Chamkar).
Law on Environmental Protection and Natural Resources Management	1996	The Law was enacted by the National Assembly and launched by the Preah Reach Kram/NS-RKM-1296/36. It was enacted on 24 December 1996. This law has the following objectives: i. To protect and promote environment quality and public health through prevention, reduction and control of pollution; ii. To assess the environmental impacts of all proposed projects prior to the issuance of a decision by the government; iii. To ensure the rational and sustainable conservation, development, management and use of the natural resources of the Kingdom of Cambodia; iv. To encourage and provide possibilities for the public to participate in the protection of environment and the management of the natural resources; and v. To suppress any acts that cause harm to the environment.
Law on the Protection of Cultural Heritage (NS/RKM/0196/26)	1996	Regulates the protection of national cultural heritage and cultural property in general against illegal destruction, modification, alteration, excavation, alienation, exportation or importation. Its Article 37 stipulates that in case of chance find of a cultural property during construction, work should be stopped and the person who found the property should immediately make a declaration to the

Law/Regulation/Guideline	Year	Summary
		local police, who shall, in turn, transmit the property to the Provincial Governor without delay.
Law on Forestry	2002	Article 1: This law defines the framework for management, harvesting, use, development and conservation of the forests in the Kingdom of Cambodia. The objective of this law is to ensure the sustainable management of these forests for their social, economic and environmental benefits, including conservation of biological diversity and cultural heritage.
Law on Water Resources Management (NS/RKM/0607/016)	2007	Requires license/permit/written authorization for the: (i) abstraction & use of water resources other than for domestic purposes, watering for animal husbandry, fishing & irrigation of domestic gardens and orchards; (ii) extraction of sand, soil & gravel from the beds & banks of water courses, lakes, canals & reservoirs; (iii) filling of river, tributary, stream, natural lakes, canal & reservoir; and (iv) discharge, disposal or deposit of polluting substances that are likely to deteriorate water quality and to endanger human, animal and plant health. (Articles 12 & 22) Its Article 24 stipulates that Ministry of Water Resources and Meteorology (MOWRAM), in collaboration with other concerned agencies, may designate a floodplain area as flood retention area.
Law on the Management of Pesticides and Fertilizers	2012	The Law on the Management of Pesticides and Fertilizers was enacted on 14 January 2012. This law has the following objectives: i. To support a policy promoting the effectiveness potentiality of agriculture sector, for the development of social and national economy; ii. To ensure the safe and effective control of pesticides and fertilizers, whether in consistent with the international standards; iii. To enhance public awareness on the implementation of standard requirements of pesticides and fertilizers for all relevant activities related to these products; and iv. To reduce risks caused by the use of pesticides and fertilizers, for beneficiary of farmers and people in the nationwide, by ensuring food security, food safety, public health, and the sustainability of environment. The scope of the law shall apply to the management and the implementation of standard requirements for: i. All type of pesticides and fertilizers, raw materials or active ingredients and other compositions of pesticides and fertilizers which are used as inputs in agricultural production. ii. All activities of natural persons or legal entities who are traders, formulators, pests control services operators, advertisers, donors, and users of all types of pesticides and fertilizers.
Sub-decree on Environmental Impact Assessment Process	1999	The Sub-decree No. 72 ANRK.BK in the Law on Environmental Impact Assessment Process dated 11 August 1999 sets out EIA procedures. The main objectives of this sub-decree are:

Law/Regulation/Guideline	Year	Summary
		i. To determine an EIA for every private and public project or activity, through review by the MOE, prior to the submission for a decision from the government; ii. To determine the type and size of the proposed project(s) and activities, including existing and ongoing activities in both private and public sector prior to undertaking the process of EIA; and iii. To encourage public participation in the implementation of the EIA process and take into account their input and suggestions for reconsideration prior to theimplementation of any project.
Sub-decree No. 36 ANK/BK on Solid Waste Management	1999	Article 1: Regulates solid waste management to ensure the protection of human health and the conservation of biodiversity through using appropriate technical approaches. Article 2: This sub-decree applies to all activities related to disposal, storage, collection, transport, recycling, dumping of garbage and hazardous waste. Article 4: The Ministry of Environment shall establish guidelines on disposal, collection, transport, storage, recycling, minimizing, and dumping of household waste in provinces and cities in order to ensure the safe management of household waste. The authorities of the provinces and cities shall establish the waste management plan in their province and city for short, medium and long-term.
Sub-decree No. 27 ANRK/BK on Water Pollution Control	1999	Regulates activities that cause pollution in public water areas in order to sustain good water quality so that the protection of human health and the conservation of biodiversity are ensured. Annex 2 contains effluent standards. Discharge of landfill leachate shall comply with the effluent standards for discharge of wastewater to public water area and sewer. Annex 13 contains ambient water quality standards for biodiversity conservation, and annex 6 includes ambient water quality standards for public health.
Sub-decree No. 42 ANK/BK on Control of Air Pollution and Noise Disturbance	2000	Regulates air and noise pollution from mobile and fixed sources through monitoring, curb and mitigation activities to protect the environmental quality and public health. It contains the following relevant standards: (i)) ambient air quality standard (Annex 6); and (ii) maximum allowable noise level in public and residential areas (Annex 6). Article 3 A. “Source of pollution” is defined and separates mobile sources (including transport) and fixed sources such as factories and construction sites. Article 3 B. “Pollutant” is defined as smoke, dust, ash particle substance, gas, vapour, fog, odour, radio-active substance.
		-The goal of this sub-decree is to enhance the management of garbage and solid waste of downtowns with effectiveness, transparency and accountability,

Law/Regulation/Guideline	Year	Summary
Sub-decree on Garbage and Urban Solid Waste Management	2015	referring to ensure aesthetics, public health and environmental protection -This sub-decree covers separating, storing, cleaning, collecting, transporting, recycling and management of landfills of garbage and solid waste of downtowns in the Kingdom of Cambodia
Sub-decree N0. 235 on Management of Drainage and Wastewater Treatment System	2017	-Aims to improve the management of drainage and wastewater treatment systems in term of efficiency, transparency, and accountability to ensure safety, public health, and biodiversity conservation. -The scope of this Sub-Decree applies to the management of drainage and wastewater treatment systems in capital, provincial, district, khan and resorts or recreation centers in the Kingdom of Cambodia. Its annexes 1 and 2 provide Effleunt Discharge Standards from Commercial Building, Borey, Satellite City and Resort or Recreation Center Discharges Directly to the Drainage/Sewerage System connected to Centralized Wastewater Treatment Plant, and to the Public Waterbody or Drainage/ Sewerage System
Prakas on the Launch of Standards of the Quantity of Toxins or Hazardous Substances Allowed to be Disposed	2015	This Parkas includes the standards of the quantity of toxic chemicals or hazardous substances contained in hazardous waste which is allowed to be disposed in sanitary landfills and standards of the quantity of toxic chemicals or hazardous substances allowed in soils. Any disposal of chemical waste or hazardous substances as stipulated in the Parkas out of sites determined by the ministry and competent institutions shall be absolutely prohibited and deemed as the infringement of law.
Prakas on Environmental Impact Assessment Classification for Development Projects No. 21 PRK.BST	2020	The Prakas determines the types and sizes of projects that are required to prepare environmental impact assessments. Projects having minor environmental impacts are required to prepare an Environmental Protection Agreement together with an Environmental Management Plan. Projects having medium impacts shall prepare an Initial Environmental Impact Assessment report, and projects with significant impacts are required to prepare a full EIA. All sizes of rubbish disposal sites are required to undertake an IESIA and all sizes of industrial waste disposal sites are required to undertake an EIA.
Environmental Guidelines on Solid Waste Management	2006	Contains a Landfill Ordinance that regulates landfill requirements to: (i) reduce as far as possible the adverse effects of waste disposal on the environment; (ii) preserve groundwater, surface water & air quality & to reduce emissions of greenhouse gases (iii) ensure waste is not harmful to human, natural & animal health during operation & decommissioning; and (iv) provide information and technical recommendation on the construction, operation, closure and aftercare management of landfills to ensure public health and safety and environmental protection.

Law/Regulation/Guideline	Year	Summary
Technical Guideline on Garbage and Urban Solid Waste Management	2016	The technical guideline provides standards for all activities related to disposal, storage, collection, transportation, recycling, dumping of municipal and hazardous waste as well as management of final dumpsite (closing Landfill) and continued management. The technical guidelines list the requirements to be implemented within 90 days for landfill closing (e.g. monitoring, gas management).
National Integrated Pest Management Program		The Integrated Pest Management (IPM) Program in Cambodia was established in 1993 after conducting national workshop on "Environment and IPM". The overall goal of National IPM Program is to promote food security in Cambodia by enhancing the sustainability of intensified crop production system through the promotion of integrated crop management (ICM) skills at farm level. The objectives of this program are: i. to reduce dependence on agricultural chemical, especially pesticides, in agricultural production and to minimize hazards to the human health, animals and environment; ii. to develop the capacity of farmers and agricultural technical officers in conducting training and experiments so that they are able to identify problems occurring in agricultural production and find appropriate solution to deal with the problem by themselves; and iii. Educate farmers on agricultural technology by enhancing their knowledge on field ecology and by developing skills among farmers in monitoring and analyzing field situations that enable them to manage crops properly. At the national level the position of the IPM program was strengthened by a Prakas (Ministerial Declaration) in July 2002, recognizing the National IPM Program as coordinating body for all IPM related activities in Cambodia. The Prakas also established a steering committee and a deputy director to act as the national coordinator

Law/Regulation/Guideline	Year	Summary
Labour Law (1997) Decree No. CS/RKM/0397/01 On October 5, 2021, Cambodia enacted the third amendment to the country's main employment legislation, the Labor Law of 1997, revising the rules governing individual labor dispute resolution, work shifts, and public holidays falling on Sundays.	1997	This law governs relations between employers and workers resulting from employment contracts to be performed within Cambodia. The key sections relevant to this project include: **<u>Chapter VIII Health and Safety of Worker</u>** The key provisions relate to the quality of the premises; cleaning and hygiene; lodging of personnel, if applicable (such as workers camps); ventilation and sanitation; individual protective instruments and work clothes; lighting and noise levels in the workplace. Article 230: Workplaces must guarantee the safety of workers. However, the only specific occupational health and safety Prakas relates to the garment industry and brick manufacture. **<u>Chapter IX Work-Related Accidents</u>** Article 248: All occupational illness, as defined by law, shall be considered a work-related accident. The law sets out how accidents should be managed in terms of compensation.

Law on Land (NS/RKM/0801/14)	2001	Provides that: (i) unless it is in the public interest, no person may be deprived of ownership of his immovable property; and (ii) ownership deprivation shall be carried out according to legal forms and procedures and after an advanced payment of fair and just compensation. (Article 5)
Expropriation Law	2010	Defines the principles, mechanisms, and procedures of expropriation, and defining fair and just compensation for any construction, rehabilitation, and public physical infrastructure expansion project for the public and national interests and development of Cambodia.
The Law on Road Traffic	2015	The law is intended to ensure road traffic safety and order, and protection of human and animal health and lives, properties and environment. Its establishment a requirement for all motor vehicles, trailers, and semi-trailers moving on the road to obtain a technical inspection certificate. It also outlines road safety requirements.
National Policy on the Development of Indigenous Peoples		1. The guiding document to address Indigenous Peoples' issues in Cambodia is the National Policy on the Development of Indigenous Peoples. The Policy, prepared starting in 1994, was approved by the Council of Ministers on April 24, 2009 and sets out government policies related to indigenous peoples concerning culture, education, vocational training, health, environment, land, agriculture, water resources, infrastructure, justice, tourism, industry and mines and energy. The Policy provides principles for formal registration of indigenous communities as legal entities with their own bylaws and enables their participation in economic development that affects their lives and cultures. It states: "Indigenous Peoples shall be fully entitled to express their comments and opinions and to make any decisions on the development of the economy, society and their cultures towards growth in the society
Policy on Registration and Right to Use of Indigenous Communities		The policy was approved by the Council of Ministers on April 24, 2009, and a Sub-Decree on procedures of registration of Land of Indigenous communities was signed on June 9, 2009 by the Prime Minister. This policy takes as its basis the recognition in the Land Law of 2001, of the right of indigenous communities to possess and use land as their collective ownership. The policy states that the registration of indigenous communities as collective ownership is different from the registration of individual privately owned land parcels because the land registration of the indigenous communities is the registration of all land parcels belonging to the communities as a whole, consisting of both State Public Land and State Private Land in accordance with the articles 25, 26, and 229 of the Land Law and related Sub-decrees. These land parcels are different in size and can be located within the same or different communes/sangkat

3.1.2 EIA Classification

43 In order to provide guidelines on effective implementation of sub-decree No 72 ANRK.BK on environmental impact assessment Procedures for development projects, MoE promulgated sub- decree No. 21 on Environmental Impact Assessment Classification for Development Projects.

44 According to this sub-decree, environmental impact assessment for projects is classified into three categories.

- Projects requiring full environmental impact assessment (full ESIA), equivalent to AIIB's

environmental category A, and IFAD's high risk
- Projects that require initial environmental impact assessment (IEIA), equivalent to AIIB's environmental category B, and IFAD's substantial risk
- Projects requiring the Contract on Environmental Protection (EPC), equivalent to AIIB's environmental category C plus simple EIA analysis and EMP, equivalent to IFAD's moderate/low risk

45 The sub-decree includes an annex listing projects under various sectors and their categorization on the basis of their nature, type and size. The sector and EIA classification for irrigation project is summarized in Table 3-2 below.

Table 3-2: ESIA Classification for Development ProjectsClassification for Development Projects

No.	Project Type	ESIA (Equiv. to AIIB's A	IESIA (Equiv. to AIIBB's B	Env. Protection Contract
142	Irrigation systems		≥5000ha	1000-5000ha
143	Water diversion systems		≥5000ha	1000-5000ha
176	All building construction	Build area>45000m^2	15000 – 45000m^2	3000-15000m^2
179	Road construction (new)	>100km	≥30 – 100km	10-<30km
180	Railroad and road expansion	>100km	≥50 – 100km	10-<50km
181	Road in protected areas	>30km	≥ 10-30 Km	10km
182	Road widen in protected area	>50km	≥ 10-50 km	10km

Source: Prakas No. 021 PRK.BST dated 03 February 2020.

3.1.3 Occupational and Community Safety and Health

46 Government Occupational and Community Safety and Health (OHS) guidelines follow the OHS Program for Cambodia (2010-2013) that was developed by the International Labor Organization (ILO). The draft guidelines provide the framework for instituting OHS at the workplace and in the community. The OHS guidelines for Cambodia will likely need to be supplemented with the international the IFC EHS/OHS Guidelines for Construction and Decommissioning, Waste Management Facilities, and Toll Roads.

47 Additionally, the National MoH's guideline on Covid-19 and National Guideline for Infection prevention and control for healthcare facilities of Cambodia will be applied due to the current situation in respect of the Covid-19 outbreak to reduce the incidence and risk of preventable Nosocomial Infection (NI). Occupational and community health and safety, as laid out in the EHS guidelines, will be a cross-cutting assessment for the subprojects.

48 The Ministry of Labor and Vocational Training (MLVT) has the following guidelines which will be implemented during the construction phase of the Project:

- MLVT Prakas2 No. 075/11 K.B/BR.K (March 2011) - Sanitation at the Construction Site: The Prakas sets to ensure that the sanitation and safety conditions are fulfilled for workers at construction sites by owners, directors, contractors or sub-contractors of construction establishments or construction companies. Articles 3 and 4 ensure that workers are provided with shelter, sanitation facilities and safe potable water for drinking and washing.

- MLVT Prakas No. 076/11 K.B/BR.K (March 2011) - The Protection of Risk Resulting From Climate Change at Construction Sites. Articles of this Prakas require safety measures and break times for workers at the construction site during extreme weather events.

- MLVT Prakas No. 077/11 K.B/BR.K (March 2011) - Providing of Information at the Construction Site. This Prakas states requirements for owners or responsible persons of a construction site to provide information, i.e. name and address of the owner of enterprise, construction establishment, Construction Company, name and address of architect, nature of construction, date for the start of the construction, estimated time

to finish the construction works, and estimated number of workers to be employed for construction activities.

- MLVT Prakas No. 078/11 K.B/BR.K (March 2011) - Stock of Materials, Waste Disposal and Clearance at Construction Site. This Prakas provides safety guidelines and requirements for the safe storage of construction of materials and hazardous substances/objects that can pose health and safety risks to workers.

49 The key national environmental quality standards applied to the subproject are listed in Table-3-3 below together with relevant international guidelines.

Table-3-3: Key National and International Environmental Standards and Guidelines

Environmental Issue	National Standards	International Guidelines
Ambient air quality	Annex 1, Ambient Air Quality Standard, of Sub-decree on Control of Air Pollution and Noise Disturbance, 2000	WHO Air Quality Guidelines, global update 2005
Noise	Annex 6, Max. Standard of Noise Level Allowable in the Public and Residential Areas, of Sub-decree on Control of Air Pollution and Noise Disturbance, 2000	WHO Guidelines for Community Noise, 1999
Surface water quality	Sub-decree No. 27 ANRK/BK 1999 on Water Pollution Control: Annex 4, Water Quality Standards for Public Waters for the Purpose of Biodiversity Conservation, and Annex 5, Water Quality Standards for Public Waters and Health	US EPA National Recommended Water Quality Criteria Mekong River Commission (MRC)_ Technical Guidelines for the Protection of Aquatic Life MRC Technical Guidelines for the Protection of Human Health

3.1.4 Applicable Evaluation Ambient Quality Standards

50 Water quality standard in public water area for public health protection is shown in Table-3-4 below.

Table-3-4: Water quality standard in public water areas for public health protection

No.	Parameter	Unit	Surface water Standard
1	Carbon tetrachloride	µg/l	< 12
2	Hexachloro-benzene	µg/l	< 0.03
3	DDT	µg/l	< 10
4	Endrin	µg/l	< 0.01
5	Diedrin	µg/l	< 0.01
6	Aldrin	µg/l	< 0.005
7	Isodrin	µg/l	< 0.005
8	Perchloroethylene	µg/l	< 10
9	Hexachlorobutadiene	µg/l	< 0.1
10	Chloroform	µg/l	< 12
11	1,2 Trichloroethylene	µg/l	< 10
12	Trichloroethylene	µg/l	< 10
13	Trichlorobenzene	µg/l	< 0.4
14	Hexachloroethylene	µg/l	< 0.05
15	Benzene	µg/l	< 10
16	Tetrachloroethylene	µg/l	< 10
17	Cadmium	µg/l	< 1

Source*:* Annex 5 of Sub-decree No 27 ANRK.BK on Water Pollution Control, 2009

51 Water quality standards in public water areas for biodiversity conservation is shown in Table-3-5 below.

Table-3-5: Water quality standard in public water areas for bio-diversity conservation

Parameter	Unit	Standard Value		
		River	Lake/Reservoir	Coastal Water
pH		6.5-8.5	6.5-8.5	7.0-8.3
BOD5	mg/l	1-10	NV	NV
Suspended Solid	mg/l	25-100	1-15	n/a
Dissolved Oxygen	mg/l	2.0-7.5	2.0-7.5	2.0-7.5
Coliforms	MPN/100ml	<5000	<1000	<1000
COD	mg/l	NV	1-8	2-8
Total Nitrogen	mg/l		0.1 – 0.6	0.2– 1.0
Total Phosphorus	mg/l		0.005– 0.05	0.02 – 0.09
Oil content	mg/l	NV	NV	0

NV=No value
Source: Annex 4 of Sub-decree on No 27 ANRK.BK Water Pollution Control, 2009.

52 Ambient Air Quality Standards are shown in Table-3-6below.

Table-3-6: Ambient Air Quality Standard

Parameters	Cambodia[a]				IFC-EHS[b] Guidelines WHO
	Period 1h Average mg/m3	Period 8h Average mg/m3	Period 24h Average mg/m3	Period 1year Average mg/m^3	interim target1 ug/m3
Carbon monoxide (CO)	40	20	-	-	
Nitrogen dioxide (NO2)	0.3	-	0.1	-	40（1yr.） 200 (1 hr.)
Sulfur dioxide (SO2)	0.5	-	0.3	0.1	500 (10 min) 125 (24hr.)
Ozone (O3)	0.2	-	-	-	100 (8 hr. daily)
Lead (Pb)	-	-	0.005	-	
Particulates	-	-	0.33	0.1	150 (PM10 24hr) 75 (PM2.5 24hr)

[a] Sub-decree N0 42 ANRK.BK on Air Pollution Control and Noise Disturbance.
[b] Environmental, Health, and Safety Guidelines, IFC.

Maximum permitted noise levels in public and residential areas are shown in Table-3-7 below.

Table-3-7: Maximum permitted noise level in public and residential area (dB (A))

Location	Cambodian Standard			IFC-EHS Guidelines	
	06:00 to 18:00	18:00 to 22:00	22:00 to 6:00	Day 7:00 to 22:00	Night 22:00 to 7:00
Silence Area Hospital; Library, School, Nursery	45	40	35	55	5
Resident Area Hotel; Administration place, House	60	50	45		

Commercial, Services Areas and mix	70	65	50	70	70
Small Industrial factories intermingling in residential areas	75	70	50		

Note: This standard is applied to control of noise level of any source of activity that emitted noise into the public and residential areas.
Source: Annex 6 of Sub-Decree on Air Pollution Control and Noise Disturbance, 2000

3.1.5 International Conventions

53 Cambodia is a signatory to many international environmental treaties and conventions which provide a comprehensive legal framework. These include:

- Biodiversity Convention in 1994;
- Convention on International Trade in Endangered Species of Fauna and Flora (CITES) in 1997;
- Ramsar Convention in 1999;
- United Nations Framework Convention on Climate Change (UNFCC), 1992, entered into force on 21 March 1994 (Cambodia ratified on 18 December 1995);
- Kyoto Protocol 1997, entered into force on 16 February 2005 (Cambodia accessed on 22 August 2002);
- Vienna Convention for the Protection of the Ozone Layer, entered into force on 22 September 1988 (Cambodia accessed on 27 June 2001);
- Montreal Protocol on Substances that Deplete the Ozone Layer, 1987, entered into force on 1 January 1989 (Cambodia accessed on 27 June 2001);
- The International Convention for the Prevention of Marine Pollution from Ships, 1973 as modified by the Protocol of 1978 relating thereto “MARPOL 73/78”, fully entered into force on 2 October 1983 (Cambodia ratified on 1994);
- Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal, entered into force on 5 May 1992 (Cambodia accessed on 02 March 2001);
- United Nations Convention to Combat Desertification, entered into force on 26 December 1996 (Cambodia ratified on 18 August 1997);
- Convention on International Trade in Endangered Species of Wild Fauna and Flora, entered into force on 01 July 1975 (Cambodia ratified on 04 July 1997);
- Cambodia joined the UNESCO Network of Biosphere Reserves in 1997. It committed to the Millennium Development Goals and subsequently endorsed the Sustainable Development Goals at the UN General Assembly in 2015;
- At the regional level, it ratified the following ASEAN Agreements: (a) on Transboundary Haze Pollution in 2006; and (b) on Disaster Management and Emergency Response, which entered into force in 2009; and
- At the subregional level, Cambodia, along with Lao PDR, Thailand and Viet Nam, signed the “Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin” (or the Mekong Agreement) in April 1995.

3.2 Application of AIIB, IFAD and GCF Environmental, Social, and Climate Risks Standards/Procedures

3.2.1 AIIB’s Environmental and Social Framework

54 The objectives of this ESF are to:

- Reflect institutional aims to address environmental and social risks and impacts in Projects (defined below in *Section II, Definitions,* of the ESP).
- Provide a robust structure for managing operational and reputational risks of the Bank and its shareholders in relation to Projects’ environmental and social risks and impacts.
- Support the environmental and social soundness and sustainability of Projects.

- Facilitate the integration of environmental and social aspects of Projects into the decision-making process by all parties.
- Provide a mechanism for addressing environmental and social risks and impacts in Project identification, preparation and implementation.
- Enable Clients (defined below in *Section II, Definitions,* of the ESP) to identify and manage environmental and social risks and impacts of Projects, including those of climate change.
- Provide a framework for public consultation and disclosure of environmental and social information in relation to Projects.
- Provide a grievance redress mechanism designed to enable Project-affected people to voice their concerns and grievances in connection with the environmental and social aspects of Projects.
- Improve development effectiveness and impact to increase results on the ground, in both the short and long term.
- Support Clients, through Bank financing of Projects, to strengthen their environmental and social management systems.
- Support Clients, through Bank financing of Projects, to implement their obligations under national environmental and social legislation (including under international agreements adopted by the Member) governing these Projects, including commitments relating to climate change.
- Support Clients, where feasible and appropriate, to mobilize resources for technical assistance for the preparation of environmental and social documents and capacity enhancement.
- Facilitate cooperation on environmental and social matters with development partners.

3.2.2 *AIIB's Environmental and Social Standards*

3.2.3 *Environmental and Social Standard 1: Environmental and Social Assessment and Management Scope and Application:*

55 Environmental and Social Standard (**ESS**) 1 applies if the Project is likely to have adverse environmental risks and impacts or social risks and impacts (or both). The scope of the environmental and social assessment and management measures are proportional to the risks and impacts of the Project. ESS 1 provides both for quality environmental and social assessment and for management of risks and impacts through effective mitigation and monitoring measures during the course of Project implementation.

- **Environmental coverage:** Environmental Risks and Impacts, Biodiversity Consideration, protected areas, ecosystem services, sustainability of land and water use, precautionary approach, pollution prevention, resource efficiency, climate change and greenhouse gases.
- **Social coverage:** Social Risks and Impacts, Scope of Social Coverage, Vulnerable/Disadvantaged Groups and Discrimination, Gender, Gender-based violence, Land and Natural Resource Access Loss of access to assets or resources or restriction on land use, Cultural resources
- **Heath and safety:** health and safety of workers and communities, occupational heath and safety, labor influx, building safety, traffic and road safety, security personnel, safety of dam.
- **Labor and Working conditions:** labor management relationships, civil servants, child labor and forced labor,

3.2.4 *Environmental and Social Standard 2: Land acquisition and involuntary resettlement*

56 **Scope and Application.** ESS 2 applies if the Project would or may involve Involuntary Resettlement (including Involuntary Resettlement of the past or foreseeable future that the Bank determines is directly linked to the Project).

3.2.5 *Environmental and Social Standard 3: Indigenous Peoples*

57 **Scope and Application:** ESS 3 applies if Indigenous Peoples are present in, or have a collective attachment to, the proposed area of the Project, and are likely to be affected by the Project.

The term Indigenous Peoples is used in a generic sense to refer to a distinct social and cultural group possessing the following characteristics in varying degrees:2 (a) self-identification as members of a distinct indigenous cultural group and recognition of this identity by others; (b) collective attachment to geographically distinct habitats, ancestral territories or areas of seasonal use or occupation in the Project area and to the natural resources in these areas; (c) customary cultural, economic, social or political institutions that are distinct or separate from those of the dominant society or culture; and (d) a distinct language or dialect, often different from the official language or languages of the country or region in which they live. In considering these characteristics, national legislation, customary law and any international conventions to which the Member in whose territory the Project is located is a party may be taken into account. A group that has lost collective attachment to geographically distinct habitats or ancestral territories in the Project area because of forced severance remains eligible for coverage as an Indigenous People, under ESS 3.

3.2.6 *Application of IFAD and GCF Environmental, Social, and Climate Risks Standards/Procedures*

58 Based on the IFAD SECAP and GCF ESS, the following safeguards documents were prepared: (i) Environmental and Social Management Framework (ESCMF) including climate considerations; (ii) Indigenous Peoples' Plan (IP Plan); (iii) Stakeholder Engagement Plan (SEP); and (iv) Gender Assessment & Action Plan (GAP). The documents have been publicly disclosed in advance of implementation and board approval to respect the Pelosi Amendment[14] as a best practice, even though the project is not high or substantial risk (the risk rating is only moderate), and the documents collectively respond to the standards described below.

3.2.7 SECAP's Environment and Social Standards (ESSs) are described as below:

- Standard 1: Biodiversity Conservation;
- Standard 2: Resource Efficiency and Pollution Prevention;
- Standard 3: Cultural Heritage
- Standard 4: Indigenous Peoples
- Standard 5: Labour and Working Conditions
- Standard 6: Community Health and Safety;
- Standard 7: Physical and Economic Resettlement;
- Standard 8: Financial Intermediaries and Direct Investments;
- Standard 9: Climate Change

59 Not explicitly listed as a standard, but considered a vital part of project design, implementation, and safeguarding is stakeholder engagement. Provisions to ensure meaningful engagement are provided within the Stakeholder Engagement Plan and initial feedback and engagement was mainstreamed into the project design.

The scope of the safeguard standards are detailed in Table-3-8.

Table-3-8: Scope of Safeguards Standards

Safeguards Standard	Scope
Standard 1: Biodiversity Conservation	**Scope:** In accordance with the Convention on Biological Diversity (CBD), this standard recognizes that biodiversity is about more than plants, animals and micro-organisms, and includes people and their need for food security, medicines, fresh air and water, shelter, and a clean and healthy environment. Key objectives include: • Maintain and conserve biodiversity

[14] The 1989 Pelosi Amendment requires disclosure of environmental impacts at least 120 days prior to board approval for high- and sometimes substantial-risk projects (URL: https://www.gao.gov/archive/2000/ns00192.pdf)

Safeguards Standard	Scope
	• Ensure the fair and equitable sharing of benefits from the utilization of generic resources; • Respect, preserve, maintain, and encourage knowledge, innovations, and practices of indigenous peoples and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources; and • Adopt a precautionary approach to natural resource conservation and management to ensure opportunities for environmentally sustainable development.
Standard 2: Resource Efficiency and Pollution Prevention	**Scope:** This Standard recognizes that economic activity and development can often pollute the air, water, and land. They may also result in the consumption of finite resources, which may in turn threaten people, ecosystem services and the environment. It advocates for a precautionary approach with the following objectives: • Avoid, minimize and manage the risks and impacts associated with hazardous substances and materials, including pesticides; • Avoid or minimize project-related emissions of short- and long-lived climate pollutants; • Promote more sustainable use of resources, including energy, land and water; and • Identify opportunities for improving resource efficiency.
Standard 3: Cultural Heritage	**Scope:** This Standard recognizes that cultural heritage is central to individual and collective identity and memory, providing continuity between the past, present, and future. Objectives include: • Preserve and safeguard cultural heritage; • Ensure that active efforts are made to prevent IFAD-supported projects from altering, damaging or removing any tangible or intangible cultural heritage; • Promote the equitable sharing of benefits from the use of cultural heritage; and • Promote meaningful consultation on matters related to cultural heritage.
Standard 4: Indigenous Peoples	**Scope:** This standard focuses on the rights of Indigenous Peoples and promotes the following objectives: • Support indigenous peoples to determine priorities and strategies for exercising their right to development; • Ensure that each project is designed in partnership with indigenous peoples and with their full, effective and meaningful consultation, leading to FPIC; • Ensure that indigenous peoples obtain fair and equitable benefits and opportunities from project-supported activities in a culturally appropriate and inclusive manner; and • Recognize and respect the rights of indigenous peoples to the lands, territories, waters and other resources that they have traditionally owned, used or relied upon.
Standard 5: Labour and Working Conditions	**Scope:** This standard is focused on fostering inclusive, diversified, and productive rural economies that create opportunities for decent work and higher incomes. Objectives of this standard are to: • Promote direct action to foster decent rural employment;

Safeguards Standard	Scope

	• Promote, respect and realize fundamental principles and rights by:
	  ○ Preventing discrimination and promoting equal opportunities for workers;
	  ○ Supporting freedom of association and the right to collective bargaining; and
	  ○ Preventing the use of child labour and forced labour;
	• Protect and promote the safety and health of workers;
	• Ensure that projects comply with national employment and labour laws, and international commitments;
	• Leave no one behind by protecting and supporting workers in disadvantaged and vulnerable situations, including women (e.g. maternity protection), young workers, migrant workers, workers in the informal economy and workers with disabilities.

Standard 6: Community Health and Safety	**Scope:** These standard stresses avoiding – and where avoidance is not possible, minimizing and mitigating – health-related and safety-related risks and impacts that may arise from IFAD-supported projects, with special attention to marginalized and disadvantaged groups. Objectives include to: • Ensure quality and safety in the design and construction of programming-related infrastructure, preventing and minimizing potential safety risks and accidents; • Avoid or minimize community exposure to disaster risks, diseases and hazardous materials associated with project activities; • Ensure that the safeguarding of personnel and property minimizes risks to communities and is carried out in accordance with international human rights standards and principles; and • Have in place effective measures to address emergency events, whether human-made or natural hazards.
Standard 7: Physical and Economic Resettlement	**Scope:** This Standard not only considers resettlement as the physical relocation of people but as economic, social and cultural displacement restricting people's access to livelihoods and culturally important sites. Objectives include to: • Avoid involuntary resettlement or, when unavoidable, minimize involuntary resettlement by exploring alternative project designs and sites; • Avoid forced eviction; • Ensure that resettlement activities are planned and implemented collaboratively with the meaningful participation of affected people; • Enhance and restore the livelihoods of all displaced peoples; and • Provide explicit guidance to borrowers/recipients/partners on the conditions that need to be met regarding involuntary resettlement.
Standard 8: Financial Intermediaries and Direct Investments	**Scope:** This Standard recognizes that investments in FIs (indirect investments) and private-sector companies (direct investments) are critical for promoting sustainable financial markets and providing financial products and services to farming businesses and rural micro, small and medium-sized enterprises. Objectives include to:

Safeguards Standard	Scope
	• Promote sound environmental, social and climate practices, and sound human resource management with FIs and direct investees; • Ensure that FIs and direct investees assess and manage any environmental and social risks and impacts of subprojects; and • Promote good environmental and social management practices by direct investees and in the subprojects financed by FIs.
Standard 9: Climate Change	**Scope:** This standard is focused actively considering, planning for, and responding to projected climate changes. Objectives include to: • Ensure alignment of IFAD-supported projects with the Nationally Determined Contributions of countries and the goals of the Paris Agreement and other international frameworks; • Ensure that proposed activities are screened and assessed for climate change and disaster risks and impacts, including both impacts of projects and on them; • Apply the mitigation hierarchy in project design; • Strengthen the resilience of communities to address the risk of climate change impacts and climate-related disasters; and • Increase the ability of communities to adapt to the adverse impacts of climate change, and foster climate resilience and low GHG-emitting projects that do not threaten food production.

3.3 Gap Analysis and Gap Filling Measures

60 IFAD classifies projects and subprojects into one of four classifications: *high risk*, s*ubstantial risk*, *moderate risk* or *low risk* and discloses a project's risk classification and basis for that classification in project documents and on the IFAD website. GCF classifies projects and subprojects into one of three classifications: high risk, moderate risk, or low risk, however the GCF accepts the standards and risk classifications of Accredited Entities, like IFAD, thus for this project (and to simplify approval for IFAD-funded activities) the ESCMF utilizes the IFAD classifications.

61 The assessment identified key gaps between the county's legal system and international recognized environmental and social standards (e.g. AIIB, IFAD, GCF) and priority needs to ensure full compliance of the ESSs. The conclusion was that Cambodia has a comprehensive regulatory framework that in many cases meets the requirements of the ES standards, and key issues are more associated with implementation and differentiated capacities between the central and provincial PMUs and the provinces. There are opportunities to accelerate implementation of recent improvements in the country system, especially on labour, community safety, and stakeholder engagement.

62 Based on the project's high or category A risk rating for environment, social, and climate considerations, national regulations are adequate for most of the investments, while additional gap-filling measures will be applied for the preparation of an Environmental, Social and Climate Impact Assessment (ESCIA) for the overall project particularly related to the civil works so that contractors and implementation partners can adequately address issues related to contract management, safety of local communities, and workers. Capacity building efforts pertaining to regulation and oversight are also incorporated as part of the safeguards management of the CAISAR project and as part of the project design (e.g. under Component 2 activities).

63 There are key gaps between the environmental, social, and climate assessment requirements of the Asian Infrastructure Investment Bank (AIIB), International Fund for Agricultural Development (IFAD), Green Climate Fund (GCF), and the Cambodian Government.

64 One key difference is the scope of their assessments. The AIIB and GCF focus on infrastructure and climate projects, while IFAD focuses on agricultural development. As a result, the types of environmental and social risks and impacts that are assessed may differ.

65 Another difference is the level of detail required in the assessments. The AIIB requires a comprehensive Environmental and Social Framework (ESF) that covers all projects, while the GCF requires a simplified Environmental and Social Management System (ESMS) that is tailored to each project. IFAD requires an Environmental and Social Assessment (ESA) that is specific to each project.

66 In terms of climate assessments, the GCF requires a detailed assessment of the project's potential greenhouse gas emissions and its contribution to climate change mitigation and adaptation. The AIIB also considers climate risks and opportunities in its project assessments but does not require a specific climate assessment. Cambodia's Environmental Impact Assessment (EIA) requirements do not explicitly specify climate assessment procedures. However, the EIA process does consider the potential impacts of projects on the environment, which includes climate-related factors. The assessment typically covers aspects such as air quality, water resources, biodiversity, and social impacts, which indirectly address climate considerations.

67 Overall, while there are some similarities in the environmental, social, and climate assessment requirements of these institutions, there are also key differences that reflect their different mandates and priorities.

68 A detailed list of the Green Climate Fund's climate assessment requirements for an irrigation and flood protection project in Cambodia require:

1. Project description: The project description should include a detailed description of the irrigation and flood protection project in Cambodia, including the location, size, and scope of the project, as well as the expected benefits and impacts.
2. Climate rationale: The project should have a clear climate rationale that explains how it will contribute to climate change mitigation and adaptation. This should include an analysis of the project's potential greenhouse gas emissions and its contribution to reducing emissions.
3. Baseline emissions: The project should include a baseline emissions assessment that estimates the greenhouse gas emissions that would occur in the absence of the project.
4. Project emissions: The project should estimate the greenhouse gas emissions that will be generated by the project, including direct and indirect emissions.
5. Mitigation potential: The project should assess its potential to reduce greenhouse gas emissions and contribute to climate change mitigation. This should include an analysis of the project's potential to reduce emissions compared to the baseline scenario.
6. Adaptation potential: The project should assess its potential to contribute to climate change adaptation, including an analysis of the project's ability to increase resilience to climate change impacts such as flooding and drought.
7. Co-benefits: The project should identify and assess any co-benefits that may result from the project, such as improved food security, increased access to water, or improved livelihoods.
8. Risks and uncertainties: The project should identify and assess any risks and uncertainties associated with the project, including potential environmental, social, and economic risks.
9. Monitoring and evaluation: The project should include a monitoring and evaluation plan that outlines how the project's greenhouse gas emissions, climate change mitigation and adaptation impacts, and co-benefits will be monitored and evaluated over time.

69 Overall, the Green Climate Fund's climate assessment requirements for an irrigation and flood protection project in Cambodia are designed to ensure that the project is aligned with the Fund's climate change objectives and that its potential greenhouse gas emissions and contributions to climate change mitigation and adaptation are carefully evaluated.

70 It is important to ensure that the environmental, social, and climate assessments of an irrigation and flood control project in Cambodia meet both the requirements of the international organizations as well as the legal requirements of the Cambodia government. This will help to ensure that the project is implemented in a way that is legally compliant and meets international standards for environmental and social sustainability and climate change mitigation and adaptation.

3.3.1 *Environmental, Social and Climate Assessment in Cambodia*

71 The Environmental Impact Assessment (EIA) process in Cambodia faces several issues that hinder its effectiveness and transparency. Some of the key issues include:

1. Limited public participation: The EIA process in Cambodia often lacks meaningful public participation. Communities and affected stakeholders are not adequately informed or involved in decision-making processes, limiting their ability to provide input, voice concerns, and influence project outcomes.
2. Inadequate assessment quality: The quality of environmental impact assessments conducted in Cambodia is often criticized for being insufficient and not meeting international standards. This can result in inaccurate or incomplete assessments, leading to inadequate identification and mitigation of potential environmental and social impacts.
3. Lack of independence: The EIA process in Cambodia suffers from a lack of independence, as project proponents are often responsible for conducting and financing their own environmental impact assessments. This can create conflicts of interest and raise concerns about the credibility and objectivity of the assessment process.
4. Weak enforcement and compliance: Despite having regulations in place, the enforcement of EIA requirements and conditions is often weak in Cambodia. This can lead to non-compliance by project developers, with inadequate monitoring and enforcement mechanisms to ensure adherence to environmental safeguards.
5. Limited capacity and resources: Cambodia faces challenges in terms of limited technical capacity and resources for conducting robust environmental impact assessments. Insufficient expertise and resources can result in inadequate assessments and monitoring, compromising the effectiveness of the EIA process.
6. Lack of transparency and accountability: The EIA process in Cambodia lacks transparency, with limited public access to information and documentation related to environmental impact assessments. This lack of transparency hampers accountability and the ability of affected communities to understand and challenge project decisions.

72 While climate change is not explicitly mentioned in the Cambodian EIA requirements, the government has recognized the importance of climate change mitigation and adaptation. The country has developed policies and strategies to address climate change, such as the National Adaptation Plan and the National Climate Change Strategic Plan. These initiatives aim to integrate climate change considerations into various sectors, including infrastructure development and land use planning.

73 In recent years, there has been recognition globally of the need to include climate change considerations in the EIA process. This includes assessing the potential greenhouse gas emissions, vulnerability to climate impacts, and the resilience of projects to climate change.

74 In conclusion the ESCIA requirements of AIIB, IFAD, GCF and the Cambodian government are similar intent and must include the specific climate assessment requirements as defined by GCF.

3.3.2 *Labor and Working Conditions in Cambodia*

75 Cambodia’s labor law does address various aspects related to child labor, gender equality, forced labor, and occupational health and safety. However, it is important to note that there are still challenges in effectively enforcing these laws and ensuring full compliance across all sectors.

76 Regarding child labor, Cambodia’s labor law prohibits the employment of children under the age of 15 in any economic activity. However, there are exceptions for light work that is not harmful to their health and development, and the law also allows for children aged 12 to 15 to engage in light work with certain restrictions. Despite these regulations, child labor remains a concern in Cambodia, particularly in sectors such as agriculture, construction, and informal work.

77 In terms of gender equality, Cambodia’s labor law prohibits discrimination based on gender in recruitment, remuneration, promotion, and other employment-related matters. It also guarantees equal

pay for equal work. However, gender-based discrimination and disparities in the labor market, including lower wages for women and limited representation in higher-level positions, continue to persist.

78 Regarding forced labor, Cambodia's labor law explicitly prohibits any form of forced or compulsory labor. It also prohibits debt bondage and human trafficking. However, forced labor remains a significant issue, particularly in sectors such as agriculture, construction, and domestic work. The government has taken steps to combat this problem, including establishing mechanisms for reporting and addressing cases of forced labor.

79 Occupational health and safety is another area addressed by Cambodia's labor law. The law requires employers to provide a safe and healthy working environment, including measures to prevent accidents, injuries, and occupational diseases. It also mandates the establishment of workplace safety committees and the provision of training on occupational health and safety. However, the enforcement of these regulations and the implementation of effective safety measures can be challenging, particularly in sectors with informal or hazardous working conditions.

80 In summary, while Cambodia's labor law does address child labor, gender equality, forced labor, and occupational health and safety, there are still gaps in enforcement and compliance. Efforts are needed to strengthen the implementation of these laws and ensure the protection of workers' rights in practice.

81 Systematic labor inspection heavily relies on self-reporting, especially when construction contractors and primary suppliers are involved. For this reason, a template for labor management procedures must be included in bidding documents of contracted workers. For primary suppliers of materials, the practice of conducting due diligence on labour and working conditions among potential sources of aggregate material is uncommon. Therefore, a monitoring procedure must be established prior commencement of related works, and the site-specific ESA must assess potential labor issues, including risks of child and forced labour for suppliers and in the value chains relevant for the CAISAR project, and other health hazards on workers due to waste management and handling of any related hazardous materials during construction to ensure compliance with national laws and Standards. MOWRAM as the Lead Agency of the CAISAR project must ensure that OHS procedures and a working grievance redress mechanism are stipulated within the contract, including the system for monitoring third party contractors' compliance with the agreed OHS procedures and GRM.

4. ENVIRONMENT, SOCIAL & CLIMATE ASSESSMENT

4.1 Project Objective, Components, Areas and Beneficiaries

82 The project rationale is provided in Section 1.1. The Country and project context is provided in Section 1.2, and the CAISAR Project components are outlined in Chapter 2.

83 The CAISAR project has a broad positive impact benefitting approximately 120,000 households (500, 000 rural people) directly while its effect will propagate to over 3 million people in the region (CAISAR Feasibility Study 2023). The project will be executed through the Ministry of Water Resources and Meteorology (MOWRAM) and the National Committee for Sub-National Democratic Development Secretariat (NCDD-S), a Direct Access Accredited Entity to the GCF. The expected timelines for the approval of the co-financing by IFAD and AIIB Executive Boards are respectively September 2024 and January 2024, with the inception of the project is expected to take place in December 2024.

4.2 Project Area

84 The CAISAR project aims to enhance Cambodia's resilience against climate change through investments in innovative practices such as flood protection, drainage, and solar pumping, with a total estimated budget of $280 million. The costs are distributed among different CAISAR objectives, with flood and drainage costing $47.4 million, solar and raised tertiary costing $82.1 million, and irrigation and storage costing $150.6 million. The project is divided into three sub-projects, each with different requirements and costs. The CAISAR scheme is expected to improve yields and provide better drought resilience over the 25-year asset life, with the project expecting significant yield improvements in all three sub-project areas.

85 The core benefits of the project include food security in the face of climate change as well as significant economic contributions to poor rural households by enabling climate change resilient and adaptive agriculture as well as nationally important greenhouse gas emission reductions. The scheme will bring several indirect benefits improving the socio-economic situation for communities living within the command areas such as improved access to transport links, education and community strengthening through the establishment of FWUCs. The project is expected to be economically viable even under pessimistic assumptions, with the baseline internal rate of return for the project at 17%.

86 Through nature-based approaches including river restoration and rehabilitation and creation of natural ponds, the CAISAR project is expected to provide several environmental enhancements whilst ensuring that the environmental impacts of the construction and operational phases of the project are limited and mitigated where possible. In addition to this, the use of innovative climate-smart solutions will reduce the overall climate impact of the scheme and endeavor to reduce the emission of greenhouse gases from the existing and proposed agricultural practices with the introduction of solar pumps and Alternate Wetting and Drying techniques.

87 The character and existing farming systems differ widely in each sub project as will be described below. The CAISAR feasibility study covers a total command area of 45,000ha and is composed of three sub-project command areas – Ou Ta Paong, in Pursat Province, Lum Hach, in Kampong Chhnang Province and Krang Ponley in Kampong Chhnang, Kapong Speu and Kandal Province as shown in
Source: CAISAR Feasibility Study

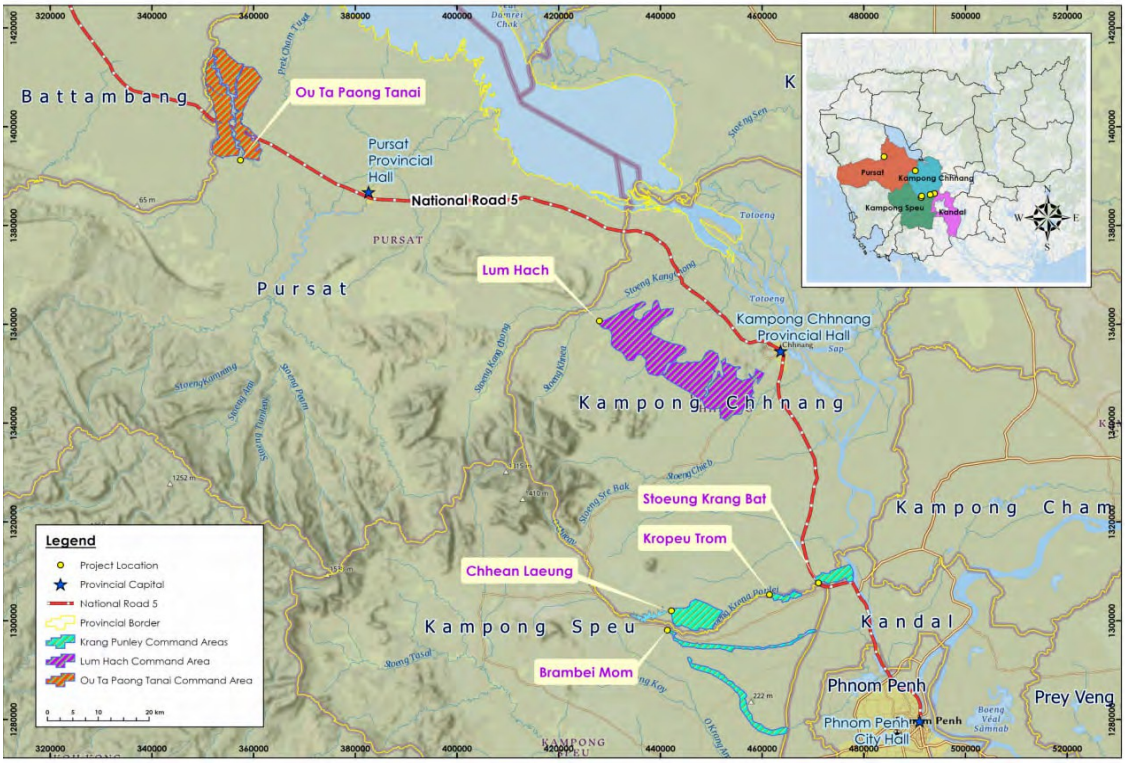
Figure 4-1: Map showing the location of the CAISAR project areas and& Provincial Boundaries

88 .

89 Detailed characteristics of the different sub-project command areas, with respect to historical and present-day conditions, temperature, precipitation, agricultural cover, and current water resources are presented in each Feasibility report for the corresponding projects which will be available to the team.

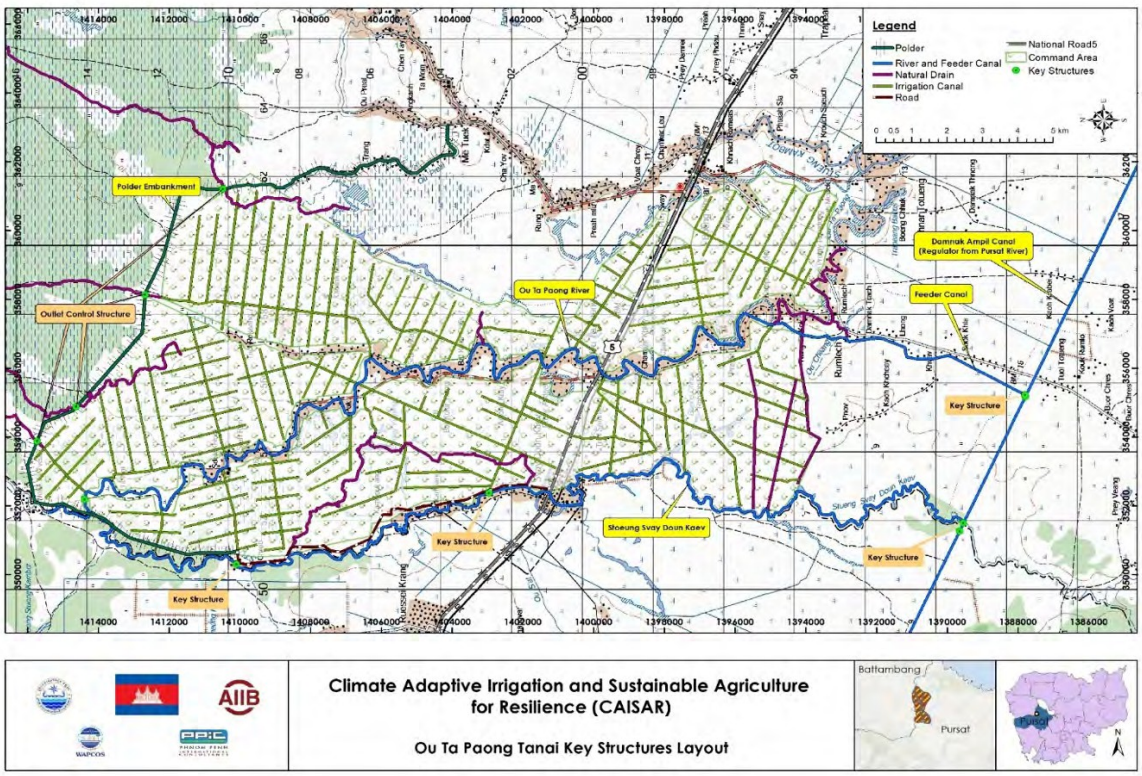
90 The sub-project areas, except for Kampong Chhnang, each have existing irrigation infrastructure which needs rehabilitation and/or has a suitable nearby water source that could enhance the agricultural output from the area and make it more resilient to the effects of climate change. The final command areas were then established based on field surveys and stakeholder consultations and

target areas that require the greatest assistance. Each sub-project area is currently experiencing or projected to experience challenges because of climate change and is therefore in need of climate adaptation and resilience measures. This work has been conducted in consultation with MOWRAM and the PDWRAM to ensure that local information is considered at each project stage.



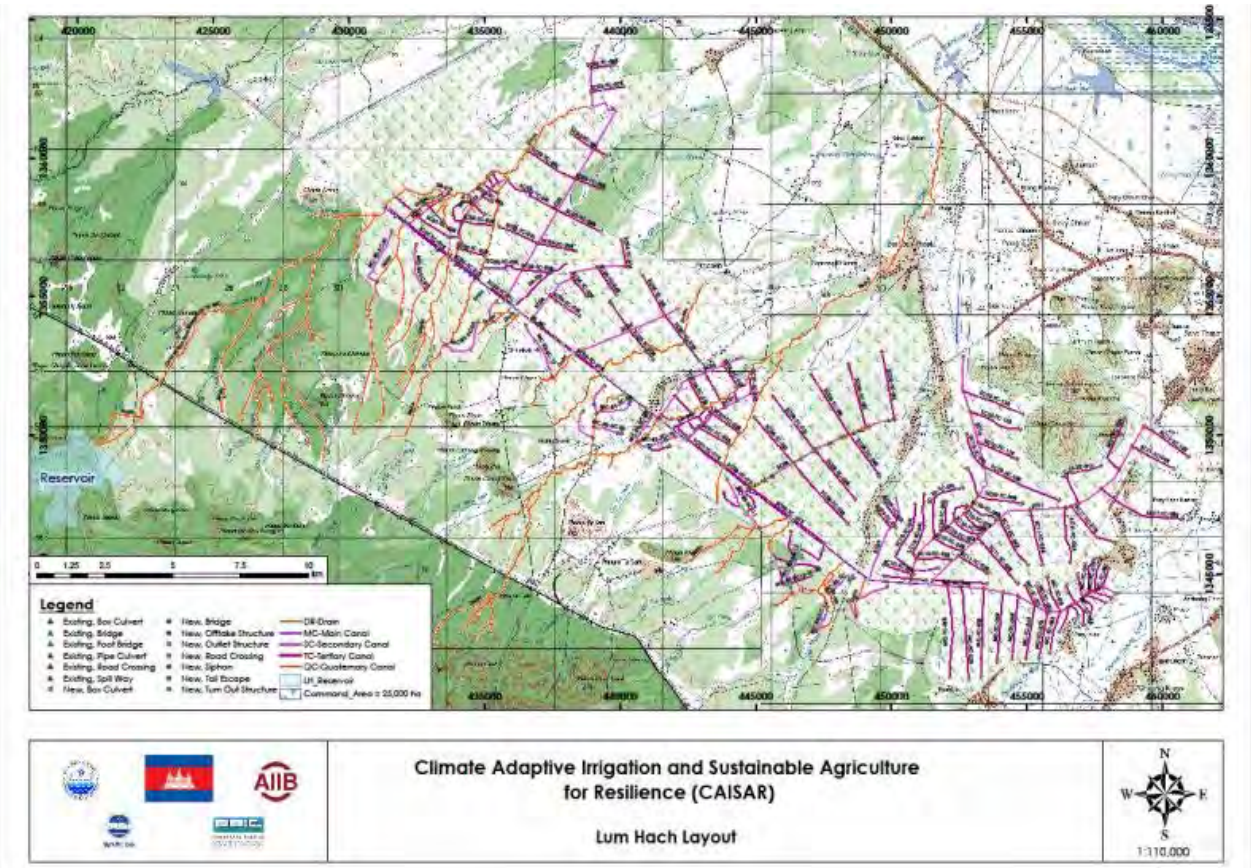
Source: CAISAR Feasibility Study

Figure 4-1: Map showing the location of the CAISAR project areas and& Provincial Boundaries



Source: CAISAR Feasibility Study 2023

Figure 4-2: Ou Ta Paoung Project Layout - Some irrigation exists, others depend on flood recession or rainfall.



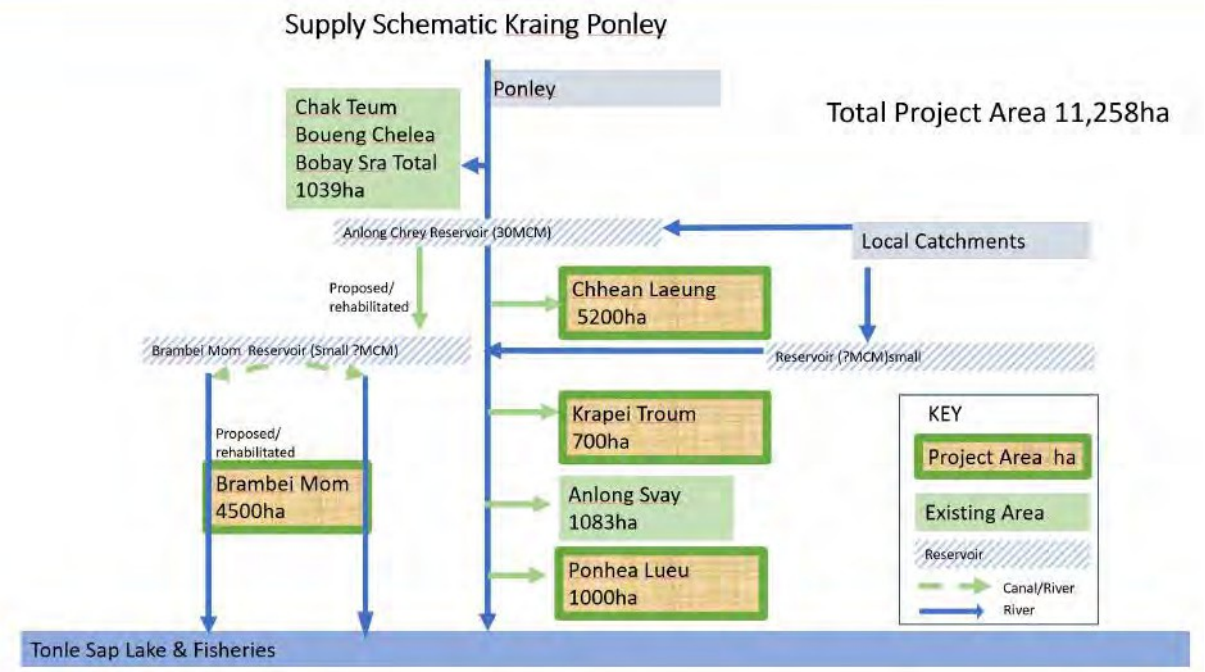
Source: CAISAR Feasibility Study 2023

Figure 4-3 Lum Hach Feasibility Level Canal Layouts and Storage (excluding JICA System)

91 Krang Ponley scheme differs from the Ou Ta Paong and Lum Hach schemes in that it consists of 4 separate command areas. These are grouped according to their hydrological connectivity via the Ponley River and geographical proximity in the North East of the Kampong Speu province and crossing slightly into Kampong Chhnang and Kandal (Source: CAISAR Feasibility Study 2023

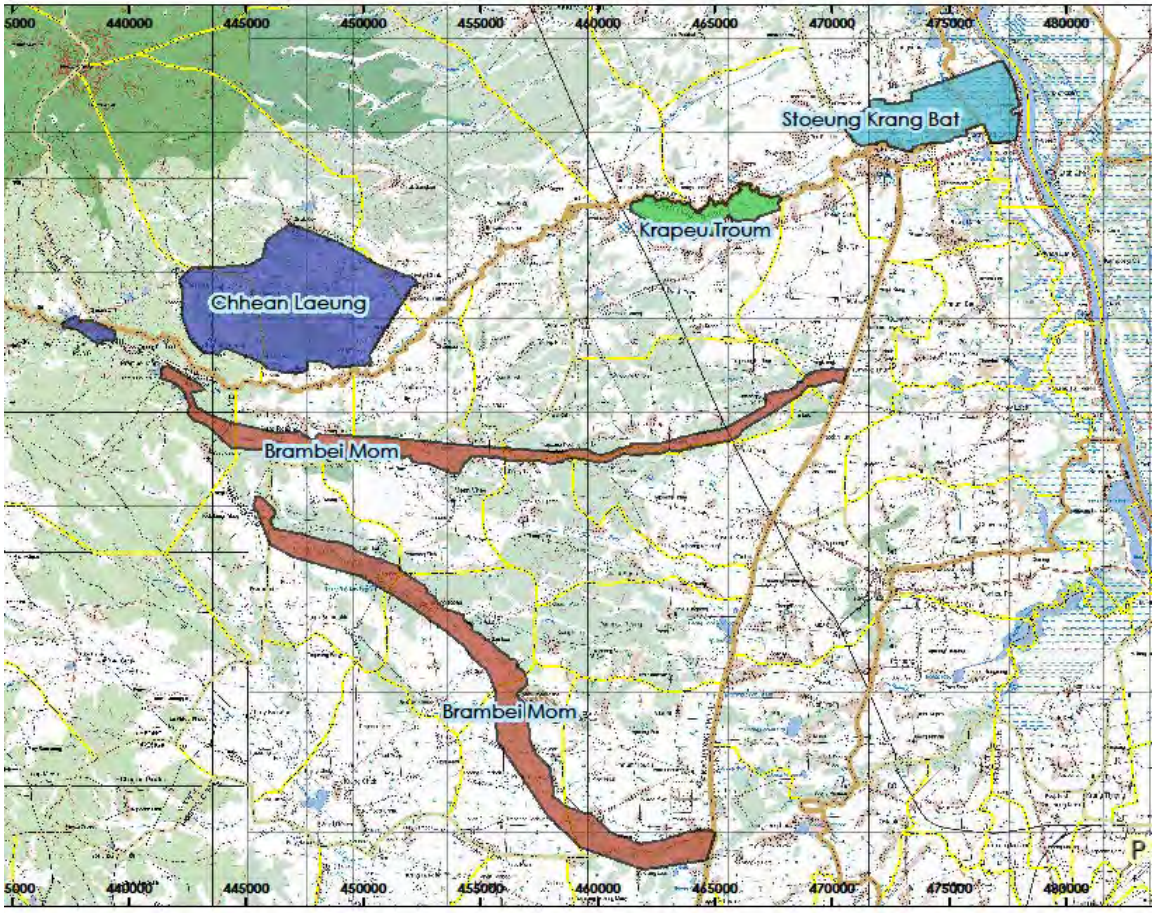
92 Figure 4-3 to Source: CAISAR Feasibility Study

93 Figure 4-7).



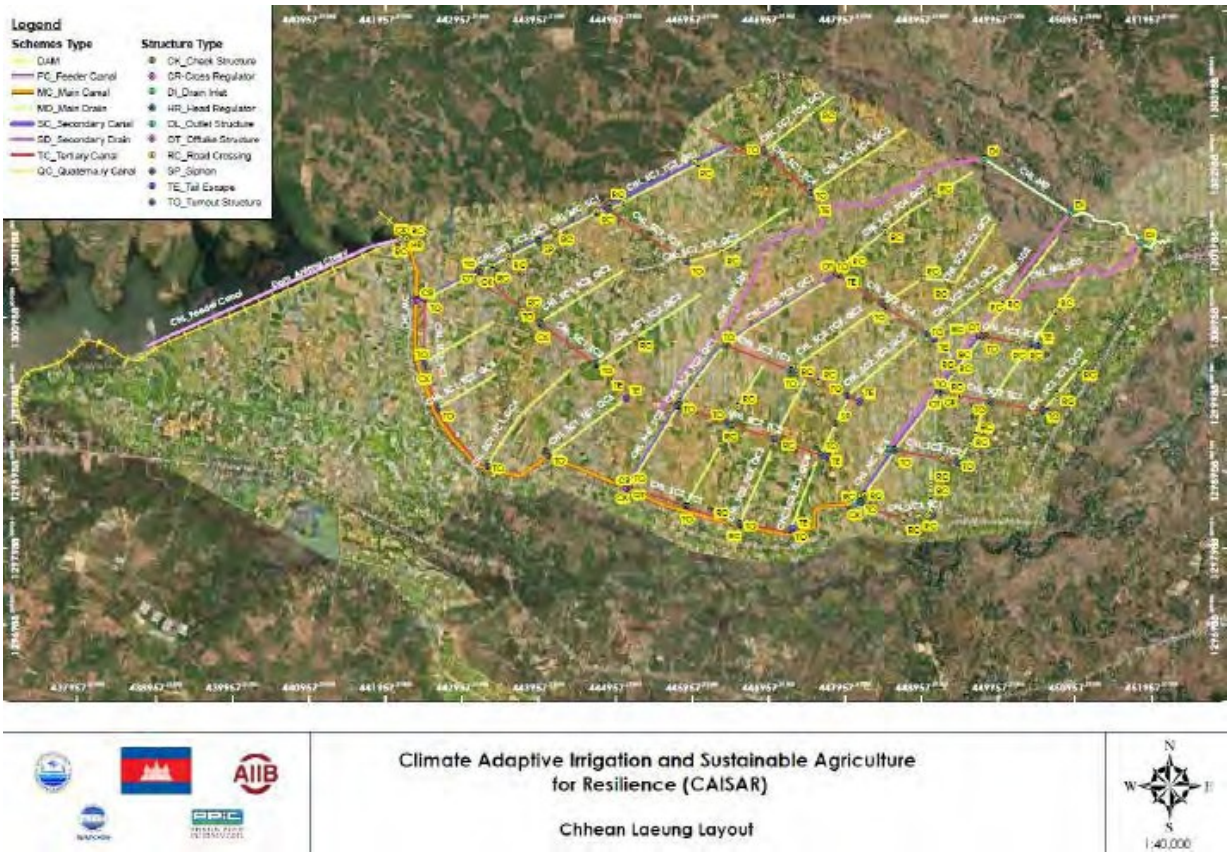
Source: CAISAR Feasibility Study

Figure 4-4: Krang Ponley overview schematic



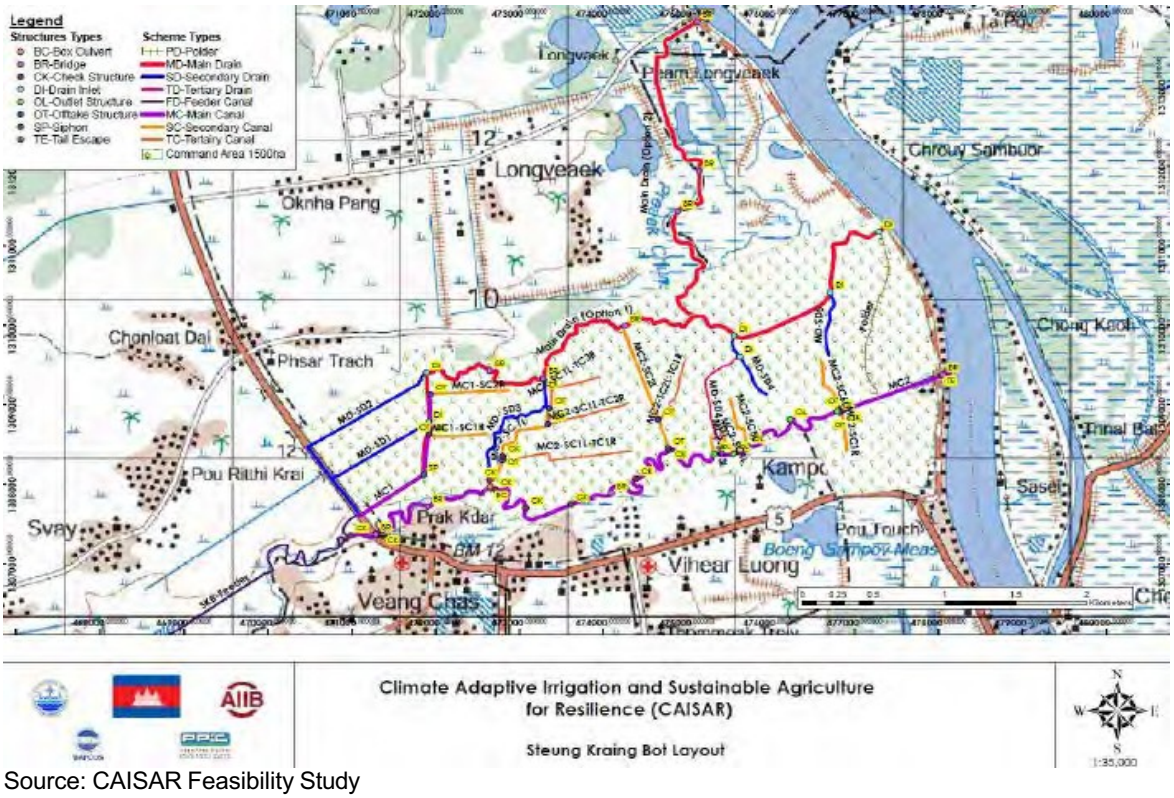
Source: CAISAR Feasibility Study

Figure 4-5: Location of Krang Ponley Irrigation Schemes



Source: CAISAR Feasibility Study

Figure 4-6 Krang Ponley Subproject - Chhean Loeung area canals do not exist,



Source: CAISAR Feasibility Study

Figure 4-7 The Outlet of the Krang Ponley to the Tonle Sap is through Krang Bat area

4.3 Project target areas and beneficiaries

94 The following section describes the CAISAR sub-projects and their beneficiaries.

4.3.1 *Krang Ponley*

95 The Krang Ponley sub-project is located within the Krang Ponley catchment and is made up of four sub areas: Brambei Mom, Krapeu Troum, Krang Bat and Cheung Luong. The Krang Ponley river is long and fed from the Anlong Chrey Reservoir. The reservoir has a storage capacity of 30M m3 and was rehabilitated by KOICA in 2012 as part of the *Krang Ponley Water Resources Development Project*. With the exception of Chhean Laeung, each of the sub-project areas has existing irrigation infrastructure. These were largely constructed under the Khmer Rouge (1975 – 1979) and have since fallen into disrepair despite farmers excavating and maintaining some main and branch canals. Severe sedimentation and embankment erosion resulting from a lack of maintenance has resulted in damaged concrete structures and an inefficient irrigation system.

96 The proposed works are expected to benefit 3 communes across the four separate sub-schemes, making use of both the Anlong Chrey reservoir and the Brambei Mom reservoir. Pond and storage area rehabilitation and excavation, upgrading main, secondary, and tertiary canals as well as a new scheme at Chhean Leung will be hugely beneficial to local communities, increasing their resilience to climate change and enabling them to increase their agricultural outputs resulting in a number of indirect social benefits. In total there are 47,000 households in the Krang Ponley sub-project area. Dry season yields are expected to increase from 4.5 tons/ha to 6.5 tons/ha and during the wet season, they are expected to increase from 3.9 tons/ha to 5.8 tons/ha.

4.3.2 *Lum Hach*

97 The Lum Hach irrigation scheme is in close proximity to the work undertaken by JICA as part of the West Tonle Sap Irrigation Project (2022). Unfortunately, due to the infilling of the 1st January canal from discarded excavated material and the lowering of the headworks on the main canal, the CAISAR Lum Hach scheme can no longer make use of the existing main canal as a water source for irrigation. Therefore, alternative water sources have been assessed and analysed to determine if they are available and sufficient for the new scheme (Annex 1).

98 The existing irrigation infrastructure has received limited farm maintenance by farmers and others. This has resulted in sedimentation, embankment erosion and damaged concrete structures making the current system unreliable.

99 The proposed works are expected to benefit people living in four communes across three districts of Kampong Chhnang Province. The overall design will enhance the existing irrigated area to enable farmers to increase yields during the wet season from 2.5 tons/ha to 4.5 tons/ha. Additionally, with the provision of a reliable water source during the dry season and sufficient training provided through the proposed FWUCs, dry season cropping will be feasible with an estimated yield of 5 tons/ha.

100 Overall there are 18000 households in the Lum Hach sub-project area.

4.3.3 *Ou Ta Paong*

101 The Ou Ta Paong sub-project lies within Pursat Province. The area is highly climate vulnerable due to its proximity to the Tonle Sap lake and the Svay Donkeo river which have shown erratic flood patterns in recent years.

102 The existing irrigation scheme at Ou Ta Paong was constructed during the Khmer Rouge. Some sections have been rehabilitated by farmers and from social funds but due to an overall lack of maintenance and finance, many sections of canal have been damaged from sedimentation and erosion. The main water source is from the Don Nak ChheKrom canal which receives water from the Steng Pursat River.

103 The proposed scheme will include flood defense investment around the command area to enable the community to protect it's farming livelihood from future flood events from the Tonle Sap but taking into consideration the importance of local fisheries.

104 The current irrigation system is not connected to upstream water sources and current farming practices are heavily dependent on rainfall and flood recession agriculture. The design proposals will reduce this climate dependence and vulnerability to climatic changes by providing a reliable source of water for irrigation from the Svay Donkeo River via the Damnak Ampil Canal. 40km of Main Canal will convey water from the Damnak Ampli Head Works via the China Main Canal to feed the irrigation scheme.

105 The scheme will benefit communities living within two communes in the Bakan and Pursat Province and overall, there are 6000 households in the sub-project area. Dry season yields are expected to increase from 5.8 tons/ha to 6.5 tons/ha and wet season yields are expected to increase from 3.9 tons/ha to 5.8 tons/ha.

106 The following provides a summary of the three irrigation and flood control schemes.

Table-4-1: Summary of the Sub Project Elements

Sub Project	Ou Ta Paoung	Lum Hach	Krang Ponley
Area Cultivated (ha)	13,000	17,000	15,000
Water Source	Pursat River and Svay Don Keo	Local Streams and diversion of Boribo tributary	Krang Ponley River with existing storage at Anlong Chrey and Brambei Mom
Nature Based Solution	Restoration of Ou Ta Paoung River, fish passage on Donkeo and OTP, Natural Management of TS floods.	Enhancement of Main Canal environmental features, local storages and riparian corridors along local rivers. 200 Ponds	Control of flood regime at Krang Bat for flood recession and fisheries. Rehabiltate 31 major ponds.
Solar Pump Installations	35 (Not suitable in flood areas)	179	110(BBM)+47(CL)+27(KPT)
Main/Feeder Canals C/L(km)/N	1_8.0km_29	1_30.0_52	
Secondary Canal C/L (km)/N (Exist and New)	8_30.0km_ 13_35.8km_108	12_12.2km_673	
Tertiary Canal C/L (km)/N Exist and New	34_47.5km 139_151.0km_1452	179_107km_1487	
Main/Secondary Drains (C/L km/N)	7_36.3km_15	12_107km_99	
Existing Land Area (Ha)	300	66	144
New Land Area Required (Ha)	278	532	249

Note: (L=km C= Number of Canals, N= Number of Structures)

4.4 Socio-economic context and vulnerability

107 As part of the feasibility study for the CAISAR project, WAPCOS conducted a comprehensive livelihoods and vulnerability study of the target population. The study conducted surveys across more than 630 households in the project areas, 100 focus groups and 100 key informant interviews to understand the social and economic issues affecting the target population in the areas where CAISAR will be implemented. Issues such as poverty rates, land ownership, access to goods, education and health care as well as institutional capacities and gender related issues were all explored and analyzed by the WAPCOS team. It was important for the CAISAR project to assess such issues to get an improved understanding of the social society living in the command areas and any long-standing social inequalities which may impact their ability to adapt and be resilient to climate change. This could then assist the design and implementation of targeted and area specific aspects of both Component 1 and 2.

108 The survey results were assessed and found that the populations of all command areas follow similar social economic indicators, in terms of poverty, income, household debt, education levels, health and vulnerabilities.

109 Most of the population are rural farmers (rice typically), whilst some also supplement their income via alternative jobs such as working in the service sector. Households typically do not have stable annual incomes or expenditures due to the annual cycle of the wet and dry season and the impact this has on agricultural yields and livelihoods. This correlated with the vulnerability analysis which found that the majority of the population is at the edge of poverty despite most respondents having incomes above traditional poverty lines (the World Bank or UNDP thresholds are between 2-8 USD per day). The WAPCOS survey found that based on responses to the monthly income section in the livelihood analysis for the four provinces, the highest proportion of households earn between 200 to 300 USD/month (17.1%) and then 300 to 400 USD/month (16.0%). The high-income band per household of over 1000 USD/month was only attributed to 4.8% of households and the lowest income band of less than 50$/month was attributed to 7% of households. These average income values hide the variability between provinces, for example in Kandal province, 3% of households earn less than $50/month whereas in Kampong Chhnang the number is much higher at 10%. The low number of low-income households in Kandal may be due to the proximity to good transport links and towns/cities such as Phnom Penh. There are less alternative income sources in rural areas, such as selling produce and groceries, business, or service providers, so most households are dependent on agriculture for their livelihoods which typically does not generate large monthly incomes.

110 Since 2007, Cambodia has made significant progress in terms of educating its Children. The number of children enrolled in primary education increased from 82% in 1992 to 97% in 2017/8. However, the country still faces a number of challenges, particularly educating those living in poor rural areas as children are not reaching standards appropriate for their age.

111 At primary level, nearly 25% of children in Grade 3 cannot write a single word in a dictation test. Only 27% of 3 to 5 year old's are developmentally on track in literacy and numeracy and by the time they are 17 years old, 55% of adolescents will have dropped out of school. Overall, large numbers of girls and boys remain out of school at all levels of education, from early childhood through to adolescence. Most children drop out before reaching secondary school. Girls and boys from disadvantaged groups are struggling to realize their potential as they face difficulties getting to, and staying in, school.

112 Across the CAISAR project areas, high school dropout rates are common. The highest education level attained for 59% of households questioned during the survey was primary school. Only 22% had been to secondary school and less than 1% to university. 12% of households had never been to school and of these, 82% could not read or write. It must be noted that these average values hide the range of results which varied by province and sub project area. In Ou Ta Paong, 17% of households had never been to school. For 54% of the households questioned, primary school was their highest education level with 22% going to secondary school and 3% to university. Low education levels in this area will make it more challenging to implement climate resiliency measures.

113 By contrast, in Lum Hach, 7% of households had never been to school and 43% had been to primary school, 13% to secondary school and 2% to university. The variable educational levels attained by the households across the sub-project areas highlights the potential social inequalities experienced by local communities. There are various reasons why children may drop out of school such as cost, distance from home, engagement in agricultural activities. In most provinces of Cambodia, upper secondary schools are mainly located in district or provincial centers. Students in remote areas may therefore not be able to access them due to poor quality roads or general lack of transport. Long distances to schools and bad road conditions often require students to make use of accommodation in another district but this is not possible for the majority of poor rural families, limiting their capacity to meet their potential.

114 High school dropout rates are common in the CAISAR project areas and are typically experienced in these rural areas due to the cost, long travel times and bad road conditions. This is a social issue that the CAISAR project could address by providing good quality roads adjacent to canals and within the command areas.

115 In recent years, consecutive annual crop failures have led to household individuals sourcing other, more profitable non-farm incomes. In 2018, an estimated 1,000,000 Cambodian migrants were registered in Thailand looking for other income sources to support their families. However, the COVID19 pandemic resulted in a backflow of mostly rural labor migrants which posed its own challenges to the agricultural sector in Cambodia (ADB, 2022).

116 There continues to exist a large disparity between the rural and urban populations of Cambodia. In 2016, the estimated average monthly household income was $717 in Phnom Penh and $607 in other urban areas. By contrast, monthly incomes were on average $374 in rural areas (Government of Cambodia, Socio-Economic Survey, 2016). Rural incomes are therefore only about 50% - 60% of all urban areas although the gap does appear to be closing with the disparity in 2012 being 40% - 55% (ADB, 2022).

117 This section has discussed several direct and in-direct beneficiaries living in the project areas. It highlights the importance of surveying communities to identify any existing social inequatlies and looking for opportunities to reduce these. The CAISAR project will look to improve the general wealth, well-being, priorities, and opportunities of communities living within the command areas through providing a reliable irrigation system that is resistant to climate change and will enable farmers to improve their livelihoods.

4.5 Agriculture

118 Agriculture is the primary source of livelihood for the communities living in most provinces of Cambodia and it accounts for 22.5% of the country's Gross Domestic Product and employs over 3 million people. Rice is the dominant food crop grown on an estimated 4.5 million hectares or 70% of the country's total cultivated area (ADB, 2022). The cultivated area of rice in Cambodia increased from 3.2 million ha in 2017 to 3.3 million ha in 2018, comprising of 2.7 million ha of wet-season rice and 0.6 million ha of dry-season rice (ADB, 2022).

119 Each sub-project command area has unique climatic conditions and geology which results in different soil qualities. This in turn affects land use and farming practices as communities have adapted over time to the areas in which they live and the resources that they have.

120 Access to transport and agricultural co-operations additionally influences farming practices. Where there are agricultural co-operations, a network is already established between the farmers growing and selling the vegetables and those buying them. This facilitates vegetable cultivation and marketability, encouraging farmers to move away from rice farming to more diverse horticultural agriculture. Krang Ponley for example is very accessible and close to the city of Phnom Penh. Farmers there produce more vegetables than in other provinces as they have better access to the cities markets to sell their produce.

121 In May-June 2022, the CAISAR team conducted an agronomy survey. Based on the findings, the agronomy experts have suggested proposed cropping patterns for each sub-project area which are discussed below.

122 **In Lum Hach**, the soil quality is particularly low due to the dominance of sandy surface soils. As a result the land is not considered suitable for agricultural use. Crops can be particularly vulnerable to drought stress due to the high hydraulic conductivity of the soils resulting in fast runoff and drainage. In conjunction with insufficient water resources and irrigation supply, this results in high rates of nutrient leaching and low crop yields. The agronomy survey and livelihood survey conducted by WAPCOS found that crop yields in the Lum Hach Command Area are water limited to one annual wet season crop of rice. Interviewed farmers reported average annual yields of 1.5 to 2 tons/ha whereas district statistics report crop yields of 3.2 to 3.8 tons/ha but it is thought that this dataset does not account for failed crop years. Currently only 30% of the Command Area is agricultural land but this is expected to change under the CAISAR project, once a more reliable source of water is provided. With a more reliable water supply, dry season rice cropping would be possible but farmers in Lum Hach explained they have limited technical experience and understanding of dry season rice so in order for this to be a success, it is critical that the CAISAR project provides adequate training.

123 As highlighted in the agronomy survey, the low soil quality in Lum Hach significantly limits crop yields and opportunities for expansion. Therefore, the CAISAR scheme proposes that between wet season rice crops, farmers grow cover crops such as mung bean to improve soil organic matter and fertility. This will have an indirect benefit to crop yields by improving soil productivity and therefore enhancing rice crop yields over time. Using cover crops has a further benefit of reducing input costs as farmers are required to use less fertilizer once the cover crops improve soil fertility. Crop rotation has the added benefit that it reduces the number of pests and diseases thereby reducing crop yield losses.

124 Additionally, farmers in Lum Hach could diversify to alternative horticultural crops such as cucumber, watermelon, pumpkin etc. between wet season crops to help increase soil organic content and interrupt the intensive rice cropping which inhibits the soil from rejuvenating.

125 **The Ou Ta Paong** Command Area is dominated by agricultural land (80%). Soil fertility is high, made up of 69% high productivity soil and 31% medium productivity soil. This is largely due to the low-land nature of the command area with the northern part lying within the active floodplain of the Tonle Sap which floods annually. There are two to three crops per year, producing 3.9 tons/ha in the wet season and 5.8 tons/ha in the dry season. Dry season rice crops typically produce more yield per hectare due to the rice variety that is used during this cropping period and the additional fertilizer that is applied.

126 The improved drainage and more reliable water supply to Ou Ta Paong will enable up to three rice crops per year. In addition, between rice crops, it may be possible for famers to cultivate vegetables. Currently, the majority of farmers are reluctant to do this due to the lack of reliable water source. Once this is resolved by the CAISAR project, farmers have said they would be willing to try vegetable cultivation.

127 The dominant cropping pattern in **Krang Ponley** consists primarily of wet season rice cropping. There is however variation between the provinces depending on soil quality and water availability. Where possible, a dry season recession crop is planted with a typical yield of 4.5 tons/ha. The wet season rice yields are slightly lower at 3.9 tons/ha. However, flood inundation of the command areas can result in crop failures and reduced yields, particularly during the wet season.

128 In Krang Ponley, the overall soil quality is medium and similar to Ou Ta Paong due to the low-lying topography and annual flood inundation (particularly in Krang Bat) of the command area. Due to the proximity to markets in Phnom Penh, more farmers in this sub-project area have moved away from rice farming to horticultural produce such as watermelon, long bean, corn, eggplant and pumpkin. Farmers can either rely solely on vegetables throughout the year or grow vegetables outside of the wet season rice cropping period.

4.6 Water Resources

129 Rainfall is extremely variable across Cambodia both spatially and temporally. The Southwest monsoon in Cambodia provides 87% of the yearly rainfall during the months of May to October (Salvadore

et al, 2020). As a result, Cambodia receives an abundant amount of water during this part of the year but can also experience extreme water shortages during the dry season. The extreme volumes of water during the wet season can lead to extensive flooding which can result in crop and infrastructure damage. This is particularly an issue where flood waters inundate irrigation command areas. On the other hand, prolonged periods of dry days can lead to drought in the dry season. In areas where there are limited areas for water storage, crops can become water stressed and crop yields may be reduced or entire crops may fail. Water scarcity is therefore primarily a result of a lack of water management and water storage capacity rather than an insufficient volume of water available annually (ADB, 2022).

130 The extreme variability in rainfall results in serious challenges for rice farmers, particularly during the first few months of the wet season, when rainfall is most erratic and early season droughts are common. Short droughts can occur prior to the wettest period at the end of August to the end of November. Such short droughts can last 15 days but occasionally they can be prolonged and last up to 60 days after the first monsoon rains (ADB, 2014). This causes additional difficulties for rice farmers, particularly those who are dependent on rain-fed irrigation. Irrigation infrastructure is often lacking or is damaged due to lack of investment and maintenance which should otherwise provide reliable water supplies during these dry periods.

131 Across the three CAISAR project command areas, the majority of rice farmers are reliant on rain-fed irrigation or recession rice which brings both challenges and opportunities. Due to the erratic and unpredictable nature of the climate, farmers are reluctant to take more risks and diversify their cropping patterns as they have no reliable water source to support their crops if a period of drought occurs. In addition, there is a lack of drainage and flood protection which additionally inhibits farmers from meeting their yield potentials. Climate Change will impact Cambodia's water resources and it is critical that this is taken into account at each stage of the CAISAR project including project design and hydrological and hydraulic modelling.

132 Extensive modelling has been undertaken as part of this feasibility study to ensure that there are sufficient water resources both under current and future scenarios, taking uncertainty into account. This is summarized in detail in the D4 modelling report and the results show that the project is feasible in terms of the available of water resources both now and in the future, to support the proposed yield increases in the 45,000 ha CAISAR project command areas.

4.7 Irrigation

133 Access to water is a challenge, particularly for those with irrigation schemes located close to the Tonle Sap as flooding in the wet season and shortage in the dry season can limit annual cropping intensity. Successful water resource management is therefore critical to ensuring that the CAISAR irrigation schemes are a success.

134 Rehabilitation and climate proofing of existing irrigation infrastructure will be key. Constructing irrigation ponds also forms part of an integrated and smart water resource management plan. Climate proofing involves securing the irrigation system's resilience and sustainability against longer droughts in the dry season and to mitigate the impacts of flood events.

135 Irrigation has the potential to increase Cambodia's potential rice yields. Currently, the dominance of low wet-season rice yield limits the productivity and profitability of Cambodian farmers. For example, Cambodia's wet-season rice is about 30% less than that of Thailand's Central Plains region (ADB, 2022). There are opportunities for crop diversification that are being explored but this is likely to be on a smaller scale than rice production.

136 The infrastructure proposed is a full package for water management improvements including storage, gravity supply without repumping where possible and use of solar pumping where it is not, drainage and flood control including allowance for aquatic animals and fish.

4.8 Biodiversity

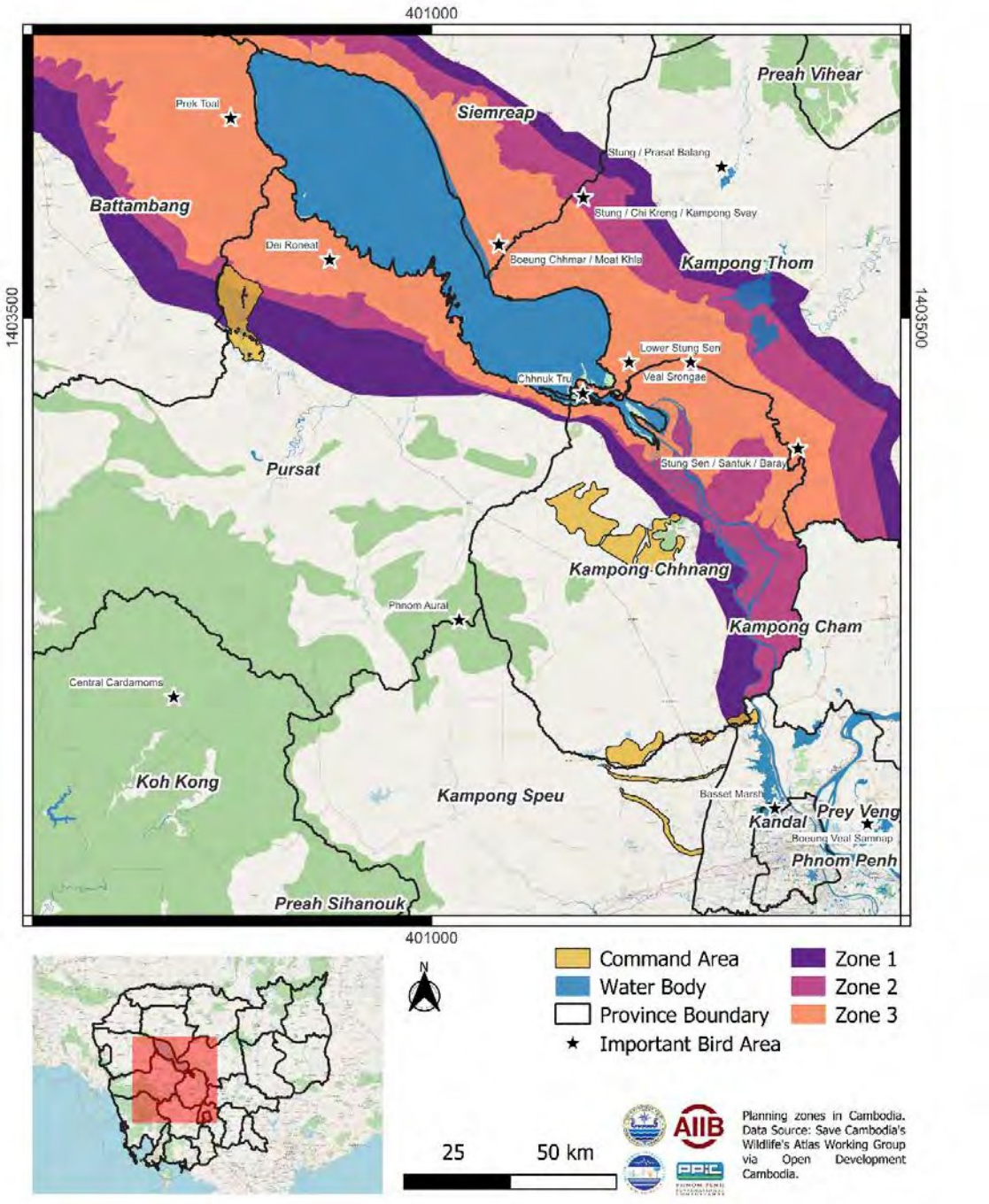
4.8.1 Designated areas and species of interest

137 The Feasibility Studies have noted the unique ecosystem in Tonle Sap lake and floodplain which is protected as a UNESCO Biosphere Reserve. The Great Lake itself if one of the most productive fisheries systems in the world, providing key breeding grounds for fish and 60% of Cambodia's protein intake. In addition, it is home to some of the largest breeding colonies of some of the world's most threatened water birds. This unique ecosystem faces unprecedented threats from population increases and pressure on natural resources. As a result, there are a number of conservation projects taking place to protect this precious environment and in 2021, the conservation areas surrounding the Tonle Sap Great Lake were updated and re-instated.

138 The agricultural protection zones are shown in Source: CAISAR Feasibility Study

139 Figure 4-8. The Zone 1 and 2 are areas where farming is allowed. In zone 1, people can live and obtain land title certificates. In zone 2, local communities are allowed to do land cultivation. In Zone 3, closest to the lake is where agriculture and fishing are officially banned and the areas of flooded forest must be protected and conserved. This re-zoning allows the government an opportunity to restore the Tonle Sap's unique forests.

140 The CAISAR command areas lie outside of zone 3. Most of the Ou Ta Paong command area falls within zones 1 and 2 where agricultural practices are permitted. The majority of the Lum Hach command area lies outside of the protection zones, with a small section to the north falling within zone 1. The majority of the Krang Ponley scheme falls outside of the protection zones although a small section of Krang Bat lies within zone 1. Based on this, there are no limitations on agricultural practices required by the Tonle Sap Agricultural Protection Zones.



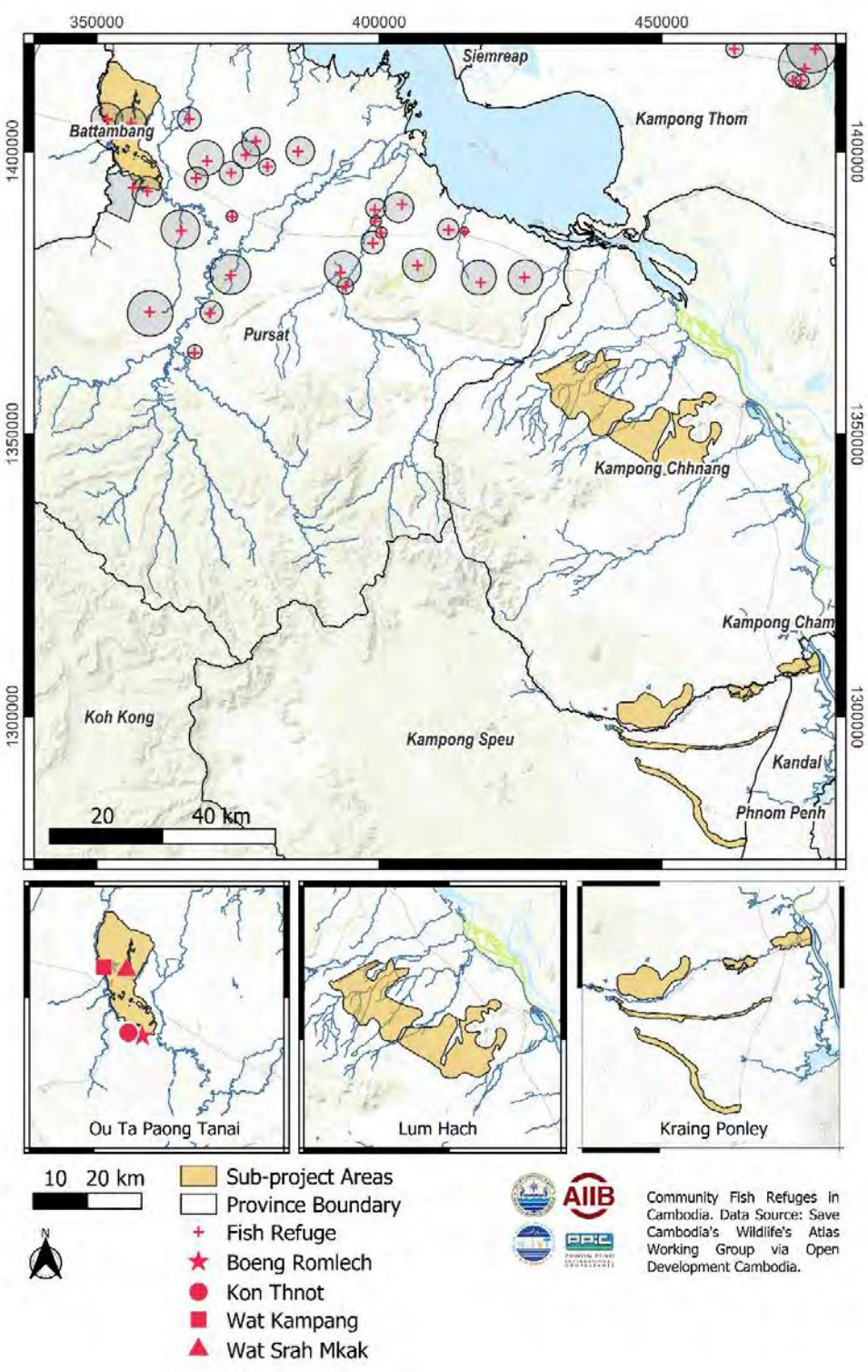
Source: CAISAR Feasibility Study

Figure 4-8 Tonle Sap Agricultural Protection Zones

141 Rice Field Fisheries are a vital source of food and income for almost all rural households in Cambodia. Fishing typically occurs during the wet season from July to February and takes place in and around flooded rice fields. Despite contributing 20-25% of the country's inland fish catch, community fish refuges are often poorly managed and have low productivity. Several projects, such as the USAID-funded Enhancing Rice Field Fisheries project, have been implemented to increase the productivity of these vital food production systems. Through improved management and inclusion of best-practice methods amongst local communities, the projects can ensure that fish are available and accessible to all poor and rural families. The location of Community Fish refuges in the CAISAR Command Areas are shown in
142 Figure 4-9. There are only 2 refuges in the Ou Ta Paong Command Area which should be considered during DED stage and allowance made in the scheme design to expand and enhance the number of fish refuges and the linkage through canals and rice fields.

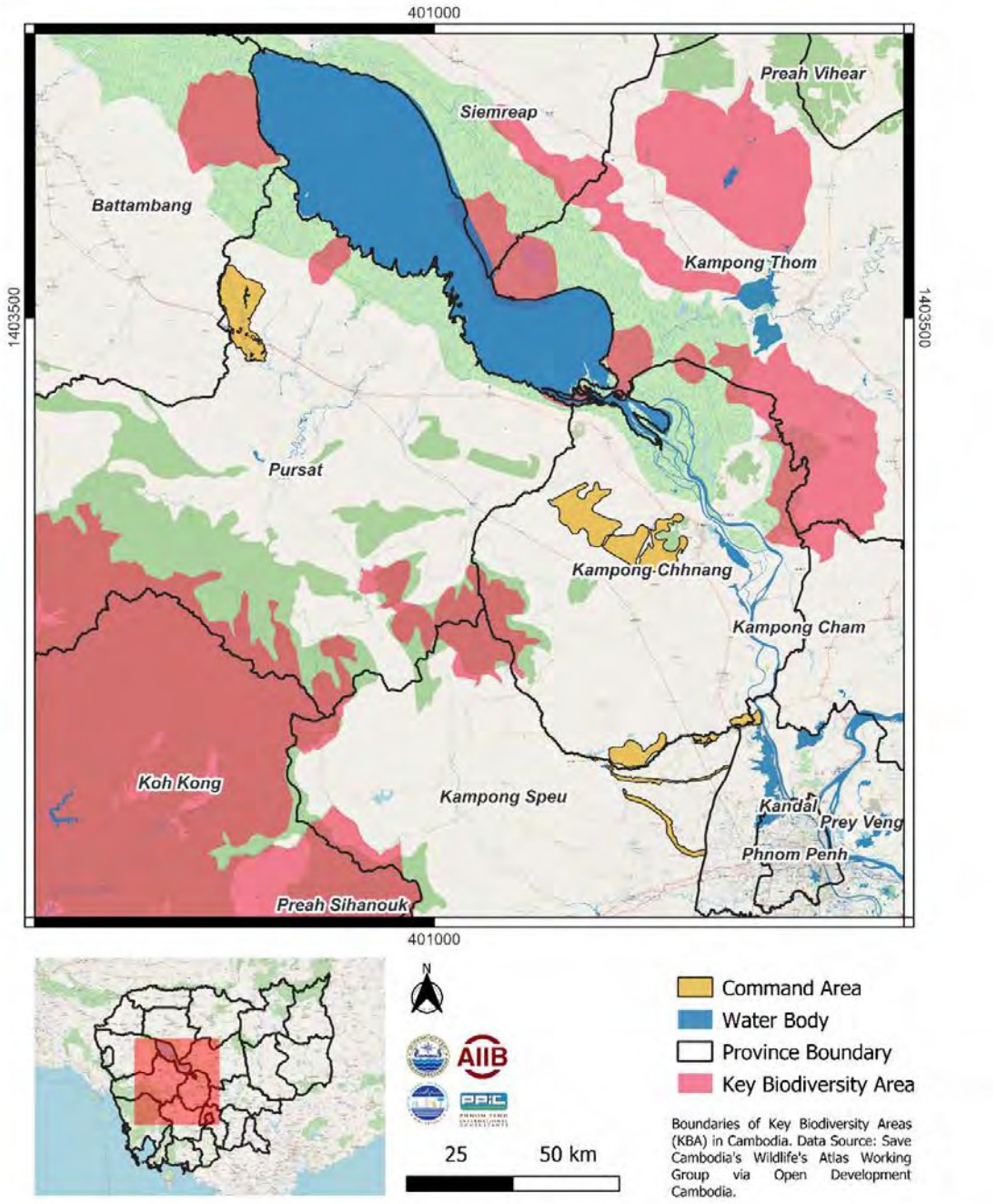
143 The key biodiversity areas are shown in Figure 4-10. The CAISAR Command Areas fall outside of these areas. However, due to the proximity, it is recommended that further analysis is undertaken during the SECAP analysis and DED to determine whether any further environmental considerations are needed.

144 The CAISAR Command areas are located largely outside of all the protected areas. The surrounding land use is dominated by paddy field thus, potential impact on local ecological features is not envisaged although this will be investigated further as part of the ESCIA.



Source: CAISAR Feasibility Study

Figure 4-9 Community Fish Refuges in the CAISAR Command Areas



Source: CAISAR Feasibility Study

Figure 4-10 Key Biodiversity Areas

4.8.2 IBAT Initial Biodiversity Assessment

145 The initial biodiversity assessment utilized the IBAT system. IBAT offers rapid visual screening for critical biodiversity. The tool is used as basic risk screening on biodiversity. This review provides an indication of the potential biodiversity related features including protected areas, key biodiversity areas and species close to the proposed project locations. It provides an early indication of potential biodiversity concerns and can provide valuable guidance in making decisions. The IBAT screening does not provide details of potential indirect, downstream, or cumulative impacts. This information may be helpful when assessing the potential environmental risk and impact of a site, categorizing investments/projects, preparing the terms of

reference or an impact assessment, focusing attention on key species of conservation concern and sites of known conservation value.

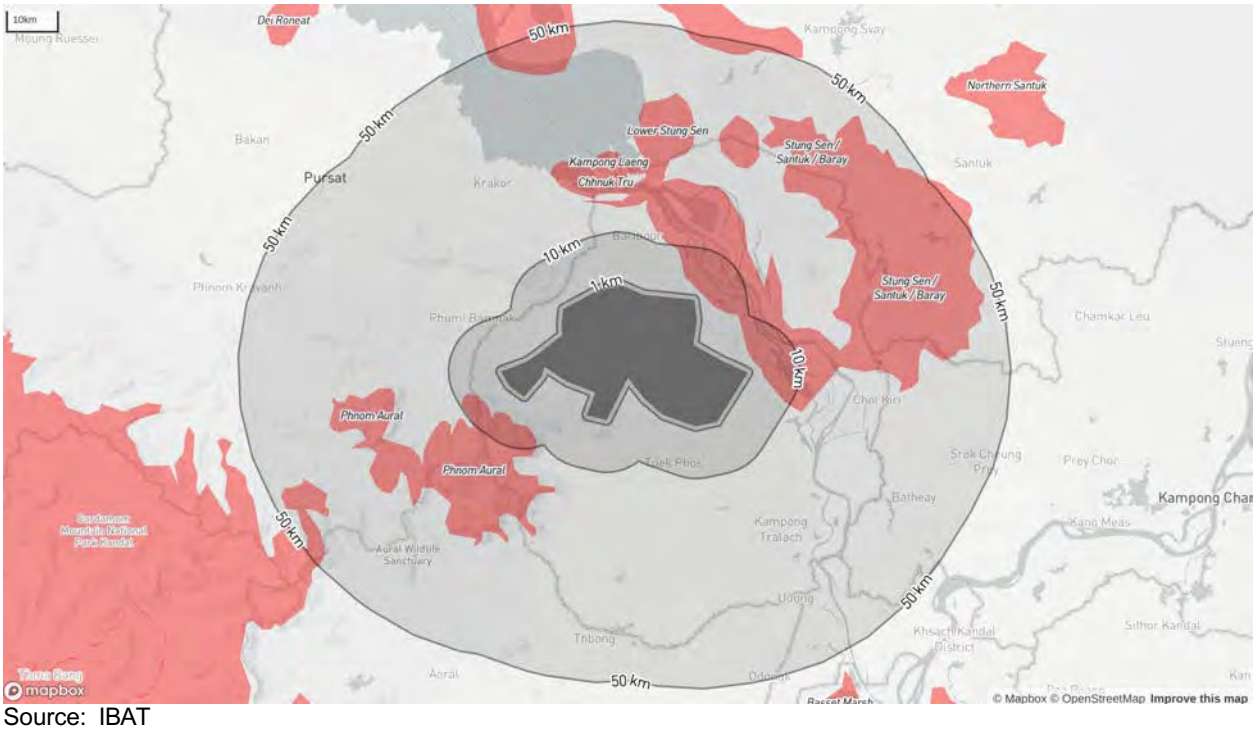
146 IBAT provides information on key biodiversity areas (KBA) which are sites contributing significantly to the global persistence of biodiversity in terrestrial, freshwater and marine ecosystems: information available from the World Database on Protected Areas (WDPA); and information form the IUCN Red List of Threatened Species (also known as the IUCN Red List) which is a compendium of information on threats, ecological requirements, and habitats and on conservation actions that can be taken to reduce or prevent extinctions (Figure 4-11, Figure 4-12, Figure 4-13).

4.8.3 Protected Areas, Key Biodiversity Areas and IUCN Threatened Species

Lum Hach Scheme

147 The IBAT assessment identified the following biodiversity features within a 5 km, 20 km and 50 km distance from the Lum Hach Irrigation and flood protection scheme.

- Protected Areas - 12
- Key Biodiversity Areas - 9
- IUCN Red List of Threatened Species – 96 (Annex ___)



Source: IBAT

Figure 4-11 IBAT Biodiversity Features around Lum Hach Scheme

148 The following protected areas were identified within a 5 km, 20 Km and 50 km radius of Lum Hach Scheme.

LH Protected Areas

Area Name	Within Buffer of KPL Project Area
Phnom Aoral – Wildlife Sanctuary	5 km
Phnom Krang Dey Meas – Protected Landscape	5 km
Tonle Sap – UNESCO-MAB Biosphere Reserve	5 km
Phnom Neang Kong Rey- Phnom Touk Meas – Multiple Use area	20 km
Boeng Chhmar Core Area (Ramsar Site)	50 km
Cardamom Corridor	50 km
Central Kravanh	50 km
North Tonle Sap	50 km
Stung Sen Core Area (Ramsar Site)	50 km

149 Key Biodiversity Areas within 5 km, 20 Km and 50 km of the Lum Hach Scheme included:

LH Key Biodiversity Areas

Area name	Distance
Kampong Laeng	5 km
Phnom Aural	5 km
Chhnuk Tru	20 km
Lower Stung Sen	20 km
Stung Sen / Santuk / Baray	20 km
Boeung Chhmar / Moat Khla	50 km
Central Cardamoms	50 km
Stung / Chi Kreng / Kampong Svay	50 km
Veal Srongae	50 km

150 The IBAT system identified 19 Critically Endangered Species and 31 Endangered Species in the IUCN Red List of Threatened Species within the 5 km, 20 and 50 km buffer areas of the Lum Hach Scheme.

Krang Ponley Scheme

151 The IBAT assessment identified the following biodiversity features within a 5 km, 20 km and 50 km distance from the Krang Ponley Irrigation and flood protection scheme.

- Protected Areas - 6
- Key Biodiversity Areas - 7
- IUCN Red List – 104 (Annex __)

Source: IBAT

Figure 4-12 IBAT Biodiversity Features around Krang Ponley Scheme

152 The following protected areas were identified within a 5 km, 20 and 50 km radius of Krang Ponley Scheme.

KPL Protected Areas

Area Name	Within Buffer of KPL Project Area
Cardamom Corridor	50 km
North Tonle Sap	50 km
Phnom Aoral	50 km
Phnom Krang Dey Meas	50 km
Phnom Neang kong Rey – Phnom Touk Meas	50 km
Souther Kravanh	50 km

153 Key Biodiversity Areas within 5 km, 20 and 50 km of the Krang Ponley Scheme included:

KPL Key Biodiversity Areas

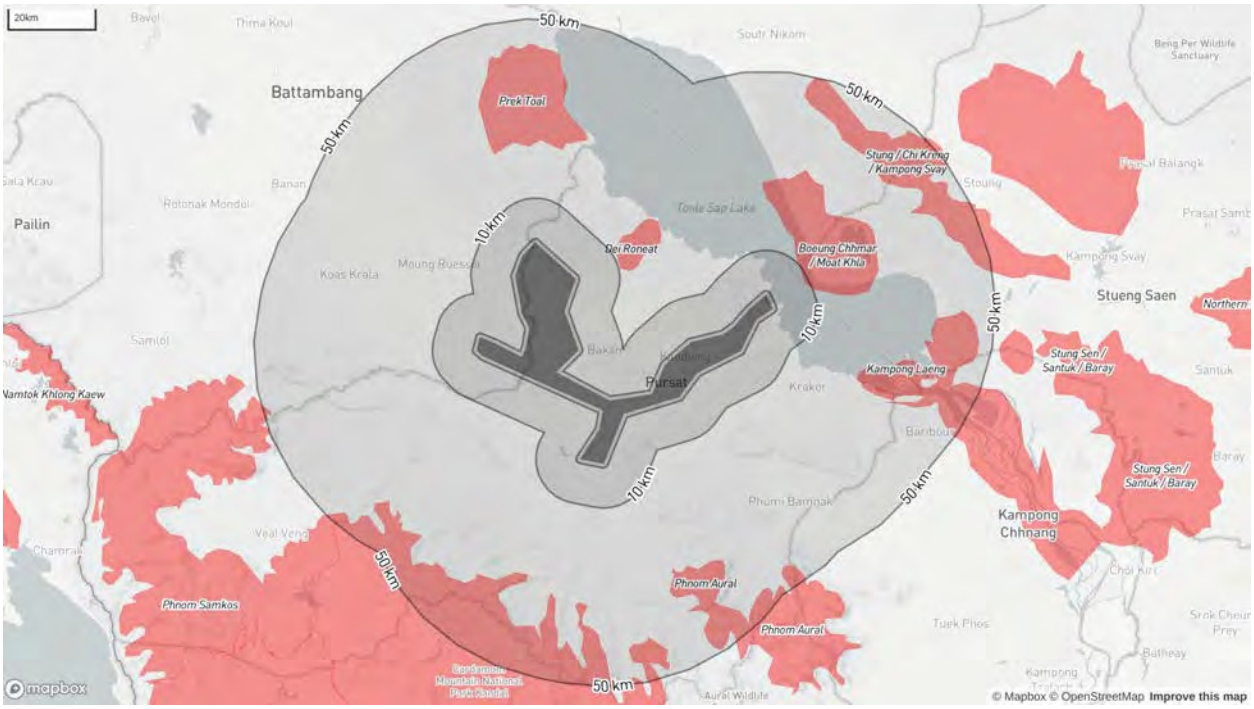
Area name	Distance
Basset Marsh	5 km
Boeung Veal Samnap	20 km
Bassac Marsh	50 km
Kampong Laeng	50 km
Phnom Aural	50 km
Southern Cardamoms	50 km
Stung Sen / Santuk / Baray	50 km

154 The IBAT system identified 18 Critically Endangered Species and 35 Endangered Species in the IUCN Red List of Threatened Species within the 5 km, 20 and 50 km buffer areas of the Krang Ponley Scheme.

Ou Ta Paong Scheme

155 The IBAT assessment identified the following biodiversity features within a 5 km, 20 km and 50 km distance from the Ou Ta Paong Irrigation and flood protection scheme.

- Protected Areas - 13
- Key Biodiversity Areas - 10
- IUCN Red List of Threatened – 97



Source: IBAT

Figure 4-13 IBAT Biodiversity Features around Ou Ta Paong Scheme

156 The following protected areas were identified within a 5 km, 20 Km and 50 km radius of Ou Ta Paong Scheme.

Protected Areas

Area Name	Within Buffer of KPL Project Area
Tonle Sap – UNESCO-MAB Biosphere Reserve	5 km
Boeng Chhmar Core Area (Ramsar Site)	20 km
Cardamom Corridor – Biodiversity Area of Protected Area	20 km
Central Kravanh	50 km
North Tonle Sap	50 km
Phnom Aoral	50 km
Phnom Somkos	50 km
Prek Toal Core Area (Ramsar Site)	50 km
Stung Sen Core Area (Ramsar Site)	50 km

157 Key Biodiversity Areas within 5 km, 20 Km and 50 km of the Ou Ta Paong Scheme included:

Key Biodiversity Areas

Area name	Distance
Boeung Chhmar / Moat Khla	20 km
Dei Roneat	20 km
Central Cardamoms	50 km
Chhnuk Tru	50 km
Kampong Laeng	50 km
Lower Stung Sen	50 km
Phnom Aural	50 km
Phnom Samkos	50 km
Prek Toal	50 km
Stung / Chi Kreng / Kampong Svay	50 km

158 The IBAT system identified 7 Endangered Species in the IUCN Red List of Threatened Species within the 5 km, 20 and 50 km buffer areas of the Ou Ta Paong Scheme.

159 The IBAT system analysis of biodiversity near the project areas suggests that a more detailed biodiversity assessment is required.

4.9 Assessment of Environmental, Social and Climate Risks, Impacts and Mitigation Measures

160 Potential risks, impacts and mitigation measures have been identified for the CAISAR irrigation and flood control protection schemes during the Pre-Construction Phase; Construction Phase and the Operations Phase in the provinces of Kampong Speu, Kampong Chhnang, Kandal, and Pursat Cambodia.

4.9.1 Pre-Construction Phase

161 Potential environmental, social, and climate-related risks and impacts to be considered specifically associated with the pre-construction phase of the planned CAISAR irrigation and flood protection project include:

4.9.1.1 Environmental Risks and Impacts (Pre-construction Phase):

1. **Habitat Assessment:** Before construction begins, there should be a thorough assessment of the project area's habitats to identify potential impacts on local flora and fauna.
2. **Vegetation Clearance**: Clearing land for construction can lead to habitat destruction and loss of biodiversity. Pre-construction activities like land clearing should be carefully planned and managed.
3. **Soil Erosion**: Pre-construction activities like excavation and grading can increase soil erosion, potentially affecting nearby water bodies and ecosystems.
4. **Land Use Changes**: Conversion of land for project purposes may alter local land use patterns, impacting agricultural and forestry activities.
5. **Waterbody Alteration:** The assessment of water bodies like rivers, streams, and wetlands should be conducted to understand potential impacts on aquatic ecosystems.
6. **Waste Management -** increase in volume of hazardous and non-hazardous waste requiring safe disposal.

4.9.1.2 Social Risks and Impacts (Pre-construction Phase):

1. **Land Acquisition:** The process of acquiring land for the project can disrupt local communities, potentially leading to land tenure issues and conflicts.
2. **Livelihood Disruption**: Even before construction starts, the anticipation of project impacts can disrupt local livelihoods as residents may alter their activities or move.

3. **Cultural Heritage**: Pre-construction surveys should identify any cultural heritage sites or traditions that may be affected, and appropriate measures should be taken to protect them.
4. **Community Engagement:** Engaging with local communities during the pre-construction phase is critical to understanding their concerns and needs, helping to design mitigation measures.
5. **Indigenous Peoples Exclusion –** Potential disbenefit to IP's or lack of inclusion in project benefits and opportunities.
6. **Gender Inequities –** Potential inequities and lack of project opportunities and benefits.

4.9.1.3 Climate Risks and Impacts (Pre-construction Phase) (See Annex 13: CAISAR Climate Change Impact Rationale)

1. **Climate Data Analysis:** It's important to analyze historical climate data during the pre-construction phase to identify climate-related risks that may affect project design and location.
2. **Future Climate Projections**: Understanding future climate projections, such as changes in rainfall patterns or increased frequency of extreme weather events, can inform the project's design for resilience.
3. **Adaptation Planning:** Pre-construction phase should involve planning for climate change adaptation measures, ensuring the project can withstand anticipated climate impacts.
4. **Mitigation Strategies:** Identifying opportunities to reduce greenhouse gas emissions associated with pre-construction activities, such as transportation or energy use, is important for climate mitigation.
5. **Data Collection**: Establishing baseline data on environmental conditions, community demographics, and climate variables during the pre-construction phase is crucial for monitoring and evaluation throughout the project's lifecycle.

162 During the pre-construction phase, thorough assessments, community consultations, and climate resilience planning should be integrated into the project's design to minimize environmental, social, and climate-related risks. This will help lay the foundation for a more sustainable and resilient project during the construction and operational phases.

163 Mitigation measures to address the environmental, social, and climate-related issues associated with the **pre-construction** phase of the CAISAR irrigation and flood protection project include:

4.9.1.4 Environmental Mitigation Measures (Pre-construction Phase):

1. **Habitat Assessment and Preservation:**
   - Conduct a detailed habitat assessment and implement measures to preserve critical habitats, such as wetlands and forests, by avoiding or minimizing construction within these areas.
2. **Revegetation and Reforestation**:
   - Implement reforestation and revegetation programs in areas where land clearance is necessary. Use native species to restore habitats.
3. **Soil Erosion Control**:
   - Implement erosion control measures, such as silt fences, erosion control blankets, and sediment basins, to prevent soil erosion during pre-construction activities.
4. **Sustainable Land Use Planning**:
   - Work with local authorities and communities to develop land use plans that minimize negative impacts on agriculture and forestry.
5. **Water Management:**
   - Develop and implement a water management plan to minimize waterbody alteration during pre-construction activities.
6. **Waste Management**:

- Prepare and implement waste management plan.

4.9.1.5 Social Mitigation Measures (Pre-construction Phase):

1. **Land Acquisition and Resettlement:**
   - Follow Resettlement Planning Framework and develop a fair and transparent land acquisition and resettlement plan, ensuring affected communities are adequately compensated and resettled, if necessary.
2. **Livelihood Restoration**:
   - Implement livelihood restoration programs, such as vocational training and alternative income generation activities, to mitigate disruptions caused by pre-construction activities.
3. **Cultural Heritage Protection**:
   - Identify and protect cultural heritage sites and traditions through measures like site preservation, documentation, and community involvement.
4. **Community Engagement**:
   - Engage in meaningful consultations with local communities to gather their input and concerns and incorporate their feedback into project planning and design.
5. **Indigenous Peoples:**
   - Implement IPP and ensure full participation of vulnerable or disadvantages groups (e.g., ethnic minorities).
6. **Gender Participation**:
   - Implement Gender Action Plan and measures to promote female beneficiaries for improved participation in project planning and implementation, and economic empowerment.

4.9.1.6 Climate Mitigation and Adaptation Measures (Pre-construction Phase):

1. **Climate-Resilient Design**:
   - Incorporate climate resilience into the project design by considering future climate projections and ensuring infrastructure can withstand extreme weather events and changing climate conditions.
2. **Low-Carbon Practices**:
   - Minimize greenhouse gas emissions from pre-construction activities by using energy-efficient machinery, promoting green transportation, and reducing construction-related emissions.
3. **Adaptive Management:**
   - Develop adaptive management plans that can be adjusted based on changing climate conditions, ensuring the project's long-term viability.
4. **Baseline Data Collection**:
   - Establish baseline data for environmental, social, and climate variables during the pre-construction phase to enable effective monitoring and evaluation throughout the project's lifecycle.
5. **Climate Risk Assessments:**
   - Regularly assess climate risks and vulnerabilities during the pre-construction phase to identify emerging issues and adjust plans accordingly.
6. **Community Resilience**:
   - Support local communities in building resilience to climate change through capacity-building programs, education, and access to climate-resilient livelihood options.
7. **Green Infrastructure:**
   - Consider the use of green infrastructure solutions, such as natural flood management techniques, to complement traditional engineering approaches and enhance climate resilience.

164 It's essential that these mitigation measures are integrated into the project's planning and design from the early stages of the pre-construction phase. Collaboration with relevant stakeholders, including local communities, environmental experts, and climate specialists, is crucial to ensure the successful implementation of these measures and the overall sustainability of the project. Regular monitoring and evaluation is also essential to assess the effectiveness of these mitigation efforts and make necessary adjustments as needed.

4.9.2 Construction Phase

165 The potential environmental, social, and climate-related risks and impacts to be considered that are associated with the construction phase of the CAISAR irrigation and flood protection project include:

4.9.2.1 Environmental Risks and Impacts (Construction Phase):

1. **Habitat Destruction:** Construction activities can result in the direct destruction of natural habitats, including wetlands, forests, and aquatic ecosystems.
2. **Soil Erosion and Sedimentation:** Excavation, grading, and land clearing can increase soil erosion, leading to sedimentation in nearby water bodies, affecting water quality and aquatic ecosystems.
3. **Water Pollution**: Construction machinery, equipment, and runoff from construction sites can introduce pollutants, such as sediment, oil, and chemicals, into nearby water bodies.
4. **Noise and Air Pollution:** Construction activities generate noise pollution and emissions from heavy machinery, impacting local air quality and disturbing wildlife.
5. **Resource Consumption**: Construction materials, water, and energy are often consumed in large quantities, leading to resource depletion and increased carbon emissions.
6. **Waste Management** – increase in volume of hazardous and non-hazardous waste requiring safe disposal.

4.9.2.2 Social Risks and Impacts (Construction Phase):

1. **Displacement and Resettlement:** The construction phase may require the displacement of local households leading to potential land tenure issues and disruption of livelihoods.
2. **Traffic and Access Disruption**: Increased construction-related traffic can disrupt local transportation networks, impacting communities and businesses along transportation routes.
3. **Health and Safety:** Construction sites pose health and safety risks to workers and nearby communities. Accidents and exposure to construction-related hazards can have serious consequences.
4. **Cultural Heritage:** Construction activities and in migration of labor may threaten cultural heritage sites or disrupt local traditions and practices, leading to social and cultural impacts.
5. **Indigenous Peoples Exclusion –** Potential disbenefit to IP's or lack of inclusion in project benefits and opportunities.
6. **Gender Inequities –** Potential inequities and lack of project opportunities and benefits.

4.9.2.3 Climate Risks and Impacts (Construction Phase):

1. **Emissions**: Construction machinery and transportation can generate significant greenhouse gas emissions, contributing to climate change if not properly managed.
2. **Climate-Related Disruptions**: Extreme weather events, such as heavy rainfall or flooding, can disrupt construction activities, leading to delays and increased costs.
3. **Water Management**: Managing water resources during construction, including temporary diversion of rivers or drainage, can impact local hydrology and potentially lead to downstream flooding.
4. **Infrastructure Vulnerability:** The construction phase may expose infrastructure to climate risks, such as flooding or storm damage, if proper precautions and design considerations are not taken into account.
5. **Temperature Extremes**: Construction workers may be exposed to temperature extremes, including heat stress in hot seasons and cold stress during cooler months, affecting worker health and productivity.

166 To address these risks and mitigate negative impacts during the construction phase, it's essential to implement environmental and social management plans. These plans will include measures to minimize habitat destruction, control pollution, ensure worker safety, and engage with local communities.

167 Additionally, climate resilience measures will be integrated into the construction process to mitigate climate-related risks and ensure the infrastructure's long-term sustainability. Regular monitoring and adherence to best practices will be implemented to minimize adverse effects during this phase of the project.

168 Suggested mitigation measures to address the potential environmental, social, and climate-related risks and impacts associated with the **construction phase** of the CAISAR irrigation and flood protection include.

4.9.2.4 Environmental Mitigation Measures (Construction Phase):

1. **Habitat Protection and Restoration:**
   - Establish construction exclusion zones around sensitive habitats to prevent disturbance.
   - Implement habitat restoration programs in areas where construction has occurred.
2. **Erosion and Sediment Control:**
   - Install erosion control measures such as silt fences, sediment basins, and check dams to prevent soil erosion.
   - Implement best management practices for construction site runoff, including sediment ponds.
3. **Water Pollution Control:**
   - Properly manage construction chemicals, fuels, and waste to prevent water pollution.
   - Use environmentally friendly construction materials and techniques to reduce the risk of pollution.
4. **Noise and Air Pollution Management:**
   - Implement noise barriers and schedule noisy activities during non-sensitive hours.
   - Ensure construction equipment meets emissions standards and maintain equipment properly.
5. **Resource Efficiency:**
   - Reduce resource consumption by optimizing construction material use and recycling where feasible.
   - Implement energy-efficient construction practices and use renewable energy sources where possible.
6. **Waste Management**
   - Implement waste management plan

4.9.2.5 Social Mitigation Measures (Construction Phase):

1. **Community Engagement:**
   - Maintain ongoing communication with affected communities to address concerns and keep them informed about construction activities.
   - Implement grievance mechanism to address community complaints and issues promptly.
2. **Displacement and Resettlement:**
   - Implement resettlement plans, ensuring affected communities receive fair compensation, land, and livelihood restoration support.
   - Support affected households in finding alternative housing and income opportunities.
3. **Health and Safety:**
   - Enforce strict health and safety regulations on construction sites to protect both workers and nearby communities.
   - Provide appropriate training and personal protective equipment to workers.
4. **Cultural Heritage Protection:**

- Conduct archaeological surveys before construction in culturally sensitive areas.
- Develop mitigation strategies to protect cultural heritage sites and involve local communities in preservation efforts.

5. **Indigenous Peoples:**
   - Implement IPP and ensure full participation of vulnerable or disadvantages groups (e.g., ethnic minorities).
6. **Gender Participation:**
   - Implement Gender Action Plan and measures to promote female beneficiaries for improved participation in project planning and implementation, and economic empowerment.

4.9.2.6 Climate Mitigation and Adaptation Measures (Construction Phase):

1. **Emission Reduction:**
   - Use low-emission construction equipment and vehicles.
   - Minimize idling time for construction machinery to reduce emissions.
   - Promote sustainable transportation options for workers and materials.
2. **Climate-Resilient Construction:**
   - Incorporate climate-resilient design features into infrastructure construction to withstand climate-related risks.
   - Implement flood and stormwater management measures to prevent construction site flooding.
3. **Temperature Extremes:**
   - Implement heat stress prevention measures for workers, such as shaded rest areas and hydration stations in hot weather.
   - Provide adequate clothing and equipment for workers during cold weather.
4. **Community Resilience Building:**
   - Support local communities in building climate resilience by providing training and resources for climate adaptation.
5. **Monitoring and Compliance:**
   - Establish regular monitoring and reporting mechanisms to ensure compliance with environmental, social, and climate mitigation measures.
   - Conduct periodic audits to assess the effectiveness of mitigation efforts and make necessary adjustments.

169 These mitigation measures should be integrated into the construction management plan and closely monitored throughout the construction phase. Collaboration with relevant stakeholders, including local communities, environmental experts, and safety professionals, is essential to ensure successful implementation and the overall sustainability of the project.

4.9.3 Operations Phase

170 The potential environmental, social, and climate-related risks and impacts associated with the operations phase of the planned CAISAR irrigation and flood protection project include:

4.9.3.1 Environmental Risks and Impacts (Operations Phase):

1. **Water Management**: Inadequate water management during operations can lead to over-extraction of water resources, which may cause downstream water scarcity, altered hydrology, and harm to aquatic ecosystems.

2. **Water Quality**: The irrigation system's operations can affect water quality, with potential risks of contamination from agricultural runoff, pesticide use, or improper wastewater disposal.
3. **Erosion and Sedimentation:** Ongoing maintenance and operation activities can contribute to soil erosion and sedimentation in water bodies, impacting water quality and aquatic habitats.
4. **Invasive Species:** Poorly managed water flows can facilitate the spread of invasive aquatic species, potentially harming native ecosystems.
5. **Energy Use:** The energy requirements for pump stations, flood control systems, and other infrastructure elements can result in increased carbon emissions if not managed efficiently.
6. **Waste Management -** increase in volume of hazardous and non-hazardous waste requiring safe disposal.

4.9.3.2 Social Risks and Impacts (Operations Phase):

1. **Land Use Conflicts**: Conflicts over water allocation and land use may arise among competing stakeholders, such as farmers, leading to disputes and social tensions.
2. **Access to Water:** Unequal access to water resources during the operations phase can exacerbate social inequalities, impacting vulnerable communities and livelihoods.
3. **Health and Safety:** Ongoing maintenance and operations work can pose health and safety risks to workers and nearby communities, particularly if safety measures are inadequate.
4. **Community Engagement**: Maintaining effective communication and engagement with local communities is crucial to address their concerns and ensure the equitable distribution of benefits.
5. **Indigenous Peoples Exclusion –** Potential disbenefit to IP's or lack of inclusion in project benefits and opportunities.
6. **Gender Inequities –** Potential inequities and lack of project opportunities and benefits.

4.9.3.3 Climate Risks and Impacts (Operations Phase):

1. **Climate Variability:** Changes in rainfall patterns, increased temperature, or more frequent extreme weather events can affect water availability and the effectiveness of flood protection systems.
2. **Extreme Events**: The irrigation and flood protection infrastructure must be resilient to withstand extreme weather events, including floods, droughts, and storms.
3. **Maintenance Challenges**: Climate-related impacts, such as increased sedimentation or infrastructure damage from extreme events, can pose challenges for ongoing maintenance and operations.
4. **Energy Efficiency**: Climate mitigation efforts should focus on optimizing energy use and transitioning to cleaner energy sources to reduce greenhouse gas emissions associated with ongoing operations.
5. **Adaptive Management:** The operations phase should include adaptive management strategies to respond to changing climate conditions and ensure infrastructure remains effective.
6. **Community Resilience**: Local communities will require support to build resilience to climate-related risks, such as training in climate-smart agriculture or flood preparedness.
7. **Water Management**: Climate-related changes may necessitate adjustments in water management practices to ensure sustainable and equitable water distribution.

171 Addressing these potential risks and impacts during the operations phase requires proactive planning, ongoing monitoring, and adaptive management. Sustainable water management practices, efficient energy use, and community engagement are crucial components of mitigating these issues and ensuring the long-term success and resilience of the irrigation and flood protection project. Regular maintenance and assessment of the infrastructure's performance under changing climate conditions are essential for its continued effectiveness.

172 Suggested mitigation measures to address the potential environmental, social, and climate-related risks and impacts during the operations phase of the CAISAR irrigation and flood protection project include:

4.9.3.4 Environmental Mitigation Measures (Operations Phase):

1. **Sustainable Water Management:**
   - Implement efficient water management practices to prevent over-extraction and ensure equitable water distribution.
   - Monitor water quality regularly and implement measures to reduce contamination, such as the responsible use of pesticides and proper wastewater treatment.
2. **Erosion and Sedimentation Control:**
   - Develop and implement erosion control measures to minimize soil erosion and sedimentation in water bodies.
   - Regularly maintain sediment basins and silt fences to manage sediment runoff.
3. **Invasive Species Management:**
   - Implement monitoring and control programs to prevent the spread of invasive aquatic species in irrigation and flood protection infrastructure.
4. **Energy Efficiency:**
   - Optimize energy use through efficient pump systems, renewable energy integration, and regular maintenance of energy-consuming equipment.
5. **Waste Management**
   - Implement waste management plan.

4.9.3.5 Social Mitigation Measures (Operations Phase):

1. **Stakeholder Engagement:**
   - Maintain transparent and ongoing engagement with local communities and stakeholders to address concerns and ensure the equitable distribution of water resources.
   - Establish mechanisms for conflict resolution and dispute management related to land use and water allocation.
2. **Access to Water:**
   - Ensure that water access is fair and inclusive, with mechanisms in place to support vulnerable and marginalized communities in accessing water resources.
3. **Health and Safety:**
   - Continue to enforce strict health and safety regulations for workers and nearby communities during ongoing maintenance and operation activities.
   - Provide ongoing safety training and personal protective equipment to workers.
4. **Indigenous Peoples:**
   - Implement IPP and ensure full participation of vulnerable or disadvantages groups (e.g., ethnic minorities).
5. **Gender Participation:**
   - Implement Gender Action Plan and measures to promote female beneficiaries for improved participation in project planning and implementation, and economic empowerment.

4.9.3.6 Climate Mitigation and Adaptation Measures (Operations Phase):

1. **Climate-Resilient Infrastructure:**
   - Regularly assess and maintain flood protection and irrigation infrastructure to ensure its resilience to changing climate conditions.
   - Develop flood and drought management strategies based on climate projections.
2. **Maintenance and Repairs:**

- Implement a robust maintenance program to promptly address damage or sedimentation issues caused by climate-related events.
- Ensure that infrastructure components remain in good working condition to maintain their effectiveness.

3. **Energy Transition:**
   - Transitioning to cleaner energy sources for operation, implement and maintain solar solar pumps to reduce carbon emissions.
   - Promote energy-efficient practices within the operational phase.
4. **Adaptive Management:**
   - Establish adaptive management plans that allow for adjustments in water management and infrastructure operations in response to climate variability and extreme events.
5. **Community Resilience Building:**
   - Support local communities in building climate resilience through education, capacity-building programs, and climate-smart agriculture practices.
   - Encourage community-led initiatives for flood preparedness and disaster risk reduction.
6. **Water Management Adjustments:**
   - Be prepared to adjust water management practices, such as reservoir release schedules, in response to changing climate conditions and hydrological patterns.
7. **Monitoring and Reporting:**
   - Continue regular monitoring and reporting on environmental, social, and climate-related factors to assess the effectiveness of mitigation efforts and make necessary adjustments.

173 These mitigation measures will be integrated into the ongoing operation and maintenance plan for the CAISAR irrigation and flood protection infrastructure. Collaboration with relevant stakeholders, including local communities, environmental experts, and climate specialists, is essential to ensure the successful implementation of these measures and the long-term sustainability and resilience of the project during the operations phase. Regular evaluation and adaptation are critical components of managing risks and impacts effectively.

174 The CAISAR irrigation and flood protection project is planned to have the following positive environmental, social, and climate impacts:

4.9.4 Positive Environmental, Social and Climate Impacts:

4.9.4.1 Positive Environmental Impacts:

1. **Improved Water Management:** Irrigation systems help optimize water use, reducing wastage and ensuring efficient distribution of water resources. This will mitigate water scarcity issues and enhance ecosystem health.
2. **Increased Crop Yields**: Irrigation can significantly increase agricultural productivity, reducing the need to expand agricultural land into forests and natural habitats, thereby preserving biodiversity.
3. **Reduced Soil Erosion:** Flood protection measures can prevent soil erosion caused by heavy rains and floods, which helps maintain soil fertility and prevents sedimentation in rivers and water bodies.
4. **Enhanced Ecosystem Services**: Sustainable water management will positively impact wetland ecosystems by maintaining water levels and preserving habitats for aquatic plants and wildlife.

4.9.4.2 Positive Social Impacts:

1. **Improved Food Security**: Increased agricultural productivity due to irrigation will lead to greater food security for local communities, reducing dependence on external food sources.
2. **Poverty Alleviation**: Higher crop yields will enhance the income and livelihoods of local farmers, potentially reducing poverty rates in the region.
3. **Health Benefits**: Access to clean water for irrigation will improve public health by reducing waterborne diseases and improving sanitation practices.
4. **Employment Opportunities:** The construction and maintenance of irrigation and flood protection infrastructure will generate employment opportunities for local communities.
5. **Infrastructure Development:** The project will improve transportation and connectivity, making it easier for people to access markets, healthcare, and educational facilities.

4.9.4.3 Positive Climate Impacts:

1. **Climate Resilience:** Flood protection infrastructure will help communities adapt to climate change by reducing the impacts of extreme weather events and flooding.
2. **Carbon Sequestration**: Irrigation will enhance the carbon sequestration capacity of soils, contributing to climate change mitigation efforts.
3. **Reduced Emissions**: By increasing agricultural productivity and reducing the need for land conversion, the project will indirectly help reduce greenhouse gas emissions associated with deforestation and land-use changes.
4. **Improved Water Efficiency**: Efficient irrigation practices will reduce the energy and water requirements for agriculture, which can lower greenhouse gas emissions associated with water pumping and distribution.

175 The success of the CAISAR project depends on effective planning, sustainable practices, and community engagement. Environmental impact assessments and social safeguards will be in place to mitigate any potential negative consequences and ensure the long-term sustainability of these positive impacts.

5. PROCEDURES FOR REVIEW, CLEARANCE, AND IMPLEMENTATION OF SUBPROJECT E&S INSTRUMENTS

5.1 Objective and Approach

176 Since some of the activities and subprojects will be identified during implementation, this ESCMF was prepared to apply to all subprojects and investment activities. The main objective of the ESCMF process is to ensure that the subprojects and activities financed by the project will not create adverse impacts on the local environment and communities, and the residual and/or unavoidable impacts are mitigated in line with the IAAB, IFAD and GCF safeguards standards.

177 During implementation, identified activities/subprojects will be screened for and given a risk classification based on their E&S issues and applicable safeguards standards (ESSs), after which any necessary environmental and social assessment (ESA) and other E&S instruments will be prepared based on the requirements laid out in this ESCMF. The assessments, instruments, and mitigation measures will be proportionate to the nature and scale and the potential risks and impacts of the project and consistent with the requirements of IAAB, IFAD, the GCF, and national laws/regulations. The safeguards plans prepared for subprojects may include but are not limited to: Environmental and Social Management Plans (ESCMPs); including health and workers issues related to sexual exploitation and abuse (SEA); and IP Plans. Terms of reference, work plans, and documents defining the scope and outputs of any site-specific safeguard's capacity building activities (for example, through the annual Information, Education, and Communication program) will be drafted so that the advice and support provided is also consistent with the IAAB, IFAD and GCF safeguards standards. Based on the initial sub-project safeguards screening, any subsequent ESA would: (i) cover the requirements established under the relevant safeguard standard for that subproject; and (ii) identify the environmental and social risks and impacts including direct, indirect, cumulative, and residual impacts.

5.2 Key Steps

178 The ESCMF process is comprised of four steps, as depicted in **Figure 7** and summarized below:

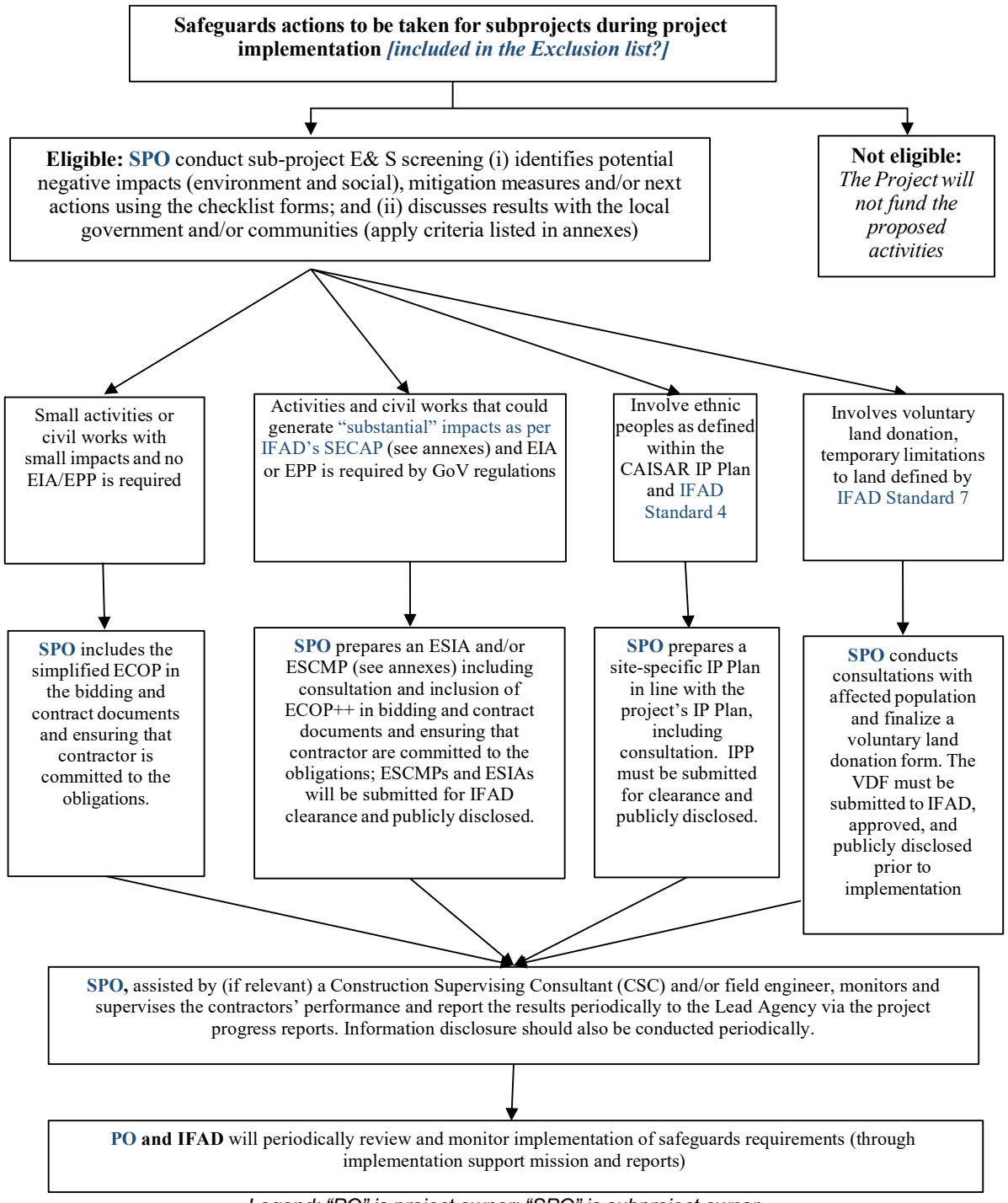
STEP 1: Screening for eligibility and E&S issues including risks and impacts using screening criteria, application of ESSs, and identification of and needs for preparation and implemenation of E&S documents/instruments.

STEP 2: Prepare E&S documents, including the development of mitigation measures in the ESCMP, IP Plan, and RP to be incorporated into bidding and contractual documents and subjected to close monitoring of the contractor performance. ESCMPs clearly identify mitigation measures for potential negative impacts during site clearance and construction, including the management of contractors, chance finds, EHS application, and workers' Codes of Conduct.

STEP 3: Clearance and disclosure of E&S documents; and

STEP 4: Implementation, monitoring, and reporting.

179 The risk analysis, impact assessment, and preparation of E&S documents for all subprojects will be carried out during implementation. A full ESIA is being conducted for the project. Preparation of a subproject ESCMP occurs when the subproject activities have been clearly identified and locations are known. During the preparation of the ESCMP, due attention will be given to address the issues of biodiversity conservation and sustainable management of living natural resources, resource efficiency and pollution prevention, labour and working conditions, community health and safety, indigenous persons/ethnic minorities, women, cultural heritage, and stakeholder engagement and information disclosure.



Legend: "PO" is project owner; "SPO" is subproject owner

Figure 5-1: Flowchart for Safeguard Actions for Subprojects

180 Key safeguards actions can be highlighted as follows:

- Small works to be carried out under Component 2 will incorporate a site-specific ESCMP requirements and an ECOP into the bidding documents and consultant contracts, with contractor performance closely monitored by the responsible persons of the implementing agencies.
- If screening highlights the need for voluntary land donation or temporary disruption to land use, a Voluntary Land Donation form must be prepared and consulted upon (in line with the VGGT principles and IFAD Standard 7), as well as approved and disclosed prior to sub-project implementation.
- If the ethnic minorities are present in the subproject, a site-specific IP Plan will be prepared and implemented according to IFAD Standard 4 and the guidelines can found in the project's overarching IP Plan.
- All the major E&S documents of a given subproject will be submitted for IFAD clearance before their respective approval and implementation.

5.3 E&S Risk and Impact Assessment

181 This step (Step 1) aims to confirm the eligibility of subproject and/or activities to be financed by the Project as well as identify the potential E&S issues and assess potential impacts of the subprojects/activities including needs for preparation of E&S documents as required by IFAD/GCF standards using an E & S screening checklist. The agencies responsible for implementing the subproject/activity will be responsible for undertaking and signing the screening forms. PPMUs will each be responsible for screening their own activities. Consultation with IFAD safeguards specialists can be made as needed, depending on subproject complexity.

5.4 Development of E&S Documents

182 This step (Step 2) is focused on preparing safeguards documents in relation to the issues identified in Step 1. Guidelines for the preparation of an ESCMP are provided in the annexes, whereas a project-level SEP and IP Plan have been developed separately. Again, PPMUs will be responsible for their own activities and subprojects, and their corresponding safeguards specialists will be responsible for the preparation of E&S documents. Consultation with IFAD safeguards specialists for complex subprojects will be made as needed.

183 It is also crucial that the implementing agencies of the subprojects and activities are responsible for preparation of E&S documents (e.g. EPP, EIA, etc.) required by the Government of Cambodia's EIA regulation and secure approval of responsible agencies.

5.5 Review, Approval, and Disclosure of E&S Documents

184 **IFAD review and clearance:** Before approval and commencement of subproject works, the Subproject Officer (SPO) will submit all key E&S documents to IFAD for review, clearance, and public disclosure. For CAISAR, it is suggested that IFAD conduct reviews of the first three ESCMPs prepared by each province and may then reduce (or increase) frequency as needed. The approval process described herein may also be reviewed occasionally, particularly once the E&S capacity of the implementation partners has been built with the support of the E&S capacity-building consultants/project safeguards specialists. At that point, IFAD may choose to review ESCMPs selected at random.

185 All E&S documents will be posted on the official websites of MOWRAM and the project provinces, and hardcopies in the Khmer language will be available at the CPMU, PPMU, and subproject sites. The CPMU and PPMUs must publish a notification of disclosure of information and solicit comments within the month following that disclosure date. The English version of the ESCMPs will be disclosed on the IFAD (and potentially GCF) website(s).

186 Government approval: Responsible agencies are also required to approve the ESIA or EPP documents as required by Government regulation. Any prepared EIA (in Khmer or English) as well as the approval conditions will be provided to IFAD for information and will be disclosed to the public.

5.6 Implementation, Supervision, Monitoring, and Reporting

187 ESCMF implementation, supervision, monitoring, and reporting is an integral part of project and subproject implementation. Each E&S staff is responsible for specific activities. IFAD SECAP specialists also supervise and monitor the implementation of safeguards activities during IFAD project supervision missions. Delegation of responsibilities is as follows:

- ***Gender Action Plan and IP Plan monitoring:*** The PPMU will hire a social inclusion/gender specialist to monitor the implementation of the IP Plan and GAP and report results to IFAD.
- ***E&S monitoring of contractor performance during construction:*** To ensure compliance with the national laws and regulations as well as some specific requirements of the IFAD SECAP standards at subproject level, PPMUs will hire a qualified national consultant to conduct monthly monitoring and reporting while assigning the Construction Supervision Consultant (CSC) or field engineers to be responsible for monitoring and reporting of contractor's compliance to the construction-focused ESCMPs on a day-to-day basis. At the project level, the PPMU Environmental Safeguards Specialist will ensure monitoring of environmental and social performance at sub-project sites and of the construction contractor throughout construction. The Environmental Safeguards Specialist will report their findings in the Project E&S monitoring reports for IFAD and GCF (this will be done on a six-month basis, or as agreed with IFAD and GCF in accordance with the legal agreement). The PPMU will also be responsible for monitoring and evaluating implementation of the Stakeholder Engagement Plan, including responses to grievances and/or complaints of the project/subproject affected peoples as well as the project workers (see Section 10).
- ***E&S monitoring during implementation of activities/operation of infrastructure:*** Specialized training will be provided on risks inherently associated with project activities that involve waste management, occupational health and safety, and community health and safety. E&S staff must pay extra attention – proportional to the more substantial risks – to those activities during implementation. To ensure sustainability after project closure, the awareness and capacity of MOWRAM/PDWRAM staff and related implementing agencies must be increased through trainings and during implementation supervision. This will require E&S capacity building consultants (including extension staff). PPMUs will detail safeguards progress in the subprojects' E&S monitoring reports for submission to the CPMU. The CPMU will then aggregate and submit the information to IFAD and the GCF.

6. IMPLEMENTATION ARRANGEMENTS

6.1 Responsibility for ESCMF Implementation

188 The feasibility study included recommendations on how the CAISAR Project should be implemented and is summarized in the following paragraphs. The CAISAR project has a clear objective related to both climate and poverty, but the ambitious scope requires cooperation between government agencies. The project will be adopted by the existing country program steering committee chaired by the Ministry of Economy and Finance (MEF). The executing agency, the Ministry of Water Resources and Meteorology (MOWRAM) will provide overall management of the project and implementation of Component 2 (Infrastructure). The National Committee for Sub National Democratic Development (NCDD) will be the implementing agency for component 1.

189 The Project Management Unit (PMU) will consist of personnel from MOWRAM, the Department of Hydrology and River Works (DHRW) of MOWRAM, and Provincial Departments of Water Resources and Meteorology (PDWRAMs) of four provinces.

190 The NCDD working with the International Fund for Agricultural Development (IFAD) will lead Component 1, which involves providing farm level support, capacity building and training of FWUCs, and promoting the adoption of efficient and climate resilient farming practices. IFAD will also be responsible for communications and visibility throughout the project's implementation.

191 Other key phases of implementation include a pilot program for solar pumping and geofabrics to identify any inefficiencies before the full construction phase, with a budget of $60k. Surveys will also be carried out on dam structures and river sections and structures to determine where work is required to rehabilitate and climate-proof the infrastructure, with a budget of $70k managed by the PMU. It is known that the Anlong Chrey dam has limited freeboard and MOWRAM wish to improve safety of the structure.

192 Monitoring and evaluation will be a crucial aspect of the project's success, with engagement at the FWUC level monitoring and reporting to ensure capacity is being increased in time to realize the significant benefits expected upon completion of construction. Material effectiveness and quality of design will also be monitored and evaluated to ensure the scheme is delivered to a standard consistent with at least a 25-year asset life.

193 The roles and responsibilities of each organization have been clearly outlined, with MOWRAM responsible for overall supervision and guidance, and the DFWUC responsible for preparing the annual work plan and budgets, initiating, and coordinating communication, coordinating with the Ministry of Agriculture, Forestry and Fisheries (MAFF) on agriculture support activities, and implementing social and environmental safeguards, among other tasks. The PDWRAM will assist the PMU in disseminating information and coordinating with the Ministry of Economy and Finance-General Department of Resettlement (MEF-GDR) to implement the resettlement plan, among other tasks.

194 The project steering committee (PSC), chaired by the Minister of MOWRAM, will provide policy guidance and oversee project implementation, while the Inter-Ministerial Resettlement Committee (IRC), chaired by MEF, will manage resettlement and land acquisition. By following this implementation arrangement, the CAISAR project can proceed smoothly and achieve its goals of improving water resource management and enhancing agricultural productivity in Cambodia.

6.2 Project Implementation Organizations (Component 2)

195 The expansion of irrigated areas and the modernization of irrigation systems are high in the order of priorities of the Royal Government of Cambodia as well as the Ministry of Water Resources and Meteorology (MOWRAM), which is responsible for sustainable water resources management, including irrigation in Cambodia. Proper irrigation O&M can only be successfully implemented when the five basic pillars of irrigation are properly addressed. These five pillars are: (i) security of water

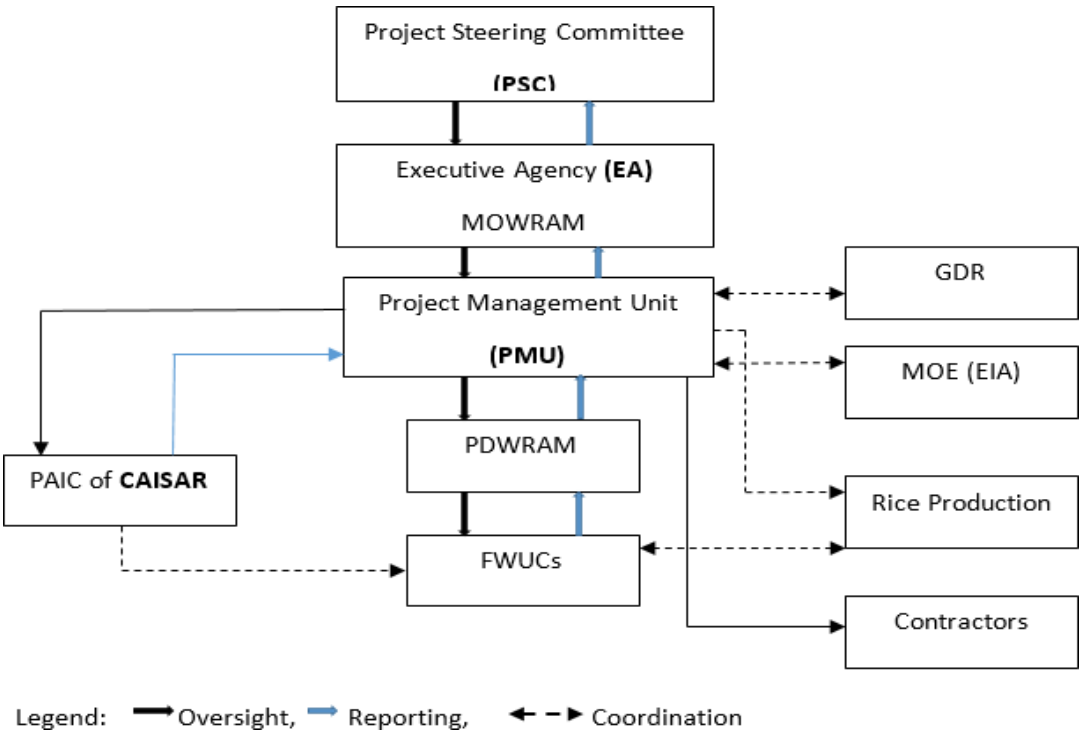
availability; (ii) sustainable infrastructure; (iii) water management, (IV) Irrigation institution and (v) human capital.

196 The FWUC Department has personnel at the Central level but no Office and personnel at the Province and District level so for the effective operation of FWUC the DFWUC should recruit and or appoint additional personnel and train them to meet the right qualification and experience for the FWUC office at the provincial and district levels.

197 A CAISAR project implementation organization chart is defined in Source: Feasibility Study
198 Figure 6-1. MOWRAM is the Executing Agency for implementation of the Project. However, successful implementation of the Project requires the cooperation of several ministries. The project steering committee (PSC) was established to achieve the inter-ministerial coordination and chaired by the Minister of MOWRAM and comprising of senior officials from MOWRAM, MOI (NCDD), MAFF, Ministry of Environment (MOE), Ministry of Economy and Finance (MEF), and the Provincial Governor's Offices of Pursat, Kampong Chhnang, Kandal, and Kampong Speu provinces will oversee project implementation and provide support to the project. The Table 6-1 below show the Management, Executive and Implementation body and Figure 6-1 show the Project organization Structure.

Table 6-1: PSC Management Arrangement.

Descriptions	**Arrangements**
Management	
(i) Oversight Body	**Project Steering Committee (PSC)** Chair: H.E. Lim Kean Hor, Minister, MOWRAM Secretary: H.E. Chann Sinath, Deputy Director General, DFWUC/Project Director Members: H.E. Secretary of State, MOI (NCDD) H.E. Secretary of State, MEF H.E. Secretary of State, MOWRAM H.E. Under Secretary of State, MEF H.E. Under Secretary State, MAFF H.E. Director General, MEF H.E. 4 Provincial Governors Director of Department of Cooperation and Debt Management, MEF Office of Multilateral Cooperation 1, MEF
(ii) Executing Agency	MOWRAM
(iii) Implementation Unit	Establish PMU at MOWRAM Level and possibly PIU at PDWRAM Level



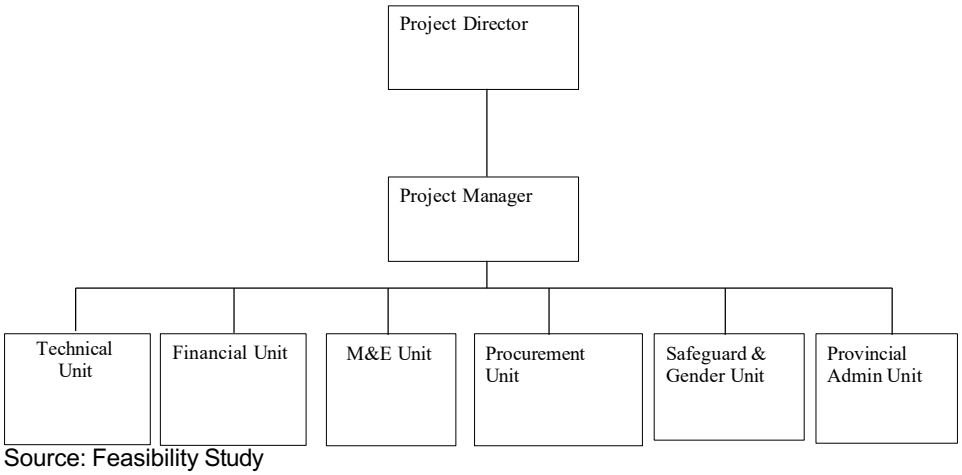
Source: Feasibility Study

Figure 6-1: CAISAR Project (Component 1) Structure Chart

199 A project management unit (PMU) has been established for the CAISAR project. The PMU will be headed by the Secretary of State of MOWRAM as Project Director, with assistance from the DFWUC Director as Project Manager. The PMU will be fully involved in the preparation and implementation of the project. The PMU is composed of designated personnel from MOWRAM, the Department of Hydrology and River Works (DHRW) of MOWRAM, and the PDWRAMs of Pursat, Kampong Chhnang, Kampong Speu, and Kandal provinces.

200 The PDWRAMs are responsible for coordinating all field activities with FWUCs and DFWUC and implementing O&M activities.

201 The PMU is supported by the Project Management Implementation Consulting (PMIC) and consists of Project Director, Project Manager, Technical Unit, M&E Unit, Financial Unit, Procurement Unit, Safeguard & Gender Unit and Provincial Administration Unit as show in Figure 6-2 below.



Source: Feasibility Study

Figure 6-2 PMU Structure Chart.

6.3 Project Implementation Organizations at Sub-National Level

202 Note that the following text applies to Component 2 only. It is envisaged that IFAD will detail further the role of the NCDD and the coordination with the provincial and district agencies for agriculture, rural development etc.

6.4 Provincial Department of Water Resources and Meteorology (PDWRAM)

203 The Provincial Department of Water Resources and Meteorology of MOWRAM is the mandated body tasked to undertake full responsibilities for the O&M of the Main system/scheme. Specifically, PDWRAM is expected to perform the following responsibilities:

a) Ensures that the main canal infrastructure is properly maintained and repaired.
b) Ensures that the seasonal water management plan is endorsed and approved.
c) Ensure that in the dry season the main canal system provides sufficient water.
d) Provide technical assistance to FWUC and its members in the operation and maintenance of the irrigation systems/scheme.
e) Assume leadership in the resolution of conflicts on water disputes.
f) Operation and maintenance of main canal systems with appropriate funding provided by the Royal Government of Cambodia.
g) Implement routine maintenance of the Main Canal system including the structures.
h) Update report to MOWRAM on the deferred maintenance needs of the system including an estimate cost and time repair work.
i) Monitor the volume of water in the main canal and the level of water released to the water users in order for it to function normally.

6.5 Project Implementation Organizations at Scheme Level

204 According to the FWUC Sub-decree of March 2015, a FWUC shall be established and registered with MOWRAM for each irrigation system/scheme in Cambodia. Establishing the FWUC is important in helping sustain the irrigation schemes to be constructed under the Project. Therefore, the Project will establishment an efficient and effective FWUC and will provide adequate inputs and supports to ensure that the FWUC will be able to function effectively.

205 The FWUC will be established as early as possible after a subproject has been proved feasible and endorsed for the construction to enable the local farmers to participate in all stages of the project formulation and implementation.

206 The establishment of a FWUC requires considerable efforts in community organization and training of the established FWUC. The general strategy in mobilizing and organizing the farmers is described below:

(i) One FWUC is organized in each irrigation system/scheme, hence, there will be 4 FWUCs established in the CAISAR, 1 FWUC will need to be restructured or have the committee members re-elected, and 1 FWUC needs more capacity building as mention in Table 6-2 below.
(ii) One FWUG is delineated and organized within the command area of one secondary canal (SC). When the SC area is small, a FWUG could also cover more than one SC.
(iii) One FWUSG is delineated and organized within the command area of one or more tertiary canal (TC)

Table 6-2: Distribution Network & Name of FWUC to be established in the CAISAR Scheme.

No	Scheme Name	Command Area (ha)	Number			Number		
			District	Commune	Village	FWUC	FWUG	FWUSG
1	Ou Tapoang Tanai	13, 270	1	2	31	1	2	31
2	Lum Hach	16,664	3	10	55	1	10	55
3	Chhean Laeung	5,307	1	3	15	1	3	15
4	Stueng Krang Bat	1,500	2	3	13	1	3	13

No	Scheme Name	Command Area (ha)	Number			Number		
			District	Commune	Village	FWUC	FWUG	FWUSG
5	Brambei Mom	16,556	3	12	56	The current FWUC is weak and incapable of collecting ISF. It needs to be restructured and or re-elected as the current FWUC is governed by only 4 communes out of 12 communes in the CAISAR Project scheme.		
6	Krapeu Troum	903	1	1	14	This FWUC is active and they need more capacity building, support and documentation.		

207 After the FWUC's are recognized and officially registered, the Farmer Water User Committee (FWUC) will have full responsibility for the operation and maintenance of the irrigation system as follows:

a) Has the obligation to collect the irrigation service fee (ISF) from all its members for repair and maintenance of the secondary and tertiary irrigation system.
b) Resolve all internal conflicts involving water distribution between and among other FWUC leaders.
c) Convene the General Meeting once a year and other meetings with group and subgroup member as required.
d) Take action to replace vacant position of the structure as required and in accordance with its Statute.
e) Ensure that ISF are collected and kept properly and evaluate expenditures, manage and monitor the level of ISF in each phase and adjust as needed after approval from the members.
f) Assist in facilitating the support of the MOWRAM, PDWRAM and Development Partners on repairs, maintenance, and development of irrigated infrastructure as well as on agricultural development.
g) Mobilize local labor and financial resources to support regularly and seasonally operations and maintenance of irrigation system such as secondary and or tertiary canals and other parts.
h) Review on all kinds of secondary and tertiary canals and structures and Submit report to the PDWRAM.
i) Conduct seasonal maintenance before season of planting.
j) Prepare seasonal water distribution schedule for each growing season and provide a copy to PDWRAM for the preparation of the seasonal water management plan.
k) Manage the distribution of water under the guidance of PDWRAM because these structures are usually under the responsibility of PDWRAM but the operation of these gates will be transferred to the FWUC.

6.6 Procurement

208 The procurement principles to be followed by the CAISAR project were set out in the Aide Memorandum between MOWRAM, AIIB and IFAD following missions in December 2020 and January 2021. Project procurement using AIIB/GCF/IFAD financings will follow the Standard Operating Procedures on Procurement for All Externally Financed Projects/Programs in Cambodia (the SOP 2019/ Procurement Manual) to the extent such are consistent with the IFAD and AIIB Project Procurement Guidelines. NCDD PIU will be directly responsible for project procurement activities of Component 1. MOWRAM PMU will be directly responsible for project procurement activities of Component 2. Procurement review committees for both components will have representatives from both MOWRAM PMU and NCDD PIU.

209 Procurement method thresholds and prior review thresholds for GCF/IFAD financed activities will be determined and specified in the Project Procurement Arrangements Letter (PPA). Requests for IFAD prior review and no objection (for 18-month/annual procurement plans, procurement documents subjected to IFAD prior review) shall be routed through IFAD's web-based procurement management and tracking system (the current NOTUS system to be upgraded in 2023).

210 For the procurement of AIIB/GCF/IFAD financed activities, the standard bidding documents under the MEF's Standard Operational Procedures will be adopted and used with integration of additional provisions in compliance with the AIIB/IFAD Policy on Preventing Fraud and Corruption in its Activities and Operations, and IFAD's Social, Environmental and Climate Assessment Procedures (SECAP).

211 For Component 2 activities, three areas will be identified, (a) Project Management by PMU (b) Preparation of TOR's for DED and Pilots, surveys, detailed engineering design (DED) and contract preparation and tendering towards implementation (c) Packages of work and purchase/Installation of M&E goods such as solar pump stations.

212 For (a) and (b) the PMU already have a procurement plan detailing when the work is expected, how and when it will be procured and budgets. These do not need to be repeated here as they are continually updated by the PMU.

213 For the implementation phase a series of packages for civil works of around $10m-$20m can readily be defined and contracts requiring specific expertise such as the nature-based works on the river restoration work at Ou Ta Poung River, or the heavier engineering work for the upgrading of the offtake structure on the Damnak Ampil and widening/lining of the feeder canal linking to the Ou Ta Paoung River. Lining of secondary offtake canals to increase capacity whilst limiting additional land take may be similarly packaged. For tertiary and quaternary canals significant work with the local communities is needed to finalise design and layout acceptable to the farmers and landowners. To avoid double pumping raised canals and solar pump installations are needed. Land requirements may be reduced through buried pipe or channel systems with access roads above. Continuity for drainage and fish may require small siphons. On the Krang Ponley particularly, expertise in storages and pond restoration is needed as well as more significant drainage works and embankment raising. Creating farm ponds in Cambodia is significantly more expensive than in Thailand where conditions are similar and there is potential for improving efficiencies.

6.7 Monitoring and Reporting Arrangements

214 The E&S performance will be included in the subproject and overall project progress reports. The two safeguards specialists in each of the PPMUs, with assistance from the CSC/field engineers (where relevant), will monitor and report on the E&S performance of the project. The safeguards specialists in the PPMUs will submit E&S performance reports at the subproject level to the CPMU on a monthly basis. At the central level, the CPMU will prepare E&S monitoring report twice per year for submission to IFAD and the GCF, describing the project's progress and compliance with the SECAP/GCF safeguards standards and other requirements.

215 The progress report submitted to the CPMU must include sufficient information on subproject implementation progress and E&S issues related to ESCMF implementation. The overall progress report from CPMU to be submitted to IFAD and the GCF must include adequate information regarding: (i) preparation and disclosure of the E&S instruments for subprojects; (ii) implementation progress of the ESCMP, including incorporation of the ECOP/COC on SEA/other ESCMP requirements pertaining to the contractor in the bidding and contractual documents; (iii) monitoring and supervision on implementation perforamnce of contractors, CSCs, and PPMUs according to the ESCMP, ECOP, and COC on SEA; and (iv) any challenges, solutions, and lessons learned during E&S/ESCMF implementation. Table 6-3 provides a summary of reporting procedures.

Table 6-3: Reporting Procedures

	Report Prepared by	Submitted to	Frequency of Reporting
1	Contractor to the Employer	PPMUs	Once before construction commences and monthly thereafter
2	Construction Supervision Consultant (CSC)	PPMUs	Weekly and monthly

3	Community Monitoring	PPMUs	When the community has any complaint about the subproject E&S/ESCMF implementation
4	PPMUs	CPMU	Monthly
5	CPMU	IFAD and GCF	Once every six-months, in accordance with any signed legal agreements.

6.8 Incorporation of ESCMF into Project Operational Manual

216 The ESCMF process and requirements will be incorporated into the Project Implementation Manual (PIM) and the CPMU will provide training to ensure that the subproject owners (PPMUs) understand them and will supervise and monitor the ESCMF implementation periodically. The E&S section in the POM will also refer to the ESCMF and related safeguards documents, as needed.

7. CAPACITY BUILDING, TRAINING, AND TECHNICAL ASSISTANCE

7.1 Capacity Building for Efficient Project Management

217 Capacity building is a component that will provide supports to MOWRAM/ PMU and PDWRAM to strengthen their capacity with the objective to expedite Project implementation and ensure effective Project management. The capacity building will cover (i) overall Project management, (ii) establishment of FWUCs and capacity building of FWUCs and iii) international and national consultants to fill capacity gaps of MOWRAM/ PMU and PDWRAM.

7.2 MOWRAM/ PMU and PDWRAM

218 The institutional assessment report prepared by PPIC and WAPCOS, December 2022 noted that the weak and insufficient capacity of human resource in all levels of the irrigation management is the primary cause of the slow rural development in Cambodia. The need for adequately trained professionals in water resources and irrigation management in Cambodia is an issue. The capacity building can be performed through education, training, workshop, etc.

219 Based on the institutional assessments report of the Water Resources Management Sector Development Program (WRMSDP), the training for MOWRAM and PDWRAM will include all personnel at the central and provincial levels that are involved in the CAISAR project scheme. This means that the officers who will be involved in the CAISAR project will also be trained. However, the training for FWUCs TOT must be included. For the CAISAR project it is advised that the training plan covers all 6 Irrigation Schemes with both for CAISAR PMU and PDWRAM with topics including 1) Project Orientation and Presentation of Project Plans; 2) FWUC Formation and Strengthening; 3) Gender Awareness and Gender Action Plan; 4) Data Management for Hydro and Meteorological Data and O&M for Meteorological Equipment; 5) Environmental Awareness; 6) Construction Management and Supervision and 7) On-Farm Water Management and Operation and Maintenance.

7.3 FWUC/FWUG/FWUSG

220 To help the trainees clearly understand and be able to apply them to their work, it was noted that each training program needs to dedicate sufficient time for each topic.

221 For FWUC management training programs are needed to strengthen the capacity of existing or new FWUCs that includes: a. Basic administrative management, b. Accounting and finance, c. Conflict resolution, d. Operation and maintenance of irrigation facilities and e. Collection of irrigation service fees.

222 It is suggested that FWUC need to have the opportunity to meet regularly and exchange their personal experiences and to learn from each other regarding FWUC management. Interaction between FWUCs can help to reduce conflicts between FWUCs in the same irrigation scheme/ reservoir.

223 As each FWUC have different geographical characteristics, socio-economic condition and different issues, training materials should be simplified by using the simple words and expressions commonly used by the local people

224 A well-defined FWUC Organizing Framework within MOWRAM/PDWRAM needs to be synchronized with the Water Distribution Schedule and agreed upon within the FWUC and disseminated to all farmer-water users within the Irrigation scheme.

225 The Project should construct the secondary and tertiary canals until the tertiary gates and will assist FWUC in collection of ISF.

226 The institutional assessment report has suggested that Technical and financial support will be provided to the FWUC that will manage the operation of Ou Tapoang, Lum Hach and Kraing Pomley Scheme to ensure that system O&M is conducted in an effective and sustainable manner.

227 To ensure effective and consistent training on E&S, particularly under the new IFAD SECAP (2021) and GCF ESS (2022), training should be provided by qualified national consultants. In addition to refresher training on safeguards pertaining to waste management, use and disposal of pesticides/fertilizers, etc., there must be additional training focused on ensuring the effective performance of contractors – including provision of adequate services related to health, safety of workers and local communities.

7.4 Training and Technical Assistance

228 Training and capacity building on the IFAD SECAP/GCF ESS has been recommended to address the concepts of proportionality and adaptive management as well as cover the implementation of the safeguards documents as they relate to: (i) contractor management and monitoring of E&S issues concerning labour; (ii) community health and safety; (iii) environmental health and safety; and (iv) requirements for systematic stakeholder engagement. The targeted training programs focused on E&S risk management could also help strengthening inter-agency coordination and cooperation which is critical for ensuring effective management of all aspects of climate change adaptation. Given the project structure and the plan to implement a number of subprojects in each province involved, significant inputs from qualified national consultants will be required, along with on-the-job training on assessing risks and impacts management during preparation and implementation.

229 During implementation of Project, E&S training and technical assistance will be provided to the implementing agencies both at the Project and subproject level. During the first three years, the CPMU will conduct at least two safeguard training workshops per year (one on environment and one on social) to the subproject owners regarding the ESCMF process and needs for preparation of safeguard documents (ESCMPs, SEP, IP Plans, and ECOP etc.). When possible, an IFAD SECAP Specialist will participate in these training workshops. Safeguards technical training for any other specific issues and related aspects should occur at least once per year for three years. This could be combined with the annual IEC.

230 Priority for training should include, but is not limited to, the following:

(i) The ESCMF process and guidelines for preparation, implementation, and supervision of E&S instruments designed for CAISAR and its subprojects;
(ii) Specific training on the IP Plans, SEP, and labour management with regard to planning and implementation, including the application of differentiated GRM pathways to more effectively respond to local complaints;
(iii) Specific training on supervision and monitoring of contractor performance, including forms and reporting processes; basic knowledge on health and safety; good construction practices for reducing potential impacts on local environment and local peoples; Codes of Conduct on SEA; and communication and GRM procedures and other social issues related to communicable diseases (including covid-19), etc.;
(iv) Specific training on IPM; safe use and disposal of pesticides/herbicides/chemical fertilizers being used in primary production;
(v) Specific training on waste management, including hazardous and bio-hazardous waste;
(vi) Specific training on the use of PPE and best practices (during construction, pesticide application, etc.).

7.5 Technical Assistance on E&S Capacity Building

231 Given the specific needs related to E&S training and limited capacity of some agencies with respect to the newest IFAD SECAP and GCF ESS, a qualified national firm could be mobilized by the CPMU to provide E&S training, supervision, monitoring, and reporting of the ESCMF implementation and SECAP/ESS compliance to IFAD and the GCF. If required by IFAD and/or the GCF, the CPMU will also mobilize an independent monitoring agency (IMA) for monitoring of IP Plan implementation, voluntary land donation (if applicable), and other E&S consultants to assist in the preparation and/or monitoring of various E&S activities during implementation. PPMUs may mobilize E&S consultants

(either individual or hired through a firm) to assist in the implementation of ESCMF, preparation of E&S documents, and mitigation measures of the subprojects under their responsibility.

232 MoWRAM have significant experience in application of the World Bank ESF and the Asian Development Bank safeguards policy through a number of similar projects over the past several years. Through this project, MoWRAM have maintained a proven track record for safeguards compliance. MoWRAM keep improving their capacities, through continued capacity development of staff of the Environmental and Social Office (ESO). Some of the staff within the ESO have solid working experience in engineering, community development, environment, social and public administration, engaging with indigenous people, and most have been trained by the World Bank on various topics related to environment and social management in rural development projects. The ESO with MoWRAM have a total of 7 staff (4 are female) who are assigned to different projects. The ESO will need additional technical support during the WASAC project implementation from E&S specialized staffs. MoWRAM will engage additional national consultants to work alongside staff of ESO to support the PMUs of MoWRAM in day-to-day E&S implementation and management.

Review of MoWRAM/PMUs capacity in prevention of SEA/SH risks

233 The MoWRAM PMUs have experience in identifying SEA/SH risks and prevention of SEA/SH based on lessons learned from several previous projects. Under this project, based on identified risks of SEA/SH, an approach and framework for management of SEA/SH risks has been proposed, and further addressed in the Labor Management Procedures. PMUs will appoint one social officer and one GRM officer to ensure the SEA/SH risks are monitored and reported. In addition, the MoWRAM PMUs have assigned a gender focal point to provide on-the-job training to the Contractors.

234 At an early stage of project implementation, MoWRAM PMUs will recruit E&S consultants, and engage a consultant specialized in SEA/SH to carry out SEA/SH trainings for PMU members and relevant members of MoWRAM, ESOs. MoWRAM also ensure that SEA/SH risks will be updated based on local experience and site conduct at respective subprojects. Accordingly, actions to be taken to prevent SEA/SH will be updated and included as part of the ESCMPs, and which will be subsequently applied as part of construction Contractor responsibilities (as prescribed in the Contractors' Work Contract). Budget will also be allocated (in Contractor's bill-of-quantity) to ensure the Contractor has budget in place to recruit a SEA/SH consultant to conduct public awareness raising on SEA/SH at subprojects, and to undertake SEA/SH management measures on the part of Contractors' workers and staff to minimize the risks of SEA/SH. In case where SEA/SH incidence is frequent or a significant episode has occurred.

235 Land acquisition and voluntary donations training will be conducted by the E&S Consultant. It is expected this training could be started as soon as E&S specialized staff are engaged by MoWRAM. Additional support from E&S staffs will be needed monthly or bimonthly during the construction phase, and quarterly or biannually during maintenance phase based on the need for support for the select subprojects. These training initiatives will be carried out face-to-faced. In case COVID-19 restrictions return, virtual training will be conducted. Zoom or Webex will be used for online training, The training will have knowledge session combined with discussion/exercises/role plays/quiz with Questions & Answers session at the end of each day. The training will be delivered in different time format, depending on the topics, number of participants, time availability, and may typically range from one day to three days. MoWRAM and PMUs will engage qualified trainers for the above training topics. For new topics, MoWRAM can ask support from the AIIB and IFAD to support in terms of sharing training material, references, and assist in training facilitation, if possible, to provided MoWRAM PMUs with practical, hands-on experience at the first stage of project implementation, particularly soon after project effectiveness.

8. ESCMF IMPLEMENTATION BUDGET

236 The roles and responsibilities of each organization have been clearly outlined, with MOWRAM responsible for overall supervision and guidance, and the DFWUC responsible for preparing the annual work plan and budgets, initiating, and coordinating communication, coordinating with the Ministry of Agriculture, Forestry and Fisheries (MAFF) on agriculture support activities, and implementing social and environmental safeguards, among other tasks. The PDWRAM will assist the PMU in disseminating information and coordinating with the Ministry of Economy and Finance-General Department of Resettlement (MEF-GDR) to implement the resettlement plan, among other tasks.

237 The E&S performance will be included in the subproject and overall project progress reports. The two safeguards specialists with assistance from the CSC/field engineers (where relevant), will monitor and report on the E&S performance of the project. The safeguards specialists in the PPMUs will submit E&S performance reports at the subproject level to the CPMU on a monthly basis.

238 The ESCMF process and requirements will be incorporated into the Project Implementation Manual (PIM) and the PMU will provide training to ensure that the subproject owners (PMUs) understand them and will supervise and monitor the ESCMF implementation periodically. The E&S section in the POM will also refer to the ESCMF and related safeguards documents, as needed.

239 Monitoring and evaluation will be a crucial aspect of the project's success, with engagement at the FWUC level monitoring and reporting to ensure capacity is being increased in time to realize the significant benefits expected upon completion of construction. Material effectiveness and quality of design will also be monitored and evaluated to ensure the scheme is delivered to a standard consistent with at least a 25-year asset life.

240 The following ESCMF implementation costs include two safeguards' specialists in the PMU, Their responsible include: (a) preparation of E&S documents of subprojects, including consultation with local authorities and communities; (b) supervision, monitoring, and training workshops on E&S issues; (c) implementation and monitoring of the ESCMPs, SEP, IP Plan, and Gender Action Plan. (with the support of the project's Monitoring & Evaluation Specialist); and (d) ensuring contractors implement their respective Environmental Code of Practice and Codes of Conduct for Gender Based Violence (GBV) and Violence Against Children (VAC) and any site-specific measures. The budget also includes the social economic survey including the census for the resettlement plan. A budget for an Independent E&S Monitoring Consultant for an estimated 6 year construction period for the 6 schemes.

241 MoWRAM will appoint at least one Environmental Specialist, one Social Specialist, and one GRM Focal Point (hereinafter ESOs) for full time support for the project. The ESOs of MoWRAM will be instrumental in ensuring the environmental and social performance of the project. The ESOs, who are supported by Design and Supervision consultants and E&S consultants, will be responsible for ensuring effective environmental and social management for all project activities. The ESOs, Design and Supervision consultants and E&S consultants will work together as a team in which ESOs play the lead role in E&S monitoring for the whole project. In particular, ESOs will review all related project and E&S documents which are prepared by E&S consultants. Where necessary, ESO will conduct site visits, interview contractor, construction supervisors, workers, provincial-level government staff of MoWRAM, local authorities and local communities to collect necessary E&S information for the purpose of internal monitoring. The ESO will monitor Contractors' compliance with Construction-ESCMP and visit each subproject location at least once a month during construction. Upon completion of each site visit, the MoWRAM'S ESOs should prepare a Monitoring Report reflecting main issues found, resolution arrangements and timing for the resolution.

The **ESOs** will be responsible for:

- Implementing and monitoring performance of environment and social mitigation measures, including health and safety;

- Conducting screening and scoping on environment and social impacts, including screening for land acquisition impacts based on the guidance in the RPF and presence of Indigenous Peoples based on the guidance in the IPPF;
- Conducting trainings on health, safety, gender, SEA/SH, VAC, labor rights, HIV/AIDS, STDs, Covid-19 and the grievance redress mechanism to project communities, and monitoring contractor's training for their workers on Workers' Code of Conduct which covers SEA/SH/VAC, HIV/AIDS, STDs, and COVID-19 and the workers' grievance redress mechanism;
- Monitoring environmental and social activities of the project, in particular the implementation of the ESCMPs for subprojects, and any other relevant project documents such as RP and IPP;
- Monitor, including ensuring effective functioning of project's Grievance Redress Mechanism and solve grievances submitted to the PMUs level;
- Leading all stakeholder engagement activities, including information disclosure, consultations, reporting back to stakeholders, according to the provisions in the SEP;
- Working closely with Provincial Department of Water Resource and Meteorology, General Department of Resettlement, and other line ministries and/or relevant departments as necessary;
- Prepare monthly reports on E&S implementation and submit to the PM and PD.

E&S Consultants

242 The E&S consultants are responsible for assisting the ESO in monitoring and reporting on the safeguard implementation performed by the contractors.

- Develop screening checklist to assess risks and potential environmental and social impacts for each subproject;
- Take lead in building capacity for the project (based on list of potential training topics, including periodic provision of on-the-job training to contractors, ESO and PMUs on the implementation and management of E&S risks and impact at subproject level;
- Review C-ESCMP and ensure C-ESCMP is consistent and cover all risks and potential impacts identified in site-specific ESCMP, particularly risks related to OHS, CHS, SEA/SH/VAC taking into account local knowledge and experience in prevention and management of these risks.
- Ensure C-ESCMP have actionable plan to addressed identified risks and potential impacts, including allocation of resources to implement fully such actions.
- Make recommendation for improvement before PMU's and PMU's DISS Consultant's approval of C-ESCMP;
- Conduct site visit to construction sites and worker camp and make above assessment as part of monitoring and reporting responsibility;
- Develop E&S monitoring checklist and reporting template;
- Participate and support ESO in monthly safeguard monitoring and reporting;

243 The Government of Cambodia and AIIB, IFAD and GCF will co-finance the ESCMF implementation budget, except for costs related to all aspects of land acquisition, resettlement, and livelihood restoration. When needed, qualified national (individual or firm) consultants for capacity building and training on ESCMF implementation and the concepts of the AIIB's ESF, IFAD's SECAP and GCF's ES Policy will be provided. Budget for trainings and capacity building are mainstreamed into the project budget across project outputs/components, so are not listed explicitly in the ESCMF implementation budget. Likewise, the budget for preparation of the Biodiversity Impact Assessment and related Biodiversity Management Plan, if any, are not listed in the ESCMF implementation budget, as they have already been contracted by MOWRAM as part of the ESCIA.

244 Costs related to staffing, implementation, and monitoring of the ESCMF, as well as costs more broadly focused on safeguards are built into existing project activities/components, can be found in Table 8-1.

Table 8-1: Estimated ESCMF Implementation Cost

Line Item	Estimated cost (USD)	Remarks
Environment & Climate Safeguards Specialist	USD 240,000 (60 months at USD 4000 per month) per PMU	The PMU will be responsible for management of this budget.
Gender & Social Safeguards Specialist	USD 240,000 (60 months at USD 4000 per month) per PMU	
GRM Focal Point	USD 240,000 (60 months at USD 4000 per month) per PMU	
Socioeconomic and census survey for Resettlement Plan 840 ha impacted (private & public) with estimate of 10 households per ha	USD 250,000	
Independent E&S Monitoring Consultant (Estimated 6 year project implementation period)	USD 500,00	
TOTAL	**USD 1,470,000**	

9. GRIEVANCE REDRESS MECHANISM (GRM)

245 As part of environmental and social policies of the AIIB, IFAD, and GCF, the Lead Agency is required to establish and implement a GRM to respond to concerns and grievances of project-affected parties related to the E&S performance of the project/subprojects in a timely manner. The GRM may include: (a) different ways in which users can submit their grievances, including submission in person, by phone, text messages, mail, email or via a web site; (b) a log where grievances are registered in writing and maintained in a database; (c) publicly advertised procedures, setting out the length of time users can expected to wait for acknowledgement, response, and resolution of their grievances; (d) transparency about the grievance procedures, governing structure, and decision makers; and (e) an appeals process (including the natural judiciary) to which unsatisfied grievances may be referred when resolution of grievance has not been achieved. The project/subject owner may provide mediation as an option where users are not satisfied with the project's resolution. Project/subproject owners must establish and implement the project GRM to receive and facilitate resolution of such concerns and grievances. As best practice, this ESCMF stipulates that contracted workers will have access to the project GRM to also raise workplace-related concerns. Those workers will be informed of the GRM upon their recruitment, as well as the measures put in place to protect them against any reprisal for its use.

246 As part of overall implementation of the subproject, the GRM will be established by the implementing agencies. The GRM identifies procedures, responsible persons, and contact information; will be readily accessible for the public; and will handle grievances and resolve them at the lowest level required and as quickly as possible. The GRM provides the framework within which complaints about environmental and safety issues can be handled, grievances can be addressed, and disputes can be settled quickly. The GRM will be in place before the subproject activities commence.

247 General Process: Complaints and claims through the project GRM can be lodged verbally, in writing, or by telephone/email. On receipt of a complaint, or project representative will register the complaint in the Complaints File and maintain a Log of Events pertaining to the complaint, until its resolution. Information to be recorded in the Complaints Log will include:

- The date and time of the complaint;
- The name, address and contact details of the complainant;
- A short description of the issue of complaint;
- Actions taken to address the complaint, including persons contacted and findings of each step in the complaint redress process;
- The dates and times when the complainant is contacted during the redress process;
- The final resolution of the complaint;
- The date, time and manner in which the complainant was informed thereof; and
- The complainant's signature when resolution has been obtained.

9.1 Objectives of the Project GRMs

248 The objective of the GRM is to provide affected persons with redress procedures that can be conveniently used to raise a project related concern or grievance. The GRM guides how a complaint can be lodged, including forms and channels through which a complaint can be submitted. To facilitate the grievance resolution process, grievances received will be acknowledged in writing and solved within a specified timeframe. During the resolution process, where necessary, dialogue will be held with aggrieved person for mutual understanding and effective resolution. Once a complaint is resolved, the aggrieved person will be notified of the resolution results.

249 The GRM has sequential steps that aggrieved person can use. If the aggrieved person is not satisfactory with the grievance resolution result, or if their complaint is not resolved within the timeframe specified for a particular step, aggrieved person can move on to the next step which is higher in resolution hierarchy. The project has an appeal process where complainant can resort if they

are not satisfied with a resolution decision at a particular step, or their complaints are not resolved within a specified timeframe.

9.2 Summary of national legislation related to grievance and complaint

250 The RGC has various laws and sub-decrees that have been in place to guide the implementation of the complaint resolution process. These documents specify the right of the complainants as well as the responsibilities of concerned governmental agencies as to complaint resolution. Relevant legal documents include:

- Law on Expropriation (dated 26 February 2010);
- Labor Law (dated 13 March 1997, amended on 20 July 2007 and 26 June 2018);
- Law on Prevention of Domestic Violence and Protection of Victims (dated 24 October 2005);
- Sub-decree No. 22 ANK/BK (2018) on Standard Operating Procedures for Land Acquisition and Involuntary Resettlement for Externally Financed Projects in Cambodia. Guidelines for Grievance Redress Mechanism (Appendix 8);
- Law on Administrative Management of Capital, Provinces, Municipalities, Districts and Khans (dated 22 May 2008) – Section 6 on Solution of Local Conflicts;
- Sub-decree No. 22 (25 March 2002) on Decentralization of Roles, Functions, and Power to Commune Councils (Article 61: duty to promote the role of conciliating disputes between citizens);
- Sub decree No 47 ANK.BK (31 May 2002) on Organization and Functioning of the Cadastral Commission (Chapter 4 – District/Khan Level Conciliation).

9.3 Principles of the Project GRMs

251 Under CAISAR, the following principles will be applied:

- **Channels.** Different channels are established to enable affected person to submit their grievances, including submission to village committee, as well as district and provincial levels.
- **Forms.** Grievances can be submitted in writing and verbally, and either directly by the affected households, or by a person delegated by the complainant.
- **Complainant can delegate a representative who acts on their behalf.** A person lodging a grievance can ask assistance from their family or from individual to act as their representative.
- **Disclosure.** GRM procedures are disclosed in public domain (e.g., websites of PMU, public notice board at village hall, and in front of substation).
- **Documentation.** A grievance logbook will be maintained at substation (subproject level) and at PMU level (through PMU GRM focal point).
- **Transparency.** Grievance procedures include steps, time frame for grievance resolution for each step, notification to affected person, how decision is made.
- **Acknowledgement.** The unit in charge of complaint resolution will notify complainant upon complaint receipt and will initiate the complaint resolution process.
- **Appeal.** If the agency in charge does not resolve a grievance in a manner that is satisfactory to the affected person, a multistakeholder committee will be established (ad-hoc) to resolve the dismissed grievance – as an alternative for affected person going to court.
- **Monitoring.** All grievances received are recorded by PMU and relevant substations, and are processed/resolved in a given timeframe, and are monitored by PMU GRM focal point.
- **Time-limit.** Time-limit is specified for each step in the grievance resolution process.
- **Complainants bear no costs.** Complaint resolution is free of charge to aggrieved person. However, if the complaints bring their case to court, they will bear the costs associated with their lawsuit.
- **Any grievance concerning urgent health and safety issues** shall be resolved immediately.

252 The project has in place complaint handling procedures for three types of potential grievances, including grievances related to 1) land acquisition, 2) labor and working conditions, and 3) sexual exploitation and abuse and sexual harassment (SEA/SH/GBV/GBV), and 3) general complaints. These procedures are established based on the above GRM principles and are in accordance with pertinent national legislation. The GRM for complaints related to land acquisition is provided in the project's Resettlement and Policy Framework (RPF) and that for IPs is provided in the project's IPPF. Summary for the above four procedures is provided below:

9.4.1 Redress Procedure for Complaints related to Land Acquisition

9.4 Project's Redress Procedures

253 Under this project, to facilitate the grievance redress, the informal and formal steps are combined for convenient use of affected people, as follows:

- **Step 1 − Commune/Sangkat level.** APs will seek assistance from commune/Sangkat chief or community elderlies who will discuss with the leader of the PRSC-WG to find a solution. Verbal grievance can be provided to the commune/Sangkat chief or community elderlies. So, no written complaint is required. It is noted that even if the complaint is made verbally, the complaint will be registered in project's logbook, including resolution process and result for such verbal grievance for monitoring purpose. Upon receipt of the verbal complaint, the PRSC-WG will consult with the IRC-WG to ensure the complaint is addressed timely. If the grievance is not resolved to the satisfaction of the AP, or if the AP prefers, s/he may lodge their complaint through the formal route which includes the steps below.
- **Step 2 − District level**. AH can lodge a written complaint to the Head of the District Office (where the subproject is located). The AH can bring a community elderly or their representative to discuss their grievance at the District Office. A conciliation meeting shall be held and a decision be made within 15 working days from the date of complaint is received by the District Office. If the complaint is resolved to the satisfaction of the AH, the IRC-WG will inform GDR's Department of Internal Monitoring and Data Management (DIMDM) who will review and seek the approval of the Director General of GDR for appropriate remedial action. GDR will inform the AF of the decision/ remedial action within 15 working days from the receipt of the grievance by the District Office. If the complaint is rejected at this step, District Office will inform the AH of the rejection in writing. If the complainant is not satisfied with the decision/resolution result, s/he can proceed to step 3 (below).
- **Step 3 − GDR level.** The complainant who is not satisfied with proposed resolution from Step 2 shall lodge a written complaint to the GDR for resolution.The GDR, through its DIMDM, will carry out a holistic review of the complaint and submit a report on its findings with the relevant recommendations, if any, to the Director General of GDR for review and decision. GDR may conduct a field visit to meet the complaint and the IRC-WG to gather relevant information. The final report must be completed within 30 working days from the date of receipt of the complaint by GDR for submission to the Director General of GDR who will make a final decision within 5 working days of receipt of the final report. In the event that the subject matter requires a policy level intervention, it will be referred to the IRC for a decision which may require that an additional 10 working days be extended from the original deadline for final decision.
- **Step 4 − Provincial level.** AH will submit a written complaint to the PGRC through the Provincial Governor's Office. The complainant or a representative will be given an opportunity to present its case during a meeting and the PGRC may consider any compelling and special circumstances of the AH to inform their decision. The GDR will send a representative, as a non-voting member, to provide an explanation to the rejection of the complaint at Step 3 with the GDR. The decision of the PGRC must be made on a consensus basis and will be final and binding except when the matter relates to government's policy. Decisions related to government's policy matters on land acquisition and resettlement are decided by the IRC. The PGRC will have 40 working days from the date of receipt of the complaint to reach a final decision. The decision of the PGRC will be sent to the IRC (through the GDR) for endorsement before any remedial action is taken.

  There are no fees or charges levied on the AH for their lodgment of complaint and for complaint resolution for the above 4 steps.
- **Step 5 − Court of Law**. If the aggrieved person prefers filing a lawsuit at the Provincial/Municipal Courts, as applicable, to seek a resolution, AP can do so but will bear cost related to the lawsuit as per the Expropriation Law. When the case is brought to a Court

of Law, there is no involvement of the GDR, PRSC or IRC-WG unless there is a judicial order from the competent courts.

9.4.2 Redress Procedure for Complaints related to Labor and Working Conditions

254 Project workers can lodge their grievance/complaint as follows:

- **Step 1 – Employer Level (Contractor and Subcontractor).** Aggrieved person (AP) can submit their grievance to their Employer who serves as the first focal point for receiving and resolving grievance. Grievance can be lodged verbally or in writing, in person or by phone, text message, mail or email (anonymous complaint is accepted). The Employer involved will resolve the case no later than 15 working days. Once resolved and the AP is satisfactory, the Employer will report the case, including resolution process and results, to the SEO of the MOWRAM for information and record. If the AP is not satisfied with the resolution of their Employer, the Employer will refer the AP to the SEO of MOWRAM, if needed and inform the AP of this referral. It is noted that if a complaint concerns the safety and health of one or several individuals, such complaint shall be resolved as soon as possible – depending on the nature and urgency of the grievance.
- **Step 2 – PMU level.** MOWRAM SEO will resolve the complaint referred to by the Employer (Step 1) and acknowledge receipt of the AP's complaints within two weeks from the date of complaint receipt. If the SEO of MOWRAM cannot resolve the complaint, the SEO Team will consult with the Project Manager/Director for resolution. The SEO of the MOWRAM will inform the AP (in writing) of the PMU's resolution result within 30 days from the date of complaint receipt. If the AP is not satisfied with the resolution result proposed by PMU, PMU will refer the case to the Project Steering Committee of the project and shall inform the AP (in writing) of this referral.
- **Step 3 – Project Steering Committee level.** At this level, the case will be resolved no later than 21 days. The AP will be informed of the resolution decision in writing. In case the grievance has not been solved within the specified timeframe, or the AP does not agree with the proposed resolution, the AP can approach the Labor Inspector of his/her province or municipality.
- **Step 4 – Court of Law.** If the AP is not satisfied with the resolution proposed above, a multistakeholder committee will be established (ad-hoc) to resolve the dismissed grievance – as an alternative for affected person going to court. If the grievance could not be resolved satisfactorily by the multistakeholder committee, the affected person may resort to the court of law. The cost associated with the lawsuit shall be borne by the AP. The decision of the Court will be final.

9.4.3 Redress Procedure for Complaints related to SEA/SH/GBV

255 Under the project, the GRM for SEA/SH/GBV mainly serves to: (i) refer complainants to a local GBV service provider; and (ii) record resolution of the complaint. In line with the above, the following principles apply so as to recognize SEA/SH/GBV victim as principal decision makers in their own care, and treat them with agency, dignity and respect for their needs and wishes:

- **Multiple channels** are in place for easy access and lodge complaints.
- **SEA/SH/GBV survivors will be referred to a local GBV service provider** for immediate support if they make a complaint directly to PMU.
- **Confidentiality of survivors is protected.** GM operator (at PMU and local GBV service providers) will keep confidential for SEA/SH/GBV allegation report.
- **No identifiable information on the survivor shall be collected and stored** in Project Grievance Logbook.
- **Costs of operating the SEA/SH/GBV GRM will be covered by the project**.

256 **It is noted that under this project, GBV service provider will be engaged** for subprojects that are rated "High" or "Substantial" for SEA/SH/GBV risks − based on SEA/SH/GBV risk assessment as part of site-specific ESMP.

The following channels can be used to submit a grievance related to SEA/SH/GBV:

+ Channel 1 – AP who believe the SEA/SH/GBV incidence is related to project workers can follow steps outlined in Section 6.4.2 (above) to lodge a SEA/SH/GBV complaint.

+ Channel 2 – Alternatively, AP can lodge their complaint, verbally or in writing, to the GRM's Focal Point within the SEO of MOWRAM for advice and resolution (contact of GRM Focal Point is provided in Section 5.1 (Resources).

+ Channel 3 – If AP wants to bring the case to the Court of Law, AP can follow steps below for prosecution. Prosecution related to SEA/SH/GBV is administered under the Criminal Code and the Code of Criminal Procedure and is as follows:

- **Step 1 – Judicial Police.** SEA/SH/GBV victim or a representative can submit their grievance to a local Judicial Police (JP) Officer. JPs include a) Commune/ Sangkat Chief, b) Commune/ Sangkat/ District/ Provincial/ National Police, and c) District/ Provincial/ National Military Police. The JP is responsible for receiving, recording complaints, and may conduct preliminary investigations to identify and arrest the perpetrator. The JP will also collect evidence to support the prosecutors. If the SEA/SH/GBV happens at home and/or falls under the domain of domestic violence (as per Law on the Prevention of Domestic Violence and Protection of Victims), the SEA/SH/GBV survivor may seek support from a local qualified Judiciary Police Officer (appointed by the Ministry of Women's Affairs) who can act as a complaining party on behalf of the SEA/SH/GBV survivor15.
- **Step 2 – Prosecutor.** Upon receiving the completed written record from the JP, the prosecutor can decide on if the prosecutor will hold a file without processing it further or conduct proceedings against the perpetrator. The prosecutor may bring the case to the Court of Law and present the evidence in Court hearings.
- **Step 3 – Investigation by Judge.** During this step, the investigating Judge will conduct interrogation of the charged person and perform other required investigation procedure.
- **Step 4 – Hearing.** After issuing an order of indictment, the investigating Judge will submit the case to the trial court president who shall arrange a date for the trial. The decision of the Court on SEA/SH/GBV resolution is final.

9.4.4 Redress Procedure for General Complaints

257 In case individuals, households, or communities are affected by any other aspects, for instance, environmental impacts such as increased dust, noise, or lack of safety measures that increase risks of traffic accident to road users or to local EM, various channels will be established for convinient use by affected parties, including IPs. These include:

- **PMU GRM focal point's telephone** (See Section 5.1 – Resources).
- **Local EM leaders** (in case affected individual/households are EM)
- **Contractor's hotline:** to report cases that they think contractors can solve timely (contact detail of Contractos will be posted at construction sites, and distributed to IPs (through Subproject Information Booklet) during consultation, and post at public billboard of Commune/Sangkat offices, pagodas, etc.
- **Commune/Sangkat offices**

9.5 Registration of Project Grievance

258 The SEO, Project 6.Managers within MOWRAM is responsible to establishing and maintaining the project grievance logbook (PGL). The PGL will be established by the SEO to record all concerns/ grievance that are submitted by project stakeholders during project implementation. In case there is serious complaint, the World Bank should be notified of these complaints within 24 hours of complaint receipt (See Annex 3 for Guidance for establishing and maintaining Project Grievance Logbook).

[15] In 2007, Inter-Ministerial Prakas No. 64 was issued by the Ministry of Women's Affairs (MoWA) and the Ministry of Justice (MoJ) appointing MoWA officials who have legal qualifications to be officials of the MoWA Judicial Police. The roles and authority of the JPO under MoWA is defined in the MoWA's Prakas No. 072 KKN/BS (2007) and is as follows: (1) act as a plaintiff representing the victim (2) prepare reports and records (3) monitor and follow up on relevant investigations (4) follow up on Court's procedures (decisions and convictions). In addition, Prakas of the Ministry of the Interior (No. 3840, 2020) on Establishment and Functioning of the Commune/ Sangkat Committee for Women and Children, has defined the roles and responsibilities of these Committees in prevention, mitigation and collaboration with juridical agencies to prevent, resolve cases related to domestic violence, sexual abuses, sexual harassment, human trafficking (such as exportations of women and children in commune/ sangkat for sexual exploitation).

259 **The GRM is an integral project management element** that intends to seek feedback from beneficiaries and resolve of complaints on project activities and performance. The GRMs for the project are based on IAAB, IFAD, UN, and GCF requirements and, most importantly, national requirements for solving potential problems between project owners and local residents/persons affected by the subproject(s).

10. ESCMF STAKEHOLDER CONSULTATION AND DISCLOSURE

10.1 Consultation Requirements

260 AIIB, IFAD and GCF require that consultations be held with the project affected peoples, local communities, vulnerable persons/ethnic minorities, and other relevant stakeholders. The consultations should provide information on the following aspects: a) purpose of the project; b) results of the environmental and social assessment; and c) presentation of the complementary studies required, in any instances where they apply. This ESCMF has been prepared through a detailed consultative process at both the field and central level, and consultations findings may also be used for subsequent safeguards documents.

261 Consultation through community outreach during project implementation is good practice to ensure that the potential adverse impacts and concerns are properly addressed during project construction and operation. Consultation with affected populations and ethnic minorities is required when the activities involve physical relocation, land acquisition, and ethnic minorities.

10.2 Consultation Process Summary

262 Public consultation is a key component of CAISAR and it was pivotal in preparation of the following documents:

- Environmental and Social Management Framework (ESCMF)
- Resettlement Planning Framework (RPF)
- Indigenous Peoples Planning Framework (IPPF)
- Gender Assessment & Social Inclusion Plan
- Stakeholder Engagement Plan (SEP), and
- Environmental, Social, Climate Assessment report (ESCA)

10.3 Initial Stakeholder Consultation Results

263 A number of missions and stakeholder engagement meetings have been held which are all part of the process of informing stakeholders about the proposed project, getting understanding and acceptance of the project, and getting input to further optimize the design and implementation of the project.

10.3.1 *Missions 1 and 2*

264 A two-stage joint mission was conducted by the Asian Infrastructure Investment Bank (AIIB), the International Fund for Agricultural Development (IFAD) and Ministry of Water Resources and Metrology (MoWRAM) for design and review of progress on the Climate Adaptive Irrigation and Sustainable Agriculture for Resilience (CAISAR) Project (the Project) from 11 to 24 December 2022[1] and 9 to 19 January 2023.[2]

265 During the mission, discussions were held with key stakeholders in Phnom Penh and field visits to four provinces (Pursat, Kampong Chnang, Kampong Speu, and Kandal province) were conducted. Mission members visited all the key points of the irrigation areas guided by the Secretary of State His Excellency Chan Sinath and the directors of the Provincial Water Resource Management (PDWRAM). Districts and commune administrations, farmers and agribusiness entrepreneurs were met to determine and reach agreement on the directions and focus of the Project design and to review progress to date.

266 The objectives of the mission were (a) to check the requirements at the Project sites and review preparation progress, (b) to prepare all necessary information, studies and relevant documentation necessary for completing the Feasibility Study (FS), Green Climate Fund (GCF) Project Concept Note (CN) and GCF's Full Funding Proposal package, and (c) to define and

check the key studies required for the feasibility study and carry out the relevant consultations for the design mission.

10.3.2 *Mission 3*

267 A third field mission was conducted during the period of 18-26 May 2023 to Ou Tapoung (Pursat Province), Lum Hach (Kampong Chhnang Province) and Krang Ponley (Kampong Pseu, Kandal Province). The objectives of this mission were to: 1. Conduct discussions with provincial agencies with respect to planned projects and possible issues, and 2. Better understand the irrigation and flood control schemes as well as the smart irrigation needs; 3. Investigate the potential environmental and social issues related to the planned project schemes; and 4. To discuss appropriate environmental, social and climate safeguard measures suitable for the project (Annex 12).

10.3.3 *Ou Tapoung Feasibility Study Consultations*

During the preparation of the Ou Tapoung Feasibility Study, several meetings were held with FWUC commune representatives. These included:

- Meeting with Village Leaders from the Ou Ta Paong tail-end area, which included the following Villages of Ou Ta Paong Commune:
    1) Prey Yeang
    2) Robors Reang
    3) Chamkar Muol
    4) Chamkar Khluy
    5) Ou Tapoang
    6) Anglong Kray
    7) Srash Mkak
    8) Bot Kokichas
    9) Sdok Khlork
    10) Chhouk Krobao
    11) Somroung Pok
    12) Psar Angdoeurk
    13) Ornga Mean,
    14) Srash Ron
    15) Bot Kokithmey
    16) Ta nai
    17) Ou Bot
    18) Tuol Rokeang
- Meeting with FWUC of Kampang Irrigation Scheme on Svay Doun Kaev River
- Meeting with Bakan District Chairman
- Meeting with FWUC Damnak Ampil
- Meeting with FWUC Krouch Saeuch

PDWRAM explained that most of the systems in the DAC command area have at one or another time in the past 15 years undergone a rehabilitation. OTP is sort of a 'left-over'. PDWRAM explained that the rehabilitation of the OTP system is included in the current Five-Year Plan (PDWRAM). PDWRAM envisages that the OTP command area will receive its irrigation water via a gate on Damnak Ampil Canal (DAC).[16] An existing branch of Damnak Ampil Canal (DAC) is destined as the most logic route for delivering water to OTP River.

The feasibility study is to recommend options for improvement of the irrigation services in the area between the rivers Kambot and Svay Doun Khay. The work to be undertaken includes rehabilitation, upgrading, and extension of existing infrastructure systems for irrigation, drainage, flood protection, water storage, and transport.

[16] The ToR for the CAISAR Consultancy Services states:

10.3.4 *First Round of Stakeholder Engagement Meetings*

268 The first round of stakeholder meetings were held during the 26th to 30th June 2023 at commune and provincial levels in all three subprojects and six irrigation schemes. There were potential affected people and local authorities in the subproject areas and command areas that attended the consultation meetings at commune level, while representatives from provincial administration and provincial departments attended the public consultation meeting at provincial level.

269 The SECAP team provided a presentation at each meeting that included the following topics:

- Background of the CAISAR project
- Purpose of the Public Consultation
- Technical scope of each scheme
- Anticipated environmental and social risks and impacts
- Environmental and social safeguards documents to be prepared
- Grievance redress mechanism

270 Key comments and concerns raised by meeting participants included:

- Is there a **compensation** program for affected people?
- How can **complaints** be lodged if there is an issue?
- Participants generally expressed support for the project to be implemented soon

271 The key recommendations from the first round of stakeholder meetings include:

- Brambei Mom (Kampong Speu): there is a community forestry of 800ha. Wild animals such as wild boar, peafowl, tiger cat, banteng, gaur and so on.
- UXO: still found in some areas.
- Kampong Chhnang Department of Agriculture: suggested further assessment for the reservoir of Lum Hach.
- Reservoir of Lum Hach was reserved for irrigation purpose and it is state land. However, local people encroach and occupy the land inside the Lum Hach reservoir over the past years.
- Provincial Department of Health: recommended to ensure the health and safety of workers in the project (e.g., disease transmission and medical staff should standby at each construction site.
- Provincial Department of Education: should avoid adverse impacts on schools and students.

10.4 Information Disclosure

272 AIIB, IFAD and GCF funded projects are required to disclose all safeguards related documents locally in an accessible place and in a form and language understandable to key stakeholders (in this instance, Khmer and English) and on the external website of MOWRAM and of IFAD and the GCF prior to appraisal.

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11. Data for 2020, World Bank, World Development Indicators
12. The ESCMF examines the risks and impacts when a project consists of a program and/or a series of subprojects, and the risks and impacts cannot be determined until the program or subproject details have been identified.
13. The 1989 Pelosi Amendment requires disclosure of environmental impacts at least 120 days prior to board approval for high- and sometimes substantial-risk projects (URL: https://www.gao.gov/archive/2000/ns00192.pdf)
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ANNEX 1: EXCLUSION LIST

Any sub-project that meets one or more of the following screening criteria will not be approved for financing under the project:

- Rural roads with total length of more than 10 kilometres per scheme;
- Irrigation canals with base width more than 10m; sluices with total drainage width more than 10m; irrigation embankments to protect cultivation areas of more than 500 hectares; large dams (higher than 15m) or any dams resulting in a high-risk rating (in terms of environment, social, and/or dam safety).
- Reservoirs with capacity of more than 3 million cubic meters;
- Infrastructure schemes that require physical resettlement of more than 20 people per subproject area or affect more than 10 percent (in value term) of assets of an individual household, or adversely impacts security of tenure of EM households.
- Any sub-project that physically displaces EM or dilutes/changes their security of tenure.
- Relocation and/or demolition of any permanent houses or business.
- Use of the project as an incentive and/or a tool to support and/or implement involuntary resettlement of local people and village consolidation.
- Land appropriation
- New settlements or expansion of existing settlements.
- Activities that would likely create adverse impacts on ethnic groups/indigenous peoples within the village and/or in neighboring villages, or activities unacceptable to ethnic groups living in an ethnic homogenous village or a village of mixed ethnic composition.
- Damage or loss to cultural property, including sites having archeological (prehistoric), paleontological, historical, religious, cultural and unique natural values.
- Resources access restriction (e.g. restricted access to farming land) that could not be mitigated and will result in adverse impacts on the livelihoods of ethnic groups and disadvantage peoples.
- Purchase of banned pesticides, insecticides, herbicides and other unbanned pesticides, unbanned insecticides and unbanned herbicides and dangerous chemicals exceeding the amount required to treat efficiently the infected area. However, if pest invasion occurs, the use of small amounts of eligible and registered pesticides in Cambodia will be allowed if supplemented by additional training of farmers to ensure pesticide safe uses in line with IFAD/GCF ESS policies and procedures. Highly Hazardous Pesticides (HHP) will not be used by the project.
- Purchase of destructive farming gear and other investments detrimental to the environment.
- Unsustainable exploitation of natural resources.
- Introduction of non-native species, unless these are already present in the vicinity or known from similar settings to be non-invasive.
- Significant conversion or degradation of natural habitat or where the conservation and/or environmental gains do not clearly outweigh any potential losses.
- Production or trade in any product or activity deemed illegal under Cambodia's laws or regulations or international conventions and agreements, or subject to international bans.
- Labor and working conditions involving harmful, exploitative, involuntary or compulsory forms of labor, forced labor[17], child labor[18] or significant occupational health and safety issues.
- Trade in any products with businesses engaged in exploitative environmental or social behavior. Sub-activities that require full EIA will not be funded including any projects that will use or induce the use of hazardous materials (including asbestos) or any banned chemicals.

[17] Forced labor means all work or service, not voluntarily performed, that is extracted from an individual under threat of force or penalty.

[18] Harmful child labor means the employment of children that is economically exploitive, or is likely to be hazardous to, or to interfere with, the child's education, or to be harmful to the child's health, or physical, mental, spiritual, moral, or social development.

ANNEX 2: IUCN RED LIST OF THREATENED SPECIES

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Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
Crocodylus siamensis	Siamese Crocodile	REPTILIA	CR	Decreasing	Terrestrial, Freshwater
Heosemys grandis	Giant Asian Pond Turtle	REPTILIA	CR	Decreasing	Terrestrial, Freshwater
Heosemys annandalii	Yellow-headed Temple Turtle	REPTILIA	CR	Decreasing	Terrestrial, Freshwater
Pangasianodon gigas	Mekong Giant Catfish	ACTINOPTERYGII	CR	Decreasing	Freshwater
Pangasius sanitwongsei	Giant Pangasius	ACTINOPTERYGII	CR	Decreasing	Freshwater
Probarbus jullieni	Jullien's Golden Carp	ACTINOPTERYGII	CR	Decreasing	Freshwater
Batagur a nis	Southern River Terrapin	REPTILIA	CR	Decreasing	Terrestrial, Marine, Freshwater
Catlocarpio siamensis	Giant Carp	ACTINOPTERYGII	CR	Decreasing	Freshwater
Datnioides pulcher	Siamese Tiger Perch	ACTINOPTERYGII	CR	Decreasing	Freshwater

Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
Heliopais personatus	Masked Finfoot	AVES	CR	Decreasing	Terrestrial, Freshwater

Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
Emberiza aureola	Yellow-breasted Bunting	AVES	CR	Decreasing	Terrestrial, Freshwater
Pelochelys cantorii	Asian Giant Softshell Turtle	REPTILIA	CR	Decreasing	Terrestrial, Marine, Freshwater
Indotestudo elongata	Elongated Tortoise	REPTILIA	CR	Decreasing	Terrestrial
Manis javanica	Sunda Pangolin	MAMMALIA	CR	Decreasing	Terrestrial
Gyps bengalensis	White-rumped Vulture	AVES	CR	Decreasing	Terrestrial
Sarcogyps calvus	Red-headed Vulture	AVES	CR	Decreasing	Terrestrial
Gyps tenuirostris	Slender-billed Vulture	AVES	CR	Decreasing	Terrestrial
Panthera pardus ssp. delacouri	Indochinese Leopard	MAMMALIA	CR	Decreasing	Terrestrial
Rucervus eldii	Eld's Deer	MAMMALIA	EN	Decreasing	Terrestrial, Freshwater
Laubuka caeruleostigmata	Flying Minnow	ACTINOPTERYGII	EN	Decreasing	Freshwater
Cuora amboinensis	Southeast Asian Box Turtle	REPTILIA	EN	Decreasing	Terrestrial, Freshwater

Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
Lutra sumatrana	Hairy-nosed Otter	MAMMALIA	EN	Decreasing	Terrestrial, Marine, Freshwater
Siebenrockiella crassicollis	Black Marsh Turtle	REPTILIA	EN	Decreasing	Terrestrial, Freshwater
Fluvitrygon oxyrhynchus	Marbled Whipray	CHONDRICHTHYES	EN	Decreasing	Freshwater
Pangasianodon hypophthalmus	Striped Catfish	ACTINOPTERYGII	EN	Decreasing	Freshwater
Urogymnus polylepis	Giant Freshwater Whipray	CHONDRICHTHYES	EN	Decreasing	Marine, Freshwater
Asarcornis scutulata	White-winged Duck	AVES	EN	Decreasing	Terrestrial, Freshwater
Rynchops albicollis	Indian Skimmer	AVES	EN	Decreasing	Terrestrial, Freshwater
Sterna acuticauda	Black-bellied Tern	AVES	EN	Decreasing	Terrestrial, Freshwater
Mycteria cinerea	Milky Stork	AVES	EN	Decreasing	Terrestrial, Marine, Freshwater
Leptoptilos dubius	Greater Adjutant	AVES	EN	Decreasing	Terrestrial, Freshwater
Scleropages formosus		ACTINOPTERYGII	EN	Decreasing	Freshwater
Bos javanicus	Banteng	MAMMALIA	EN	Decreasing	Terrestrial

Cuon alpinus	Dhole	MAMMALIA	EN	Decreasing	Terrestrial

Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
Elephas maximus	Asian Elephant	MAMMALIA	EN	Decreasing	Terrestrial
Hylobates pileatus	Pileated Gibbon	MAMMALIA	EN	Decreasing	Terrestrial
Macaca fascicularis	Long-tailed Macaque	MAMMALIA	EN	Decreasing	Terrestrial
Panthera tigris	Tiger	MAMMALIA	EN	Decreasing	Terrestrial
Pteropus vampyrus	Large Flying-fox	MAMMALIA	EN	Decreasing	Terrestrial
Pterocarpus macrocarpus	Burma Padauk	MAGNOLIOPSIDA	EN	Decreasing	Terrestrial
Hopea helferi		MAGNOLIOPSIDA	EN	Decreasing	Terrestrial
Shorea hypochra	White Meranti	MAGNOLIOPSIDA	EN	Decreasing	Terrestrial
Hopea ferrea		MAGNOLIOPSIDA	EN	Decreasing	Terrestrial
Anisoptera costata		MAGNOLIOPSIDA	EN	Decreasing	Terrestrial
Dipterocarpus intricatus		MAGNOLIOPSIDA	EN	Decreasing	Terrestrial
Vatica philastreana		MAGNOLIOPSIDA	EN	Decreasing	Terrestrial
Nycticebus bengalensis	Bengal Slow Loris	MAMMALIA	EN	Decreasing	Terrestrial

Trachypithecus germaini	Indochinese Silvered Langur	MAMMALIA	EN	Decreasing	Terrestrial

Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
Viverra megaspila	Large-spotted Civet	MAMMALIA	EN	Decreasing	Terrestrial
Pavo muticus	Green Peafowl	AVES	EN	Decreasing	Terrestrial
Tectona grandis	Teak	MAGNOLIOPSIDA	EN	Decreasing	Terrestrial
Calostoma insigne		AGARICOMYCETES	EN	Decreasing	Terrestrial
Macaca fascicularis ssp. fascicularis	Common Long-tailed Macaque	MAMMALIA	EN	Decreasing	Terrestrial

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Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
Crocodylus siamensis	Siamese Crocodile	REPTILIA	CR	Decreasing	Terrestrial, Freshwater
Heosemys grandis	Giant Asian Pond Turtle	REPTILIA	CR	Decreasing	Terrestrial, Freshwater
Heosemys annandalii	Yellow-headed Temple Turtle	REPTILIA	CR	Decreasing	Terrestrial, Freshwater

Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome

Crocodylus siamensis	Siamese Crocodile	REPTILIA	CR	Decreasing	Terrestrial, Freshwater
Heosemys grandis	Giant Asian Pond Turtle	REPTILIA	CR	Decreasing	Terrestrial, Freshwater
Heosemys annandalii	Yellow-headed Temple Turtle	REPTILIA	CR	Decreasing	Terrestrial, Freshwater

Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
Gyps bengalensis	White-rumped Vulture	AVES	CR	Decreasing	Terrestrial
Sarcogyps calvus	Red-headed Vulture	AVES	CR	Decreasing	Terrestrial
Gyps tenuirostris	Slender-billed Vulture	AVES	CR	Decreasing	Terrestrial
Panthera pardus ssp. delacouri	Indochinese Leopard	MAMMALIA	CR	Decreasing	Terrestrial
Rucervus eldii	Eld's Deer	MAMMALIA	EN	Decreasing	Terrestrial, Freshwater
Laubuka caeruleostigmata	Flying Minnow	ACTINOPTERYGII	EN	Decreasing	Freshwater
Cuora amboinensis	Southeast Asian Box Turtle	REPTILIA	EN	Decreasing	Terrestrial, Freshwater
Lutra sumatrana	Hairy-nosed Otter	MAMMALIA	EN	Decreasing	Terrestrial, Marine, Freshwater

Siebenrockiella crassicollis	Black Marsh Turtle	REPTILIA	EN	Decreasing	Terrestrial, Freshwater
Fluvitrygon oxyrhynchus	Marbled Whipray	CHONDRICHTHYES	EN	Decreasing	Freshwater
Pangasianodon hypophthalmus	Striped Catfish	ACTINOPTERYGII	EN	Decreasing	Freshwater
Urogymnus polylepis	Giant Freshwater Whipray	CHONDRICHTHYES	EN	Decreasing	Marine, Freshwater

Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
Asarcornis scutulata	White-winged Duck	AVES	EN	Decreasing	Terrestrial, Freshwater
Rynchops albicollis	Indian Skimmer	AVES	EN	Decreasing	Terrestrial, Freshwater
Sterna acuticauda	Black-bellied Tern	AVES	EN	Decreasing	Terrestrial, Freshwater
Mycteria cinerea	Milky Stork	AVES	EN	Decreasing	Terrestrial, Marine, Freshwater
Leptoptilos dubius	Greater Adjutant	AVES	EN	Decreasing	Terrestrial, Freshwater
Scleropages formosus		ACTINOPTERYGII	EN	Decreasing	Freshwater
Bos javanicus	Banteng	MAMMALIA	EN	Decreasing	Terrestrial
Cuon alpinus	Dhole	MAMMALIA	EN	Decreasing	Terrestrial

Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
Elephas maximus	Asian Elephant	MAMMALIA	EN	Decreasing	Terrestrial
Hylobates pileatus	Pileated Gibbon	MAMMALIA	EN	Decreasing	Terrestrial
Macaca fascicularis	Long-tailed Macaque	MAMMALIA	EN	Decreasing	Terrestrial
Manouria impressa	Impressed Tortoise	REPTILIA	EN	Decreasing	Terrestrial
Panthera tigris	Tiger	MAMMALIA	EN	Decreasing	Terrestrial
Pteropus vampyrus	Large Flying-fox	MAMMALIA	EN	Decreasing	Terrestrial

Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
Pterocarpus macrocarpus	Burma Padauk	MAGNOLIOPSIDA	EN	Decreasing	Terrestrial
Anisoptera costata		MAGNOLIOPSIDA	EN	Decreasing	Terrestrial
Dipterocarpus intricatus		MAGNOLIOPSIDA	EN	Decreasing	Terrestrial
Nycticebus bengalensis	Bengal Slow Loris	MAMMALIA	EN	Decreasing	Terrestrial
Trachypithecus germaini	Indochinese Silvered Langur	MAMMALIA	EN	Decreasing	Terrestrial

Viverra megaspila	Large-spotted Civet	MAMMALIA	EN	Decreasing	Terrestrial
Pavo muticus	Green Peafowl	AVES	EN	Decreasing	Terrestrial
Calostoma insigne		AGARICOMYCETES	EN	Decreasing	Terrestrial
Macaca fascicularis ssp. fascicularis	Common Long-tailed Macaque	MAMMALIA	EN	Decreasing	Terrestrial

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Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
Crocodylus siamensis	Siamese Crocodile	REPTILIA	CR	Decreasing	Terrestrial, Freshwater
Heosemys grandis	Giant Asian Pond Turtle	REPTILIA	CR	Decreasing	Terrestrial, Freshwater
Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
Heosemys annandalii	Yellow-headed Temple Turtle	REPTILIA	CR	Decreasing	Terrestrial, Freshwater
Pangasianodon gigas	Mekong Giant Catfish	ACTINOPTERYGII	CR	Decreasing	Freshwater
Pangasius sanitwongsei	Giant Pangasius	ACTINOPTERYGII	CR	Decreasing	Freshwater
Batagur a nis	Southern River Terrapin	REPTILIA	CR	Decreasing	Terrestrial, Marine, Freshwater

Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
Catlocarpio siamensis	Giant Carp	ACTINOPTERYGII	CR	Decreasing	Freshwater
Datnioides pulcher	Siamese Tiger Perch	ACTINOPTERYGII	CR	Decreasing	Freshwater
Terniopsis ubonensis		MAGNOLIOPSIDA	CR	Unknown	Freshwater
Heliopais personatus	Masked Finfoot	AVES	CR	Decreasing	Terrestrial, Freshwater
Emberiza aureola	Yellow-breasted Bunting	AVES	CR	Decreasing	Terrestrial, Freshwater
Indotestudo elongata	Elongated Tortoise	REPTILIA	CR	Decreasing	Terrestrial
Manis javanica	Sunda Pangolin	MAMMALIA	CR	Decreasing	Terrestrial
Aquilaria crassna	Agarwood	MAGNOLIOPSIDA	CR	Decreasing	Terrestrial
Houbaropsis bengalensis	Bengal Florican	AVES	CR	Decreasing	Terrestrial

Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
Gyps bengalensis	White-rumped Vulture	AVES	CR	Decreasing	Terrestrial
Sarcogyps calvus	Red-headed Vulture	AVES	CR	Decreasing	Terrestrial

Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
Gyps tenuirostris	Slender-billed Vulture	AVES	CR	Decreasing	Terrestrial
Panthera pardus ssp. delacouri	Indochinese Leopard	MAMMALIA	CR	Decreasing	Terrestrial
Laubuka caeruleostigmata	Flying Minnow	ACTINOPTERYGII	EN	Decreasing	Freshwater
Cuora amboinensis	Southeast Asian Box Turtle	REPTILIA	EN	Decreasing	Terrestrial, Freshwater
Lutra sumatrana	Hairy-nosed Otter	MAMMALIA	EN	Decreasing	Terrestrial, Marine, Freshwater
Siebenrockiella crassicollis	Black Marsh Turtle	REPTILIA	EN	Decreasing	Terrestrial, Freshwater
Fluvitrygon oxyrhynchus	Marbled Whipray	CHONDRICHTHYES	EN	Decreasing	Freshwater
Cyclemys atripons	Western Black-bridged Leaf Turtle	REPTILIA	EN	Decreasing	Terrestrial, Freshwater
Pangasianodon hypophthalmus	Striped Catfish	ACTINOPTERYGII	EN	Decreasing	Freshwater
Terniopsis chanthaburiensis		MAGNOLIOPSIDA	EN	Decreasing	Freshwater

Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
Asarcornis scutulata	White-winged Duck	AVES	EN	Decreasing	Terrestrial, Freshwater

Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
Sterna acuticauda	Black-bellied Tern	AVES	EN	Decreasing	Terrestrial, Freshwater
Mycteria cinerea	Milky Stork	AVES	EN	Decreasing	Terrestrial, Marine, Freshwater
Leptoptilos dubius	Greater Adjutant	AVES	EN	Decreasing	Terrestrial, Freshwater
Scleropages formosus		ACTINOPTERYGII	EN	Decreasing	Freshwater
Bos javanicus	Banteng	MAMMALIA	EN	Decreasing	Terrestrial
Cuon alpinus	Dhole	MAMMALIA	EN	Decreasing	Terrestrial
Elephas maximus	Asian Elephant	MAMMALIA	EN	Decreasing	Terrestrial
Hylobates pileatus	Pileated Gibbon	MAMMALIA	EN	Decreasing	Terrestrial
Macaca fascicularis	Long-tailed Macaque	MAMMALIA	EN	Decreasing	Terrestrial
Manouria impressa	Impressed Tortoise	REPTILIA	EN	Decreasing	Terrestrial
Panthera tigris	Tiger	MAMMALIA	EN	Decreasing	Terrestrial
Pteropus vampyrus	Large Flying-fox	MAMMALIA	EN	Decreasing	Terrestrial
Dipterocarpus intricatus		MAGNOLIOPSIDA	EN	Decreasing	Terrestrial

Species Name	Common Name	Taxonomic Group	IUCN Category	Population Trend	Biome
Nycticebus bengalensis	Bengal Slow Loris	MAMMALIA	EN	Decreasing	Terrestrial
Trachypithecus germaini	Indochinese Silvered Langur	MAMMALIA	EN	Decreasing	Terrestrial
Viverra megaspila	Large-spotted Civet	MAMMALIA	EN	Decreasing	Terrestrial
Philautus cardamonus		AMPHIBIA	EN	Unknown	Terrestrial
Pavo muticus	Green Peafowl	AVES	EN	Decreasing	Terrestrial
Cnemaspis neangthyi	Neang Thy's Rock Gecko	REPTILIA	EN	Unknown	Terrestrial
Calostoma insigne		AGARICOMYCETES	EN	Decreasing	Terrestrial
Macaca fascicularis ssp. fascicularis	Common Long-tailed Macaque	MAMMALIA	EN	Decreasing	Terrestrial

ANNEX 3: TERMS OF REFERENCE FOR E&S SAFEGUARDS MONITORING CONSULTANT

The following is meant to serve as a sample Terms of Reference and should, therefore, be amended accordingly to fit the context of the CAISAR project once final decisions have been made about budget and division of tasks (e.g. whether the project's Monitoring & Evaluation (M&E) specialist will be separate from the Safeguards M&E consultant).

BACKGROUND

[Hiring unit should insert background information on the CAISAR project within the given Provincial PMU and project area here]

OBJECTIVES OF THE ASSIGNMENT

MOWRAM seeks the Consultancy Services of an experienced Individual Consultant "Environmental & Social Safeguards and Project Monitoring & Evaluation Consultant" as part of the Provincial Project Management Unit (full-time engagement). The objective of this assignment is monitoring compliance of the project activities with Environmental & Social Safeguards instruments. In addition, the Consultant will support the Project's overall M&E.

SCOPE OF WORK

Duties and Responsibilities:
The specific tasks stipulated in this ToR to be undertaken by the Environmental & Social Safeguards and Project M&E Consultant include, but are not limited to the following:

With regard to Environmental and Social Safeguards:
The Consultant will assist the Project Coordinator/Project Manager and will work closely with the Environmental & Social Safeguards staff within the Provincial PMU to handle Environmental and Social Safeguards related responsibilities. Specifically:

- Undertake site visits and on-ground review, check and document compliance with site-specific measures as presented in site-specific ESCMPs.
- Provide guidance to contactors, site supervisors, and other stakeholders on manners of implementation and documentation of compliance related to environmental mitigation and monitoring measures, as presented in site-specific ESCMPs.
- Check that all documents necessary to ensure full compliance with Environmental & Social Safeguard instruments, in particular, Environmental and Social Management Plans (ESCMPs) and Indigenous Peoples' Plans (IPPs) are prepared, regularly updated, and available to relevant stakeholders;
- Ensure that project activities, being developed as a part of the Project, are designed to include avoidance of potential social and environmental risks, as recommended in the ESCMPs and annual IP Plans already prepared;
- Provide overall Environmental and Social Management oversight during the implementation of CAISAR's activities and advise the implementation agencies in addressing the environmental issues;
- Ensure that each subproject and related activities under the project are subject to the Project's ESCMP procedures;
- Review subproject and activity plans, design, costs, and bidding documents and be involved in procurement of Civil Works and Supervision to ensure that Civil Works and Supervision contracts include provisions concerning the Environmental and Social Safeguard issues;
- Coordinate with relevant agencies for obtaining environmentally related permits, as necessary;
- Communicate with local governments, contractors, and with any Environmental, Social, Health and Safety (ESHS) Experts that may be part of the subproject supervision team in all matters related to design, implementation, documenting and reporting on environmental compliance, as indicated in site-specific ESCMPs;

- Monitor implementation of site-specific ESCMPs by the Contractors to ensure that appropriate management process and procedures are in place, that Environmental and Social Safeguards related measures are adequately addressed and to ensure that in the event of a noncompliance agreed remedial actions are applied and documented;
- Check and ensure that the regular reports are prepared and timely submitted by the Contractor as per content agreed and provide comments, as appropriate;
- Contribute to, along with the E&S Provincial PMU Specialists, preparation of semi-annual ESCMP Compliance Reports for IFAD and the GCF
- Participate in missions and technical visits by IFAD, and work closely with the IFAD SECAP Specialists and Provincial PMU E&S Specialists to ensure the Project's compliance with relevant environmental and social policies.
- Undertake other actions related to environmental and social aspects of the Project, as may be instructed by the Project Manager/Coordinator from time to time and/or the E&S Specialists in the Provincial PMU, in order to ensure full compliance of the Project with national and international environmental and social standards and legislation.

With regard to Project Monitoring & Evaluation:

The Consultant will be in charge of the Project's Monitoring & Evaluation (M&E), design the strategic and technical approach to implementing project goals within the technical framework outlined for the Results Monitoring. The Consultant will coordinate and work with other members of the Provincial PMU, particularly any staff which DARD has assigned to operate the REDD+ MIS SIS and/or Project MIS, to ensure adequate monitoring of progress against the project indicators. In addition, the Consultant will also work closely with any specialists hired to carry out Mid-Term and/or Terminal Project Monitoring & Evaluation and facilitate the gathering of information.

- Review and familiarize themselves with the Project's documents, in particular with Project Operational Manual (POM) and Monitoring Information System (MIS) already established;
- Carry out the preparation and implementation of the M&E program and keep records on achievements, breakdowns of indicators;
- Continuously monitor progress towards the project's objectives and according to agreed Performance Monitoring Indicators;
- Report in semi-annual reports on the project objectives and Results Framework updates;
- Monitor the project's implementation and evaluate outcomes and results for each Component and Subcomponent, using the MIS;
- Determine whether the inputs in the project are well utilized;
- Monitor the project's implementation against the planned activities (physical and financial), analyze reasons for delays (if any), and propose measures and solutions to overcome delays;
- Ensure that the project's activities are properly implemented as per the agreed program, and take corrective actions when necessary;
- Identify good practices and advantages within the project, recording lessons-learned for future consideration;
- Carry out the roles and responsibilities given by the Project Coordinator/Manager;
- Support the beneficiary survey and other end-of-project evaluations
- Take all necessary measures for the maintenance of the MIS to keep it operational.

QUALIFICATIONS REQUIREMENTS

The person suitable for the position of the Environmental & Social Safeguard and Project Monitoring & Evaluation Consultant should have the following qualifications:

- Master's degree, preferable in the Environmental Sciences, Environmental Engineering or equivalent professional qualifications appropriate to the Consultancy Services requested;
- A minimum of 5 (five) years of relevant experience in Environmental & Social Safeguard Monitoring;
- Knowledge of Cambodia's regulations and laws (particularly in the EIA processes) is required;
- Familiarity with the IFAD, GCF, and REDD+ Safeguard policies will be an advantage;
- Knowledge and experience in Project Monitoring & Evaluation is desirable;

- Proficiency in using computer and office software packages (word processing, spreadsheet etc.). Experience in the handling of web-based data and Management Information Systems will be an added advantage;
- Fluent written and spoken Khmer and English.

REPORTING OBLIGATIONS

The Consultant will work under the direction of and report to the CAISAR Project Manager/Coordinator within the PMU, and in close consultation with the E&S Specialists of the PMU. The Consultant will deliver monthly progress reports concerning the accomplishment of their assignments.

In addition, concerning the overall Project M&E, the Consultant shall prepare semi-annual and annual surveys on project outcomes indicators and prepare semi-annual and annual project progress reports, updating relevant parts of the Result Framework, as appropriate. This work shall be conducted in close consultation with any relevant specialists with the PMU.

CLIENT'S INPUTS

The Consultant will be based and work in the Provincial PMU office. MOWRAM, as host of the Provincial PMU, will provide the office space and equipment required to perform the tasks assigned.

TERMS OF THE ASSIGNMENT AND DURATION

- The Consultant will work on full-time basis.
- Remuneration will be paid on a monthly basis.
- The Consultant will be offered the opportunities to grow up professionally by attending relevant training events and courses during the term of the contract.
- The initial contract with the Consultant will cover one year, with a 3 month probation period, at which time the performance of Consultant shall be evaluated and extension may be made annually pending continued performance.
- Evaluation of the 3 (three) month probation period and any contract extension would be fully based on the consultant's performance certified by the Project Coordinator/Manager and as agreed with IFAD.

ANNEX 4: CHANCE FINDS PROCEDURE

The following *"chance find"* procedures must be included in all third-party contracts (e.g. Letters of Agreement) in instances where the contracted party is assisting with project implementation and/or construction activities.

Provincial PMUs will ensure that the bidding documents and work contract for civil works contractors include clauses on chance find procedures. Specifically, the clause will stipulate that if the Contractor discovers archeological sites, historical sites, remains and objects, including graveyards and/or individual graves during project implementation, the Contractor shall:

- Stop the activities in the area of the chance find;
- Delineate the discovered site or area;
- Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be arranged until the responsible local or provincial authorities take over;
- Notify the supervisory Safeguards Specialist within the PMU who, in turn, will notify the responsible local and provincial authorities immediately (within 24 hours or less);
- Responsible local and/or provincial authorities would oversee protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed by government approved archeologists. The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values;
- Decisions on how to handle the finding shall be taken by the responsible local and provincial authorities. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage;
- Implementation for the authority decision concerning the management of the finding shall be communicated in writing by relevant local authorities; and
- Project activities could resume only after permission is given from the responsible local or provincial authorities concerning safeguard of the heritage.

Note that the reporting of chance finds only occurs when an item/area/etc. of cultural significance is found, and is only carried out insofar as what is detailed above (i.e. reporting the find, reporting how the item/area will be treated moving forward). Reporting begins with the local level implementer (e.g. staff tasked to the implement the project within a village) notifying the Safeguards Specialist, after which, the Safeguards Specialist guides the process according to the instructions above (e.g. notifying the relevant government authorities).

ANNEX 5: E & S CODES OF PRACTICE FOR CONSTRUCTION

Generic contract clauses are provided to assist with environmental and social management works. These clauses are general and should be modified as needed. These clauses are intended to be included as requirements in the works contract and shall remain in force throughout the contract period.

Clause on ESCMP

The Contractor is required to implement this ESCMP. The Contractor is responsible for the implementation of construction and rehabilitation activities for the sites and for implementing the impact mitigation measures in the construction phase. The Contractor's approach shall be detailed in the Contractor's Management Plan.

The Contractor shall include a suitably qualified and experienced Environmental, Occupational Health and Safety Officer (and other staff or consultants as necessary) to be specifically responsible for preparation and regular update and supervision of the ESCMP. The Environmental, Occupational Health and Safety Officer is responsible for the daily supervision and monitoring of the Contractors implementation of the Plan and compliance with the Project ESCMP for the duration of the contract. The Contractor's approach to comply with the ESCMP shall be approved by PMU prior to the Contractor's mobilization to the site.

The Contractor will be required to report on the implementation status of the ESCMP to PMU. The damages due to the violation of the stipulations by the Contractor shall be compensated and/or restored by the Contractor at his or her own expense. Performance will be monitored by PMU and will be enforced by withholding of payments (refer to relevant clause in the bid documents).

Other Standard Clauses

Permits and Approvals

The contractor shall be responsible for ensuring that he or she has all relevant legal approvals and permits required to commence works.

Site Security

The contractor shall be responsible for maintaining security over the construction site including the protection of stored materials and equipment. In the event of severe weather, the contractor shall secure the construction site and associated equipment in such a manner as to protect the site and adjacent areas from consequential damages. This includes the management of onsite, construction materials, construction and sanitary wastes, additional strengthening of erosion control and soil stabilization systems and other conditions resulting from contractor activities which may increase the potential for damages.

Discovery of Antiquities and Cultural Heritage

If, during the execution of the activities contained in this contract, any material is discovered onsite which may be considered of historical or cultural interest, such as evidence of prior settlements, native or historical activities, evidence of any existence on a site which may be of cultural significance, all work shall stop and the supervising contracting officer shall be notified immediately and the Chance Find Procedures followed (Appendix 5). The area in which the material was discovered shall be secured, cordoned off, marked, and the evidence preserved for examination by the local archaeological or cultural authority. No item believed to be an artefact must be removed or disturbed by any of the workers. Work may resume, without penalty of prejudice to the contractor upon permission from the contracting officer with any restrictions offered to protect the site.

Worker Occupational Health and Safety

The contractor shall ensure that all workers operate within a safe environment. Sanitation facilities shall be provided for all site workers. All sanitary wastes generated as a result of project activities shall be managed in a manner approved by the contracting officer and the local authority responsible for public health. The contractor shall ensure that there are basic medical facilities on site and that there are staff trained in basic first aid. Workers must be provided with the necessary protective gear as per their specific tasks such as hard hats, overalls, gloves, goggles, boots, etc. The contractor shall

provide the contracting officer with an occupational health and safety plan for approval prior to the commencement of site activities.

The contractor must ensure that all workers operate within a safe environment. All relevant Labor and Occupational Health and Safety regulations must be adhered to ensure worker safety. Sanitary facilities must be provided for all workers on site. Appropriate posting of information within the site must be done to inform workers of key rules and regulations to follow.

Noise Control

The contractor shall control noise emissions generated as a result of contracting activities to the extent possible. In the case of site locations where noise disturbance will be a concern, the contractor shall ensure that the equipment is in good working order with manufacturer supplied noise suppression (mufflers etc.) systems functioning and in good repair.

Where noise management is a concern, the contractor shall make reasonable efforts to schedule activities during normal working hours (between 7 am and 5 pm). Where noise is likely to pose a risk to the surrounding community either by normal works or working outside of normal working hours or on weekends, the contractor shall inform the contracting officer and shall develop a public notification and noise management plan for approval by the contracting officer.

Use and Management of Hazardous Materials, fuels, solvents and petroleum products

The use of any hazardous materials including pesticides, oils, fuels and petroleum products shall conform to the proper use recommendations of the product. Waste hazardous materials and their containers shall be disposed of in a manner approved by the contracting officer in accordance with State and/or national laws and the Project ESCMP. A site management plan will be developed by the contractor if the operation involves the use of these materials to include estimated quantities to be consumed in the process, storage plans, spill control plans, and waste disposal practices to be followed. Any plans required shall be approved by the contracting officer.

Elements of the hazardous materials management shall include:

- Contractor must provide temporary storage on site of all hazardous or toxic substances in safe containers labeled with details of composition, properties and handling information;
- Hazardous substances shall be placed in a leak-proof container to prevent spillage and leaching; and
- Wastes shall be transported and disposed of in a manner outlined in the ESCMP, and cleared by the PMU Safeguards Team compliant with national laws and policies and the ESCMP.

12.

Use and Management of Pesticides

Any use of pesticides shall be approved by the contracting officer and shall conform to the manufacturers' recommendations for use and application. Any person using pesticides shall demonstrate that they have read and understood these requirements and are capable of complying with the usage recommendations to the satisfaction of the contracting officer. All pesticides to be used shall conform to the list of acceptable pesticides that are not banned by the relevant local authority.

If termite treatment is to be utilized, ensure appropriate chemical management measures are implemented to prevent contamination of surrounding areas, and use only licensed and registered pest control professionals with training and knowledge of proper application methods and techniques.

Use of Explosives

No explosives shall be used on the Project.

Site Stabilization and Erosion Control

The Contractor shall implement measures at the site of operations to manage soil erosion through minimization of excavated area and time of exposure of excavated areas, preservation of existing ground cover to the extent possible, provision of approved ground cover and the use of traps and filtration systems. Where excavations are made, contractor shall implement appropriate stabilizing techniques to prevent cave-in or landslide. Measures shall be approved by the contracting officer.

The contractor must ensure that appropriate erosion control measures such as silt fences are installed. Proper site drainage must be implemented. Any drain clogged by construction material or sediment must be unclogged as soon as possible to prevent overflow and flooding. The use of retaining

structures and planting with deep rooted grasses to retain soil during and after works must be considered. The use of bio-engineering methods must be considered as a measure to reduce erosion and land slippage. All slopes and excavated areas must be monitored for movement.

The contractor will establish appropriate erosion and sediment control measures such as hay bales, sedimentation basins, and / or silt fences and traps to prevent sediment from moving off site and causing excessive turbidity in nearby streams, rivers and wetlands. Construction vehicles and machinery will be washed only in designated areas where runoff will not pollute natural surface water bodies.

Air Quality

The Contractor shall comply with the Project ESCMP requirements for dust management.

Traffic Management

In the event that construction activities should result in the disruption of area transportation services, including temporary loss of roadways, blockages due to deliveries and site related activities, the contractor shall provide the contracting officer with a traffic management plan including a description of the anticipated service disruptions, community information plan, and traffic control strategy to be implemented so as to minimize the impact to the surrounding community. This plan shall consider time of day for planned disruptions, and shall include consideration for alternative access routes, access to essential services such as medical, disaster evacuation, and other critical services. The plan shall be approved by the contracting officer.

Elements of the traffic management plan to be developed and implemented by contractor shall include:

- Alternative routes will be identified in the instance of extended road works or road blockages;
- Public notification of all disturbance to their normal routes;
- Signage, barriers and traffic diversions must be clearly visible, and the public warned of all potential hazards;
- Provision for safe passages and crossings for all pedestrians where construction traffic interferes with their normal route;
- Active traffic management by trained and visible staff at the site or along roadways as required to ensure safe and convenient passage for the vehicular and pedestrian public; and
- Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement.

13.

Water Quality

The Contractor shall comply with the Project ESCMP requirements for water quality. Under no circumstances shall the contractor permit the collection of standing water as a consequence of contractor activities to ensure that it does not create breeding grounds for any pests such as mosquitoes.

Management of Solid Wastes and Construction Debris

The contractor shall provide a solid waste management plan that conforms to the national solid waste management policies and regulations and the site-specific ESCMP for approval by the PMU and IFAD (see Appendix 3 for an outline of a site-specific ESCMP). The site's waste management plan shall include a description of waste handling procedures including collection, storage and disposal through the national waste management system. There will be no open burning of waste material and the contractor shall endeavor to recycle wastes as appropriate. Under no circumstances shall the contractor allow construction wastes to accumulate so as to cause a nuisance or health risk due to the propagation of pests and disease vectors.

Management of Workers

The Contractor will prepare a specific Code of Conduct (see Appendix 9) to describe the expected behaviors of their project worker in relation to the local communities and their social sensitivities. This is to avoid creating demand for illegal sex work, avoid SEA/SH and Violence against Children, manage alcohol consumption and avoid the use of illegal substances, and abide by cultural and social norms of the host community. The Contractor is to ensure no children (persons under the age of 18) are hired to work in the project.

The Contractor is to ensure that all overseas project staff undergo a training on the Staff Code of Conduct. Gender based violence and HIV/AIDS and communicable disease awareness raising and resources shall also be provided to all workers. MARD shall provide to the Contractor a list of approved service providers, which shall include recognized NGOs and others for conducting this training.

The Contractor is to stipulate the conditions under which visitors may attend the workers' accommodation, including curfews. The Contractor shall ensure that basic social/collective rest and recreation spaces and activities within the workers accommodation to help minimize the impact that the workers would have on the leisure and recreational facilities of the nearby communities. The Contractor must comply with the Guidelines for Worker's Camps (Appendix 7).

As per guidelines in the ESCMP, the Contractor must ensure that Worker's Camps are located at least 500m from nearby communities and schools (see Appendix 7).

ANNEX 6: GUIDELINES FOR WORKERS' CAMPS

To ensure the compliance to the OHS and ESF requirement, these guidelines will help the contractor when setting up worker's camps.

GENERAL

The Workers Camp Management Plan will be compliant with the specific prescriptions of the site-specific ESCMP. Contractors must ensure that Worker's Camps are located at least 500m from nearby communities and schools.

WORKER RECRUITMENT

The Contractor is required to minimise the number of skilled workers that are recruited from overseas. No unskilled labour will be sourced from overseas. Local communities should be prioritized for unskilled labour, including a target of 15% female unskilled workers when/where applicable. The Contractor will maximize the number of skilled and unskilled workers that are recruited from the communities along the project site.

The Contractor will be required to provide justification for any skilled workers recruited from overseas and explain why this position cannot be filled locally.

WORKERS CAMP FACILITIES

All facilities in the Workers Camp must be complaint with the stipulations of the ESCMP. The camp shall be provided with the following minimum facilities:

- Eating space and dormitories as required shall be constructed of suitable materials to provide a safe healthy environment for the workforce and which facilitate regular cleaning and the provision of ventilation and illumination.
- At least one water closet toilet, one urinal and one shower per 10 personnel engaged either permanently or temporarily on the project. Separate toilet and wash facilities shall be provided for male and female employees, including ensuring that toilets are available close to working sites/road sections where women are working.
- A sick bay and first aid station.
- Sewage collection facilities to allow for the treatment of black and grey wastewater discharge from toilets, washrooms, showers, kitchens, laundry and the like. The management of all camp wastewater water shall be as prescribed in the ESCMP.
- All camp facilities shall be maintained in a safe clean and or appropriate condition throughout the construction period.
- Throughout the period of the contract the employer, the engineer, or their representatives shall have uninterrupted access to and from the camp for the purpose of carrying out routine inspections of all buildings, facilities or installations of whatever nature to ensure compliance with this specification.

WORKERS CAMP OPERATIONS

- The Contractor will be required to provide adequate provisions for the workers for the duration of the project so as not to be a burden on the food or water security of the surrounding communities. The Contractor will strive to hire local labour to provide cleaning and food services.
- All wastewater, solid waste, freshwater usage, noise levels, handling and storage of hazardous materials shall be as prescribed in the ESCMP.

MANAGEMENT OF OFF DUTY WORKERS

- The Contractor will prepare ensure all staff sign and adhere to the Workers' Code of Conduct to describe the expected behaviours of their project worker in relation to the local communities and their social sensitivities.

- The Contractor is to ensure that all overseas project staff, not already living in Cambodia undergo a cultural familiarisation session as part of their induction training. The purpose of this induction will be to introduce the project staff to the cultural sensitivities of the local communities and the expected behaviours of the staff in their interactions with these communities.
- The Contractor is to stipulate the conditions under which visitors may attend the workers camp. Strict visiting hours should be enforced, and all visitors will be required to sign in and out of the worker's camp. No overnight visitors will be allowed.
- The Contractor shall ensure that basic social/collective rest spaces are provided equipped with seating within the Workers Camp to help minimise the impact that the workers would have on the leisure and recreational facilities of the nearby communities. Provisions should also be made to provide the workers with an active recreation space within the camp.

WORKERS CAMP MANAGEMENT PLAN

A Worker Camp Management Plan shall be submitted by the Contractor to the Provincial PMU. The Workers' Camp Management Plan shall describe how this document and the ESCMP shall be implemented in the following:

- Recruitment strategy
- Accommodation
- Canteen and dining areas
- Ablutions
- Water supply
- Wastewater management system
- Proposed power supply
- Code of Conduct for Workers
- Recreational/leisure facilities for workers
- Visitors to the Workers Camp
- Interactions with the local communities

ANNEX 7: CONTRACTORS' COVID-19 GUIDELINE

The objective of the Contractors' General Guideline on COVID-19 Considerations in Construction Works is to provide guidance on Prevention Measures and Response to possible cases of COVID-19 following the update-to-day guidance of the Ministry of Health.

Prevention Measures:

- Dissemination of COVID-19 prevention measures to staff and workers through orientation or distributing leaflet/poster at information/safety board at each construction and camp site
- Daily checking temperature of staff and workers prior to start working
- Staff and workers are wearing masks all the time
- Do not share personal items or supplies such as phones, pens, notebooks, tools, etc
- Avoid common physical greetings, such as handshakes
- Maintain a minimum physical distance of one metre from others if possible
- Wash hands often with soap and water for at least 20 seconds after using the washroom, before handling food, after blowing nose, coughing, or sneezing, and before smoking. If hands are not visibly soiled, and soap and water are unavailable, alcohol-based hand sanitizer can be used
- All offices and jobsites implement additional cleaning measures of common areas. All door handles, railings, ladders, switches, controls, eating surfaces, shared tools and equipment, taps, toilets, and personal workstation areas are wiped down at least twice a day with a disinfectant, such as disinfectant wipes. Individuals are responsible for cleaning and disinfecting their workstations
- Commonly touched surfaces on vehicles and equipment are thoroughly cleaned and disinfected at the end of shifts and between users
- Coughing or sneezing into a tissue or the bend of your arm, not your hand; dispose of used tissues you have as soon as possible in a lined waste basket and wash your hands afterwards
- Complying with any instructions announced by the Ministry of Health

Response to Possible Cases of COVID-19

- Individuals who have been potentially exposed to the virus, or who are exhibiting flu-like symptoms such as fever, tiredness, coughing, or congestion are instructed to:
  - Not come to work;
  - Contact their supervisor and/or human resources department;
  - Stay at home and self-isolate; and
  - Contact local health authorities for further direction.

- Such individuals are required to follow the directions of the local health authority and may not return to work until given approval by the proper health authorities;
- Individuals who begin to display flu-like symptoms on site are instructed to avoid touching anything, take extra care to contain coughs and sneezes, and return home immediately to undergo self-isolation as directed by the local health authority;
- All areas on site potentially infected by a confirmed or probable case are barricaded to keep individuals two meters away until the area is properly cleaned and disinfected.

ANNEX 8: WORKERS' CODE OF CONDUCT

Instructions: This Code of Conduct should be included in bidding documents for the civil works contractor(s) and in their contracts once hired. This Code of Conduct should also be included in bidding documents, and the contracts, of construction contractor. This Code of Conduct is to be signed by all contractor, including subcontractors, if any, including contractors and subcontractors' managers who work under the CAISAR project.

I, _____, acknowledge that adhering to environmental, social, health and safety (ESHS) standards, following the project's occupational health and safety (OHS) requirements, and preventing Sexual Exploitation Abuse (SEA)/Sexual Harassment (SH) is important.

The Contractor/DDIS considers that failure to follow ESHS and OHS standards, or to partake in activities constituting SEA and SH be it on the work site, the work site surroundings, at workers' camps, or the surrounding communities—constitute acts of gross misconduct and are therefore grounds for sanctions, penalties or potential termination of employment. Prosecution by the Police of those who commit VAC, SEA/SH may be pursued if appropriate.

I agree that while working on the project I will:

- Carry out his/her duties competently and diligently;
- Comply with this Code of Conduct and all applicable laws, regulations and other requirements, including requirements to protect the health, safety and well-being of other Contractor's Personnel and any other person;
- Maintain a safe working environment including by:
- Ensure that workplaces, machinery, equipment and processes under each person's control are safe and without risk to health;
- Use appropriate measures relating to chemical, physical and biological substances and agents; and
- Follow applicable emergency operating procedures.
- Report work situations that he/she believes are not safe or healthy and remove himself/herself from a work situation which he/she reasonably believes presents an imminent and danger to his/her life or health;
- Consent to a background check in any place I have worked for more than six months.
- Attend and actively partake in training courses related to ESHS, OHS, VAC, SEA/SH as requested by my employer.
- Will wear my personal protective equipment (PPE) at all times when at the work site or engaged in project related activities.
- Take all practical steps to implement the environmental and social management plan (ESCMP).
- Implement the OHS Management Plan.
- Adhere to a zero-alcohol policy during work activities, and refrain from the use of narcotics or other substances which can impair faculties at all times.
- Treat women, children (persons under the age of 18), and men with respect regardless of race, color, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.
- Not use language or behavior towards women, children or men that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.
- Not sexually exploit or abuse project beneficiaries and members of the surrounding communities.

- Not engage in sexual harassment of work personnel and staff —for instance, making unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature is prohibited: i.e. looking somebody up and down; kissing, howling or smacking sounds; hanging around somebody; whistling and catcalls; in some instances, giving personal gifts.
- Not engage in sexual favors —for instance, making promises of favorable treatment (i.e. promotion), threats of unfavorable treatment (i.e. loss of job) or payments in kind or in cash, dependent on sexual acts—or other forms of humiliating, degrading or exploitative behavior.
- Not use prostitution in any form at any time.
- Not participate in sexual contact or activity with children under the age of 18—including grooming or contact through digital media. Mistaken belief regarding the age of a child is not a defense. Consent from the child is also not a defense or excuse.
- Unless there is the full consent[19] by all parties involved, I will not have sexual interactions with members of the surrounding communities. This includes relationships involving the withholding or promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex (including prostitution). Such sexual activity is considered "non-consensual" within the scope of this Code.
- Consider reporting through the GRM or to my manager any suspected or actual SEA/SH by a fellow worker, whether employed by my company or not, or any breaches of this Code of Conduct.
- Complete relevant training courses that will be provided related to the environmental and social aspects of the Contract, including on health and safety matters, and Sexual Exploitation, and Sexual Assault (SEA);
- Report violations of this Code of Conduct; and

With respect to children under the age of 18:

- Bring to the attention of my manager the presence of any children on the construction site or engaged in hazardous activities.
- Wherever possible, ensure that another adult is present when working in the proximity of children.
- Not invite unaccompanied children unrelated to my family into my home unless they are at immediate risk of injury or in physical danger.
- Not use any computers, mobile phones, video and digital cameras or any other medium to exploit or harass children or to access child pornography (see also "Use of children's images for work related purposes" below).
- Refrain from physical punishment or discipline of children.
- No hiring of children for any CAISAR project activity (no persons under the age of 18).
- Comply with all relevant local legislation, including labor laws in relation to child labor and World Bank's safeguard policies on child labor and minimum age.
- Take appropriate caution when photographing or filming children (see x-bb below). Photos or films of children should generally not be taken in the CAISAR, except in instances showing the benefits or impacts of road works, such as impacts to schools or school safety trainings.

Use of children's images for work related purposes

When photographing or filming a child for work related purposes, I must:

- Before photographing or filming a child, assess and endeavor to comply with local traditions or restrictions for reproducing personal images.
- Before photographing or filming a child, obtain informed consent from the child and a parent or guardian of the child. As part of this I must explain how the photograph or film will be used.

[19] **Consent** is defined as the informed choice underlying an individual's free and voluntary intention, acceptance or agreement to do something. No consent can be found when such acceptance or agreement is obtained using threats, force or other forms of coercion, abduction, fraud, deception, or misrepresentation. In accordance with the United Nations Convention on the Rights of the Child, the World Bank considers that consent cannot be given by children under the age of 18, even if national legislation of the country into which the Code of Conduct is introduced has a lower age. Mistaken belief regarding the age of the child and consent from the child is not a defense.

- Ensure photographs, films, videos and DVDs present children in a dignified and respectful manner and not in a vulnerable or submissive manner. Children should be adequately clothed and not in poses that could be seen as sexually suggestive.
- Ensure images are honest representations of the context and the facts.
- Ensure file labels do not reveal identifying information about a child when sending images electronically.

Raising Concerns

If any person observes behavior that he/she believes may represent a violation of this Code of Conduct, or that otherwise concerns him/her, he/she should raise the issue promptly. This can be done in either of the following ways:

- Contact [enter name of the Contractor's Social Expert with relevant experience in handling gender-based violence, or if such person is not required under the Contract, another individual designated by the Contractor to handle these matters] in writing at this address [ ] or by telephone at [ ] or in person at [ ]; or
- Call [ ] to reach the Contractor's hotline (if any) and leave a message.

The person's identity will be kept confidential, unless reporting of allegations is mandated by the country law. Anonymous complaints or allegations may also be submitted and will be given all due and appropriate consideration. We take seriously all reports of possible misconduct and will investigate and take appropriate action. We will provide warm referrals to service providers that may help support the person who experienced the alleged incident, as appropriate.

There will be no retaliation against any person who raises a concern in good faith about any behavior prohibited by this Code of Conduct. Such retaliation would be a violation of this Code of Conduct.

Sanctions

I understand that if I breach this Workers' Code of Conduct, my employer will take disciplinary action which could include:

- Informal warning;
- Formal warning;
- Additional Training;
- Loss of up to one week's salary;
- Suspension of employment (without payment of salary), for a minimum period of 1 month up to a maximum of 6 months;
- Termination of employment;
- Report to the Police if warranted.

I understand that it is my responsibility to ensure that the environmental, social, health and safety standards are met. That I will adhere to the occupational health and safety management plan. That I will avoid actions or behaviors that could be construed as VAC or SEA/SH. Any such actions will be a breach this Workers' Code of Conduct. I do hereby acknowledge that I have read the foregoing Workers' Code of Conduct, do agree to comply with the standards contained therein and understand my roles and responsibilities to prevent and respond to ESHS, OHS, VAC and SEA/SH issues. I understand that any action inconsistent with this Workers' Code of Conduct or failure to act mandated by this Workers' Code of Conduct may result in disciplinary action and may affect my ongoing employment.

Signature: _____
Printed Name: _____
Title: _____
Date: _____

ANNEX 9: SAMPLE TORS FOR AN ENVIRONMENT & CLIMATE SAFEGUARDS SPECIALIST

BACKGROUND: [This section must include the project background, ideally tailored to the specific PPMU]

OBJECTIVE:

The Environment & Climate Safeguards Specialist will be responsible for the implementation, monitoring, and reporting of all environment and climate-related safeguards for the project. This will include, when relevant, implementation of the project's Grievance Redress Mechanism (GRM), and any items listed in the Environmental, Social, and Climate Management Framework (ESCMF). You will work in close collaboration with the Gender & Social Safeguards Specialist, as well as the project's Monitoring & Reporting specialist. You will report to the lead of the Provincial Project Management Unit.

RESPONSIBILITIES:

- Prepare, implement, and monitor environmental safeguards instruments, including the environmental & climate-risk aspects of ESCMPs and any Biodiversity Management Plans.
- Compile the environmental baseline data for ESCMPs and Biodiversity Management Plans (when applicable) at sub-project sites based on requirements of the Government of Cambodia, IFAD, and GCF
- Identify key issues & ways to manage issues pertaining to the environment and climate.
- Conduct consultations, in collaboration with the Gender & Social Safeguards Specialist, with target communities in the project area to assess the (i) current environmental situation (at local level, this includes peoples' perception of the situation); (ii) environmental & climate-related impacts of sub-projects; and (iii) mitigation measures (including the communities' recommendations/solutions) that can be taken pertaining to any negative environmental/climate impacts
- Obtain data from, sensitize, and clearly explain to relevant government staff (or civil society organizations/partners, etc.) the data, M&E, and compliance requirements for environmental safeguards & climate risk considerations during project implementation.
- Manage, along with the Gender & Social Safeguards Specialist, the project's Grievance Redress Mechanism.

MINIMUM REQUIREMENTS:

- Manage, along with the Gender & Social Safeguards Specialist, the project's Grievance Redress Mechanism.
- Advanced University degree in Environmental Science, Biology, Environmental/Civil Engineering, or any related field.
- Minimum of 5 years of relevant operational experience and proven track record in working agricultural, forest management, and construction activities, including compliance with Environmental and Social standards
- Familiarity with climate science and management of climate risks
- Working knowledge of English and Khmer proficiency.
- National of Viet Nam.

CORE COMPETENCIES:

- Results Focus
- Teamwork
- Communication
- Building Effective Relationships
- Knowledge Sharing and Continuous Improvement

TECHNICAL/FUNCTIONAL SKILLS:

- Work experience in implementation and management of international safeguards standards pertaining to environment, climate, and agroforestry activities.
- Knowledge of issues pertaining to environment, climate, and biodiversity.

- Knowledge of computer-aided design programs, AutoCAD required and Structural Analysis programs.
- Knowledge and understanding of international environmental and social safeguards standards and practices

SELECTION CRITERIA:

- Demonstrated capacity supervise agricultural, forest management, and construction activities, including compliance with Environmental and Social standards
- Demonstrated ability to liaise with multiple agencies and contractors, effectively building an understanding and partnership with other UN bodies, NGOs, government agencies, and contractors
- Ability to plan, organize, implement, and report
- Excellent communication, writing, and presentation skills in English and Khmer
- Teamwork spirit, ability to work under minimum supervision
- Ability to build effective working relationships with national and international colleagues, with different cultural and technical backgrounds
- Proven strong communication, interpersonal and negotiation skills
- Analytical skills and experience.
- Ability to keep sensitive information as confidential.

ANNEX 10: SAMPLE TORS FOR A GENDER & SOCIAL SAFEGUARDS SPECIALIST

BACKGROUND: [This section must include the project background, ideally tailored to the specific PPMU]

OBJECTIVE:

The Gender & Social Safeguards Specialist will be responsible for the implementation, monitoring, and reporting of all environment and climate-related safeguards for the project. This will include, when relevant, implementation of the project's Grievance Redress Mechanism (GRM), and any items listed in the Environmental, Social, and Climate Management Framework (ESCMF). You will work in close collaboration with the Gender & Social Safeguards Specialist, as well as the project's Monitoring & Reporting specialist. You will report to the lead of the Provincial Project Management Unit.

RESPONSIBILITIES:

- Prepare, implement, and monitor social safeguards instruments, including the social aspects of ESCMPs, the Labour Management Plan, and IP Plan.
- Compile the social baseline data for ESCMPs, LMPs, and IP Plans at sub-project sites with information on demographics, ethnic/religious minorities and indigenous populations, overall population, education, health, social protection, language(s), religion, and any other areas required based on IFAD and GCF guidelines
- Identify key issues & ways to manage issues pertaining to gender, IP, and social inclusion.
- Conduct consultations, in collaboration with the Environment & Climate Specialist, with target communities in the project area to assess the (i) current social situation (at local level, this includes peoples' perception of the situation); (ii) social impacts of sub-projects; and (iii) mitigation measures (including the communities' recommendations/solutions) that can be taken pertaining to any negative social impacts
- Obtain data from, sensitize, and clearly explain to relevant government staff (or civil society organizations/partners, etc.) the data, M&E, and compliance requirements for social safeguards & gender/IP/social inclusion during project implementation.
- Manage, along with the Environment & Climate Safeguards Specialist, the project's Grievance Redress Mechanism.

MINIMUM REQUIREMENTS:

- Advanced University degree in Social Sciences, Gender Studies, International Development, or any related field to social inclusion/gender and social safeguards.
- Minimum of 5 years of relevant operational experience and proven track record in working on development projects in the agriculture/forest sector.
- Working knowledge of English and Khmer proficiency.
- National of Viet Nam.

14.

CORE COMPETENCIES:

- Results Focus
- Teamwork
- Communication
- Building Effective Relationships
- Knowledge Sharing and Continuous Improvement

TECHNICAL/FUNCTIONAL SKILLS:

- Work experience in implementation and management of gender and social inclusion activities, and social safeguards to international standards.
- Knowledge of issues pertaining to ethnic minorities, Indigenous Persons, gender, youth, and other vulnerable populations.
- Knowledge and understanding of international environmental and social safeguards standards and practices

SELECTION CRITERIA:

- Demonstrated capacity supervise agricultural, forest management, and construction activities, including attention to issues of gender and social inclusion and compliance with Environmental and Social standards
- Demonstrated ability to liaise with multiple agencies and contractors, effectively building an understanding and partnership with other UN bodies, NGOs, government agencies, and contractors
- Ability to plan, organize, implement, and report
- Excellent communication, writing, and presentation skills in English and Khmer
- Teamwork spirit, ability to work under minimum supervision
- Ability to build effective working relationships with national and international colleagues, with different cultural and technical backgrounds
- Proven strong communication, interpersonal and negotiation skills
- Analytical skills and experience.
- Ability to keep sensitive information as confidential.

ANNEX 11: MISSION 3 LIST OF PARTICIPANTS

MINISTRY OF ECONOMY AND FINANCE(MEF)

1. 1. Heng Hanglim, Deputy Director, GDR
2. 2. Khem Sopheamony, Officer, GDR
3. 3. Huy Cahnnan, Officer, GDR

PMU ADB & WB MOWRAM

1. 4. H.E Chann Sinath, Secretary of State and Director of PMU-ADB&WB MOWRAM
2. 5. Im Soursdey, Deputy Director of DFWUC and IAIP Project Manager
3. 6. Chhim Sophea, Irrigation Engineer
4. 7. Ngorn Ly Leakina, Officer Administration Office of DoFWUC
5. 8. Chev Dalis, Procurement Assistant and Officer of DoFWUC
6. 9. Kim Vann, Finance Officer, DoFWUC
7. 10. Thou Vannak, Consultant
8. 11. Lang Sokkim, Vice Chief Officer
9. 12. Pol Saren, Deputy Director of Department
10. 13. Tan Naren, Chief of Office
11. 14. Hem Visal, Vice Chief Officer
12. 15. Prum Vanndy, Officer
13. 16. Vann Vathanak, Officer
14. 17. Eam Sophorn, Officer
15. 18. Vann Munirath, Officer
16. 19. Heng Sovannara, Director, TSA
17. 20. Khvan Pheaktra, Officer, TSA
18. 21. Tong Seng, Chief of Office, DHRW
19. 22. Chhun Thai Sreng,PMU
20. 23. Penh Socheat, National Environment, Consultant Team
21. 24. Le Anh Tuan, International Social Specialist
22. 25. Sreng Vanmly, Deputy of Office
23. 26. Sok KHOM, Deputy Secretary General, CNMC
24. 27. Roeun Sophanna, Procurement Team

MINISTRY OF ENVIRONMENT (MOE)

1. 28. Thiv Sophearith, DDG/GDEP
2. 29. Pech Moran, Deputy Director
3. 30. Chea Puthea, Official

MINISTRY OF AGRICULTURE,FORESTRY AND FISHERIES (MAFF)

1. 31. Koeut Kitlineath, Deputy Secretary General
2. 32. Seng Tuy, Acting Director, DAEng

MINISTRY OF INDUSTRY, SCIENCE, TECHNOLOGY & INNOVATION (MISTI)

1. 33. Kim Thunsamnang, Deputy Director General
2. 34. Chhoeun Raksmey, Deputy Diector
3. 35. Vong Sanin, Technical Officer & Project Management

MINISTRY OF RURAL DEVELOPMENT (MRD)

1. 36. Ong Ponnaka, Deputy Director General
2. 37. Soem Sopheara, Chief Office
3. 38. Se Vophorn, Chief Office

MINISTRY OF WOMEN AFFAIR (MOWA)

1. 39. Sav Kimsoeurn, Deputy Director General
2. 40. Meas ChinVut, Chief Office
3. 41. Phay Chan Makara, Vice Chief Office

MINISTRY OF LAND MANAGEMENT, URBAN PLANNING AND CONSTRUCTION (MLMUPC)

1. 42. CHHIM Sokun, Deputy Director General
2. 43. Meng Sotha, Director

MINISTRY OF PLANNING (MOP)

1. 44. Laing Bolin, Deputy Director

PDWRAM_Kandal

1. 45. Prak LAK, Director of PDoWRAM
2. 46. Hor Sophal, Deputy of PDoWRAM
3. 47. Heng Kearithy, Officer

PDWRAM_Kampong Chhnang

1. 48. H.E PECH KEYMONY, Deputy Governor
2. 49. Dauk BunThon, Director of PDoWRAM
3. 50. Gnin Hun, Director of PDAFF
4. 51. Seing Sokhan, Deputy Governor of Teuk Phos District
5. 52. Lun Pisey, Officer of of PDAFF
6. 53. Pen Sophea, Chief Commune of Svay Chuk
7. 54. Phan Sophalla, Commune Council of Krang Skea
8. 55. Keo Yan, Chief Commune of Krang Skea
9. 56. Sam San, Chief Commune of Tbeng Khpos
10. 57. Ouk Proeung, Chief Commune of Svay
11. 58. Meas Sokea, Commune Clerk
12. 59. Mak Sothearith, Commune Clerk
13. 60. Mong Vath, Chief Commune of Anchanh Rong
14. 61. Seam Senghour, Chief Commune of Prey Moul
15. 62. Khuy Khy, Chief Commune of Prasnoeb
16. 63. Prum Thorn, Chief Commune of Banteay Preal
17. 64. Moeng Visalsok, Chief Commune of Kdol Senchey
18. 65. Mey Sophally, Deputy Governor of Rolea Bier District
19. 66. Phal Sopheap, Deputy Governor of Baribour District
20. 67. Suon Sokha Rithy, Deputy Governor of Samakey Meanchey District

PDWRAM_Kampong Speu

1. 68. Nhanh Cheabhorng, Director of PDoWRAM

PDWRAM_Pursat

1. 69. H.E Khouy Ryda, Chief of Provincial Governor
2. 70. Lay Seth, Deputy Governor
3. 71. Tep Chamroeun, Director of Administration
4. 72. Kang Penghak, Chief Department of Public Work and Transport

5.	73.	Hai Thoura, Chief of PDoAFF
6.	74.	Keo Vey, Director of PDoWRAM
7.	75.	Oum Sokna, Deputy Governor of Ba Kan District
8.	76.	Nin Sinath, Deputy Director of PDoRD
9.	77.	Sat Tongno, Chief Office
10.	78.	Kit Phal, Deputy of PDoWRAM
11.	79.	Dos Dara, Commune Council of Rom Lech
12.	80.	Lav Sokha, Chief Office of PDoWRAM
13.	81.	Mao Minea, Vice Office of PDoWRAM
14.	82.	Meng Chhon, Chief Commune of Outa Poung
15.	83.	Em Phovibol, Chief Office of PDoE
16.	84.	Suong Saravuth, Deputy Director of Administration
17.	85.	Nget Seyha, Official
18.	86.	Sat Banve, Officer

AIIB

1.	87.	Ron Liuingston, Team Leader, SECAP
2.	88.	Y. Chan San, Consultant
3.	89.	Bo Zhang, Officer
4.	90.	Sheikh Naveed Ahmed, Officer
5.	91.	Xiang Xu, Officer

CAISAR

1.	92.	Anthony Green, Team Leader
2.	93.	Srey Heang, Deputy Team Leader

IFAD

1.	94.	Frew Behabtu, Country Director
2.	95.	Susmita Bandyopadhyoy, Senior SECAP Specialist
3.	96.	MENG Sakphouseth, Country Officer
4.	97.	Suos Pinreak, Program Specialist

FAO

1.	98.	ALESSANDRA GAGE, International Environment Officer

CS-01PMIC

1.	99.	Willem J van Diest, Team Leader of PMIC
2.	100.	Ung Kotaro, Deputy Team Leader

CS-02 NWRDMC

1.	101.	Pen Sarith, Deputy Team Leader
2.	102.	IAN Thomas, PPC

CS-03 INDIVIDUAL

1.	103.	Yin Phalleap, Finance and Accounting Management Specialist

ANNEX 12: TOR BIODIVERSITY MANAGEMENT SPECIALIST

TERMS OF REFERENCE

International Biodiversity Specialist

Background

The Government of Cambodia (GoC) has applied for financing from the Asian Infrastructure Investment Bank (AIIB or the Bank) toward the cost of the Climate Adaptive Irrigation Supporting Agricultural Resilience (CAISAR) which will support the GoC's efforts to sustain food security and improve climate resilience during and after the COVID-19 crisis through restoration and enhancement of smart and climate-resilient irrigation systems and associated ecosystems, flood control management and disaster resilience measures in 3 irrigation schemes situated in four provinces, namely: Kampong Speu, Kampong Chhnang, Kandal, and Pursat. The development objective of the CAISAR project is to restore and enhance the adaptive capacity and resilience of rural populations and agronomic systems to cope with climate change, including and disaster risk brought on by extreme events (flooding and drought), to achieve increased food security, agro-economics, and the maintenance of the companion biodiversity and ecosystem services that support it.

The estimated budget of the CAISAR project will exceed US 240 Million with AIIB being the major lender but with substantial grant co-financing for Green Climate Fund (GCF) and IFAD. MOWRAM has received a project preparation grant from AIIB (PPSF) for project preparation. The project will be implemented through the following 3 components: 1) Improving farm-level climate resilience and water use efficiency, 2) Climate-proofing water infrastructure for increased resilience and 3) Institutional Strengthening. In 2022/23, under this PPSF grant, MOWRAM implemented a first project formulation and feasibility study (FIRM) to provide the basis for the GCF funding proposal. MOWRAM is now seeking additional TA to complement this FIRM reporting and support the formulation of the Full-Funding Proposal.

General

Based on an assessment of climate change risk analyses, the Biodiversity Consultant will identify and assess the manner in which climate change is likely to impact biodiversity in the project area; with particular attention to species that either support agriculture (e.g. wild fish, birds, pollinators, soil micro-biome,) or conflict with agriculture (e.g. crop pests, displaced wildlife, alien invasive species). The climate and project risks to Threatened species existing in the project area would also be assessed and potential mitigation responses identified. This analysis will be used to generate a number of practical and cost effective recommendations to be included in a Biodiversity Management Plan.

The Consultant will also work in collaboration with the multidisciplinary CAISAR team to help identify biodiversity risk to and opportunities associated with proposed project agricultural interventions/adaptive solutions and to provide timely recommendations for their more sustainable design, selection, implementation, monitoring and associated local, inclusive, capacity building.

The Consultant will also provide guidance related to consideration, selection and development of biodiversity offsets where unavoidable residual impacts associate with proposed project interventions, can be offset and in some cases applied to Kunming declaration objectives.

The analysis will prioritize biodiversity mitigation and management programs based on their relevance and cost-effectiveness, to address the risks and opportunities associated with climate change and project initiatives. The prioritization exercise would include consideration of opportunities to adaptively enhance and benefit from the cultivation of local heirloom genetic varieties, wild cultivars and potential enhanced propagation of more resilient native fish and potential other faunal species. To the extent possible, solutions that are adapted to the needs of the poor, women, youth, and indigenous groups should be highlighted.

To achieve the above objective with high quality deliverables, the international climate change biodiversity specialist is required to fulfil the following tasks and responsibilities:

1. *Describe the methodology, location time and costs for a series of strategic biodiversity surveys within the CAISAR project study area to validate and expand on the existing IBAT data set. The data collected will provide baseline data against which project intervention, project impact and climate driven change can be monitored. These data will provide essential information that can be used to apply adaptive management practices to ensure project initiatives optimize positive biodiversity and ecosystem service outcomes.*

   ***Deliverable**: Guidance document detailing methodology to be used for biodiversity surveys.*

2. *Identify species of flora and fauna, including threatened and invasive species in the project area, most likely to be impacted by Climate change, climate extremes and expansion of agriculture, including CAISAR projects, as well as species used by local communities and or, on which there are dependencies.*

   ***Deliverable**: **prioritized flora and fauna species list** with summary data on species habitat associations, conservation status, record of occurrence in the project area, probable key habitats, population trends, population drivers, and assessment of climate risk to species*)

3. *Prepare a high-level/landscape-level? Biodiversity Management Plan (BMP) addressing each of the 6 CAISAR sub-project areas. The BMP will highlight species and habitats of concern, and Identify potential approaches to deliver positive environmental externalities (e.g. air quality, soil, water quality and availability, ecosystem services, biodiversity) that can be incorporated into CAISAR initiatives. CAISAR BMP will include guidance for the assessment of residual biodiversity impacts, provision for adaptive management, monitoring requirements, and development of site-specific Biodiversity Action Plans.*

   Deliverable: CAISAR Landscape Level BMP

4. *Refine biodiversity sensitivity mapping based on available data and make this available to the CAISAR planning and design process.*

   ***Deliverable: refined biodiversity sensitivity map** for the CAISAR project area and each of the 6 sub-project areas)*

5. *Prepare a community biodiversity survey questionnaire to better understand biodiversity trends, perceived drivers, local use and community perspectives on biodiversity conservation and local importance in the CAISAR study area/area of influence. A detailed methodology, including questions, target communities, time and costs estimate would be prepared.*

   ***Deliverable: Local Biodiversity Knowledge Questionnaire and Survey Guidance document**.*

6. *Identify key biodiversity stakeholders to be engaged while identifying biodiversity conservation priorities and concerns, development of biodiversity management/action plans, and residual impact biodiversity offsets,*

   ***Deliverable: Biodiversity Stakeholders List and contact information**)*

7. *Identify potential priority biodiversity offset locations and site management requirements based on site analysis and consultation with government and community authorities.*

   ***Deliverable: List of priority biodiversity offset sites** proximate to each of the 6 CAISAR project areas that would be more suitable and relevant for the development of biodiversity offsets.*

8. *Integrate biodiversity initiatives into the overall CAISAR stakeholder engagement plan identifying the relevant stakeholder groups and the engagement process to be followed.*

   ***Deliverable: Specific reference to biodiversity in the CAISAR stakeholder Engagement Plan**.*

9. *Work collaboratively and cooperatively with the CAISAR multi-disciplinary team to ensure biodiversity conservation and enhancement is practically integrated into project planning, design elements and companion documentation.*

Deliverable: Reference to biodiversity considerations where appropriate in CAISAR assessments, design, execution, and reporting*.*

10. *Ensure the biodiversity component of the CAISAR project provides for local, inclusive, capacity building where practical and appropriate.*

    Deliverable: specific reference to opportunities for engagement of a broad cross section or local society in biodiversity-related initiatives *and documentation of participants in same.*

Key Deliverables

The main task of the International Climate Change Adaptation Biodiversity Specialist (CCABS) will be to provide discipline input to the Full Funding Proposal and the associated Annexes based on the guidance given in GCF's programming manual. With regard to biodiversity, the GEF programming manual highlights the following considerations:

1. "*The project/programme is expected to promote positive* ***environmental externalities*** *(e.g. air quality, soil*)". The CAISAR biodiversity specialist is expected to help ensure the project delivers enhanced ecosystems services to the intervention area.
2. "*Since project activities often target multiple areas and provide multiple benefits (e.g. co-benefits from improved agricultural productivity,* ***biodiversity conservation benefiting from improved ecosystems management****), additional financial contributions from other donors should be sought, where possible."*
3. "*The excessive development of land for agriculture worldwide has impacted the Earth's climate by reducing the carbon stored in intact forests, and has caused* ***biodiversity and ecosystem service losses***." The CAISAR biodiversity specialist is expected to strive to ensure the project results in a net improvement in local ecosystems services as a result of the project.
4. "*As may be required by specific environmental and social safeguards, the Environmental and Social Policy and the Indigenous Peoples Policy, additional stand-alone assessment and management plans may need to be prepared and disclosed. Examples of additional instruments include: a resettlement policy framework, resettlement action plan, Indigenous peoples planning framework, Indigenous peoples plan, and* ***biodiversity action plan*****"**

Consultant qualifications

Environmental specialist with a minimum Masters level degree in applied environmental science with expertise in biodiversity, biodiversity management and action plans, conservation biology and environmental planning. The consultant should have at least 10 years related experience, be comfortable working in a multi-disciplinary and cultural environment as well have working experience in South Asia. The consultant should have completed at least 5 previous biodiversity management plans and have recent experience with critical habitat assessment.

Duration: 60 working days from mid-June to mid-September 2023.

Location: Phnom Penh, Cambodia with field visits in lower Tonle Sap basin.

ANNEX 13: CAISAR CLIMATE CHANGE IMPACT RATIONAL

Project activity	Description and promotion strategy in the project	specific practice	adaptation or mitigation	Primary climate benefits	Climate rational (primary impact)	Climate rationale (secondary impact	Climate co primary is a prim
Component 2. Upgrading and climate-proofing water infrastructure for increased resilience							
Outcome 2.1. Modernization of irrigation scheme and ponds							
2.1.1.Technical analysis, field survey and preparing plan for system upgrading	This activity involves conducting a technical analysis and field survey of the existing irrigation system. The purpose is to identify areas that require upgrading or rehabilitation and to assess the feasibility of constructing new irrigation schemes and storage ponds. The promotion strategy will likely involve engaging farmers and stakeholders in the survey process to ensure a participatory approach. The findings from the analysis will be used to prepare a comprehensive plan for upgrading the irrigation system.	The specific practices under this sub-component include: o Rehabilitating and upgrading existing irrigation schemes. o Constructing new irrigation schemes and storage ponds where feasible and appropriate. o Deploying ecosystem-based solutions that better serve the environment. o Implementing energy-efficient measures to reduce greenhouse gas (GHG) emissions. o Utilizing high-efficiency irrigation systems like drip and sprinkler irrigation to minimize water losses. o Replacing current diesel pumps with single-point solar pumping systems. o Integrating nature-based solutions and indigenous materials for constructing flood protection embankments.	The specific practices listed above include both adaptation and mitigation measures: o Adaptation: Upgrading and modernizing irrigation systems, establishing early warning systems, and flood-proofing infrastructure to cope with increasing flood and drought conditions. o Mitigation: Deploying energy-efficient irrigation technologies, replacing diesel pumps with solar pumps, and utilizing nature-based solutions to reduce GHG emissions.	The primary climate benefits of these practices are: o Improved resilience of the water delivery system, reducing damage to crops and infrastructure during extreme wet days and upstream flooding. o Enhanced climate adaptation through climate-proofing measures, allowing the irrigation system to cope with changing climate conditions.	The climate rationale or primary impact is to ensure a climate-resilient water supply for farmers. The project aims to reduce the negative climate impacts of droughts, dry spells, and floods during the monsoon season by upgrading the irrigation system and implementing climate-adaptive measures.	The secondary impact is the creation of green opportunities and additional benefits, such as: oIncreased water availability and storage capacity for irrigation. o Implementation of crop diversification and new income-generating activities like fish farming or duck breeding. oCreation of employment opportunities, especially for young people. o Time and labor savings, particularly for women, through the use of efficient irrigation technologies.	The Climate co-b o Mitigation: Red the use of en solar pumps, an o Adaptation: In infrastructure, le coping with extrer
2.1.2.Implementation of infrastructure upgrading	Sub-Component 2.1.2 involves the actual implementation of infrastructure upgrading activities identified in the technical analysis and plan prepared in Sub-Component 2.1.1. The upgrading process may include rehabilitating existing irrigation systems, modernizing infrastructure, and constructing new irrigation schemes and storage ponds as required. The promotion strategy is likely to focus on engaging stakeholders, including farmers, in the implementation process to ensure their active participation and buy-in.	Specific practices under this sub-component include: o Executing the rehabilitation and modernization plans for irrigation systems and infrastructure. o Constructing new irrigation schemes and storage ponds according to the prepared plans. o Utilizing climate-proofing measures to enhance the resilience of the irrigation system against extreme weather events. o Implementing engineering techniques and nature-based solutions to ensure the long-term sustainability of the upgraded infrastructure.	The specific practices listed above are primarily adaptation measures aimed at: o Enhancing the resilience of the irrigation system to cope with increasing flood and drought conditions. o Reducing the damage and destruction of irrigation infrastructure during extreme weather events.	The primary climate benefits of Sub-Component 2.1.2 are: oImproved climate resilience of the irrigation system, ensuring consistent water delivery to farmers. oMinimized damage to crops and infrastructure during flood and drought events.	The climate rationale or primary impact is to ensure a climate-resilient water supply for farmers by implementing infrastructure upgrades and modernization to withstand the impacts of changing climatic conditions.	The secondary impact is the creation of green opportunities and additional benefits, including: oIncreased water availability and storage capacity for irrigation purposes. o Potential for crop diversification and income generation through alternative farming activities. o Employment opportunities, especially for young people involved in the implementation and maintenance of the upgraded infrastructure.	The Climate co-b oMitigation: Poter through the use o systems and ec techniques. oAdaptation: Impr water infrastructu events.
2.1.3.Preparing canal O&M plans including application of ICT and SCADA for operation. The implementation will follow a participatory approach involving farmers right from survey, design, prioritization, and construction implementation. This subcomponent will be financed by GCF, IFAD and Government. Moreover, these technologies will allow to save time and labour, especially for women, and offer opportunities to engage rural youth.	Sub-Component 2.1.3 involves the preparation of Operation and Maintenance (O&M) plans for the upgraded irrigation canals and systems. This includes integrating Information and Communication Technology (ICT) and Supervisory Control and Data Acquisition (SCADA) systems for efficient operation. The promotion strategy may involve raising awareness among stakeholders about the benefits of adopting ICT and SCADA technologies to optimize water management and ensure effective maintenance.	Specific practices under this sub-component include: oDeveloping comprehensive O&M plans for the upgraded irrigation canals. oIncorporating ICT and SCADA systems for real-time monitoring and control of water flow and distribution. oUtilizing modern technology to optimize water allocation and minimize water losses. oTraining personnel in the operation and maintenance of the new systems.	The specific practices listed above are primarily adaptation measures aimed at: oEnhancing the resilience of the irrigation system through efficient water management. oCoping with changing climate conditions and reducing vulnerability to extreme weather events.	The primary climate benefits of Sub-Component 2.1.3 are: oImproved water efficiency and reduced water losses through advanced monitoring and control systems. oIncreased climate resilience of the irrigation infrastructure through effective O&M practices.	The climate rationale or primary impact is to ensure the sustainable and climate-resilient operation of the irrigation system through the adoption of modern technologies and efficient water management practices.	The secondary impact includes: oEnhanced water resource management and allocation. oImproved agricultural productivity through optimized water distribution. oReduction of maintenance costs and increased system longevity.	The Climate co-b oMitigation: Redu energy consumpti management and technologies. oAdaptation: Impr irrigation infrastru coping with chang
Outcome 2.2: Flood-proofing and Drainage improvements							
2.2.1.Establish flood monitoring, information, and early warning systems.	Sub-Component 2.2.1 involves the establishment of flood monitoring, information, and early warning systems. This includes setting up mechanisms to monitor weather conditions, water levels, and other relevant data to detect potential floods. The promotion strategy may involve raising awareness about the importance of early warning systems, training local communities to respond to flood warnings, and ensuring effective dissemination of flood-related information.	Specific practices under this sub-component include: oInstalling flood monitoring equipment and sensors in vulnerable areas. oSetting up a system to collect and analyze meteorological and hydrological data. oDeveloping protocols for issuing flood warnings and disseminating information to affected communities.	The specific practices listed above are primarily adaptation measures aimed at: oEnhancing disaster prevention and protection of farmlands and assets by providing early warnings to vulnerable communities.	The primary climate benefits of Sub-Component 2.2.1 are: oImproved disaster preparedness and reduced vulnerability to flood events through early warning systems. oEnhanced ability to respond proactively to potential flood situations.	The climate rationale or primary impact is to strengthen flood preparedness and response capacities to cope with the increasing threat of floods under changing climate conditions.	The secondary impact includes: oReduction of damages to farmlands and assets due to improved flood protection measures. oEnhanced safety and well-being of vulnerable communities through timely flood warnings.	The Climate co-b oMitigation: Poter property damage which enable prod management. oAdaptation: Impr climate-related flo vulnerable commu
2.2.2.Strengthening and construction of flood control and drainage infrastructures. It will be implemented in an integrated manner with component 2.1 activities as required. The climate information and early warning activities will be strengthened as part of component 3 and are detailed in that section	Sub-Component 2.2.2 focuses on strengthening and constructing flood control and drainage infrastructures. The project will prioritize areas identified as flood-prone based on hydrological modeling and stakeholder consultation. The promotion strategy may involve community engagement and participation in the planning and implementation of flood control measures.	Specific practices under this sub-component include: oStrengthening existing drainage networks through excavation and widening. oConstructing new flood protection embankments using resilient indigenous materials and nature-based solutions. oInstalling sub-surface drainages in needy areas to improve water drainage.	The specific practices listed above are primarily adaptation measures aimed at: oEnhancing the resilience of the drainage networks and flood embankments to protect farmlands and assets from flood events.	The primary climate benefits of Sub-Component 2.2.2 are: oImproved flood protection and drainage infrastructure to minimize damages during flood events. oIncreased resilience of the irrigation system against intensifying flood threats under changing climate conditions.	The climate rationale or primary impact is to strengthen flood protection measures and improve drainage systems to cope with the increasing frequency and intensity of floods resulting from climate change.	The secondary impact includes: oEnhanced protection of agricultural lands and infrastructure from flood damages. oImproved water management and reduced flood-induced risks for farmers.	The Climate co-b oMitigation: Utiliz and resilient mate measures can co and reduce emiss methods. oAdaptation: Incr system and farml flood events.
Outcome 2.3.: Establishments and training of Farmers Water User Communities (FWUC)							
2.3.1.Formation of institutional strengthening of the FWUC	Sub-Component 2.3.1 focuses on forming and strengthening Farmers Water User Communities (FWUCs). FWUCs play a crucial role in the sustainable operation and maintenance of irrigation schemes. The promotion strategy may involve encouraging community participation, providing training in FWUC management, and promoting inclusivity in decision-making processes.	Specific practices under this sub-component include: oEstablishing new FWUCs and strengthening existing ones. oImproving capacities in O&M activities, water use efficiency, and green technology adoption. oEnhancing the arrangement of water rights and water allocation to promote equitable and sustainable water use.	The specific practices listed above are primarily adaptation measures aimed at: oStrengthening institutional capacity to effectively manage and operate the irrigation system. oPromoting sustainable water use practices and climate adaptation strategies among farmers.	The primary climate benefits of Sub-Component 2.3.1 are: oEnhanced sustainability and long-term operation of the climate-smart and climate-proof irrigation systems. oImproved capacity of FWUCs to cope with climate-related challenges and implement climate adaptation strategies.	The climate rationale or primary impact is to ensure the sustainable operation and maintenance of the irrigation system under changing climate conditions through the establishment and strengthening of FWUCs.	The secondary impact includes: oImproved water use efficiency and equitable water allocation. oIncreased capacity of farmers to adopt climate-smart practices and technologies.	The Climate co-b oMitigation: Adop sustainable practi reduced emission oAdaptation: Incr system through el adaptation strateg
2.3.2 Build technical capacities of FWCU for canal O&M	Sub-Component 2.3.2 focuses on building the technical capacities of Farmers Water User Communities (FWUCs) in canal operation and maintenance (O&M). The project will provide training and support to FWUC members to effectively manage and operate the irrigation canals. The promotion strategy may involve conducting training sessions, workshops, and capacity-building programs for FWUC members to enhance their technical skills.	Specific practices under this sub-component include: oConducting technical training for FWUC members on canal O&M. oEquipping FWUCs with the necessary knowledge and skills for efficient water distribution and maintenance. oImplementing best practices in water resource management.	The specific practices listed above are primarily adaptation measures aimed at: oStrengthening the capacity of FWUCs to cope with changing climate conditions and efficiently manage water resources.	The primary climate benefits of Sub-Component 2.3.2 are: oEnhanced climate resilience of the irrigation system through improved canal operation and maintenance. oIncreased efficiency in water distribution, reducing water losses during irrigation.	The climate rationale or primary impact is to empower FWUCs with the technical skills needed to effectively manage the irrigation system under changing climate conditions.	The secondary impact includes: oImproved water use efficiency and reduced water wastage. oEnhanced agricultural productivity through efficient water distribution.	The Climate co-b oMitigation: Effici reduced water los contributing to low oAdaptation: Incr irrigation system practices.
2.3.3prepare long term financing plan for WUAS. This will require an identification of the capacity needs, membership, functionality of the FWUCs in the area . This will be followed by assisting them in developing a business model for the operation and maintenance of each irrigation scheme on a self-sustaining basis in partnership with the private sector. This will entail the development of an O&M plan for the infrastructure investments, assessment of the willingness and ability of the users to pay for the services and a regulatory framework that gives the WUAs the authority to collect the fee and assess the basis on which water fee will be paid as irrigation fees can be based on the size of the land being irrigated or the volume of water used. These elements will be further reviewed during the preparation of the FFP.	Sub-Component 2.3.3 involves preparing a long-term financing plan for Water User Associations (WUAs). This plan will outline the financial resources required for the sustainable operation and maintenance of the irrigation system. The promotion strategy may involve working with relevant stakeholders, including private sector partners, to develop a financially viable plan.	Specific practices under this sub-component include: oIdentifying the financial needs of WUAs for irrigation system operation and maintenance. oAssessing the willingness and ability of users to pay for irrigation services. oDeveloping a regulatory framework for water fee collection.	The specific practices listed above are primarily adaptation measures aimed at: oEnsuring the long-term sustainability of the irrigation system by securing adequate financial resources.	The primary climate benefits of Sub-Component 2.3.3 are: oIncreased financial resilience of WUAs to cope with climate-related challenges in the operation and maintenance of the irrigation system. oEnhanced capacity to sustainably manage the irrigation infrastructure under changing climate conditions.	The climate rationale or primary impact is to develop a long-term financing plan that enables WUAs to effectively manage and maintain the irrigation system in the face of climate-related risks.	The secondary impact includes: oImproved financial sustainability of the irrigation system. oEnhanced capacity of WUAs to invest in climate-resilient infrastructure and technologies.	The Climate co-b oMitigation: Finan more likely to in friendly irrigation t emissions. oAdaptation: Incr climate impacts th financing.

ANNEX 14 – INDIGENOUS PEOPLES PLANNING FRAMEWORK

Table of Contents

List of Tables

List of Figures

Abbreviations

CAISAR	Climate Adaptive Irrigation and Sustainable Agriculture for Resilience
COI	Corridor of Impact
DDIS	Detailed Design Implementation and Supervision
EA/IA	Executing Agency/Implementing Agency
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESO	Environmental and Social Officers
ESS	Environmental and Social Standards
FPICon	Free Prior and Informed Consultation
IDA	International Development Association
ILO	International Labour Organization
IP	Indigenous People
IPP	Indigenous Peoples' Plan
IPPF	Indigenous Peoples Planning Framework
MoWRAM	Ministry of Water Resources and Meteorology
MoSALVY	Ministry of Social Affairs, Labor, Vocational Training and Youth Rehabilitation
NCDD	National Committee for Sub-National Democratic Development
NGO	Non-Government Organization
PDWRAM	Provincial Department of Water Resources and Meteorology
PMU	Project Management Unit
PIU	Project Implementation Unit
PPC	Project Preparation Consultants
RGC	Royal Government of Cambodia
RP	Resettlement Plan
RPF	Resettlement Planning Framework
SA/SIA	Social Assessment/ Social Impact Assessment
SEA	Sexual Exploitation and Abuse
SEP	Stakeholder Engagement Plan
SH	Sexual Harassment
SIB	Subproject Information Booklet
VAC	Violence Against Children

Definitions

Disadvantaged individuals/groups

Refers to individuals or groups who, due to certain own circumstances such as their age, gender, disabilities, health, economic and ethnic status, and so forth, are more likely affected adversely by the project impacts and/or more limited in their ability to take advantage of project benefits. Disadvantaged individuals/groups are more likely excluded from, or unable to participate fully in the mainstream consultation process. Thus, they may require specific assistance to stay engaged during project planning and implementation. In this project, disadvantaged individuals/ groups are defined as those who have the following characteristics: i) from an ethnic group, (ii) landless/ limited productive land, (iii) female headed household with dependents, (iv) frequent lack of male labor at home (e.g. migrant workers); (v) jobless, or limited economic opportunities; (vi) family member(s) with chronic illness, or disabilities; (vii) elderlies who live on their own; (viii) youth, particularly very young couple with children (early marriage), (ix) live in an especially difficult circumstance, and (x) don't meet above criteria but are concurred by local community as vulnerable to poverty and need project's support to reduce their vulnerability. Disadvantaged individuals are usually from a poor, or a near poor household.

Environmental and social risk

Environmental (including climate change and natural disasters) and social risks are determined by a combination of project design and operational characteristics, together with exogenous factors, which: (i) may adversely affect the ability of a project to achieve and sustain its development objective(s); and (ii) define the nature, scale and significance of direct and indirect environmental and social impacts.

Free, Prior, and Informed Consultation (FPICon)

According to ESS 3 of AIIB's ESF, FPICon is established as follows:

- The scope of FPICon applies to project design, implementation arrangements and expected outcomes related to risks to, and impacts on, the affected Indigenous Peoples;
- FPICon builds on the process of meaningful consultation and requires good faith negotiation between the Client and the affected Indigenous Peoples;
- The Client documents: (a) the details of the process by which the support of the affected local indigenous communities will be determined, in a written consultation process agreement with these communities; and (b) the details of the Project-related matters on which their broad community support has been obtained, in a consultation statement, which includes all agreements reached as well as dissenting views; and
- FPICon does not require unanimity and may be achieved even when individuals or groups within or among these affected Indigenous Peoples explicitly disagree with support for the Project.

Inclusion

Inclusion means empowering all people to participate in, and benefit from, the development process. Inclusion encompasses policies to promote equality and nondiscrimination by improving the access of all people, including the poor and disadvantaged, to services and benefits such as education, health, social protection, infrastructure, affordable energy, employment, financial services and productive assets. It also embraces action to remove barriers against those who are often excluded from the development process, such as women, children, persons with disabilities, youth and minorities, and to ensure that the voice of all can be heard.

Indigenous Peoples

According to the AIIB's Environment and Social Framework, the term "Indigenous Peoples" is used in a generic sense to refer exclusively to a distinct social and cultural group possessing all the following characteristics – in varying degrees:

- Self-identification as members of a distinct indigenous social and cultural group and recognition of this identity by others; and
- Collective attachment[1] to geographically distinct habitats, ancestral territories, or areas of seasonal use or occupation, as well as to the natural resources in these areas; and
- Customary cultural, economic, social, or political institutions that are distinct or separate from those of the mainstream society or culture, and
- A distinct language or dialect, often different from the official language or languages of the country or region in which they reside.

According to IFAD's SECAP, IPs are defined as follows:

- Priority in time, with respect to occupation and use of a specific territory;
- The voluntary perpetuation of cultural distinctiveness, which may include aspects of language, social organization, religion and spiritual values, modes of production, laws and institutions;
- Self-identification, as well as recognition by other groups, or by state authorities, as a distinct collectivity; and
- An experience of subjugation, marginalization, dispossession, exclusion or discrimination.

According to GCF's Indigenous People Policy, IPs are defined as follows:

- Self-identification as members of a distinct indigenous social and cultural group and recognition of this identity by others;
- Collective attachment to geographically distinct habitats, ancestral territories, or areas of seasonal use or occupation as well as to the natural resources in these areas;
- Customary cultural, economic, social, or political systems that are distinct or separate from those of the mainstream society or culture; and
- A distinct language or dialect, often different from the official language or languages of the country or region in which they reside. This includes a language or dialect that has existed but does not exist now due to impacts that have made it difficult for a community or group to maintain a distinct language or dialect.

Information disclosure

[1] Collective attachment means that for generations there has been a physical presence in and economic ties to land and territories traditionally owned, or customarily used or occupied, by the group concerned, including areas that hold special significance for it, such as sacred sites.

The process of disseminating project information to stakeholders to allow them to understand the risks and impacts of the project, and potential opportunities. Information disclosure should be in line with the project's Stakeholder Engagement Plan which is in line with the requirements of the ESF of AIIB, SECAP of IFAD, and Information Disclosure Policy of GEF. It is required that the disclosure of project information include: (a) purpose, nature and scale of the project; (b) duration of proposed project activities; (c) environmental and social risks and potential impacts of the project on local communities, particularly the vulnerable/disadvantaged groups and proposed mitigation measures; (d) proposed stakeholder engagement process highlighting approach that will be taken to promote meaningful participation of project affected persons; (e) time and venue of proposed public consultation meetings, and the process by which meetings will be notified, meeting results summarized, and reported back to project stakeholders; and (f) process and means by which grievances can be received and addressed timely.

Meaningful consultation

Two-way process that (a) begins early in project planning process to gather initial views on project proposal and inform project design; (b) encourages stakeholder feedback, particularly as a way of informing project design and engagement by stakeholders in the identification and mitigation of environmental and social risks and impacts; (c) continues on an ongoing basis, as risks and impacts arise; (d) is based on prior disclosure and dissemination of relevant, transparent, objective, meaningful and easily accessible information in a timeframe that enables meaningful consultation with project stakeholders in a format culturally appropriate, and in relevant local language(s) and is understandable to stakeholders; (e) considers and responds to feedback; (f) supports active and inclusive engagement with project-affected parties; (g) is free of external manipulation, interference, coercion, discrimination, and intimidation; and (h) is documented and disclosed by the Government.

Vulnerable individuals /groups

Refers to individuals/groups who, by virtue of factors beyond their control, are: (a) more likely to be adversely affected by the Project's environmental and social impacts; (b) more likely than others to be limited in their ability to claim or take advantage of Project benefits. Such individuals or groups are also more likely to be excluded from or unable to participate fully in the mainstream consultation process and may require specific measures or assistance (or both) to do so.

Based on the results of the vulnerability assessment conducted for the project, vulnerable individuals/groups need differentiated mitigation measures to cope with project's adverse impacts (e.g. loss of productive land/ income source), take advantage of project's intended benefits, and fully participate in meaningful consultation process during project design, implementation, and operations. Therefore, under this project, the following groups are considered vulnerable under this project: (i) poor[2] and near-poor[3], (ii) female headed households with dependents; (iii) households from Indigenous Peoples or Ethnic Minority group that meet the definitions of Indigenous Peoples of AIIB, IFAD, and GCF, (iv) households headed by an elderly, or a disabled person with no regular income, (v) household having at least a family member with chronic illness that needs regular medical treatment.

[2] The poor are those who a) live below the poverty line (which is KHR 10,951 per person per day as defined by the World Bank for Cambodia), or b) have IDPoor 1 (very poor) or IDPoor 2 (poor).

[3] The near-poor are those whose daily per capita consumption lies between poverty line and 1.25 times the poverty line – as proposed by the World Bank. Near-poor households also have not only lower income per capita but also less diversified incomes than non-poor households (cf. WB 2022, Cambodia Poverty Assessment – Toward A More Inclusive and Resilient Cambodia).

Executive Summary

This Executive Summary summarizes the main points in the project's Indigenous Peoples Planning Framework (IPPF) which was prepared by the Ministry of Water Resources and Meteorology. This IPPF will be applied to all activities that will be carried out under the CAISAR. This IPPF is a living document which may be updated as required during project implementation. If updated, the latest IPPF version will be disclosed through the same channels.

Project Development Objective and Project Components

The project objective is to increase climate adaptation, mitigate the negative impact of extreme climate events, and improve livelihoods of smallholder farmers and vulnerable rural communities in four provinces: Pursat , Kampong Chhnang, Kampong Speu, and Kandal.

The project will be implemented through various activities organized through the following three components:

- Component 1. Improving farm-level climate adaptation, resilience, and water use efficiency
- Component 2. Upgrading and climate-proofing water infrastructure for increased resilience
- Component 3. Institutional strengthening

Purpose of the Indigenous Peoples Planning Framework

This framework is a guide to screening, assessment, and planning, including an arrangement of the outline of culturally appropriate and meaningful consultations with Indigenous peoples, conducting social impact assessments (SIA) and preparation of the IPP that pertains to any specific subproject. The purpose of this Indigenous Peoples Planning Framework (IPPF) is to set out the requirements of the AIIB's ESS3 on Indigenous Peoples and the IFAD's SECAP Standard 4, and the RGC's policy on development of Indigenous Peoples. Based on the gaps between the AIIB's ESS3, IFAD's SECAP Standard 4, and RGC's policies, measures are proposed to close the gaps through implementation arrangements, procedures, design criteria, etc. to be applied to all subprojects and project components that were confirmed during project preparation and will be identified during project implementation.

Gaps between National Policies & Donor's Environmental and Social Policies

Despite the fact that Cambodia has a policy that recognizes the rights of IPs to culture, education, justice, health, environment, land, agriculture, water resources and infrastructure among others, there are no decrees, sub-decrees or procedures for specific safeguards to protect the interest of IPs, other than those related to land or forestry. The Cambodia Land Law does recognize the right of indigenous communities in Cambodia to own immovable property - their land - with collective title. However, in practice, the procedure to register collective title can be very time consuming and only a few indigenous communities have received collective title since the Land Law was enacted in 2001. Similarly, the Forest Law also guarantees and recognizes the right of IPs to continue the use and access to certain forest areas that they traditionally use and practice.

Overall, there is an acceptable level of consistency between the government system, the AIIB'ESS and the IFAD standards on IPs. The self-identification process of indigenous communities defined in the national

policy is broadly consistent with international good practice. The national framework does not exclude communities who have become more mainstream, and indigenous communities may apply for legal status regardless of whether or not they still use their own language or practice traditional agriculture.

However, while there are some complementary links between Cambodian laws and regulations related to IPs and the ESS 3, there are no sufficiently detailed regulations or operating procedures to facilitate full implementation of the IPPs. Therefore, this IPPF has been prepared on the basis of the ESS 3 by considering relevant Cambodian policies and regulations. The IPPF also outlines the Grievance Redress Mechanism (GRM), based on the GRM that is used for the Project, which will need to be further refined in consultation with IPs, if any are found to be residing at any subproject sites.

Project's Environmental and Social Risk and Impacts

The project will bring about an overall positive impact to local farmers. In subproject where IP peoples have farmland in the command area, these IPs will benefit from improved irrigation, water supply, government's agricultural extension services, and services from local farmers' cooperatives. As IPs participate in project activities, particularly agricultural extension services, they can grow more crops, participate in value chain, increase income, and eventually improve their livelihoods. Reliable water access and promising farming opportunities thanks to improved irrigation and extension services also keep the poor, including the poor IPs, from migrating to other areas in search for income generation opportunities. Adverse impacts on IPs are foreseen. However, these impacts are mostly local, small-scaled, such as minor land acquisition in some subproject to allow construction of irrigation canal. Land impacts would be very small at household level (e.g. loss of strip of land) which would not affect the livelihoods of the IP remarkably.

During subproject construction and operation, there are a number of environmental and social risks that may apply to local people, including IP peoples who may happen to be present in a subproject area. Environmental and social risks and impacts that have been identified during project preparation have been discussed in consultation meetings with a) IP peoples who are present in subproject area, and b) other project stakeholders at commune, district, provincial and central level. These consultations aim to ensure potentially affected people, and relevant project stakeholders, are aware of such risks and stay engaged during subproject preparation and implementation for risk prevention and mitigation (Please see full list of social and environmental risks in the project's ESCMF (Section E&S Risks and Impacts) that may apply to any ethnic minorities who are present in subproject area. See also SEP, particularly section (Proposed Strategy for Consultation with Vulnerable/Disadvantaged Groups) for guidance on conducting consultation with IPs when IPs are present in the subproject area.

Mitigation Measures

Although above risks and impacts will be validated, and assessed at further length when subproject locations become known, IP(s) in a subproject's area may be affected disproportionately compared to the mainstream group. The distinctive cultural and socioeconomic characteristics of the IPs, including their existing livelihoods, etc. may expose IPs to further risks and impacts, increase their vulnerability and compromise their ability to respond to such risks and impacts – if a holistic approach is not in place. Effective communication, such as IEC, and active participation of involved IPs, are among important factors that contribute to effective engagement of IPs for meaningful consultation during subproject preparation and participatory monitoring during subproject implementation. The coordination of project stakeholders, including PMU, Contractors, local authorities, local agencies, local service providers, and

most notably the active and full participation of IPs, collectively contribute to minimizing identified risks and potential impacts at identified subprojects.

Detailed mitigation measures for the above risks and potential impacts are proposed in the project's ESCMF. These mitigation measures are specific for design stage, pre-construction stage, construction stage, and operation stage,

Purpose of Engaging IP during project preparation and implementation

The AIIB's ESF defines stakeholder engagement as a process of identifying relevant stakeholders, conducting stakeholder analysis, and organizing a series of consultations to meet with project stakeholders for collecting stakeholders' feedback and concerns on project's risks and impacts, as well as stakeholders' development needs in relation to project purposes and activities. This aims to ensure the project's adverse impacts on IPs can be avoided, or minimized and mitigated if avoidance is not possible. For this project, it is important that IPs need to be consulted on their development needs (in relation to project purposes) to ensure they can receive socioeconomic benefits that are appropriate to them culturally.

Information Disclosure

Prior to conducting consultations, MoWRAM will notify the concerned IPs of the consultation plan during preparation. MoWRAM will provide affected IPs with initial subproject information in the form of booklet in both Khmer and local language (if applicable). This initial information should be provided to IP at least two weeks prior to consultation. If the concerned IPs do not have a written language, the IP will be provided the information in Khmer and are explained verbally in the local language of the concerned IP to ensure the IP are fully informed of the consultation purpose and initial subproject information.

> For public consultation, the draft IPPF (in English) and its Executive Summary (in Khmer) was (should be?) disclosed on MoWRAM's website on XXX (https://www.). The Executive Summary (in Khmer) was also disclosed in hard copy at MoWRAM's public library in Phnom Penh, and in the offices of Provincial Departments of Water Resources and Meteorology in all four project provinces. Once finalized, the IPPF will be re-disclosed again through the above channels prior to AIIB's and IFAD's project appraisal. The draft and final IPPF will be disclosed in English on the AIIB's and IFAD's website.

During project implementation, all draft IPPs, once completed by MoWRAM and submitted to the Bank for review, shall be disclosed to affected IP communities in Khmer language. The summary of the IPP (in the form of an Information Booklet) will be translated into IP's language if the consulted IPs have their own written language. Public meetings will be hold with the affected IP(s) to explain the contents of the relevant IPP in their mother language to ensure affected IPs understand what and how the activities under the IPP will be carried out, including E&S risks and impacts of subproject activities, and how the IPs will be engaged by MoWRAM in consultation meetings during subproject preparation, and in monitoring during subproject implementation to minimize identified E&S risks and impacts. IPPs – prepared for relevant subprojects, will be disclosed locally in Khmer and local IP language (if applicable), as well as in Khmer and English language on MoWRAM's website. The English version of the IPPs will be disclosed on the AIIB's and IFAD's website.

Grievance Redress Procedures

The following section outlines complaint handling procedures that are designed to assist affected Indigenous Peoples (IPs) in making complaints regarding the project. These procedures are designed to address potential impacts and risks during project preparation and cover the following key areas: a) land

acquisition, where individual IP land is acquired either permanently or temporarily during construction, b) Gender based violence, where IPs are victims, survivors, witnesses, or otherwise affected by SEA/SH actions related to the project, and c) general complaints and concerns related to project design, adverse impacts on IPs such as dust, noise, vibration, and any other aspects that IPs attribute to project activities.

Implementation Arrangements

The MoWRAM will be responsible for implementing this IPPF. The Project Director (PD) at MoWRAM will be responsible for providing overall guidance, policy advice, conducting internal coordination, discussing and resolving issues at project level − in association with relevant government agencies where needed. The Project Manager (PM) at MoWRAM will provide day-to-day support to the PD and will be responsible for ensuring that the IPPF will be followed. The PM will oversee the work of the ESOs and ensure proper screening of IP groups will be carried out for each subproject, and steps for IP screening and social assessment described in this IPPF are followed. Within MoWRAM, the ESOs will be responsible for carrying out day-to-day activities set forth in this IPPF. An IP specialist will be appointed within MoWRAM's PMU (in addition to a Resettlement and Environmental Specialist) to provide guidance to Provincial PDWRAM in conducting consultation with affected IP in respective subprojects.

The MoWRAM needs to inform the AIIB and IFAD of the IP screening results and steps that MoWRAM will take in case IPs are present in the subproject area. When IPs are found in the subproject, MoWRAM will engage IP consultants to work closely with PMU's IP Specialist and PDWRAM to conduct Social Assessment and prepare IPPs. PMU's IP specialist and IP consultants will visit the subproject sites and work closely with PDWRAM, local authorities, relevant agencies, NGOs, particularly local IP leaders and IP members, including vulnerable groups of affected IP communities, to conduct Social Assessment.

Capacity Building

Since the MOWRAM is new to AIIB's ESF and IFAD's SECAP, and have not been familiar with requirements of AIIB's ESS3 and IFAD's SECAP Standard 4, they may not be able to conduct meaningful consultation from initial years of project implementation. In the first year, these specialists will be trained by the AIIB task team on ESF with a particular focus ESSs and IFAD's SECAP with a particular focus Standard that apply to this project to enable newly appointed ES specialists at the MOWRAM to provide appropriate support. Where needed, IP consultant will be engaged to provide additional support to PMUs' specialist, particularly in the initial years of project implementation. Since independent ES monitoring consultant will be engaged by PMU at MoWRAM, feedback from this consultant, alongside internal monitoring results, will provide regular feedback to PMU on how IPPF/IPP is carried out so that adjustment/improvement could be made appropriately and timely.

Monitoring & Evaluation

The application of this IPPF and preparation and implementation of subproject IPPs will be monitored internally by the MoWRAM. Adverse impact on IPs (if any) due to land acquisition will be monitored by GDR and MoWRAM as part of implementation arrangement set forth in Section 9.1.2 of project's Resettlement Planning Framework (RPF).

Within MoWRAM, the ESOs or the Detailed Design Implementation and Supervision (DDIS) will be responsible for conducting quarterly monitoring activities of the activities set for under all subproject IPPs. Monitoring of IPPF/IPP implementation will focus on assessing the compliance of IPP implementation against the followings:

- IP screening process and results;

- Quality of Social Assessment and adequacy of IPPs prepared based on SAs;
- Information disclosure;
- Functioning of project's GRM (as customized to the respective IP groups present in each subproject area to ensure the GRM is culturally appropriate to the local IPs);
- Development activities carried under IPPs (based on development needs of IPs);
- Results and impacts of IPPs (in ensuring the affected IP receive socioeconomic benefits of the project that is culturally appropriate, gender and intergenerational inclusive, and contributing to achieving the objective of the AIIB's ESS3 and IFAD's SECAP Standard 4).

In addition to internal monitoring, the project will encourage IPs in subproject areas to participate in monitoring and evaluation of IPP implementation process and implementation outcome which affects them. During SA exercise, feedback and suggestions from IPs will be solicited as to how they wish to participate in monitoring and evaluation of IPP activities.

MOWRAM will provide a quarterly IPP implementation report to the AIIB and IFAD. These results will be incorporated into MoWRAM's consolidated Environmental and Social Compliance Report (ESCR) (See Annex 5 for Indicative Indicators for Internal Monitoring of IPP implementation).

Reporting

MoWRAM's ESOs will ensure feedback from affected and interested IP, as well as grievances submitted by affected IPs, are resolved timely and effectively, and that resolution results are reported timely back to the aggrieved IPs. The method of reporting back depends on the stakeholders, and as follows:

- For stakeholders at national level, email and/or official letter will be used to report back to stakeholders following consultations and/or workshops. The content of the report will summarize what comments, suggestions, concerns that have been received, by whom and when, and how such comments, suggestions, concerns were considered.
- For stakeholders at local level, follow-up meetings/consultations will be conducted to informed stakeholders know on how comments, suggestions, concerned were considered.
- For Indigenous Peoples, project's responses to their comments, suggestions, concerns are reported back to them in subsequent face-to-face consultations – in line with the project's SEP and the IPPF, including how the project had considered and addressed their concerns through concrete actions to be carried out during subproject implementation process and through IPP implementation.

Grievances of all project IP will be reported back to them through project's GRM channels within the timeframes specified for each step of the above GRM procedure.

Costs

Indicative costs for IPPF implementation are estimated during project preparation for the purpose of budget planning. The actual costs of IPPF implementation depend on the number of IPPs, including scope and activities to be carried out under each IPP, during project implementation. The estimated cost below may be updated once the list of subprojects is finalized. Costs incurred as compensation payment for land acquisition and associated impacts are covered by counterpart funds and are estimated in the project' Resettlement Planning Framework (RPF).

Budget

The budget for implementing IPPF/IPPs will be allocated from counterpart funding. implementation, based on infrastructure construction subprojects that will be identified/confirmed during project implementation, this budget plan will be updated to ensure funding is sufficiently planned annually to ensure timely and effective activities in Figure below.

1. INTRODUCTION

1.1 Project Background

1.1.1 Project Context

Cambodia's irrigated agriculture faces increasing challenges from adverse impacts of climate change, especially the changes in rainfall patterns, duration and timing of the rainy season, and climate induced water disasters such as floods and droughts. Climate Resilient (CR) and low emission practices and investments in agriculture and water management are therefore crucial to protect and enhance Cambodia's agricultural production and productivity which will in turn contribute to poverty reduction and increased food security.

Addressing the complex impacts of climate change on rain fed and irrigated agriculture requires action at both farm and irrigation scheme, including enabling environment at regional and national level. Farm level actions will help communities adapt to climate change while also saving water and decreasing GHG emissions from BAU of agriculture, water use and management. This will help farmers to diversify their farming while also addressing changing rainfall patterns and increasing drought conditions throughout the growing season. Actions at system level will help achieve a modernized and climate proofed irrigation infrastructure delivering irrigation services to farmers in line with the requirements at the farm level. It will also protect the natural capital stocks, especially the land and water against the increasing threats of flood. In addition, replacement of diesel pumps with solar pumps and combination of both grey and green solutions for irrigation modernization and flood proofing works will help reduce GHG emissions.

The integrated actions combining both farm and system levels has a transformative potential to reduce vulnerability of water and agriculture systems to climate change impacts while also reducing GHG emissions and enhancing the livelihood of rural populations who primarily depend on agriculture.

The theory of change demonstrates how the project shifts the BAU from poorly constructed and maintained irrigation systems to a smart, climate resilient water management system with climate proofed irrigation and flood control infrastructures for smallholder farmers. The project's outcomes and outputs are in-line with GCF's adaptation and mitigation goals, objectives, and long-term sustainability principles.

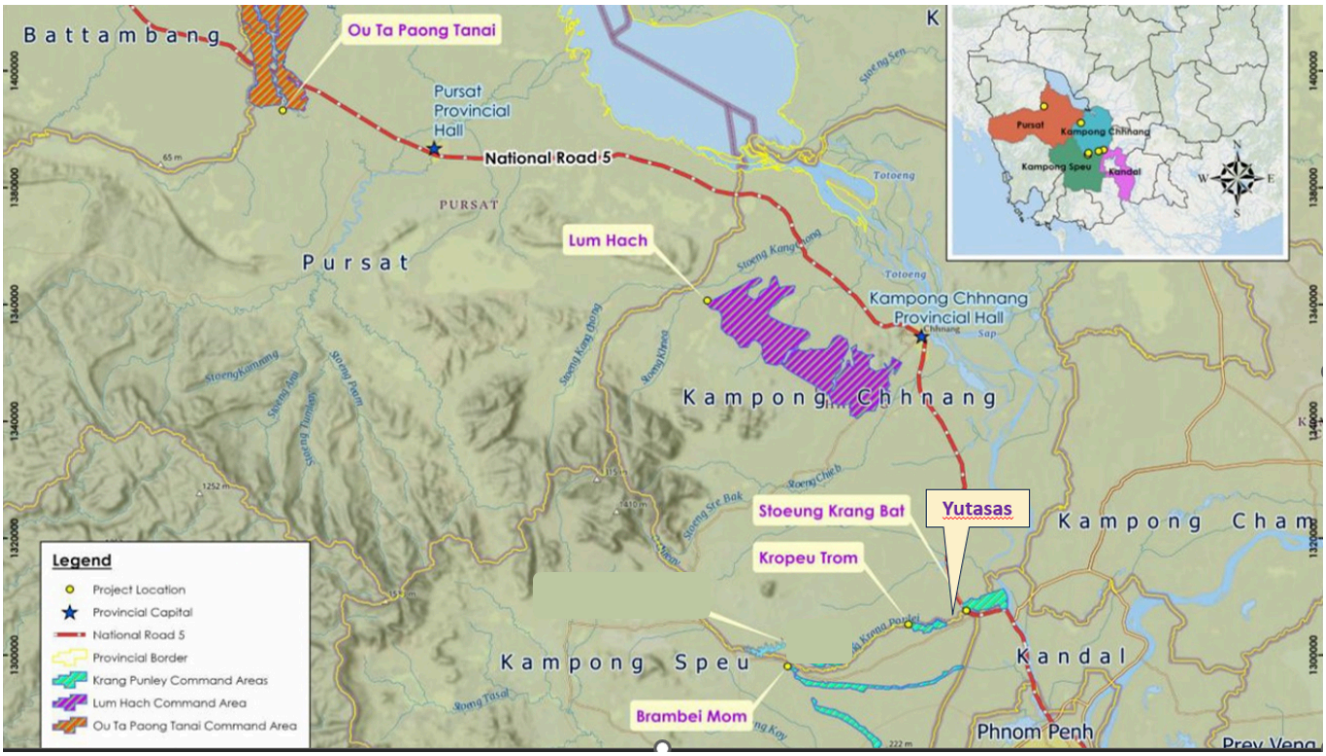
The paradigm shifting aspects of the project will include the data driven climate-proofing of irrigation infrastructure and focus on last-mile engagement of vulnerable communities. The TOC shows that IF climate resiliency of irrigated agriculture is enhanced then the agricultural outputs and income of small-scale farmers will increase, as well as the climate resilience of vulnerable households and in particular to women will increase because water and food systems are less vulnerable to increasing temperatures, changing rainfall patterns and the extreme water events, AND low-emission irrigation and sustainable agriculture adaptation practices will contribute to NDC mitigation targets.

The project's goal stated above shall be achieved through the generation of the following three outcomes: (1) Improved resiliency of small holder farmers (2) Resilient water control infrastructure and water service delivery with less crop and asset damage and (3) Reduced GHG emission. These three outcomes are derived from interventions at farm and irrigation system level together with institutional strengthening of relevant stakeholders (MoWRAM, NCDD, MoF, and MAAF) and will contribute towards an irrigated agricultural system that is climate resilient and productive ultimately reducing the climatic vulnerability of poor farmers in the project areas.

1.1.2 Project Development Objective and Project Components

The project objective is to increase climate adaptation, mitigate the negative impact of extreme climate events, and improve livelihoods of smallholder farmers and vulnerable rural communities in four provinces of Cambodia in Kampong Speu, Kampong Chhnang, Kandal, and Pursat province (see map below).

Figure 1 – Map showing six irrigation schemes located in four provinces



The project will be implemented through various activities organized through the following three components:

- Component 1. Improving farm-level climate adaptation, resilience, and water use efficiency
- Component 2. Upgrading and climate-proofing water infrastructure for increased resilience
- Component 3. Institutional strengthening

1.2 Objectives and Principles of the Indigenous Peoples Planning Framework

1.2.1 Objectives

This Indigenous Peoples Planning Framework (IPPF) is prepared in case the project is affect any Indigenous Peoples. This framework guides screening, assessment, and planning, including an arrangement of the outline of culturally appropriate and meaningful consultations with Indigenous peoples, conducting social impact assessments (SIA), and preparing the IPP for any specific subproject. This IPPF is prepared in accordance with the requirements of the AIIB's ESS3 on Indigenous Peoples and the IFAD's SECAP Standard 4, and the RGC's policy on development of Indigenous Peoples. Based on the gaps between the AIIB's ESS3, IFAD's SECAP Standard 4, and RGC's policies, measures are proposed to close the gaps through implementation arrangements, procedures, design criteria, etc. to be applied to all subprojects and project components that were confirmed during project preparation and will be identified during project implementation.

The objectives of this IPPF are:

- Ensure the Project is designed and implemented in a way that fosters full respect for Indigenous Peoples' identity, dignity, human rights, economies and cultures, as defined by the Indigenous Peoples

themselves, so that they a) Receive culturally appropriate social and economic benefits; b) Do not suffer adverse impacts as a result of Projects; and c) Can participate actively in Projects that affect them.

In particular, IPPF aims to subproject's activities:

- Avoid adverse impacts of the project on IP communities. When avoidance is not possible, minimize, mitigate and/or compensate for such impacts.
- Promote sustainable development benefits and opportunities for IP communities in a manner that is accessible, culturally appropriate and inclusive.
- Improve subproject design and promote local support by establishing and maintaining an ongoing relationship based on meaningful consultation with the IP communities affected by CAISAR throughout project cycle.
- Recognize, respect and preserve the culture, knowledge, and practices of IP communities, and provide IPs with an opportunity to adapt to changing conditions in a manner and in a timeframe acceptable to them.

1.2.2 Principles

To achieve the above mentioned objectives, the following principles will be observed – at subproject level:

a) Early screening to determine IP presence and/or collective attachment to the Project area as well as potential impacts on IPs.

b) Conduct of culturally appropriate, gender-sensitive and technically backed-up social impact assessment where full consideration to IP−generated options as regards benefits and mitigation measures are considered and translated into the IP plans.

c) Undertake meaningful consultations with affected IP communities and concerned organizations to solicit their participation across the subproject cycle to avoid adverse impacts or in cases when avoidance is not possible, to minimize, mitigate, or compensate for such effects by establishing culturally appropriate and gender inclusivecapacity development modalities and grievance mechanisms.

d) Ensure free, prior and informed consent of affected IP communities to project activities that may introduce commercial development of cultural resources and indigenous knowledge, physical displacement from traditional or customary land, and commercialdevelopment of natural resources within customary lands that impact on livelihoods or cultural uses that define the identity and community of IPs. Consent refers to a collective expression by affected IP communities, through individuals and/or their recognized representatives, of broad community support for Project/project activities even if some individuals or groups object.

e) Avoid restricted access to and physical displacement from protected areas and naturalresources but when not possible, ensure that affected IP communities participate in allaspects of the subproject cycle and that their benefits are equitably shared.

f) An IPP will be prepared that is based on the social impact assessment with the assistance of qualified and experienced experts that draw on indigenous knowledge through consultation with affected IP communities. The IPP will include a framework for continued consultation with the affected IP communities during project implementation; specifies measures to ensure that IPs receive culturally

appropriate benefits; identification of measures to avoid, minimize, mitigate, or compensate for any adverse project impacts; culturally appropriate grievance procedures; M&E arrangements, and a budget and time-bound actions for implementing the planned measures.

g) The draft IPP after approval by the AIIB is disclosed including documentation of the consultation process and the results of the social impact assessment in a timely manner and made available in an accessible place and in a form and local languages understandable to affected IPs communities and other stakeholders. The final IPP andits updates will also be disclosed to the affected IP communities and other stakeholders.

h) Prepare an action plan for legal recognition of customary rights to lands and territories or ancestral domains when the project involves (i) activities that are contingent on establishing legally recognized rights to lands and territories that IPs have traditionallyowned or customarily used or occupied, or (ii) involuntary acquisition of such lands.

i) Monitor implementation of the IPP using qualified and experienced experts; adopt a participatory monitoring approach, wherever possible; and assess whether the IPP's objective and desired outcome have been achieved, considering the baseline conditions and the results of IPP monitoring and disclose the monitoring report.

2. LEGAL FRAMEWORK

2.1 Overview

Over 97 percent of Cambodia's population belongs to the Khmer ethnic group, while the remainder comprise a range of ethnic groups, including Chams (predominantly Muslim), ethnic Vietnamese, ethnic Chinese, and indigenous Khmer Loeu (hill-tribes). Amongst the non-ethnic groups, only the hill-tribes are categorized as IPs by the government. There are also isolated villages Cham (Muslim) communities that are non-Khmer ethnic groups, but they are generally well assimilated in Khmer society and not recognized as IPs.

2.2 National Laws and Regulations Related to Indigenous Peoples

Cambodia has a number of laws and policies that protect the rights of local communities, including IPs. Since the IPs have strong ties to the land and natural resources, the Land Law (2001) is the most significant for them because it sets out the basis for their rights to land. Article 25 provides for the collective ownership of land, while Article 26 recognizes the role of traditional authorities, mechanisms and customs in decision-making and exercising ownership rights. The subsequent Policy and Sub-decree for Indigenous Peoples Registration of Collective Land Rights sets the incorporation of the community as a legal entity as a condition for receiving a collective title. National policies applicable to the indigenous peoples include:

Cambodia Constitution (1993). Article 31 stipulates that Khmer citizens are entitled to the same rights, freedom and duties and are equal before the law, regardless of their race, color, sex, language, beliefs, religions, political tendencies, birth of origin, social status, resources, and any position. Article 44 guarantees all persons, individually or collectively, shall have the right to own property. Only natural persons or legal entities of Khmer nationality shall have the right to own land. Legal private ownership shall be protected by law. Expropriation of ownership from any person shall be exercised only in the public interest as provided for by law and shall require fair and just compensation in advance.

Land Law (2001) recognizes the collective land rights of indigenous communities by the State that offer a unique chance for indigenous peoples in Cambodia to exercise their right to self-determined development that include Article 26: Ownership of the lands is granted by the State to indigenous communities as collective ownership, including all the rights and protections enjoyed by private owners. The exercise of collective ownership rights are the responsibility of the traditional authorities and decision-making mechanisms of the indigenous community, according to their customs and subject to laws such as the law on environment protection; Article 28: No authority outside the community may acquire any rights to immovable properties belonging to an indigenous community. Indigenous communities have the right to collective ownership of their lands, which gives them all the rights and protection of ownership as enjoyed by private landowners. The lands of indigenous communities include residential and agricultural land and encompass land actually cultivated and the lands reserved/fallow land for shifting cultivation. Indigenous communities shall continue to manage their community land according to their traditional customs, pending the determination of their legal status. Once they are registered as legal entities, communities can apply for the registration of their collective title (Land Law 2001, Article 23 to 25). Article 43 stipulates the Commune Council's role in protecting and preserving the environment and natural resources. They also have a role in the classifying and setting of boundaries for all forests in their area of jurisdiction, in coordination with the Ministry of Agriculture, Fisheries and Forestry (Forestry Law 2002, Article 10).

Land Concessions 2003 and 2005. A sub-decree on Social Land Concessions (SLC)was established in 2003 to accompany the implementation of the Land Allocation for Social and Economic Development Project (LASED). The SLC aims at providing state private land for purposes of settlement and family farming to private families particularly the poor, disabledsoldiers, and families of deceased soldiers who have no or not enough land.

In late December 2005, the ELC sub-decree was established, defining a mechanism to grant state private land through a specific ELC contract to a concessionaire to use the land for agricultural and agro-industrial production. This refers to the cultivation of food or industrial crops, animal raising and aquaculture and the construction of facilities for the processing of domestic agricultural raw materials (Sub-Decree No.146 on ELC, article 2). For an ELC, which can be granted to private or investment companies, it must have been classified and registered in the Land Register as state private land, complying with the necessary legal procedures (Land Law 2001 Article 17, Sub-Decree No.118 on State Land Management article. 3 & 21, Sub- Decree No. 146 on ELC article. 2).

All responsibilities and authorities in granting ELCs lie with the MAFF. The concession land cannot exceed 10,000 ha and may only be granted when some additional requirements are fulfilled as follows (sub decree No.146 on ELC, article 4 & 5):

a) A land use plan for the land has been adopted by the Provincial or Municipal State Land Management Committee, and the land use is consistent with the plan.

b) Environmental and social impact assessments have been completed with respect to the land use and development plan.

c) There are solutions for resettlement issues in accordance with the existing legal framework and procedures. There shall be no involuntary resettlement and access to private land shall be respected.

d) Public consultations have been conducted with territorial authorities and local residents, relating to economic land concession projects or proposals.

Moreover, the proposal for ELC has to be evaluated against criteria that include the promotion of people's living standards, perpetual environmental protection and natural resource management, avoidance or minimization

of adverse social impacts, creation of increased employment and with linkages and mutual support between SLC and ELC.

Organic Law (2008) recognizes the vulnerability of the indigenous peoples in Cambodia. It mandates that provincial and district councils in rural areas, capital, municipal and khan levels in urban areas formulate development plans that identify the needs of vulnerable groups, including those from the IP communities.

Protected Area Law (2008) defines the framework of management, conservation and development of protected areas. The law aims to ensure effective management and conservation of biodiversity, and sustainable use of natural resources in protected areas. The law recognizes the right of forest-dependent indigenous peoples to live within the protected areas and to use sustainably the natural resources. Under this law, protected areas are divided into four zones, including core zone, conservation zone, sustainable use zone, and community zone. The law has provisions that define how land can be used and managed in each zone.

Forestry Law 2003 authorizes the granting of forest concessions. The sub-decree on the Management of Forest Concessions states that cancelled or revoked forest concessions shall revert to natural forest protected areas and cannot be converted into an Economic Land Concession (ELC) or awarded to other companies.

Law on Education (2007) aims to promote development of human resources of the nation by providing lifetime education to all people to enable their improvements in terms of knowledge, skills, capacities, dignity, good moral behaviors and characteristics. It also encourages people to learn to better understand, love and protect the national identity, cultures and language. Article 11, 15, 16, and 40 of the Forest Law (2002) recognizes and protects the rights of indigenous peoples to access and use certain forest areas, which they traditionally rely on to sustain their way of life and enjoy the benefits of the forest

Sub-Decree No. 83 ANK, BK (2009) on Procedures of Registration of Land of Indigenous Communities. The objective of this Sub-Decree is to provide indigenous communities with legal rights to land tenure, ensure land tenure security, and protect collective ownership by preserving the identity, culture, good custom and tradition of each indigenous community.

Policy on Environmental and Social Safeguards for Sub-National Democratic Development (RGC-NCDD, 2019) states in the strategy No.7 that Indigenous Peoples also are known in Cambodia as 'Khmer Leou' who have their own cultures and customs and make their own living in a way that is significantly different from those of 'Khmer Kroam' who live in small groups. The "Khmer Leou" is considered vulnerable IP groups and receive special care and attention by the government. It is required that development projects implemented at sub-national administration should not negatively impact their lives, and traditions and customs of the "Khmer Leou", particularly with regards to resettlement and land. In terms of application, specifically in land acquisition and resettlement, this policy is applied through the RGC's SOP-LAR (2018) – Land Acquisition and Involuntary Resettlement, which requires the avoidance of land acquisition or minimization of its use where avoidance is not possible.

Manual for Indigenous Communities Identification; Legal Entity Registration; and Communal Land Registration Process *(*OHCHR, MoI, MRD, MLMUPC (2018) *provide detailed guidance on steps and measures that need to be taken for identification of indigenous communities, registration of legal entities, and community land registration process.*

RGC (2018) Land Acquisition and Involuntary Resettlement, Standard Operating Procedures for Externally Financed Projects in Cambodia. In Section E (Impact on Indigenous Peoples), it is stipulated that land acquisition and resettlement that potentially affects indigenous people should be avoided – to the maximum extent possible, through selection of site, alignment, and land demarcation. However, when land acquisition is not avoidable, a separate social impacts assessment will need to be carried out to understand clearly how the indigenous peoples use their land; how they conduct their economic activities; how they organize their social

activities; and how the project would potentially affect the IP's identity, culture, and customary livelihoods. As per the decree, a separate Indigenous Peoples Plan (IPP) must be developed to address social impacts, compensation and resettlement packages, and implementation arrangements. The consultation process should consider customary practices, and in most cases, tribal or customary leaders will be consulted as they make decisions for their people. The Project Preparation Consultants (PPC), along with the Executing Agency/Implementing Agency (EA/IA) and local commune authorities, typically prepare the IPP. This is separate from the preparation of the BRP and DRP, although the latter will include a compensation package for the displaced indigenous peoples.

Registration of Lands of Indigenous Communities 2009. Sub-decrees on tenurial security have been issued by the GKC to put in place procedures whereby IPs can process claims to their rightful lands (provided they are the majority population at commune level). Recognition and certification of lands among IPs are ongoing with the issuance of the 2009 Sub-Decree on Procedures of Registration of Lands of Indigenous Communities.

National Policy on the Development of Indigenous Peoples (NPDIP). The Council of Ministers approved the NPDIP on 24 April 2009, serving as a guiding document for the implementation of government policies related to Indigenous Peoples across various sectors such as culture, education, health, land, agriculture, infrastructure, justice, tourism, industry, and energy. The NPDIP recognizes the necessity of specific policies for indigenous communities and establishes principles for their formal registration as legal entities with their own bylaws. Additionally, the NPDIP supports the participation of indigenous communities in economic development that affects their lives and cultures, ensuring their full entitlement to express their opinions and make decisions on the development of the economy, society and their cultures towards societal growth. The NPDIP promotes the use of local languages in multilingual primary education, media, and public consultation. It also lists ten brief sector strategies dedicated to culture, education and vocational training, health, environment, land, agriculture, water resources, infrastructure, justice, industry and mines and energy. The NPDIP calls for conducting impact assessments for all infrastructure projects: "Development projects in the living areas of indigenous peoples can function only if there has been an environmental and social impact assessment and publicity to relevant indigenous peoples' communities in advance in order for those people to have an opportunity to provide input about their need." The NPDIP recognizes the rights of indigenous peoples in traditional lands, culture and traditions. This is consistent with the national Land Law (2001).

Policy on Registration and Right to Use of Land of Indigenous Communities: The Council of Ministers approved on April 24, 2009. The Prime Minister signed a Sub-Decree on procedures of registration of Land of indigenous communities on June 9, 2009. This policy was developed on basis of the Land Law (2001), which recognizes the right of the indigenous communities to possess and use land under their collective ownership. The policy states that the registration of indigenous communities' land, as collective ownership, is different from the registration of individually owned land parcel. This is because land registration of the indigenous communities entails the registration of all land parcels that the communities own and use. The policy consists of both State Public Land and State Private Land in accordance with articles 25, 26, and 229 of the Land Law (2001) and related Sub-decrees. These land parcels vary in size and can be located within the same or different communes/ sangkat. Therefore, the registration of land parcels of indigenous communities requires a separate Sub-decree that supplements the existing procedures for sporadic and systematic land registration.

Other Policy Considerations. Apart from its Constitution and other national laws, Cambodia has adopted and supports the UN Declaration of Rights of Indigenous Peoples (IP)by way of ending discrimination and promoting the rights of Cambodia's recognized IPs.

2.3 AIIB's ESS3 on Indigenous Peoples

The AIIB Environmental and Social Framework (ESF) sets out the requirements for all Bank supported operations to comply with the Bank policies addressing environmental and social impacts, among other policies[4]. The ESF includes three mandatory Environmental and Social Standards (ESSs) that detail the requirements applicable to Bank clients on, respectively: Environment and Social Assessment and Management (ESS 1), Land Acquisition and Involuntary Resettlement (ESS 2) and Indigenous Peoples (ESS 3).

Objective. The objective of the ESS 3 is to enable the design and implementation of Projects in a way that fosters full respect for IPs identity, dignity, human rights, economies and cultures, as defined by the IPs themselves, so that: (a) they receive culturally appropriate social and economic benefits; (b) they do not suffer adverse impacts as a result of Projects; and (c) can participate actively in Projects that affect them.

[4] https://www.aiib.org/en/policies-strategies/_download/environment-framework/AIIB-Revised-Environmental-and-Social-Framework-ESF-May-2021-final.pdf

Scope and application.

The ESS 3 applies if IPs are present in, or have a collective attachment to, the proposed area of a subproject, and are likely to be affected by the subproject. The term IP is used in a generic sense to refer to a distinct social and cultural group possessing the following characteristics in varying degrees: (a) self-identification as members of a distinct indigenous cultural group and recognition of this identity by others; (b) collective attachment to geographically distinct habitats, ancestral territories or areas of seasonal use or occupation in the subproject area and to the natural resources in this area; (c) customary cultural, economic, social or political institutions that are distinct or separate from those of the dominant society or culture; and (d) a distinct language or dialect, often different from the official language or languages of the country in which they reside. 4 In considering these characteristics, national legislation, customary law and any international conventions to which the member in whose territory the subproject is located is a party may be considered. A group that has lost collective attachment to geographically distinct habitats or ancestral territories in the Project area because of forced severance remains eligible for coverage as an IP under ESS 3.

Indigenous Peoples Planning Framework: An Indigenous Peoples Planning Framework (IPPF) is prepared when a Project is likely to involve IPs and consist of a program or series of activities whose details had not yet been identified at the time the Project was approved by the Bank. In the case of this Project, and under exceptional circumstances, the AIIB determined that the environmental and social assessment of the identified Project activities could be conducted using a phased approach as defined under Section E, Special Circumstances of the IPP of the ESS 3, during the development of the activities in conformity with the IPPF that is approved by the Bank.

Indigenous Peoples Plan. Generally, if the subproject process determines that IPs are present in, or have collective attachment to, a subproject area, and furthermore are likely to be affected by the subproject, the Project is required to prepare an Indigenous Peoples Plan (IPP). The IPP should draw on indigenous knowledge and participation by any affected IP communities and take into consideration differentiated impacts of the Project with respect to gender and different generations. The IPP includes (a) a framework for continued consultation with those affected IPs during the subproject implementation; (b) measures to provide these IPs with gender sensitive and culturally appropriate benefits; (c) measures to avoid, minimize. Mitigate, offset or compensate for any adverse subproject impacts, and actions to address these impacts on the different groups in the community; (d) culturally appropriate grievance procedures, monitoring and evaluation arrangements; and (e) a budget and time-bound actions for implementing the planned measures.

In the event where project activities: (a) have impacts on land and natural resources subject to traditional ownership or under customary occupation or use; (b) cause relocation of IP and/or EM from land and/or limitations on access to natural resources subject to traditional ownership or under customary occupation or use; or (c) have significant impacts on Indigenous Peoples' cultural resources, the project needs to engaged the affected IP communities in a Free, Prior and Informed Consultation (FPICon) and thereafter obtain the broad support of the affected IP/EM communities for project activities that affect them.

For CAISAR, based on the current assessment, it is anticipated that the project would not affect any land and/or natural resources that are traditionally owned or under customary occupation or use by IP and/or EM, nor their cultural resources. Therefore, FPICon is not likely triggered under the Project albeit the applicability of FPICon will be determined based on the SIA to be carried for relevant subprojects.

2.4 Gaps between National Policies & Donor's Environmental and Social Policies

Despite the fact that Cambodia has a policy that recognizes the rights of IPs to culture, education, justice, health, environment, land, agriculture, water resources and infrastructure among others, there are no decrees, sub-decrees or procedures for specific safeguards to protect the interest of IPs, other than those related to land or forestry. The Cambodia Land Law does recognize the right of indigenous communities in Cambodia to own immovable property - their land - with collective title. However, in practice, the procedure to register collective title can be very time consuming and only a few indigenous communities have received collective title since the Land Law was enacted in 2001. Similarly, the Forest Law also guarantees and recognizes the right of IPs to continue the use and access to certain forest areas that they traditionally use and practice.

Overall, there is an acceptable level of consistency between the government system, the AIIB'ESS and the IFAD standards on IPs. The self-identification process of indigenous communities defined in the national policy is broadly consistent with international good practice. The national framework does not exclude communities who have become more mainstream, and indigenous communities may apply for legal status regardless of whether or not they still use their own language or practice traditional agriculture.

However, while there are some complementary links between Cambodian laws and regulations related to IPs and the ESS 3, there are no sufficiently detailed regulations or operating procedures to facilitate full implementation of the IPPs. Therefore, this IPPF has been prepared on the basis of the ESS 3 of AIIB and Standard 4 of IFAD (Indigenous Peoples), considering relevant Cambodian policies and regulations. The IPPF also outlines the Grievance Redress Mechanism (GRM), based on the GRM that is used for the Project, which will need to be further refined in consultation with IPs, if any are found to be residing at any subproject sites.

Items for Clarification	RGC's Policies	AIIB's ESS3	IFAD's SECAP Standard 7	Clarifications
Definition of IPs	Have list of IPs that are officially recognized as IPs	• Self-identification as members of a distinct indigenous social and cultural group and recognition of this identity by others; and • Collective attachment[5] to geographically distinct habitats, ancestral territories, or areas of seasonal use or occupation, as well as to the natural resources in these areas; and • Customary cultural, economic, social, or political institutions that are distinct or separate from those of the mainstream society or culture, and • A distinct language or dialect, often different from the official language or languages of the country or region in which they reside.	• Priority in time, with respect to occupation and use of a specific territory; • The voluntary perpetuation of cultural distinctiveness, which may include aspects of language, social organization, religion and spiritual values, modes of production, laws and institutions; • Self-identification, as well as recognition by other groups, or by state authorities, as a distinct collectivity; and • An experience of subjugation, marginalization, dispossession, exclusion or discrimination.	Screening of IP will be conducted based on all ethnic groups to identified in the subproject's area of influence. Screening of IP will be based on the definitions of IP in AIIB's ESS 3 and IFAD's ESS4.
FPIC	No requirements about FPIC	***Environmental and Social Standard 3*** Conduct meaningful consultation (based on **Free, Prior, Informed Consultation** – FPICon) to obtain broad support from affected IP community when project activities: • Have impacts on land and natural resources subject to traditional ownership or under customary occupation or use; • Cause relocation of Indigenous Peoples from land and natural resources subject to traditional ownership or under customary occupation or use;	***SECAP standard 4*** Conduct meaningful consultations to obtain **Free, Prior, Informed Consent** from affected IPs when project activities: • Have an impact on the land access and use rights of rural communities; and • Target indigenous peoples or rural areas that are home to indigenous peoples. Engagement with indigenous peoples will be undertaken in good faith, in a culturally appropriate manner and with full regard to these peoples'	

[5] Collective attachment means that for generations there has been a physical presence in and economic ties to land and territories traditionally owned, or customarily used or occupied, by the group concerned, including areas that hold special significance for it, such as sacred sites.

Items for Clarification	RGC's Policies	AIIB's ESS3	IFAD's SECAP Standard 7	Clarifications
		• have significant impacts on Indigenous Peoples' cultural resources. Apply Free, Prior and Informed Consent if the laws of the Member in whose territory the Project is located mandate free, prior and informed consent (FPIC) if AIIB has determined that the requirements of such FPIC are consistent with those of FPICon.	institutions, governance systems, customs and methods of decision-making.	

3. RISKS, IMPACTS AND MITIGATION MEASURES

3.1 Overview of Indigenous Peoples

3.1.1 Overview of IPs in Cambodia

There are 22 indigenous groups that are recognized by the RGC in Cambodia. The total population of these 22 indigenous groups is 171,193 people. Most of the indigenous people (92.4%, 2013) live in the northern and eastern parts of country, particularly in provinces of Ratanakiri, Mondulkiri, Kratie, Stung Treng, Kampong Thom, and Preah Vihear provinces. Of 22 indigenous groups, 6 groups are considered major groups as they have more than 10,000 people each. These 6 groups account for 88% of the total ethnic population of the country, including Tampuan, Pnong, Kreung, Kuy, Jarai, and Prev[6].

The indigenous families are larger than the average family size of the Cambodian population, with an average of 5.3 members per family in 2008 and 4.9 in 2013. Female-headed household accounted for 14% in 2008 and 22% in 2013.

Education. Among the indigenous population aged 15 and over, almost 66% did not attend a school or complete any educational degrees. In comparison, 24.1% attended only primary school (in total, 90% had little or no education). About 10% have at least completed lower secondary education, of which 4% have joined upper secondary education, and less than 1% have received a high school diploma. However, the data show that younger indigenous peoples have a better education rate than the older indigenous peoples, and men are more educated than women.

Employment and Economic Situation. The employment rate is 87.7% among men and 85.5% among women. According to different indigenous groups, the larger indigenous groups tend to have higher labor force participation rates, such as Tampuan, Pnong, Kreung, Preu, Kuy, Kraol, and Kavet. However, the majority of indigenous peoples work without pay (57.3%) and are self-employed (38%), with more men being self-employed (58.9%) and the majority of women working without pay (78.4%). In terms of the economic sectors, the vast majority of indigenous peoples aged 15 and over are employed in agriculture (93.3% of the population, 90.6% of men, and 95.9% of women), a few in the industry sector (total 1.6%, men 1.8%, and women 1.4%), and in the services sector (total 5.1%, men 7.6%, and women 2.8%).

Health and Hygiene. There is no data on indigenous peoples' health problems other than the data on disability from the censuses and intercensal population surveys, and the data on disability, maternal health, access to health and childcare services from Cambodian Socio-Economic Surveys containing only the information about local ethnic minority groups in Cambodia. According to the 2015 Cambodia Socio-Economic Survey, 14% of local ethnic minorities were sick in 30 days before the survey, with children and the elderly being sick the most and the working-age population being sick the least. In addition, boys and older men were twice as likely to be ill as girls and older women, and adult women were 2.7 times as likely to be sick as adult men. The fact that boys were more likely to be sick than girls can be explained by the fact that boys tend to accompany their parents to work in agriculture or collect nontimber forest products. The most common diseases are malaria, respiratory diseases, typhoid fever, and tuberculosis. The health services visited include pharmacies, public hospitals, and private clinics.

Housing and ownership. In 2013, more than 95% of indigenous families had their own houses (96.3% in 2013). The majority of indigenous households used kerosene lamps and batteries as the main source of light. In contrast, 20.6% of households used electricity or their own generators as the main light source in 2013. For the primary fuel type for cooking, most indigenous households used firewood (95% in 2013). For household items

[6] Report on the Demographic and Socio-economic Situation of Indigenous Peoples in Cambodia (2021).

for information and communication, almost a third of indigenous households have television, 110% have mobile phones, and less than 1% have internet. For traveling, 76.1% of indigenous households had motorbikes, 2.2% had cars, 9.1% had tractors, 7.8% had boats, and 37.4% had bicycles (2013).

3.1.2 Overview of IPs in the Project Area

IPs were found in the four project provinces including Pursat, Kampong Chhnang, Kampong Speu, and Kandal. (See Table 2 below).

Table 1 – Distribution of Indigenous People Groups in Project Provinces

No.	Province	Indigenous Groups (>= 1000 people)	Indigenous Groups (>= 100 people)	Indigenous Groups (<100 people)
1	Pursat		Jarai, Poar	Kavet, Kleung, Kuoy, Kreung, Stieng, Ja'ong, Kroul, S'och, Kajrouk
2	Kampong Chhnang		Jarai	Kavet, Kleung, Kuoy, Kreung, Lun, Tampuon, Stieng, Ja'ong, Kroul, Rodae, S'och, Kajrouk
3	Kampong Speu		Jarai, Souy	Kavet, Kleung, Kuoy, Kreung, Lun, Stieng, Ja'ong, Kroul, Mel, Kajrouk
4	Kandal		Jarai, Kleung, Stieng, Ja'ong	Kavet, Kuoy, Lun, Bunong, Praov, Tampoun, Kroul, Rodae, L'moon, Souy, Kajrouk, Mon

Source. *Ministry of Planning and Ministry of Rural Development (2021) Report on Demographic and Socio-economic Situation of Indigenous Peoples in Cambodia.*

3.2 Project's Environmental and Social Risk and Impacts

The project will bring about an overall positive impact to local farmers. In subproject where IP peoples have farmland in the command area, these IPs will benefit from improved irrigation, water supply, government's agricultural extension services, and services from local farmers' cooperatives. As IPs participate in project activities, particularly agricultural extension services, they can grow more crops, participate in value chain, increase income, and eventually improve their livelihoods. Reliable water access and promising farming opportunities thanks to improved irrigation and extension services also keep the poor, including the poor IPs, from migrating to other areas in search for income generation opportunities. Adverse impacts on IPs are foreseen. However, these impacts are mostly local, small-scaled, such as minor land acquisition in some subproject to allow construction of irrigation canal. Land impacts would be very small at household level (e.g. loss of strip of land) which would not affect the livelihoods of the IP remarkably.

During subproject construction and operation, there are a number of environmental and social risks that may apply to local people, including IP peoples who may happen to be present in a subproject area. Environmental and social risks and impacts that have been identified during project preparation have been discussed in consultation meetings with a) IP peoples who are present in subproject area, and b) other project stakeholders at commune, district, provincial and central level. These consultations aim to ensure potentially affected people, and relevant project stakeholders, are aware of such risks and stay engaged during subproject preparation and implementation for risk prevention and mitigation (Please see full list of social and environmental risks in the project's ESCMF (Section E&S Risks and Impacts) that may apply to any ethnic minorities who are present in subproject area. See also SEP, particularly section (Proposed Strategy for Consultation with Vulnerable/Disadvantaged Groups) for guidance on conducting consultation with IPs when IPs are present in the subproject area.

3.3 Mitigation Measures

Although above risks and impacts will be validated, and assessed at further length when subproject locations become known, IP(s) in a subproject's area may be affected disproportionately compared to the mainstream group. The distinctive cultural and socioeconomic characteristics of the IPs, including their existing livelihoods, etc. may expose IPs to further risks and impacts, increase their vulnerability and compromise their ability to respond to such risks and impacts – if a holistic approach is not in place. Effective communication, such as IEC, and active participation of involved IPs, are among important factors that contribute to effective engagement of IPs for meaningful consultation during subproject preparation and participatory monitoring during subproject implementation. The coordination of project stakeholders, including PMU, Contractors, local authorities, local agencies, local service providers, and most notably the active and full participation of IPs, collectively contribute to minimizing identified risks and potential impacts at identified subprojects.

Detailed mitigation measures for the above risks and potential impacts are proposed in the project's ESCMF. These mitigation measures are specific for design stage, pre-construction stage, construction stage, and operation stage,

During subproject design and pre-construction stage:

To avoid, minimize potential impacts related to land acquisition:

- Effort will be made by PMU to ensure irrigation and road design avoid acquisition of land from IPs;
- In case where avoidance is not feasible (because of technical requirements), minimize the need for land acquisition through alternative designs;
- Compensate affected IP in accordance with RPF, if avoidance is not possible.
- Provide additional financial and developmental support, as needed, based on meaningful consultation, to support affected IPs to fully and timely restore their livelihoods and income to the pre-project level, as a minimum.

During pre-construction stage:

To address identified risks for affected IPs at subproject level, PMU will implement the following:

- Prepare site-specific ESCMP
- Screen for presence of IP(s) in subproject area, based on detailed design
- Conduct Social Assessment (based on site-specific ESCMP)
- Develop IPPs, incorporating results from SA, including mitigation measures, etc. based on meaningful consultations
- Implement IPP (as part of site-specific ESCMP)
- As part of IPP, conduct Behavior Change Communication using audio-visual and local IP language to provide knowledge, raise awareness, change attitude, and promote behavior change among IP and local stakeholders to respond effectively to identified risks, particularly risks related to SEA/SH/VAC, communicable disease, traffic safety, culture related conflicts, etc.
- Where necessary, engage service provider (e.g. SEA/SH service providers) (for subproject being risk "high" or "substantial" on SEA/SH risk (risk is assessed as part of preparation of site specific ESCMP).

During construction stage:

- Implement the following as an integrated approach:
    i. PMU to implement site-specific ESCMP
    ii. PMU to continue implementing IPP – as part of site specific ESCMP (in close collaboration with IPs and local partners)
    iii. Contractor to implement C-ESCMP (including IEC campaign)
    iv. PMU to allow budget fully and timely (based on budget plan in IPP, Contractors' bill-of-quantity)
    v. PMU will enhance monitoring process to ensure risks are minimized. This can be achieved through coordinated works of SEO-PMU, DDIS consultant, E&S consultant, and independent E&S monitoring consultant, and participatory consultation of local IPs.

During operation stage:

- Ensure safety measures are in place (e.g. signpost, warnings, safe crossing, etc.)
- Continue IEC campaign, where need, to raise awareness of IPs on safe driving before new road is open to traffic
- PMU to maintain GRM's focal point (particularly during liability stage of contractors following construction completion)
- Ensure routine maintenance is carried out to ensure the road functions as designed

4. PREPARATION OF INDIGENOUS PEOPLES PLAN

When Indigenous Peoples and/or Ethnic Minority groups are present in a subproject area, PMU needs to prepare an IPP for the respective subproject. It is noted the IPP shall be prepared whether the identified IPs/EMs are affected positively (as subproject beneficiaries), or adversely, or both. To prepare an IPP for a subproject, a social assessment will be conducted for that subproject to inform the content development for the IPP and guide the IPP implementation. To ensure the social assessment focuses, social assessment shall be conducted vis-à-vis investment activities that are proposed under the mentioned subproject.

The following three steps shall be followed to prepare an IPP: 1) Screen for Indigenous Peoples/ Ethnic Minorities, 2) Conduct social assessment to develop IPP, and 3) Write-up the IPP:

4.1 Screening for Indigenous Peoples/ Ethnic Minorities (IP/EM)

Once the six subprojects (Ou Ta Pong, Lum Hach, Brambei Mom, Krapeau Trom, Yotassas, and Steung Krang Bat are approved, PMU's Consultant will conduct IP screening for these seven subprojects. The IP Screening involves two key tasks: 1) Define subproject area (based on subproject's area of influence), and 2) Screen for IP/EMs in the subproject area (See Annex 2 for more guidance). If the IP screening indicates that IP and/or EMs are present in the subproject area, an IPP has to be prepared.

4.2 Preparing an IPP

Preparation of an IPP involve two key steps: 1) conducting a Social Assessment and 2) writing up the IPP.

Step 1. Conduct a Social Assessment (SA)

The purpose of the social assessment is to identify and examine the potential impacts of the approved subproject on the livelihoods of the IP/EMs. In particular, the SA explores how the environmental and social risks and impacts associated with the proposed subproject activities affect the IP/EM. Based on this understanding, measures will be proposed to avoid, or mitigate the adverse impacts and risks and meanwhile enhancing the intended positive impacts of the subproject. The social assessment shall be conducted in a manner that is inclusive, culturally appropriate and gender sensitive. The depth and breadth of the SA should be based on the scope, scale and nature of the subproject impacts and risks. These are determined based on:

a) The magnitude of subproject's impacts on the affected IP/EM, including: (i) customary rights of use and access to land and natural resources; (ii) socioeconomic status; (iii) cultural and communal integrity and heritage; (iv) health, education, livelihood systems and social security status; and (v) indigenous knowledge; and
b) The vulnerability of the affected IP/EM.

The social assessment needs to have the following key elements:

a) Description of the subproject, including a map of the subproject area;
b) Policy, legal and administrative framework, including the international and national legal framework applicable to the subproject;
c) Scoping, including stakeholder identification and consultation plan;
d) Baseline environmental and social data;
e) Evaluation of environmental and social risks and impacts;
f) Development of mitigation, monitoring and management measures and actions.

Step 2. Write-up an IPP

Based on the information generated from the above social assessment, PMU's consultant will write up the IPP. An IPP shall include the key following elements, as a minimum.

a) A framework for continued consultation with these affected Indigenous Peoples during Project implementation;
b) Measures to provide these Indigenous Peoples with gender sensitive and culturally appropriate benefits;
c) Measures to avoid, minimize, mitigate, offset or compensate for any adverse Project impacts, and actions to address these impacts on the different groups in the community;
d) Culturally appropriate grievance procedures, monitoring and evaluation arrangements; and
e) A budget and time-bound actions for implementing the planned measures.

It is recommended that the IPP should be developed as an overall community development plan to address specific issues associated with the needs of the affected IP/EM. The IPP needs to address not only any adverse impacts and risks, but also enhance the intended positive impact of the subprojects through a continuous IP/EM engagement process during sub-sheme design, implementation, monitoring. This aims to promote the ownership of affected IP/EM and enhance subproject's development effectiveness.

4.3 Approving an IPP

PMU will submit all IPPs to the AIIB for review and clearance prior to IPP implementation.

4.4 Disclosing an IPP

All IPPs, once cleared by AIIB, will be disclosed locally in both English and Khmer at subproject area and will be posted on the websites of MoWRAM and MAFF. The same version will also be disclosed on AIIB's and IFAD's website.

4.5 Implementing an IPP

The IPP should be implemented in coordination with the local authorities and affected IP. The activities and the outcomes of the IPPs implementation should be monitored and evaluated (See also Section 7.3). MoWRAM and MAFF will ensure sufficient financial and human resources available timely prior to embarking IPP implementation.

5. STAKEHOLDER ENGAGEMENT AND INFORMATION DISCLOSURE

5.1 Purpose of Engaging IP during project preparation and implementation

The AIIB's ESF defines stakeholder engagement as a process of identifying relevant stakeholders, conducting stakeholder analysis, and organizing a series of consultations to meet with project stakeholders for collecting stakeholders' feedback and concerns on project's risks and impacts, as well as stakeholders' development needs in relation to project purposes and activities. This aims to ensure the project's adverse impacts on IPs can be avoided, or minimized and mitigated if avoidance is not possible. For this project, it is important that IPs need to be consulted on their development needs (in relation to project purposes) to ensure they can receive socioeconomic benefits that are appropriate to them culturally.

5.2 Consultation results during Project Preparation

Consultation on project design and related IP issues was conducted in XXX 2023 at national level (as listed below), and with IPs potentially affected at subprojects during 25-30 June 2023 (on proposed project), and XXX September 2023 (based on initial design). (See summary of consultation results at Annex 1).

5.3 Consultation with IPs during Project Implementation

5.3.1 Overview of consultation process

During project implementation, consultations with IPs will be carried out for subprojects where IP screening has confirmed that IPs, as per AIIB ESS3 and IFAD's SECAP Standard 4, are present in the subproject areas. The consultations with identified IPs will be carried out on an iterative basis throughout subproject cycle, to ensure affected IP are informed of the risks and impacts identified for the subproject, and provide meaningful feedback. To ensure relevant IP stakeholders are engaged in project consultations, MoWRAM will identify IP group(s) present in subprojects, then conduct consultations with them – as per Section 4.2. The consultations with identified IP groups will be conducted in a culturally appropriate manner that takes into consideration gender sensitivity and intergenerational perspectives.

The consultations will seek also feedback from IPs on subproject's risks and impacts, suggestions to avoid or mitigate such risks and impacts, and developmental needs of the IP in relation to the project goal and subproject activities. To promote effective project design and build project support and ownership of local IPs, while reducing risk of potential delays during subproject implementation, MoWRAM will apply the engagement strategy. The engagement process will include analysis of IPs as project stakeholders, engagement planning, disclosure of information, and conducting meaningful consultations with the affected IP(s). The consultations will be based on the existing customary institutions and decision-making processes of the consulted IPs to

promote IP's participation and support for the subprojects. In particular, the consultations to be conducted by MoWRAM at subproject level will:

a) Involve the participation of IPs' representative bodies and organizations, such as councils of elders or village councils, or chieftains. Where appropriate, consultations shall be carried out with other members of the IP communities;

b) Allow for IPs to participate effectively in the design of project activities or mitigation measures that could potentially affect them – either positively or negatively;

c) Provide IPs sufficient time to confirm the broad support from the affected IP for proposed project activities, and associated risks and impacts.

Stage	Stakeholders	Activities	Outcomes
1. Subproject identification	▪ MoWRAM and MAFF ▪ Implementing agency at provincial and district level (e.g. PDWRAM, PDAFF) ▪ Commune and village authorities ▪ Target beneficiary households, including poor, vulnerable, and disadvantaged groups	▪ Government and agency meetings to explain need for safeguards, agree on selection criteria. ▪ Scoping – visiting potential sites, physical inspection. ▪ Meetings and briefings with provincial and district agencies. ▪ Meetings with commune and village authorities. ▪ Meetings with target beneficiaries.	▪ Agreement on objectives, priorities. ▪ Indicative development priorities for community. ▪ Identification of problems and issues. ▪ Basic design needs. ▪ Records of community participation disaggregated by sex and ethnicity.
2. Subproject preparation	▪ MoWRAM and MAFF ▪ Implementing agency at provincial and district level (e.g. PDWRAM, PDAFF) ▪ Commune and village authorities ▪ Target beneficiary households, including poor, vulnerable, and disadvantaged groups	▪ data requirements, participatory methods, consultation process and need for indigenous people /ethnic minority	▪ Data for preparation of socioeconomic profiles. ▪ Needs and constraints identified. ▪ Special considerations identified.

	▪ Commune and village authorities ▪ Target beneficiary households ▪ Members of vulnerable or minority groups ▪ Project technical assistance	▪ Open village meeting to explain purpose and process of consultations. ▪ Field level data collection – socio- economic data and surveys.	▪ Identification of gender issues, women's needs, and priorities. ▪ Identification of specific needs for tailoring innovative behavior change campaign
		▪ Household level and focus group discussions for identifying needs ▪ IP/ Ethnic minority households and separate focal discussion groups by gender. ▪ Discuss proposed project design. ▪ Obtain feedback, determine level and scope of support. ▪ Update briefings for provincial and district agencies.	▪ Identification of indigenous peoples/ethnic minority households that will be qualified/covered under the IP/EM ▪ Identification of needs for Information, Education and Communication material to be prepared in IP/EM language. ▪ Records of community participation and consultation results.
3. Subproject completion and evaluation	▪ MoWRAM and MAFF ▪ Implementing agency at provincial and district level (e.g. PDWRAM, PDAFF) ▪ Commune and village authorities ▪ Target beneficiary households, including poor, vulnerable, and disadvantaged groups	▪ Meetings with commune and village officials to discuss benefits and issues. ▪ Focus group discussions to review/evaluate benefits received, implementation issues, and improvements needed. ▪ Separate focal group discussion (by gender) where needed.	▪ Feedback on implementation progress, issues, and constraints. ▪ Suggestions for future improvements ▪ Records of community participation and consultation results

5.3.2 Free, Prior and Informed Consultation/Consent

The project will be designed to avoid any project activities that may

(a) have impacts on land and natural resources subject to traditional ownership or under customary occupation or use;
(b) cause relocation of Indigenous Peoples from land and/or limitations on access to natural resources subject to traditional ownership or under customary occupation or use; or
(c) have significant impacts on Indigenous Peoples' cultural resources.

The SIA process will determine the applicability of FPIC but on top of it, the project will ensure engaged the affected IP/EM in a meaningful consultation process by adopting the Informed Consultation and Participation (ICP) approach to ensure affected IP/EM are engaged in the informed consultation process and participating in project's consultation sessions. The consultation process adopted will be inclusive and iterative and promote in-depth exchange of views and information. PMU will ensure the views of the affected IP/EM concerning matters that affect IP/EM directly are considered and incorporated into subproject's design and implementation, particularly into proposed mitigation measures, sharing of development benefits and opportunities, and implementation issues.

The consultation process will also aim to capture both men's and women's views that are obtained from separate engagements/meetings, and will reflect men's and women's different concerns and priorities about subproject's risks and impacts, mitigation mechanisms, and benefits, in subproject implementation process. PMU will document the consultation process, particularly measures that PMU will take to avoid or minimize risks to and adverse impacts on affected IP/EM, and inform affected people of how their concerns have been considered and taken into action.

5.4 Information Disclosure

Prior to conducting consultations, MoWRAM will notify the concerned IPs of the consultation plan during preparation. MoWRAM will provide affected IPs with initial subproject information in the form of booklet in both Khmer and local language (if applicable). This initial information should be provided to IP at least two weeks prior to consultation. If the concerned IPs do not have a written language, the IP will be provided the information in Khmer and are explained verbally in the local language of the concerned IP to ensure the IP are fully informed of the consultation purpose and initial subproject information.

For public consultation, the draft IPPF (in English) and its Executive Summary (in Khmer) will be disclosed on MoWRAM's website on XXX (https://www.). The Executive Summary (in Khmer) will also be disclosed in hard copy at MoWRAM's public library in Phnom Penh, and in the offices of Provincial Departments of Water Resources and Meteorology in all four project provinces. Once finalized, the IPPF will be re-disclosed again through the above channels prior to AIIB's and IFAD's project appraisal. The draft and final IPPF will be disclosed in English on the AIIB's and IFAD's website.

During project implementation, all draft IPPs, once completed by MoWRAM and submitted to the Bank for review, shall be disclosed to affected IP communities in Khmer language. The summary of the IPP (in the form of an Information Booklet) will be translated into IP's language if the consulted IPs have their own written language. Public meetings will be hold with the affected IP(s) to explain the contents of the relevant IPP in their mother language to ensure affected IPs understand what and how the activities under the IPP will be carried out, including E&S risks and impacts of subproject activities, and how the IPs will be engaged by MoWRAM in consultation meetings during subproject preparation, and in monitoring during subproject implementation to minimize identified E&S risks and impacts. IPPs – prepared for relevant subprojects, will be disclosed locally in Khmer and local IP language (if applicable), as well as in Khmer and English language on MoWRAM's website. The English version of the IPPs will be disclosed on the AIIB's and IFAD's website.

6. GRIEVANCE REDRESS MECHANISM

6.1 Purpose of Project's GRM

The purpose of the GRM in this IPPF is to provide aggrieved IP with grievance redress procedures that are accessible, easily used, and free of charge to ensure that the grievances submitted by the affected IPs are solved timely. The GRM in this IPPF guides how a complaint of affected IP can be lodged, including forms of grievance lodging, channels, and steps that can be taken.

The GRM also describes the time-limits, where possible, for each step, such as time-limit for acknowledging receipt of complaints, notification of resolution decision. During the grievance resolution progress, where necessary, dialogues will be held between the aggrieved IP and project's GRM focal point that are designated for each step. Dialogues with affected IP during complaint resolution process aims to promote mutual understanding and collaboration among concerned parties.

The project also includes an appeal process that a complainant can use when they are dissatisfied with the resolution results/decision, or their complaints are not resolved within a specified timeframe. During subproject implementation, IPs in the subproject area will be reminded of the availability of this GRM and will be explained during consultations about how to use it.

6.2 Grievance Redress Procedures

The following section outlines complaint handling procedures that are designed to assist affected Indigenous Peoples (IPs) in making complaints regarding the project. These procedures are designed to address potential impacts and risks during project preparation and cover three key areas: a) land acquisition, where individual IP land is acquired either permanently or temporarily during construction, b) gender based violence, where IPs are victims, survivors, witnesses, or otherwise affected by SEA/SH actions related to the project, and c) general complaints and concerns related to project design, adverse impacts on IPs such as dust, noise, vibration, and any other aspects that IPs attribute to project activities.

6.2.1 Grievances related to Land Acquisition

The project has prepared a standardized GRM for stakeholders affected by land acquisition, including IPs. However, given the presence of various IP groups in project provinces, the IP groups in each subproject area will be consulted for feedback on the project's standardized GRM, as presented below. The purpose of consultation on the GRM in this IPPF is to ensure that the standardized steps and process below are culturally appropriate to the affected IP group. If required by the consulted IPs, the GRM below will be updated to reflect the customary complaint handling procedures currently practiced by the consulted IP and/or may be preferred by the affected IPs, based on the Social Assessment of IPs once site-specific subprojects are identified or confirmed during project implementation (See detailed Procedures at Section 6.2.2 of project's Resettlement Policy Framework).

6.2.2 Grievances related to Gender Based Violence/SEA/SH

In case the IP wishes to submit a grievance related to gender based violence, they can lodge their grievance using the Redress Procedure for Complaints related to gender (See Section 6.4.3 in the Stakeholder Engagement Plan for details).

6.2.3 Grievances related to any other aspects not covered in the above GRM

If environmental factors, such as elevated levels of dust or increased noise during evening hours, negatively impact the living or business activities of IPs, several channels will be established for their convenience. These channels may include:

- **PMU GRM focal point's telephone;**

- **Local IP leaders;**
- **Contractor's hotline:** to report cases that they think contractors can timely address them (contact detail of Contractors will be posted at construction sites, and distributed to IPs (through Subproject Information Booklet) during consultations, and posted at public billboards of Commune/Sangkat offices, pagodas; and
- **Commune/Sangkat offices**

7. IMPLEMENTATION ARRANGEMENTS

7.1 Implementation Arrangements

The MoWRAM will be responsible for implementing this IPPF. The Project Director (PD) at MoWRAM will be responsible for providing overall guidance, policy advice, conducting internal coordination, discussing and resolving issues at project level – in association with relevant government agencies where needed. The Project Manager (PM) at MoWRAM will provide day-to-day support to the PD and will be responsible for ensuring that the IPPF will be followed. The PM will oversee the work of the ESOs and ensure proper screening of IP groups will be carried out for each subproject, and steps for IP screening and social assessment described in this IPPF are followed. Within MoWRAM, the ESOs will be responsible for carrying out day-to-day activities set forth in this IPPF. An IP specialist will be appointed within MoWRAM's PMU (in addition to a Resettlement and Environmental Specialist) to provide guidance to Provincial PDWRAM in conducting consultation with affected IP in respective subprojects.

The MoWRAM needs to inform the AIIB and IFAD of the IP screening results and steps that MoWRAM will take in case IPs are present in the subproject area. When IPs are found in the subproject, MoWRAM will engage IP consultants to work closely with PMU's IP Specialist and PDWRAM to conduct Social Assessment and prepare IPPs. PMU's IP specialist and IP consultants will visit the subproject sites and work closely with PDWRAM, local authorities, relevant agencies, NGOs, particularly local IP leaders and IP members, including vulnerable groups of affected IP communities, to conduct Social Assessment.

7.2 Capacity Building

Since the MOWRAM is new to AIIB's ESF and IFAD's SECAP, and have not been familiar with requirements of AIIB's ESS3 and IFAD's SECAP Standard 4, they may not be able to conduct meaningful consultation from initial years of project implementation. In the first year, these specialists will be trained by the AIIB task team on ESF with a particular focus ESSs and IFAD's SECAP with a particular focus Standard that apply to this project to enable newly appointed ES specialists at the MOWRAM to provide appropriate support. Where needed, IP consultant will be engaged to provide additional support to PMUs' specialist, particularly in the initial years of project implementation. Since independent ES monitoring consultant will be engaged by PMU at MoWRAM, feedback from this consultant, alongside internal monitoring results, will provide regular feedback to PMU on how IPPF/IPP is carried out so that adjustment/improvement could be made appropriately and timely.

7.3 Monitoring & Evaluation

The application of the IPPF, including implementation of subproject IPPs, will be monitored internally by the MoWRAM. Adverse impact on IPs (if any) due to land acquisition will be monitored by GDR and MoWRAM as part of implementation arrangement set forth in Section 9.1.2 of project's Resettlement Planning Framework (RPF).

Within MoWRAM, the ESO will be responsible for conducting quarterly monitoring activities of the activities set for under all subproject IPPs. Monitoring of IPPF/IPP implementation will focus on assessing the compliance of IPP implementation vis-à-vis the followings:

- IP screening process and results;
- Information disclosure;
- Quality of Social Assessment and of IPP preparation;
- IPP implementation process, the level of achievement at output, outcome, and purpose levels;

- Functioning of project's GRM (as customized to respective EG/IP groups present in each subproject area to ensure the GRM is culturally appropriate to the local EG/IPs);
- Development activities carried under IPPs (based on development needs of IPs);
- Results and impacts of IPPs (in ensuring the affected IP receive socioeconomic benefits of the project that is culturally appropriate, gender and intergenerational inclusive, and contributing to achieving the objective of the AIIB's ESS3 and IFAD's SECAP Standard 4).

In addition to internal monitoring, the project will encourage IPs in subproject areas to participate in monitoring and evaluation of IPP implementation process and implementation outcome which affects them. During SA exercise, feedback and suggestions from IPs will be solicited as to how they wish to participate in monitoring and evaluation of IPP activities.

MOWRAM will provide a quarterly IPP implementation report to the AIIB and IFAD. These results will be incorporated into MoWRAM's consolidated Environmental and Social Compliance Report (ESCR) (See Annex 4 for Indicative Indicators for Internal Monitoring of IPP implementation).

7.4 Reporting

MoWRAM's ESOs will ensure feedback from affected and interested IP, as well as grievances submitted by affected IPs, are resolved timely and effectively, and that resolution results are reported timely back to the aggrieved IPs. The method of reporting back depends on the stakeholders, and as follows:

- For stakeholders at national level, email and/or official letter will be used to report back to stakeholders following consultations and/or workshops. The content of the report will summarize what comments, suggestions, concerns that have been received, by whom and when, and how such comments, suggestions, concerns were considered.
- For stakeholders at local level, follow-up meetings/consultations will be conducted to informed stakeholders know on how comments, suggestions, concerned were considered.
- For Indigenous Peoples, project's responses to their comments, suggestions, concerns are reported back to them in subsequent face-to-face consultations – in line with the project's SEP and the IPPF, including how the project had considered and addressed their concerns through concrete actions to be carried out during subproject implementation process and through IPP implementation.

Grievances of all project IP will be reported back to them through project's GRM channels within the timeframes specified for each step of the above GRM procedure.

8. COSTS AND BUDGET

8.1 Costs

Indicative costs for IPPF implementation are estimated during project preparation (See Figure below) for the purpose of budget planning. The actual costs of IPP implementation depend on the number of IPPs, including scope and activities to be carried out under each IPP, during project implementation. The estimated cost below may be updated once the list of subprojects is finalized.

8.2 Budget

The budget for implementing IPPs will be allocated from project's financing (See Figure below). Implementation, based on subprojects that will be identified/confirmed during project implementation. This budget plan will be updated to ensure funding is planned annually to ensure timely and effective implementation of proposed activities.

Table 2 – Key activities and costs for supporting IPP implementation (in US Dollars)

No.	Key activities	Stakeholders involved	Estimated costs (per province x 4)	Sub-Total (Counterpart Budget)	Sub-Total (AIIB finance)	Sub-Total (IFAD finance)	Total
1	Recruitments of IP consultants to conduct screening and SA	• MoWRAM (oversight) • ESO (implement)	3,000 x 4	12,000	-		12,000
2	Recruitment of bilingual facilitators to support consultations as part of SA	• MoWRAM • ESO (implement)	1,000 x 4	4,000	-		4,000
3	Conduct Social Assessment and Prepare subproject IPPs	• MoWRAM (oversight) • ESO (lead) • IP Consultant (implement)	5,000 x 4	20,000	-		20,000
4	Conduct mitigation measures, development activities, and relevant activities, as part of IPP (based on the needs of consulted IPs, e.g. trainings for IP on good agriculture practices such as Integrated Pest Management, water saving technology (e.g. alternative wet dry, fertilizer needs assessment/ application, alternative job that is not land based for income generation activities which are culturally appropriate, etc.)	• MoWRAM (lead) • Consultant (implement)	5,000 x 4	20,000	-		20,000
5	Monitoring and Evaluation, Reporting	• MoWRAM (oversight) • ESO (implement)	2,000x4	8,000	-		8,000
6	Staff allowance	• MoWRAM (oversight) • ESO (implement)	$34 x 7 staffs x 10 days x 4 provinces	9,520	-		9,520
7	Transport		1,000 x 4	4,000	-		4,000
8	Data collection		1,000x 4	4,000	-		4,000
9	Others		500 x 60	30,000	-		30,000
10	Contingency (10% of above 9 items)						11,152
					Grand-Total		**122,672**

ANNEXES

Annex 1 – Guidance for Screening for Indigenous Peoples/Ethnic Minorities

Once a subproject is approved, PMU's Consultant will conduct initial screening for the presence of IP/EM in the subproject area. The following steps could be followed:

1) **Define area of influence** (subproject area): subproject area needs to be defined, spatially, based on the subproject area described in the most updated Environmental and Social Impact Assessment/ Environmental and Social Management Plan prepared for the subproject.

2) **Screening.** Screening of IP/EM consist of two key tasks: desktop review and field works.

Desktop screening. Conduct IP/EM screening vis-à-vis above defined subproject. Identification of potential presence of IP/EM could be carried out initially based on the IP database managed by the Ministry of Rural Development and the Ministry of Planning. In addition, commune authorities within the subproject area could be asked to provide the most updated information about IP/EM groups living in their respective communes to facilitate consultant's initial desktop screening. It is noted that Ethnic Minorities refer to all groups by their own ethnicity and IP in the context of Cambodia refers to IP groups that are officially recognized. Screening results need to be updated if there is change to subproject area.

Consultant's screening needs to cover IP groups (that are recognized by the Government), and other ethnic groups based on the definition of IP of AIIB and IFAD (See also Definitions section of this document).

Field visit. After completing desktop review, PMU's consultant will visit the subproject's area of influence to validate their above initial screening results In addition to face-to-face validation with local commune authorities (and district authorities if needed) on initial screening result, the consultant need to conduct field observation in area where identified IP/EM are living, and their production area. Consultant may need to interview IP/EM and their respective leaders living in subproject area, and local people who are knowledgeable about IP/EM such as the village chiefs, opinion leaders, mass organizations such as commune women's union, farmers' association, to understand more about the socioeconomic and cultural life, livelihood activities, cultural heritages of the identified IP/EM in the subproject area. Consultant needs to visit the field again if there is change to subproject area.

While doing desktop screening and making field visit for validation of desktop review, the following guiding questions and IP screening form can be used:

- Are there socio-cultural groups in or use the subproject area who may be considered as hill tribes, ethnic minorities or indigenous communities within the subproject area?
- Are there national or local laws or policies as well as anthropological research or studies that consider these groups residing in or using the subproject area as belonging to ethnic minorities, IPs or cultural communities?
- Do such groups identify themselves as being part of a distinct social or cultural group?
- Do such groups maintain collective attachments to distinct habitats or ancestral territories and/or to the dominant society in these habitats and territories?
- Do such groups maintain cultural, economic, social and political institutions distinct from the dominant society and culture?
- Do such groups speak a distinct language or dialect?
- Have such groups been historically, socially and ecologically marginalized, disempowered, excluded and/or discriminated against?
- Are such groups represented as IPs in any formal decision-making bodies a the National of local levels?

- Do such groups experience subjugation, marginalization, dispossession, exclusion or discrimination?
- How vulnerable the groups are under the subproject's impacts and risks?

If screening result indicates that the ethnic groups being considered matches the definition of IPs as per AIIB's ESS 3 and IFAD's Standard 4 (See definition of IPs at section "Definitions" of this document), the IP screening results should be documented fully in the form of IP Screening Report and recommend that an IPP will be prepared for the relevant subproject.

Province-Capital:	**Municipality-District-Khan:**	**Location map attached**	
		Yes	No
Commune-Sangkat:	**Village:**	**Street-road No.:**	
Type of civil work/activity:			
Brief description of work/activity and location of civil work: *[Roads, community pond. required/purpose of civil work, (table/explain each activity) number of village (number of population) affected with explanation aboutthe affected community]*			

Screening checklist				
Questions	**Yes**	**No**	**Not known**	**Remarks**
A. Indigenous Peoples Identification				
1. Are there socio-cultural groups present in or usethe Project/Subproject area who may be considered as "tribes" (hill tribes, schedules tribes,tribal peoples), "minorities" (ethnic or national minorities), or "indigenous communities" in the Subproject area?				
2. Are there national or local laws or policies as wellas anthropological research/studies that consider these groups present in or using the subproject areas belonging to "ethnic minorities", scheduled tribes, tribal peoples, national minorities, or cultural communities?				
3. Do such groups self-identify as being part of a distinct social and cultural group?				
4. Do such groups maintain collective attachmentsto distinct habitats or ancestral territories and/or tothe natural resources in these habitats and territories?				

5. Do such groups maintain cultural, economic, social, and political institutions distinct from the dominant society and culture?				
6. Do such groups speak a distinct language or dialect?				
7. Has such groups been historically, socially and economically marginalized, disempowered, excluded, and/or discriminated against?				
8. Are such groups represented as "Indigenous Peoples" or as "ethnic minorities" or "scheduled tribes" or "tribal populations" in any formal decision-making bodies at the national or local levels?				

Questions	**Yes**	**No**	**Not known**	**Remarks**
B. Identification of potential impacts *(provide elaboration in Remarks column)*				
9. Will the subproject directly or indirectly benefit or target IPs?				
10. Will the subproject directly or indirectly affect Indigenous Peoples' traditional sociocultural and belief practices? (e.g. childrearing, health, education, arts, and governance)				
11. Will the subproject affect the livelihood systemsof Indigenous Peoples? (e.g., food production system, natural resource management, crafts and trade, employment status)				
12. Will the subproject be in an area (land or territory) occupied, owned, or used by Indigenous Peoples, and/or claimed as ancestral domain?				
C. Identification of Specialist Requirements				
13. Commercial development of the cultural resources and knowledge of IPs?				
14. Physical displacement from traditional or customary lands?				
15. Commercial development of natural resources (such as minerals, hydrocarbons, forests, water, hunting or fishing grounds) within customary lands under use that would impact the livelihoods or the cultural, ceremonial, spiritual uses that define the identity and community of Indigenous Peoples?				
16. Establishing legal recognition of rights to landsand territories that are traditionally owned or customarily used, occupied or claimed by IPs?				
17. Acquisition of lands that are traditionally ownedor customarily used, occupied or claimed by IPs?				

Anticipated impact on IPs

Subproject activities		**Expected positive impact**	**Expected negative impact**

Subproject Category	Subproject eligibility	Next steps
A. Subproject has impacts (negative or positive) on IP communities residing withinthe subproject area.	A/B	Prepare IPP describing the completion of meaningful consultations with the IPs and the identification of appropriate mitigation measures to obviate or mitigate any identified negative impacts.
B. Subproject has no impacts sine there are no IP communities residing in thesubproject area.	C	No IPP required and no further action is needed.

IP Screening checklist by:

	Name	Position:
	Signature	Date:

Annex 2 – Guidance for Preparing an Indigenous People Plan (IPP)

As mentioned in Section 4.2, preparation of an IPP involves two key steps: conducting a Social Assessment (SA) and writing up the IPP.

1. Conducting a Social Assessment for the purpose of IPP

The SA aims to understand how the IP is affected by the subproject's activities, which informs how mitigation and development measures shall be proposed. The SA aims to explore measures to ensure a) affected IPs shall receive socioeconomic benefits culturally appropriate to them; b) if there are any potential adverse impacts and risks for IPs, such risks and impacts will be avoided to extent possible; c) where avoidance is not possible, measures are proposed to minimize, mitigate, and compensate for unavoidable adverse impacts. Mitigation and development measures will be proposed based on meaningful consultations with the IP households affected by subproject's investment activities.

The scope of SA will be proportionate to: (a) the magnitude of subproject's risks and impacts on the IP; socioeconomic status; cultural and communal integrity and heritage; health, education, livelihood systems and social security status; and indigenous knowledge; and (b) the vulnerability of the affected Indigenous Peoples. The IPP will also need to complement the broader coverage of environmental and social risks and impacts identified in subproject's Environmental and Social Impact Assessment that is conducted to develop subproject Environmental and Social Management Plan. The IPP need to provide specialized guidance on how specific issues associated with the needs of affected IP shall be addressed.

The level of detail and comprehensiveness of the IPP should be proportionate to subproject's risks and impacts. Mitigation and development measures that are proposed for the affected IPs should be culturally appropriate to the IPs.

2. Writing up the IPP

An Indigenous Peoples Plan (IPP) is required for subprojects that have impacts on IPs (positive, adverse, or both). The level of detail and comprehensiveness of IPP is commensurate with the significance of potential impacts on indigenous peoples. The substantive aspects of this outline will guide the preparation of IPPs, although not necessarily in the order shown.

1. **Executive Summary of the Indigenous Peoples Plan**
   This section concisely describes the critical facts, significant findings, and recommended actions.

2. **Description of the Project**
   This section provides a general description of the subproject, discusses the subproject interventions and activities that may bring impacts on indigenous peoples; and identifies the subproject area.

3. **Social Impact Assessment**
   This section:
   a) Reviews the legal and institutional framework applicable to IPs in the subproject context.
   b) Provides baseline information on the demographic, social, cultural, and political characteristics of the affected indigenous peoples communities; the land and territoriesthat they have traditionally owned or customarily used or occupied; and the natural resources on which they depend.

c) Identifies key Project stakeholders and elaborate a culturally appropriate and gender- sensitive process for meaningful consultation with indigenous peoples at each stage of subproject preparation and implementation, taking the review and baseline informationinto account.
d) Assesses, based on meaningful consultation with the affected indigenous peoples, thepotential adverse and positive effects of the Project. Critical to the determination of potential adverse impacts is a gender-sensitive analysis of the relative vulnerability of,and risks to, the affected indigenous peoples given their particular circumstances andclose ties to land and natural resources, as well as their lack of access to opportunitiesrelative to those available to other social groups in the communities, regions, or national societies in which they live.
e) Includes a gender-sensitive assessment of the affected IPs perceptions about the project and its impact on their social, economic, and cultural status.
f) Identifies and recommends, based on meaningful consultation with the affected IPs, the measures necessary to avoid adverse effects or, if such measures are not possible,identifies measures to minimize, mitigate, and/or compensate for such effects and to ensure that the indigenous peoples receive culturally appropriate benefits under the Project.

4. Information Disclosure, Consultation, and Participation

This section: (i) describes the information disclosure, consultation, and participation process with the affected indigenous peoples that was carried out during subproject preparation; (ii) summarizes their comments on the results of the ESIA and identifies concerns raised during consultation and how these have been addressed in the Project design; (iii) in the case of Project activities requiring broad community support, documents the process and outcome ofconsultations with affected IPs and any agreement resulting from such consultations for the Project activities and safeguard measures addressing the impacts of such activities; (iv) describes consultation and participation mechanisms to be used during implementation to ensure ethnic minority participation during implementation; and (v) confirms disclosure of thedraft and final IPP to the affected IPs.

5. Beneficial Measures

This section specifies the measures to ensure that the IPs receive social and economic benefits that are culturally appropriate, and gender responsive.

6. Mitigation Measures

This section specifies the measures to avoid adverse impacts on IPs; and where the avoidance is impossible, specifies the measures to minimize, mitigate and compensate for identified unavoidable adverse impacts for each affected indigenous peoples.

7. Capacity Building

This section provides measures to strengthen the social, legal, and technical capabilities of (i)government institutions to address IPs issues in the Project area; and (ii) IPs organizations inthe Project area to enable them to represent the affected IPs more effectively.

8. Grievance Redress Mechanism

This section describes the procedures to redress grievances by affected IPs. It also explains how the procedures are accessible to indigenous peoples and culturally appropriate and gender sensitive.

9. Implementation Arrangement

This section describes institutional arrangement responsibilities and mechanisms for carryingout the various measures of the IPP. It also describes the process of including relevant local organizations and nongovernment

organizations in carrying out the measures of the IPP.

10. Monitoring, Reporting and Evaluation

This section describes the mechanisms and benchmarks appropriate to the Project for monitoring and evaluating the implementation of the IPP. It also specifies arrangements for participation of affected indigenous peoples in the preparation and validation of monitoring, and evaluation reports.

11. Cost Estimate and Financing

This section provides an itemized budget for all activities described in the IPP.

Annex 3 – Indicators for IPP Implementation Monitoring

Monitoring indicators should assist the project to assess progress of the Indigenous Peoples Plan (IPP) and whether mitigation measures are effective, resulting in desired outcomes. This enables the project to respond to any issues and manage change accordingly.

Indicators that show implementation progress are called process indicators and give some certainty that the project is proceeding according to plan.

Indicators that measure whether the IPP mitigation measures are successful are called outcome indicators and reflect the results of the process.

It is important that an appropriate number of indicators be included in the monitoring plan. Too few may leave gaps in critical areas. Too many may overburden the collection process, and diminish quality. Use the minimum but necessary number of monitoring indicators to ensure adequate IPP implementation and expected outcomes.

Some examples of process and outcome indicators are shown below. They are not an exhaustive list, and should be selected as required.

Example of Process Indictors	
Demographic baseline	• The numbers of affected Indigenous Peoples (IP) by category of impact, gender, age, habitat (village etc.), income, status and position • Number of households with handicapped, elderly or invalid members • Number of female headed households • Number of vulnerable households (poor, elderly) • Number of households by ethnic group • Number of births and deaths
Consultation and participation	• Number of consultation and participation activities that occur—meetings, information dissemination, brochures; flyers, training • Percentage of IP women as participants; number of meetings exclusively with IP women • Percentage of vulnerable IP groups represented / attending meetings; number of meetings exclusively with vulnerable IP groups. • Languages used at meetings • Good faith negotiations—recording of process, participants, locations, correspondence • Broad community support—record of processes, participants, locations and agreement obtained • Consultation and participation progress against plan and budget
Mitigation measures	• Progress of implementation of mitigation / beneficial measures against plan • Number of activities that occur/completed—such as construction, livelihood restoration, disbursements, training • Percentage progress against timelines and budget
Grievance redress	• Total number of people/groups using the grievance redress procedure. • Number of distinct people/groups. Any IP group with significantly more grievances? • How many times has a household submitted the same grievance? • Number of grievances resolved? • Length of time taken to be resolved? • Types of grievance categories and prevalence

Implementation problems	• Identified delays — (days, cost) due to personnel, capacity, insufficient funds, etc. • Number of times implementation schedule revised
Example of Outcome Indicators	
Consultation and participation program	• Awareness of IP issues among implementing stakeholders in each sector • Awareness of IPP mitigation and beneficial measures amongst recipients • Awareness of project details amongst stakeholders • IP perception of effectiveness, cultural appropriateness and inclusiveness of consultation measures • Attendance at consultation and participation activities Level of involvement by IP and representatives in the design and implementation of consultation and participation
Enhanced dignity of IP groups, integrity of traditional kinship networks and livelihood patterns	• Changes in religious/cultural practices • Changes in cultural governance • Participation in cultural governance (by gender, status) • Number of people (age and sex) who can speak national language and/or local dialect • Changes in condition of schools, community buildings, temples structures • Numbers of religious/cultural events and persons (monk shamans, priests etc.) • Participation in cultural/religious events (by gender, time/resources allocated)
Livelihoods and living standards	• Major asset inventory—e.g. vehicle, phone, tools, kitchen equipment • Changes in patterns of IP occupation, production, and resource use • Changes in income and expenditure patterns among IP households • Savings • Change in food used by IP—amount, nutrition source • Cost of living changes—market prices etc. • Changes in key social parameters—gender roles of production • Vulnerable groups—status, relative income, livelihood · Education—literacy and numeracy level in national/ethnic language • School attendance of IP children (by sex and age) • Key health indicators of IP (by gender, age)