Concept Environmental and Social Review Summary

Concept Stage

(ESRS Concept Stage)

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BASIC INFORMATION

A. Basic Project Data

Country	Region	Project ID	Parent Project ID (if any)
Cambodia	EAST ASIA AND PACIFIC	P178417	
Project Name	Water Supply and Sanitation Acceleration Project		
Practice Area (Lead)	Financing Instrument	Estimated Appraisal Date	Estimated Board Date
Water	Investment Project Financing	5/22/2023	9/29/2023
Borrower(s)	Implementing Agency(ies)		
Kingdom of Cambodia	Ministry of Public Works and Transport, Ministry of Industry, Science, Technology & Innovation		

Proposed Development Objective

To improve provision of sustainable water supply and sanitation services and strengthen the operational performance of service providers in selected towns or communes; and in case of an Eligible Crisis or Emergency, respond promptly and effectively to it

Financing (in USD Million)	Amount
Total Project Cost	100.00

B. Is the project being prepared in a Situation of Urgent Need of Assistance or Capacity Constraints, as per Bank IPF Policy, para. 12?

No

C. Summary Description of Proposed Project [including overview of Country, Sectoral & Institutional Contexts and Relationship to CPF]

The proposed project will focus on accelerating the progress of water supply and sanitation (WSS) in Cambodia by financing investments in selected provinces taking a province-wide approach (considering provincial towns and other potential districts outside provincial towns), and fostering an enabling environment at the sector level to unlock bottlenecks and accelerate progress, and at the operational level to sustain long-lasting investment. The interventions under the proposed project will complement other previous or ongoing investment projects in selected provincial

towns, retrofitting existing and/or planned infrastructure to optimize its capacity; and to expand or develop services in unserved areas in provincial towns as well as areas outside of provincial towns.

The proposed project will have three components, namely Provincial Water Supply Component, Provincial Sanitation Component, and Contingent Emergency Response Component (CERC). The first two components will comprise infrastructure development and support to address sector level issues to improve the enabling environment for acceleration of access and sustainability. Under these components, Government's planning capacity for the sector will be enhanced, financial sustainability of participating water supply and sanitation utilities will be ensured, institutional set up for operation and maintenance particularly for sanitation will be defined, Government regulatory capacity will be improved, and private sector financing will be leveraged for water supply. Under the third component, the project would strengthen the adaptive capacity of the client to respond to an eligible crisis or emergency.

Under Component 1 - Provincial Water Supply, the proposed project will finance the expansion of piped water supply system, including extension of piped water supply network and expansion or development of water treatment plant, in selected provincial towns which are currently served by public utilities. Outside provincial towns, the proposed project will finance development of water supply systems in various greenfield sites across the selected province, and may potentially finance the expansion of existing water supply systems which are currently run by small-scale private water operators. As part of the investment support under this component, the proposed project will leverage private sector financing on a public-private partnership (PPP) basis with due consideration to appropriate risk allocation between public and private sectors. Water supply connection subsidies for poor households living within the water supply network areas may be provided, and interventions to strengthen the sustainability of water sources will be undertaken. In addition to infrastructure investment, the proposed project will also (i) support strengthening the sector regulatory capacity, (ii) support the process of transforming public utilities into autonomous utilities, with more ring fenced financial, management and administrative authority, and (iii) support development of needed regulation and strategic framework to facilitate the implementation of province-wide approach to water supply service delivery.

Under Component 2 - Provincial Sanitation, the proposed project will finance the development of sanitation system in selected provincial towns, i.e., Ta Khmao town in Kandal province and other towns, and potentially in some selected areas outside provincial towns that are likely to have increasing pollution issues resulting from economic development. Depending on the need of each town, the proposed project will finance the construction of wastewater treatment plant, fecal sludge treatment facilities, development of wastewater collection networks, and provide household connections to sewerage. Investment in some key limited drainage infrastructure in selected towns may be provided to reduce water logging or flooding that may affect sanitation system in those towns. In addition to infrastructure investment, the proposed project will also (i) support strengthening institutional capacity at national level in visioning, strategic planning, and implementing regulations, (ii) support establishment and development of institutional and operational capacity of a wastewater/sanitation entity at town level to ensure sustainable operations, (iii) set up sustainable sanitation tariff, (iv) operationalize the concept of city-wide inclusive sanitation to ensure sanitation solutions are available to all parts of the selected towns, and (v) support community mobilization to connect to sewerage system and to empty septic tanks periodically.

Under Component 3 – Contingent emergency response component, this component is to enable response to unexpected crises and emergencies during the project implementation period. The CERC will be established and managed in accordance with the provisions of the World Bank Policy and World Bank Directive on Investment Project Financing.

Priority provincial towns selected for the investment support under the proposed project will be identified during the project preparation, based on agreeable criteria, which will encompass (i) the actual need of the provincial towns, (ii) the economic potential, (iii) the commitment of the provincial level administration or agencies, and (iv) the sustainability aspects (including setting up institution for operation and maintenance, tariff revision and collection, etc.). Once a provincial town is selected, the province hosting that particular provincial town shall become the target province for WSS interventions, where the proposed project will also support investment in other areas beyond the provincial town.

D. Environmental and Social Overview

D.1. Detailed project location(s) and salient physical characteristics relevant to the E&S assessment [geographic, environmental, social]

The project locations are tentatively identified in four target provinces: Svay Rieng, Battambang, Pursat and Ta Khmao of Kandal province. While towns of these provinces are classified as urban areas, access to piped water and sanitation in these provinces remains a challenge. The selection of sites for investment in districts/towns outside the provincial municipality will be carried out taking into account measures to minimize E&S risks and impacts arising from the investment

Cambodia's Socio-Economic Survey (CSES) 2019 informs that only around 33% of household in other urban areas (not in Phnom Penh) had piped water in the dwelling, and only about 12% of households in other urban areas (not in Phnom Penh) have toilets connected to sewerage. Poor and vulnerable households (8.5% of total population) tend to have more limited access to these services, compared to other households. Their vulnerability has been particularly exacerbated by the impact of Covid-19, which has increased poverty level among these poor households.

Geographically, Battamang and Siem Reap provinces directly benefit from a freshwater resource lying on mouth of the Tonle Sap Great Lake, where Takmao is located at a lower Mekong. Svay Rieng province is naturally built with unique natural water resource characteristic with its isolated Wai Ko River that provides rich water resources all year round. The project will focus on surface water withdrawal, during the design phase, rather than groundwater. However, the project will finance water supply projects that will extract water from a water source connected to the Mekong River, so OP 7.50 is triggered for this project. The triggering of policy is also a precaution for other subproject locations that will be identified during project preparation. All riparian countries will then have to be informed and consulted.

All four target provinces have different environmental, geographical, and cultural characteristics. For example, in some project areas (i.e. Pusat and Battambang) there is presence of indigenous peoples. Furthermore, Siem Reap is classified word heritage with rich of cultural resources. For example, Siem Reap River and Battambang are areas with presence of cultural and natural heritage with sensitive biodiversity and habitats being protected (i.e. UNESCO's Tonte Sab Biosphere Reserve (TSBR) with a protected area of 1,483,339 ha, as well as Ramsar site of the Boeung Chhmar and associated river system and floodplain). However, an IBAT analysis determined that the water supply and sanitation investments are relatively far from environmentally sensitive areas, therefore, the potential for impact of project activities on natural habitats is not significant. In any case, the areas which are being identified at this time are still provisional, so a biodiversity and protected areas analysis will need to be conducted as part of site specific environmental and social assessment once the locations for water treatment plants and network is finalized.

Given this urbanized and high population density, the project may require economic displacement impacts such as business and traffic disruption, including disturbance to local people's accessing their properties. Another related issue is the complex nature of the operation and management of the water supply and wastewater systems, which are financed by different international financial institutions, government agencies and the private sector. Thus there might be potential involvement of "associated facilities". Careful and prior E&S assessment and due diligence of E&S performance under those associated projects may be required. In addition, there is sensitivity around the nature of project activities which may induce impacts to nearby residents due to noise, smell, pollution, and overall community and health and safety.

D. 2. Borrower's Institutional Capacity

The implementing agencies will be Ministry of Public Works and Transport (MPWT) and Ministry of Industry, Science, Technology & Innovation (MISTI), with support from the Ministry of Economy and Finance (MEF). Two key departments of these ministries are currently implementing the Bank financed project, Water Supply and Sanitation Project (WaSSIP) (P163876), with support of two respective Component Management Units, including tasks related to environmental and social safeguards.

While the departments have experience in managing Bank financed project, it is under Bank's Safeguards Policies. Based on the project performance experience, despite some limitations in terms of staff capacity in environmental and social management, the two ministries/departments have demonstrated strong commitment to implementing the project's safeguard instruments and addressing recommendations by Bank's environmental and social specialists where there are some shortfalls in the implementation. MISTI assigned two junior staff for WaSSIP, while MPWT assigned an experienced staff member with support of one environmental and one social consultant. Thus far, safeguards performance of the ongoing project has been rated as Satisfactory. Learning from the existing project implementation, both MISTI and MPWT require continued support from individual consultants and Bank's hands-on support for monitoring and reporting. Under ESF, although some staff obtained ESF training, both PMUs of MISTI and MPWT needs further support in preparing relevant environmental and social instruments on time prior to appraisal, and for effective E&S risks/impact management during project implementation. ToRs of these E&S consultants will need to be reviewed by the Bank prior to their recruitment to support project preparation and implementation.

This additional project will put pressure on the existing human resources that have been pre-occupied with the current WaSSIP project and other externally financed projects. Given this, it is important that a thorough and comprehensive assessment of their institutional capacity is conducted, coupled with a capacity training plan and budgets, which will help to enhance the ministries' capacity for the project and in the medium and long run. For the purpose of the project preparation under ESF, the Bank provided an initial three-day-training workshop in ESF practice for both PMUs scheduled for 7-9 June 2022. Around 25 participants including assigned environmental and social focal persons participated in the training.

II. SCREENING OF POTENTIAL ENVIRONMENTAL AND SOCIAL (ES) RISKS AND IMPACTS

A. Environmental and Social Risk Classification (ESRC)	Substantial
Environmental Risk Rating	Substantial

The environmental risks and impacts are primarily related to the project's investments in water supply (Component 1) and sanitation (Component 2) from construction to operation of the facilities. The Component 1 includes (a) Development of new water treatment plants (one in each municipalities of Battambang and Pursat); (b) rehabilitation / replacement and extension of the distribution network to provide access to piped water supply services (existing or planned) for selected provinces. The Component 2 includes; (c) rehabilitation / replacement and extension of the wastewater collection network to collect wastewater to existing or planned wastewater treatment plants (WWTP); (d) construction of wastewater treatment plants (WWTP), (e) development of fecal sludge management services in towns or districts to complement network wastewater investments, adopting the concept of City-Wide Inclusive Sanitation (CWIS), and (f) development of alternative water supply solutions for the settlements that cannot be connected to the water supply systems, such as a combination of structural (e.g., rainwater harvesting systems, infiltration pits), and non-structural interventions (e.g., 'cap and trade' licensing system, protection zones for water supply management etc.), as well as a hybrid approach integrating nature-based solutions (e.g., vegetated buffer zones) to integrate sustainability aspects in the provision of water supply and sanitation services. The negative impacts may arise largely related to sewerage network expansion and connections, development of surface water intakes and treatment and treatment plant, development of water harvesting, and the development/expansion of water distribution networks in urban areas. During construction stage, there are risks and impacts associated with civil works including : i) generation of dust, noise, vibration and gas emissions due to the operation and movement of construction vehicles and machinery; ii) improper disposal of construction waste and asbestos (if present) especially near the natural water sources (canals, streams, ponds, etc.), or minor operational or accidental spills of fuel and lubricants from the construction machinery; iii) occupational health and safety (OHS) and community health and safety risks associated with the construction/expansion of water and sanitation infrastructure, including accidents, injuries, and exposure to chemicals and pathogens; iv) traffic congestion and emission when digging and installing pipe network; iv) pollution from temporary increase in suspended solids in the water and impact on downstream users during construction; and v) improper restoration of construction sites, including cleaning and closing of old unhygienic outdoor pits at the end of the civil works. During operation phase, the risks include: i) provision of unsafe drinking water caused by lack of drainage in the immediate vicinity of springs; ii) pollution of surface water, soil and groundwater due to inadequate controls and discharge of household or commercially untreated or partially treated wastewater into the environment; iii) pollution and health risk due to inadequate management of grey water and sludge in case of increased water supply in urban areas; iv) urban flooding from solid waste blocking the sewerage system; v) Increased air emissions from water treatment operations, including ozone (in the case of ozone disinfection) and gaseous or volatile chemicals used in disinfection processes (for example, chlorine and ammonia). Protection of the water quality of existing water supply systems and new water treatment plants, and the uninterrupted supply of water to existing users during rehabilitation will also be potential issues. The project will also support development of regulations, framework and transaction modes that will not have significant environmental risks.

Social Risk Rating Substantial

The social risk is classified as Substantial, in view of potential legacy issues related to associated facilities, unknown impacts on land, livelihoods and IP communities, risks related to working conditions for workers and safety of nearby communities, as well as capacity of implementing agencies. Overall, the proposed project, which aims to improve provision of sustainable water supply and sanitation services, will generate significant benefits for people including vulnerable groups in project areas, including access to better employment generation. Particularly the project considers providing water supply connection subsidies for poor households around project areas. Despite this, project activities have the potential to generate predictable, site specific, mitigatable social risks and impacts, though

minimal. Potential social risks and impacts may include: 1) risks linked with associated facilities (waste water treatment) financed by government/donors or the private sector, as well as the sensitivity around sites for wastewater treatment; 2) risks associated with sub-standard labor and poor working conditions on construction sites; 3) risks to community health and safety due to construction activities, and risks associated with workforce mobilization (e.g. Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH) as well as the spread of communicable disease (i.e., Victor borne diseases, Covid-19) among workers and communities); 4) risk associated with the minor acquisition of land and land affixed assets for wastewater and water treatment plants, and temporary impacts on local residence during construction of piped water/waste water system; 5) risks and impacts on indigenous peoples in sub-project areas where there is presence of indigenous peoples. Furthermore, the project will also include technical assistance to MPWT/MISTI to implement sectoral regulatory frameworks. Therefore, terms of reference for this technical assistance support will need to include social risk aspects, particularly to ensure that policies and regulations (to be developed) will take into consideration equitable access to project benefits by vulnerable groups. While clients have experienced in environmental and social risks management for the existing WaSSIP, the Bank's ESF is new to them, and this requires support from qualified social and environmental consultants for project instrument preparation and E&S risk management. Special attention will be needed to monitor and enforce compliance in the application of ESS1 (assessment and management of potential social impacts/risks linked with potential associated waste/water facilities financed by other agencies); ESS2 (Labor and Working Conditions); and ESS4 (Community Health and Safety), since temporary labor influx of workers is a possibility. Similarly, attention needs to be paid to ESS5 (Land Acquisition, Restrictions on Land Use and Involuntary Resettlement) due to the existing gaps between this standard compared to national legislation and, given the potential negative impacts to people living around sites for wastewater/water treatment plants and wastewater/clean water networks. Furthermore, given the presence of indigenous peoples in some target provinces (discussed below), attention will need to be paid to compliance with ESS7 in the event that the project may lead to impacts on their land and culture and access to resources and the need to ensure that they can access project benefits in a culturally appropriate manner. Emphasis will be also placed on consultation with indigenous groups present in the project areas as part of the project Stakeholder Engagement Plan, which will be prepared in line with the ESS10.

B. Environment and Social Standards (ESSs) that Apply to the Activities Being Considered

B.1. General Assessment

ESS1 Assessment and Management of Environmental and Social Risks and Impacts

Overview of the relevance of the Standard for the Project:

The following standards are screened as relevant: ESS1; ESS2; ESS3; ESS4; ESS5; ESS6; ESS7; ESS8 and ESS10. Overall, the project is expected to have positive environmental and social impacts in terms of improved water supply and sanitation in the provinces of Battambang, Pursat, Svay Rieng and Takhmao municipality in Kandal. The selection of specific sites for investment in districts/towns outside the provincial municipality will be carried out during the implementation of the project based on selection criteria with due considerations to technical, environmental and social aspects minimizing risks and impacts arising from the investment.

The E&S impacts from the activities funded under the proposed project are expected to be significant widespread, direct and indirect at all stages of construction, operation and maintenance, and ultimately at decommissioning stages. In addition, the connection of water supply systems and water treatment capacity in areas currently served by

private operators could also result in impacts on the associated facilities. The environmental risks and impacts at construction stage are likely involved poor management of traffic and movement/operation of heavy equipment, and digging and installing pipe network would generate dust, noise and daily traffic congestion and disturbances. However, these impacts are temporary and site specific. OHS and community health and safety is an area of concern, but would be managed through strict adherence to OHS requirements including wearing PPE, safety training to workers and community awareness raising. Further attention must be paid to operation and maintenance, and decommission of the facilities. Risks are significant concerning possible pollution of water sources due to inadequate control of discharge of untreated/partially treated wastewater, pollution from purchases/uses of chemical products for water and wastewater treatment process, poor management/storage of products, increase suspended solids in water, especially at the end of pipe network, etc.

Screening for potential social impacts and risks has been informed by lessons from the ongoing Bank financed projects implemented by MISTI/MPWT, and the review of proposed project's documents and other publicly available information. Social risks and impacts anticipated for this project are: (1) risks of excluding project benefits to vulnerable groups; (2) risk of use of child labor as part of construction and risk related to OHS of workers and their working conditions during construction and operation; (3) risks related to temporary labor influx of workers including increased SEA/SH from workers and their proximity to vulnerable groups, as well as other risks associated with project construction and operation ; (4) risks associated with land acquisition and economic displacement and possible loss of access to properties and assets; (5) risks associated with engaging with indigenous communities present in project areas and risks/impacts on their land, culture and access to resources; and (6) risk associated with engaging with relevant stakeholders deemed having an interest in this project.

At this stage, a framework approach is proposed as an appropriate method for management of E&S risks and impacts. Prior to appraisal, in order to reduce, mitigate and/or offset adverse risks and impacts, and propose mitigation measures, MISTI and MPWT with support of qualified E&S consultants, will develop, consult and disclose an ESMF which includes E&S screening tools and procedure and outlines for site specific instruments which will be developed once the locations are identified during the project implementation. A generic ESMP, which is part of the ESMF, will provide framework guidance for managing E&S aspects of impacts of construction for water and sanitation activities, and other activities to which the Bank will provide financing for budget, staffing, and operational arrangements for project E&S risk management, including a training plan informed by the client's capacity needs assessment, all to be funded by the client during the course of project preparation. In areas where specific locations are identified, there is a need to conduct a site specific E&S assessment to assess likelihood for associated facilities as financed by the government and/or other donors, as well as to prepare site specific ESMPs. For the CERC component, an Emergency Response Manual (ERM) will be prepared specifically for the CERC and disclosed. Timing for the preparation of E&S instruments for the CERC will be assessed during project preparation.

In particular, given that two locations have been identified, as proposed by the clients (construction and expansion of Water Treatment Plan in Takhmao municipality in Kandal and in Battambang provincial town, ESIAs will be developed to fully identify and assess the potential E&S impacts of the two proposed sub-projects, evaluate alternatives, and design appropriate mitigation, management, and monitoring measures for all stages of the project cycle. Built on the current WaSSIP, the contract for feasibility study firm will be extended to carry out the technical feasibility study and design of the facilities, in which E&S risk assessment and development of instrument are embedded in the ToR.

However, clients will make sure that qualified staff/consultants are in place, and additional resources would be acquired.

The ESIAs, which will be aligned with the national requirements, will include a cumulative impact assessment assessment in combination with impacts of other relevant past, present and reasonably foreseeable developments as well as unplanned but predictable activities enabled by the project that may occur later or at a different location. This assessment will need to consider, among other things, water intake from multiple sources and multiple discharges into the same recipient and also associated facilities.

The World Bank team will support the government agencies in the preparation of the ToRs for these assessments, which will be subject to comprehensive stakeholder and riparian countries consultations and public disclosure before the Bank appraises the project. The ToRs will include requirements for compliance with the mitigation hierarchy and measures to meet the E&S Standards. In addition to the above, the TORs for project activities (technical studies, institutional strengthening and update of sectoral framework/regulations) will be reviewed by the Bank to ensure that ESF requirements are effectively integrated, including ensuring accessibility to wastewater/water services/system by the vulnerable and marginalized groups. This will allow due consideration of the potential social implications of activities under the studies/analysis. This provision will be clearly mentioned in the ESCP and the ESMF.

The Borrower will also prepare LMP for the project which will lay out the systems to be put in place to ensure that labor and working conditions, as well as OHS procedures that meet the ESS2 requirements are followed in all project activities. One of the key risks relates to meaningful and effective stakeholder and riparian countries engagement. A core part of the project design will focus on establishing an effective Stakeholder Engagement platform, transparent sharing of information in timely, clear and accessible manner and format, and an inclusive process of participation and consultation for all affected groups and other interested parties. For this, the Borrower will prepare a SEP in a participatory manner and will disclose and consult it before project Appraisal. It will include a grievance mechanism to address complaints about environmental and social issues in the project. The Borrower will prepare an ESCP, which will set out the activities to be carried out during project implementation and could be adjusted during the project cycle in line with the evolution of E&S risks and impacts.

Areas where "Use of Borrower Framework" is being considered:

None

ESS10 Stakeholder Engagement and Information Disclosure

A Stakeholder Engagement Plan (SEP) including a Grievance Redress Mechanism (GRM) will be prepared prior to appraisal to guide the Borrower to identify stakeholders (which will include amongst others disadvantaged groups, local authorities, local communities, indigenous peoples), build and maintain a constructive relationship with them, and to meet communication and disclosure requirements, with a particular focus on project-affected parties. The SEP will also guide how to meaningfully engage impacted people, including vulnerable groups, engaging them in an inclusive manner on issues that could potentially affect them, including their access to project benefit and issues related to project specific locations, as well as engagement with respect to cultural and spiritual places. Further details are provided under ESS10.

The SEP will be implemented, updated, and disclosed by MISTI/MPWT throughout the different phases of the project life cycle. It will be developed early in the project preparation process to inform engagement to address key risks and develop communication and engagement strategies and materials to effectively reach out to affected and interested stakeholders to ensure accessibility and cultural appropriateness. Stakeholder identification, analysis and engagement will inform assessment of both the processes and practices prescribed in the ESMF. The approach to engagement activities will take into account the needs of vulnerability, language, literacy as well as consent, and child protection measures, both as part of engagement and also the assessment process. The engagement will ensure not only risks are managed but benefits are accessible to all and that views of interested stakeholders are taken into consideration for subproject designs, as well as the environmental and social performance. Given the sensitivity around potential sites for wastewater treatment, the SEP will need to carefully assess the risks and identify pertinent stakeholders and propose engagement strategies that entail constructive relationship with them, particularly project affected people and those living around the project sites.

At this early stage various affected and interested stakeholders have been identified: (a) line ministries: MISTI/MPWT, General Department of Resettlement (MEF), Ministry of Culture, (b) vulnerable groups including disabled people, poor households, ethnic minorities (c) local individuals or groups: local authorities and village chiefs, indigenous peoples and their leaders, (d) Community Based Organizations (CBOs), women organizations and religious leaders, (e) street vendors, businesses/companies in the project areas, (f) academia, environmental organizations, (g) CBOs, and Non-Governmental Organizations (NGOs) working in areas of water supplies, waste water; (h) private sector: water supply operators, construction companies and (i) development partners at the central level. Consultations with local communities and gathering of information from cultural heritage authorities will help to both identify cultural heritage present in project areas and understand the nature and significance of potential project-identified heritage. Consultations with local communities will be important to identify cultural and spiritual spaces and understand the values and significance attached to these by different stakeholders. Any consultation will need to take into consideration the different interpretations of cultural heritage by different communities and the importance they place on them. Women and girls have a different attachment to spaces and their own cultural and spiritual spaces than men and boys and this should inform engagement to identify and understand impacts, and to develop appropriate measures.

The SEP will guide how beneficiaries and affected communities will be engaged, as per ESS10. The SEP will include specific engagement requirements to reach out stakeholders to ensure accessibility and culturally-appropriateness effectively. The SEP will include a Project Grievance Mechanism. It will be informed publicly, and it will address compliances coming from project-affected peoples and groups.
Furthermore, as part of the information disclosure arrangements, the drafts of the site specific ESMPs of Takhmao and Battambang facilities and ESIA reports the project's ESMF (which include RPF, IPPF), SEP, and ESCP will be disclosed publicly on the website of MISTI and MPWT and hard copies made available at participating provincial MISTI/MPWT's offices, with directly affected households meaningfully consulted. Meetings will be consistent with applicable government guidance on COVID-19 measures for public gatherings. Meaningful consultation with relevant stakeholders will be conducted before appraisal, and its results adequately recorded and disclosed.

B.2. Specific Risks and Impacts

A brief description of the potential environmental and social risks and impacts relevant to the Project.

ESS2 Labor and Working Conditions

The project is expected to finance construction of civil works (water and waste water systems and facilities) that will bring a limited influx of labor due to the nature of the works. From experience of the current WaSSIP project and other projects of similar nature, such kinds of works are likely to bring labor influx (contracted workers) from nearby neighborhoods, including foreign and local technical consultants and staff. Each site may employ workers ranging between 30 to 40 people, with the potential to require worker camps. The project will involve employment of civil servants (government staff), direct workers (consultants and technical experts), contracted workers and primary supply workers (workers from major suppliers of goods and equipment). Since, the project will adopt a similar approach to the existing WaSSIP, it is very unlikely that communities will be involved in providing labor to the project.

Labor related risks include: (i) employment discrimination, (ii) labor related disputes, (iv) SEA/SH, (v) child labor in construction work, (vi) inadequate workers accommodation; and (vii) occupational health and safety or OHS related issues such as inadequate personal protective equipment (PPE), sanitation facilities for workers at construction sites, and infection of Covid-19. The labor management procedures to be prepared will need to take into account the needs of women workers including female apprentices and providing a safe working environment.

The Client is required to develop Labor Management Procedures (LMP), which will set out how all categories of project workers will be managed and treated in line with the national Labor Law and ESS2. The LMP will also ensure that different project teams and workers will be provided with adequate resources, including personal protective equipment (PPE), Covid-19 protective measures, materials and equipment, accommodation, transport, first aid-kits available at work sites, and can be contacted/reached in case of emergency. During project preparation, the Client will assess the risks/hazards and put in place measures in the LMP to address these risks and impacts including Codes of Conduct (CoCs). The CoCs which will be included in the contracts with contractors/subcontractors and the letter of appointment for government staff. The Client will develop a dedicated Worker Grievance Mechanism, as part of LMP, for all groups of workers, to collect and address potential grievances coming from project workers.

The project's Labor Management Procedures (LMP) will also need to take into account COVID-safe guidelines mandated by the government and/or best practice in the country, in order to maintain a safe working environment for workers and for the community and minimize the risk of COVID transmission. This should include hygiene practices, use of PPE and ensuring sick workers can self-isolate and access pay.

Contractor's site-specific management plans (C-ESMP) will include the following provisions for managing potential impacts and risks associated with OHS: (i) The contractors/sub-contractors are to comply with all national and good practice regulations regarding workers' safety; (ii) The contractors/sub-contractors are to provide required training in occupational safety regulations and use of PPE; (iii) The contractors are to provide safety measures as appropriate during works such as first aid kits etc.; (iv) Documentation and reporting of occupational accidents/incidents/diseases; (v) Emergency prevention and preparedness and response arrangements to emergency situation; and (vi) Remedies for adverse impacts such as occupational injuries and disease. Contractor management and preparation of contractor requirements particularly for the OHS/CHS aspects through the operations manual and more specifically through qualifications, bidding criteria and contracts will be considered. The Component Management Units will ensure that all tender documents for civil works include the requirement for preparation of site-specific management plans, and budget provisions for all relevant aspects of the OHS. The project will also

regularly monitor the contractor's performance in implementing OHS measures/requirements. Project's regular reporting system will include project's performance on the OHS implementation.

Since the national Labor Law defines 12 years old as the minimum working age, a specific provision on minimum working age in line with the ESF will be included in the LMP and bidding documents. Given the hazardous nature of construction work particularly, wastewater systems and facilities, and the challenge around site supervision and monitoring, it is recommended that only workers of more than 18 years of age should be engaged. A strong emphasis will be placed on monitoring compliance, so the ESMF will include requirements on Occupational Health and Safety procedures and all relevant provisions that contractors need to prepare, implement and monitor on all construction sites for ensuring basic safety around work sites, use of personal protective equipment, and training and awareness education for workers, including on SEA/SH and their Code of Conduct.

ESS3 Resource Efficiency and Pollution Prevention and Management

This standard is relevant. Water and energy efficiency, pollution prevention and management, as required by ESS3, are essential to achieving the objectives of the proposed project. Therefore, the borrower will consider measures that are technically and financially feasible to reduce the negative impact on surrounding communities, environment and other ecosystem services. Also complying with ESS3, a water resource management in and around the proposed treatment facilities will be developed as part of sub-project project feasibility studies and update of ESF instruments would be done if needed. Furthermore, the borrower will also ensure that the water use efficiency is improved and are being implemented throughout the project period. The Bank will support MISTI is reviewing the ToR for the studies.

Pollution prevention measures will be proposed for the construction and operation phases of the project in accordance with the mitigation hierarchy. These prevention measures must address the following identified risks:

Surface water and groundwater can be contaminated with potentially toxic substances of natural or anthropogenic origin, including pathogens and organic compounds. This contamination may result from natural sources, routine actions or discharges (e.g., releases within allowable limits), accidental (e.g., spill), or intentional (e.g., sabotage). Leaks in the water supply system can reduce system pressure, compromise the integrity of the system and its ability to protect water quality (by allowing contaminated water to enter the system), and increase water supply demands, the amount of chemicals, and the amount of energy used for pumping and treatment. Leaks in the distribution system can result from improper installation or maintenance, inadequate corrosion protection, settling, traffic and vibration stresses and other factors.

Residual solid waste generated by water treatment includes process residues, used filtration membranes, used media and miscellaneous waste. Treatment residuals consist primarily of settled suspended solids from the source water and chemicals added during the treatment process, such as lime and coagulants. Pre-sedimentation, coagulation, lime softening, iron and manganese removal and slow sand and diatom filtration produce sludge.
Composition of the sludge depends on the treatment process and the characteristics of the source water, and can include toxic metals and pollutants, organic compounds, microorganisms, etc. Spent media may include filter media (including sand, coal, or diatomaceous earth from filtration plants), ion exchange resins, Granular Activated Carbon [GAC], etc. Water treatment may involve the use of chemicals for coagulation, disinfection and water conditioning. If

suitable facilities for storage, handling and treatment of fecal sludge are not available, it may be indiscriminately dumped into the environment or used in unhygienic manner in agriculture. These risks should be properly identified, and mitigation measures should be designed and included in the ESMF, the ESIAs and ESMPs.

Air emissions from water treatment operations will also need to be considered; these may include ozone (in the case of ozone disinfection) and gaseous or volatile chemicals used for disinfection processes (e.g., chlorine and ammonia).

Since the project will promote water intake from surface waters, some of the project activities may have direct impacts, requiring careful design and feasibility studies of water supply infrastructure to assess any unintended upstream and downstream impacts and implement adequate mitigation measures, for example construction of water gates to store/retain water for dry season use.

The water and sewer rehabilitation activities will require earthworks and the consumption of diesel for heavy machinery and generators. There will be a generation of waste such as packing materials; minor air pollution and fugitive dust; noise and vibration, management of fuel and oil spills at the construction sites will also be generated during construction rehabilitation and construction activities. A screening will be conducted in consultation with the Climate Change Group of the Bank to determine the significance of the GHG emissions from the project activities, if the GHG emissions are significant, the client will be required to further estimate GHG gross emissions using the Bank's approved methodologies. However, further Pollution prevention measures will also include the cleaning and closing of old outdoor unhygienic pits upon completion of works and the measures for the management of an increased quantity of greywater resulting from an improved water supply. The potential risks and adverse impacts related to excavation, storage, and transportation of materials, and generation of non-hazardous and hazardous wastes will be addressed in the ESMF and the site specific ESIAs/ESMPs of Takhmao and Battambang facilities, taking into account the national standards and the requirements of the World Bank Group Environment, Health, and Safety Guidelines (WBG EHSG).

Use of construction materials that are hazardous to human health (for example, asbestos and asbestos-containing materials (ACM) will not be permitted. ACM waste (from the removal of old transmission and/or distribution pipes) will be collected, transported, and finally disposed of by applying protective measures following hazardous waste handling standards or national regulation on hazardous waste management (Sub-decree No. 36, 1999).

The project also aims to develop alternative water supply solutions for communities that cannot be connected to water supply systems, such as rainwater harvesting systems, infiltration pits, 'cap and trade' licensing system, protection zones for water supply management, as well as a hybrid approach integrating nature-based solutions to integrate sustainability aspects in the provision of water supply and sanitation services. This approach will contribute to environmental sustainability by reducing the application and use of non-natural materials and promoting resource efficiency.

The project will adopt the World Bank Good Practice Note on Water Use and will apply measures that avoid or minimize water usage so that the project's water use does not have a significant negative impact on communities, other users and the environment. These measures include, but are not limited to, the use of additional technically feasible water conservation measures within the Borrower's operations, the use of alternative water supplies, water

consumption offsets to maintain total demand for water resources within the available supply, and evaluation of alternative project locations.

Potential risks to potential resource efficiency shall further be investigated during environmental and social assessments, and should therefore be included in the ESMF and ESIAs.

The construction contractor/s will develop a C-ESMP with various site-specific management plans for air quality management, waste and hazardous materials management, water management, soil management, and management plan for campsite and OHS for workers in line with Bank's ESHS requirements.

ESS4 Community Health and Safety

If well managed, this project has a substantial potential to improve the environmental, social, and health conditions of the communities in selected towns and communes. However, pending further assessments and details during project appraisal stage, the project activities are likely to induce moderate risks/impacts to communities living nearby subproject sites during construction and operations of civil works. Based on the experience of the current WaSSIP project and other similar projects, plausible risks and impacts on health and safety of communities during construction may include: community disturbance as a result of civil works (noise, dust, air, odor from waste water, possible accidents from transport of construction materials), disturbance/disruption to community in their access to home/business, SEA/SH as a result of influx of labor. And during operation phase, community health and safety risks may include community disturbance as result of operation of water/waste water treatment (i.e. noise, smell), victor borne diseases from waste water storage.

The client, who will prepare the ESMF, will need to assess community health and safety risks and impacts, and will include mitigation measures that can be incorporated in the site-specific management plans, where relevant. Those measures shall be in line with national legislation and requirements, the World Bank’s Environmental Health and Safety Guidelines (EHSG) and Good International Industrial Practices (GIIP). Contractor management and preparation of contractor requirements particularly for the community health and safety aspects through the operations manual and more specifically through qualifications, bidding criteria and contracts will be considered given that the project will likely involve a number of contractors.

As part of the ESMF, the client will also need to assess the risk of SEA/SH, given the fact that each sub-project site may involve employment of 30-40 workers. To address the risk of SEA/SH, the project’s ESMF will include provisions to prevent and manage SEA/SH and violence against children (VAC). Among others, it will include provisions to promote local recruitment of the workforce, plus mitigation measures such as a worker codes of conduct (including requirements for both worker-community and worker-worker interactions), mapping of third-party service providers, plus specific actions (training, public awareness, etc.) to avoid sexual harassment, sexual assault, and exploitation. As part of the ESMF, the client will need to ensure that the design of the facilities, where appropriate, takes into consideration universal access.

Furthermore, the Project also has a potential risk of spreading COVID19 to communities and the ESMF will also need to take into account the latest COVID-safe guidelines mandated by the government and/or best practice in the country.

ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement

Key activities for the project (i.e., extension and densification of water supply/wastewater network, household connections, water/wastewater treatment plants and water supply distribution network) are expected to require limited land acquisition, including residential, commercial and agricultural lands. This may include temporary, permanent, and economic displacement. To minimize such potential impacts, the project may consider selecting sites in lands owned by the government and/or sites that may not lead to demolition or relocation of households or commercial premises. As such, works requiring physical relocation is also possible, but should be minimal. All efforts will be made to eliminate such impacts through technical (re)designing . In this regard, E&S screening process, as part of the ESMF, will need to be conducted to select sites with minimal resettlement impacts.

Since technical designs for specific sub-projects or specific site locations remain unknown, and there is a likelihood for minimal land acquisition and resettlement and possible impacts on livelihood disruption (resulting from piped network and sewerage networks and connections), the client will need to develop a Resettlement Policy Framework (RPF), including measure to address temporary economic impacts, as well as the application of voluntary land donation provisions (in line with the ESS5). Following the identification of specific sites during implementation, Resettlement Plans (RPs) will be prepared as required.

In Cambodia, for International Financed Institutions financed projects, Standard Operating Procedures (SOP) of the Ministry of Economy and Finance (MEF) offers principles and procedures for resettlement and land acquisition. The SOP mandates that MEF's General Department of Resettlement (GDR) is responsible for resettlement and land acquisition. Earlier assessments inform that there are some gaps between the SOP and the ESS5 (i.e., assisting persons without legal titles, restoration of livelihoods after resettlement, and insufficient public disclosure and grievance redress). It is important for the clients/consultants tasked with preparation of the RPF to engage with GDR as early as possible to ensure that the process of getting the GDR's approval of the RPF (which should be in line with the SOP and the Bank's ESS5) is timely.

ESS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources

Based on the IBAT analysis, the project activities are not in the vicinity of any protected areas, moreover, most of the construction and civil works will be carried out on land already disturbed by humans and therefore should not have any impact on terrestrial biodiversity. However, due to the nature of the project, special attention must be paid to the aquatic ecosystem, and the impact must be properly assessed and managed. Thus, when the site of the subproject is known, subproject-relevant areas, including downstream areas, prior to project execution should be screened to understand the presence of areas of high biodiversity values, critical or sensitive natural habitats within project areas, protected areas, and endemic flora and fauna including protected animal or plant species. The ESMPs will include provisions for biodiversity assessment management and conservation measures to manage risks and impacts to any natural habitats consistent with the requirements of ESS6. The ESMF will include to address ESS6 issues, including baselines, eligibility criteria, screening requirement, generic risk assessment and biodiversity conservation measures associated with each type of project supported activities during both construction and operation.

The project will increase the volume of sewage waste that is discharged into the environment and may impact aquatic biodiversity if wastewater is not properly managed. Contamination of the aquatic environment by sewage can lead to: i) increased biological oxygen demand (BOD) resulting in hypoxic dead zones and increased turbidity killing marine organisms; ii) eutrophication resulting in algal or phytoplankton blooms; and iii) infection of the ecosystem by pathogenic bacteria and parasites.

During project implementation, effluent will be monitored following the national regulations on pollution control.

For these reasons, the impacts on biodiversity and associated mitigation measures need to be assessed in detail and adequately addressed in the project's ESMF and site specific ESIA/ESMP. The Borrower will conduct the environmental and social assessment in accordance with requirements of ESS6, including the modified natural habitats and the rivers and their ecosystems during construction and operation.

The environmental and social assessment process during project preparation will assess the potential risks and impacts on natural habitats from the various project activities, including potential direct, indirect, and cumulative impacts on key biodiversity receptors. The project assessments also will take into account ecosystem services that could be impacted by the project. The site specific ESIA for the known locations will include an evaluation of the systems and verification practices to: (i) identify where the supply is coming from and the habitat type of the source area; and (ii) where possible, limit procurement to those suppliers that can demonstrate that they are not contributing to significant conversion or degradation of natural habitats. The project design will exclude activities that may impact sensitive and protected ecosystems by applying sub-project selection criteria. The ESIA will also address the risks and impacts of sand and aggregate extraction for construction in riverbeds, riverbanks, and floodplains, which can have significant impacts on terrestrial and aquatic environments at the extraction site and for a considerable distance downstream. The ESIAs/ESMPs will provide for appropriate risk assessments and mitigation measures to avoid damaging natural habitats and ecological and hydrological systems.

ESS7 Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities

The project will be implemented in 4 provinces/municipalities. Two of these provinces (i.e., Pusat, Battambang) are geographically considered as having the presence of indigenous peoples (IP) from the data of the Department of Indigenous Peoples of Cambodia’s Ministry of Rural Development. Given this, the project needs to ensure that indigenous peoples are consulted in a culturally appropriate manner and have opportunities to benefit from the project activities, which will need to be elaborated as part of the SEP and the IPPF. In general terms, the project is expected to bring benefits to local communities including indigenous peoples through investments in household connections for piped water supplies and wastewater collection networks. In particular, the project takes into consideration subsidies for poor households living within the water supply network areas. It is important to note that the project areas of primary focus will be major towns/municipalities. As such, it is not anticipated that the project will result in adverse impacts on indigenous peoples, taking into consideration the geographical context of indigenous peoples in Cambodia.

However, in the context of where detailed project locations have not been identified (except the two identified towns of Battambang and Takmao, where there is no presence of indigenous peoples, given the locations are very urban), it is required that prior to appraisal an Indigenous Peoples Planning Framework (IPPF) be prepared, which will

lay out provisions with regard to how indigenous peoples are consulted and how they can access project benefits. There is also a need to ensure indigenous peoples contribute to project design and decisions, and this will be managed through the SEP. The IPPF will also propose a methodology for screening for the presence of indigenous groups in the area of project influence, to assess the expected direct or indirect social risks they may face, as well as to propose measures to mitigate potential cumulative adverse environmental and social risks and impacts affecting them.
Special attention to the needs of indigenous groups in engagement including ensuring translation into relevant languages during consultations of key issues and measures. Special attention will be paid to ensure the active participation of the different ethnic groups and representatives in the project's stakeholder engagement activities and to ensure that any information shared is sensitive to cultural needs.

ESS8 Cultural Heritage

The presence of cultural heritage assets is rich in the provinces of Battambang and Pursatwhich some of them were officially listed as endangered cultural heritage, for example architectural buildings built during the French protectorate between 1853-1953 in provincial municipality of Battambang. The value of tangible and intangible cultural heritage as an asset for development and an integral part of people's identity were recognized by the Royal Government of Cambodia in 1996 Law on the Protection of Cultural Heritage. Currently there is no indication of potential impacts on cultural heritage. However, this will be thoroughly assessed as part of the ESIA/ESMP process for all specific investments. The project design would exclude any activities that result in significant adverse impacts on cultural heritage. The project's ESMF and site specific ESIA/ESMP for known locations will produce a chance finds procedure for physical cultural heritage that may be affected during project implementation, as well as a screening process to minimize possible impacts on cultural heritage. For any works carried out in areas with known or suspected cultural heritage value, pre-construction site-specific assessments will be conducted, and cultural management plans will be prepared during project implementation. Presence of UXOs will be assessed and clients will acquire support from certified government agency for safe removal if any.

ESS9 Financial Intermediaries

This standard is not considered relevant as financial intermediaries will not be used by the Project.

B.3 Other Relevant Project Risks

None

C. Legal Operational Policies that Apply

OP 7.50 Projects on International Waterways	Yes
OP 7.60 Projects in Disputed Areas	No

III. WORLD BANK ENVIRONMENTAL AND SOCIAL DUE DILIGENCE

A. Is a common approach being considered?

No

Financing Partners

Co-financing partners is currently not considered

B. Proposed Measures, Actions and Timing (Borrower's commitments)

Actions to be completed prior to Bank Board Approval:

Prior to Appraisal, the Client will prepare, to a level acceptable to the World Bank, consult on, and disclose the following documents:

1. Environmental and Social Impact Assessments (ESIAs) and Environmental and Social Management Plans (ESMPs) for Takhmao and Battambang facilities;
2. The project's Environmental and Social Management Framework covering four target provinces;
3. Resettlement Policy Framework (RPF) as part of the ESMF;
4. Prepare and disclose the LMP
5. Prepare and disclose the IPPF as part of the ESMF, and Indigenous Peoples Plans if required;
6. Prepare and disclose the SEP

Possible issues to be addressed in the Borrower Environmental and Social Commitment Plan (ESCP):

1. Building ESF capacity of the Implementation Agencies, other line agencies, local governments, and contractors on the ESF implementation;
2. The Client will prepare the Terms of References (TORs) to conduct Project's activities (study, analysis, plans, training, and capacity building, design and supervision consultants) to be reviewed by the Bank to ensure that the requirements of the World Bank ESF policy is effectively integrated.
3. Preparing, disclosing and consulting site-specific RAPs and ESIA/ESMPs;
4. Application of the LMP to project activities, including the possible need to develop additional LMPs or similar instruments for some of the sub-activities;
5. Ensuring that a qualified environment specialist and a social specialist are employed to support the Component Implementation Units throughout implementation;
6. Preparing site-specific IPPs, if needed;
7. Continued stakeholder engagement throughout project implementation and beyond project closure; and
8. Preparation and disclosure of self-standing Emergency Response Manual (ERM) ; and
9. Regular review and updating, as necessary, of the ESCP.
10. Ensuring a Grievance Mechanism for the project will be developed and implemented to address concerns and grievances of project stakeholders on issues related to environmental and social performance.

C. Timing

Tentative target date for preparing the Appraisal Stage ESRS 09-Mar-2023

IV. CONTACT POINTS

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Borrower/Client/Recipient

Borrower: Kingdom of Cambodia

Implementing Agency(ies)

Implementing Agency: Ministry of Public Works and Transport

Implementing Agency: Ministry of Industry, Science, Technology & Innovation

V. FOR MORE INFORMATION CONTACT

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VI. APPROVAL

Task Team Leader(s):	Phyrum Kov, Irma Magdalena Setiono
Practice Manager (ENR/Social)	Mona Sur Recommended on 15-Jul-2022 at 16:02:45 GMT-04:00
Safeguards Advisor ESSA	Nina Chee (SAESSA) Cleared on 18-Jul-2022 at 15:30:8 GMT-04:00