



# 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	P170976	
Project Name	Cambodia: Solid Waste and Plastic Management Improvement Project		
Practice Area (Lead)	Financing Instrument	Estimated Appraisal Date	Estimated Board Date
Environment, Natural Resources & the Blue Economy	Investment Project Financing	11/30/2020	3/22/2021
Borrower(s)	Implementing Agency(ies)		
Ministry of Economy and Finance (MEF), KINGDOM OF CAMBODIA	Ministry of Public Works and Transport, Ministry of Environment, Ministry of Interior		

Proposed Development Objective(s)

The PDO is to improve solid waste and plastic management and capacity in selected cities and nationally in Cambodia

Financing (in USD Million)	Amount
<b>Total Project Cost</b>	<b>60.00</b>

**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]**

Cambodia has experienced remarkable economic growth becoming a lower middle-income country and is undergoing a process of urbanization expected to further increase the coming years. Cambodia’s level of urbanization of 21 percent of its 15.8 million people (2016) is low and far below other countries with similar gross domestic product (GDP) per capita, suggesting that rapid urbanization may be expected in the coming years. While Phnom Penh continues to consolidate its role as the primary city of Cambodia, the country’s secondary cities are continuing to act



and expand as regional centers in their own right. Secondary cities in Cambodia are establishing their own economic trajectory and have witnessed urbanization rates of between 3-5 percent . The main drivers of growth have been garment exports, agriculture, tourism and, more recently, construction and real estate.

Thanks to rapid and sustained growth, Cambodia has become one of the world’s leaders in poverty reduction and shared prosperity. Official estimates show that poverty incidence under the national poverty line fell from 47.8 percent in 2007 to 13.5 percent in 2014, a trend supported by improvements in other indicators of living standards such as asset ownership, housing amenities, and human development outcomes .

The impressive growth of tourism has allowed the sector to become an important engine for growth, employment generation, and investment attraction. Cambodia received nearly four million tourists in 2018, up from less than 250,000 in 1995, contributing around 17 percent of GDP and making tourism an important source of foreign exchange, investment, and employment . Siem Reap, with its world-famous Angkor Wat, received 2 million tourists alone by air. Coastal regions also representing some 12% of the tourism share in 2018 .

Due the increasing urbanization in Phnom Penh and secondary cities and despite improvements in infrastructure in water supply, roads and electricity, cities and districts suffer from lack of infrastructure. City limits have been expanded but often in the absence of spatial planning and urban development planning. The continued growth of the cities will require higher levels of infrastructure and municipal service levels, which are currently facing under-investment together with weak institutional capacity in policy, planning implementation and enforcement. There is a risk that the lack of municipal services can hamper growth and specifically to Cambodia’s tourism assets that are an important engine for growth. Smaller towns such as district centers (many currently characterized as rural) are also expected to grow significantly to reach population densities requiring higher levels of infrastructure and basic service. There is significant risk that negative externalities because of rapid but unplanned urbanization could hamper growth.

Solid waste has generation has increased substantially over the years Sound waste data is missing in the country and is often inconsistent and unverifiable. Total waste generation has been estimated at 4 mln t/y as of 2015, equal to 0.73 kg/day/capita. Due to economic growth and urbanization, waste generation has rapidly increased over the last years. In 2016, 1.3 mln tons of municipal solid waste (MSW) was disposed of at 55 dumping sites nationwide, an increase of 7.6% within one year. Between 2000 and 2017, the amount of collected MSW of Phnom Penh has increased substantially, and by 35% between 2016 – 2018. In Sihanoukville, uncontrolled growth has led to a 400% waste increase within the last 4 years only. Due to this drastic increase in waste, landfills around the country are rapidly reaching their capacity limit, such as in Siem Reap. In urban centers, 50-60 % of the waste has been determined as organic, and plastics reaching over 20% and increasing in share.

Several government strategies have focused on better management of solid waste, but implementation is challenging. Cambodia’s Law on Environmental Protection and Natural Resource Management (1996) designates the Ministry of Environment (MoE) as the leading agency tasked with formulating policies, issuing regulations and coordinating actions on waste management and pollution control. Sub-decree 113 (2015) assigns responsibilities for the management of solid waste to municipalities, however municipalities have been struggling with implementation. The country’s Sub-Decree on Management of Plastic Bags (No 168, 2017) aims to increase effectiveness of plastic reduction by regulating importation, production, distribution. The forthcoming National Waste Strategy and Action Plan for Cambodia (2018-2030) defines a roadmap for improving waste management practices and aims to provide authorities at all levels with instructions to effectively manage solid waste and plastics.



Solid waste is more and more seen as a critical bottleneck for Cambodian cities and districts growth. Recently, solid waste has become a high priority national agenda. In several media statements, Prime Minister Hun Sen emphasized the issue of solid and liquid waste in Phnom Penh and major cities in coastal areas and along the Mekong river. In June 2019, the Government of Cambodia endorsed the Bangkok Declaration on Combating Marine Debris in the ASEAN Region and ASEAN Framework of Action on Marine Debris during the ASEAN Summit. In Phnom Penh, the government is currently taking action by preparing public tenders for solid waste collection, planning to divide the city into several collection zones.

Solid waste can also become a critical bottleneck for Cambodia's tourism assets. Inadequate solid waste management is a major potential constraint to growth for Cambodia's key tourism destinations, including Siem Reap where Angkor Wat temple complex is located, Phnom Penh, and coastal tourism. Cambodia's coastline, the fastest growing tourism destination, already suffers severely from marine plastics pollution. Short-term solutions such as street cleaning, are costly. While detailed numbers are lacking, some surveys show that particularly high-income tourists, including business travelers and international conventions, are easily deterred by extensive solid waste pollution. In Thailand as well as the Philippines, key tourism hotspots have been closed for years due to pollution, including solid waste.

Inadequate solid waste management brings a variety of environmental and economic impacts. When urban solid waste is not collected, it is often openly burned, informally buried, or disposed in streets, canals, rivers, and parks. Solid waste burning can be a significant and costly source of air pollution in urban areas. Waste burning contributes to respiratory infections for urban residents resulting in significant health damages and lost working days. Uncollected waste leads to increased pests and diseases, lower property values and decreases the city's attractiveness to outside investments. Poor and vulnerable populations are the most likely to suffer from inadequate sanitation due to uncollected waste, which can be a heavy financial burden through health-related expenditures and lost productivity. The country-wide overall economic impacts of the plastic pollution alone on the tourism sector have been estimated at USD 1.5mln .

Plastic leakage into the waterways is also substantial and flowing into canals, rivers and the ocean. Plastic waste pollution forms a particularly crucial part of solid waste mismanagement in Cambodia. The Mekong River is amongst the most polluted rivers worldwide, with Phnom Penh, being situated at the river, presumably being a major source. In Phnom Penh alone, about 10 million plastic bags are used every day. In Siem Reap, plastic bags were found to make up 60 percent of the waste obstructing wastewater runoff. It is estimated that in the country 41% of used plastic bags are burnt, and 48% end into the sea. One study implemented in Sihanoukville showed, that 80% of all coastal debris found in the environment were plastics. An ongoing World Bank survey highlights that single-use packaging comprises the bulk of the waste that ends up in the environment, with Food wrappers (PP), Shopping bags (HDPE and LDPE), Drinking cups and beverage bottles (PET), and straws (PP) being the dominant items.

The plastic leakage endangers local river, lake and marine ecosystems. Plastics becomes part of the animal and human food chain, burning of mismanaged plastic leads to toxic fumes contributing to air pollution and Phnom Penh and other major cities are severely affected by increased flooding risks due to plastic waste blocking drainage systems. Studies suggest that Cambodian municipalities continue to spend as much as USD600,000 for urban street sweeping per year. The country-wide overall economic impacts of the plastic pollution on Cambodia have been estimated at USD 2.5mln per year, with USD 0.9mln being attributed to Fisheries & Aquaculture, and USD 1.5mln on the tourism sector.



Even when solid waste is collected, the environmental impacts of open waste dumpsites are also exemplary. While the amount of solid waste generation has substantially increased, the infrastructure for collection and sanitary disposal has not kept up with the demand, causing significant environmental problems. Landfills in Cambodia are usually operated as open dumpsites, with the landfills of Phnom Penh, Siem Reap and Sihanoukville being no exemption. Waste dumping is done without compaction, and in combination with steep slopes is a dangerous situation for waste pickers. At the Siem Reap landfill, the presence of a “waste pool” and “leachate pond” are severe environmental hazardous. Toxic waste components are contaminating surface and groundwater, including of adjacent farmland. Uncollected methane significantly contributes to national greenhouse gas emissions and provides a high risk of landfill fires.

Absence of waste reduction measures, recycling, lack of public awareness and citizen engagement. Cambodia’s National 3R Strategy for Waste Management in Cambodia (2008) outlines principles and actions for reducing, reusing, and recycling solid waste, however implementation of measures has been insufficient, shown in the drastic increase of waste generation. Aside from pre-processing recycling activities led by informal collectors and small-scale facilities, the domestic recycling industry in Cambodia remains largely underdeveloped. Public awareness and citizen engagement are increasing particularly in urban areas, however has not yet translated into wide-spread visible behavior change.

Role of woman in formal waste collection and informal waste collection and waste picking at landfills. Women and children in the informal waste sector face multiple disadvantages and are exposed to health and social threats posed by inadequate solid waste management. Their contributions to recovery and recycling of valuable plastics in the face of underdeveloped formal waste management systems are largely overlooked and unsupported. Improving the management of waste collection systems must consider the informal sector, where substantial amount of waste pickers are women, and work in hazardous and unsanitary environments without adequate protection and safety.

The insufficient waste collection and subsequent littering and pollution in Cambodian cities is to a large extent originating from full privatization of waste collection and disposal without adequate performance benchmarks and payment for services. Solid waste management collection and disposal is fully outsourced to the private sector, but conditions for privatization and proper functioning of the private sector are absent, such as: (i) lack of performance benchmarks in the contracts that define the waste collection service area and frequency, amongst others; (ii) low waste fee payment guarantee to the private firms as the waste companies collect themselves the fees from the waste generators without payment enforcement possibility. Consequently, the private waste collection companies focus on the more profitable waste collection from institutions and commercial sector and reduce waste collection in areas with low payment discipline. Due to lack funds in the waste collection services, the private solid waste collector work with outdated equipment that lead to frequent breakdowns and subsequent solid waste collection interruption. The lack of solid waste collection leads to street littering and dumping of waste in the canals/rivers, blockage of drains and complaints from population.

While sub-decree 113 places the responsibility for solid waste management with the municipality, municipalities do not have a solid waste management unit with enough budget and staffing. The lack of SWM units at municipal level is considered a major constraint of the sector, being a key factor of the limited government capacity in managing waste collection and disposal and as well as waste fee collection and planning/enforcement. This is recently changing, with SWM units being established at municipal governments, however building up the necessary capacities of new



established units will require time and resources. Typically, municipal waste management units are tasked with key solid waste management functions, such as: (i) collection/organization of the (household) waste fees in order to pay for private waste management services, (ii) establishing solid waste management performance indicators and including these in the contracts with private sector waste management companies. Further including requirements into the contracts to provide clarity on costs and revenues of the private sector waste collection; (iii) monitoring and enforcement of private sector waste management companies on the basis of established Key Performance Indicators, required operational plans and reporting requirements regarding costs, revenues and waste quantities as well as required environmental standards for solid waste transport, treatment and disposal; (iv) preparation of local waste management strategy and plans, (v) local legislation, specifically Municipal Ordinances for Solid Waste Management, (vi) Solid waste information system comprising of information of amount and type of solid waste generated, collected and disposed as well as financial information of the costs and revenues applicable; and (vii) public awareness and citizen engagement. Specific and continuous public awareness raising, education and citizen engagement will be required at the municipal level. This is typically financed out of the solid waste fee as continuous activities are required, also to support increasing waste and plastics reduction, recycling and reuse.

Solid waste fee setting, and household fee collection is typically a Municipal responsibility, supported by accompanying legislation and moving towards cost recovery for solid waste management services. Typically, collection of the solid waste fee from households is executed by the municipality based on a Municipal Ordinance instead of the private sector. The waste fee is typically integrated in the property tax, water bill, separate waste bill, electricity bill and with the possibility to enforce payments from households as solid waste collection is a municipal service. Fee setting by Municipality should be on basis of (full) cost recovery or moving towards cost recovery, based on standardized methodology issued by the national government. For municipalities to do this, an information/database, financial management and a waste accounting system will be required as well as supporting legislation and guidance methodologies from national level. Collection of the waste fee from commercial entities could still be on basis of individual contracts with private sector waste collection companies or be include with the municipality household waste fee collection, allowing for cross subsidy of commercial tariffs towards households.

Similarly, provincial strengthening in solid waste management sector is required. Specifically, through establishment and regulations for Provincial Regional Waste Management Strategies and Plans, specifically landfill planning and implementation plans for regional landfills as well as including an option for provincial ownership of regional landfill. In case of regional landfills, there is the option for provincial contracts with private solid waste sector for the management of such regional landfill and required solid waste gate fee setting for solid waste disposal.

At the national level, legislation, regulations and guidelines for Solid Waste Management also needs to be strengthened. Such strengthening of legislation, regulations and guidelines are foreseen to be implemented under the Ministry of Environment, Ministry of Public Works and Transport and the Ministry of Interior, specifically the following identified areas of strengthening: (i) definition of municipal waste with waste catalogue defining the different waste fractions. This is needed to define which wastes are to be collected as part of the general waste fee and for which types/fractions of waste separate contracts with separate fees can be applicable to increase the revenues from solid waste management; (ii) clarification regulations to sub-decree 113 regarding tasks and responsibilities of Ministries, Provinces and Municipalities; (iii) preparation of a Sub-Decree and guidelines on Reporting and Database Management for Solid Waste; (iv) national template for tender documents, national template for contracts between municipalities and private companies on waste management services, including Key Performance Indicators for the private sector as well as enforcement guidelines, including regulations allowing and guiding municipalities to enter



into Public Private Partnerships and further pre-requisites for private sector engagement; (v) guidelines for cost calculation for different waste services (collection, landfilling, street cleaning) and methodology for waste fee determination considering waste service levels and local conditions and cost recovery plan for investments in solid waste infrastructure; (vi) preparation of a Sub-Decree with design standards and an operational manual for sanitary landfills and licenses for operation; and (vi) strengthening of further legislation and planning for SWM (sector strategic plans, sector investment plans, regulations to better regulate private sector, development of accounting and data systems).

The Project is fully aligned with Focus Area III “Improve Agriculture and Strengthen Sustainable Use of Natural Resources” in the Country Partnership Framework for Cambodia for the period FY2019-FY2023 . The focus area focuses on supporting strengthening of natural resources management, particularly water and forestry in and around Cambodia’s major ecosystems, as well as management of rapidly urbanizing areas. The CPF stated that WBG support will focus on water, sanitation, waste management, and roads to improve connectivity and access to basic infrastructure services in rural and urban areas during the CPF period.

Alignment with Nationally Determined Contributions (NDC). Cambodia has made important commitments in its NDC to reduce greenhouse gas emissions by 27% as compared to business-as-usual scenario by 2030. 1% of these greenhouse gas reductions is estimated to come from “other sectors”, including energy efficiency for buildings and more efficient cookstoves, reducing emissions from waste and renewable energy for irrigation and solar lamps . Throughout preparation and upon a decision of the inclusion of the pilot cities in the Project, the precise amount of greenhouse gas emission reductions that will be achieved through the Project will be estimated as well as the share of Cambodia NDC that they represent.

The proposed program: (i) supports the World Bank’s commitment to ensuring the protection and sustainable use of marine and coastal resources; (ii) follows the EAP Region’s Engagement Framework and Action Plan for Marine Plastic Debris; and (iii) will explore potential for additional regional IDA. The World Bank launched the flagship PROBLUE Multi-Donor Trust Fund with a window dedicated to “the threats posed to ocean health by marine pollution, including litter and plastics”. By improving solid waste management services in pilot areas in Cambodia in cities and areas adjacent to rivers and coast, this program would support addressing one of the world’s most pressing issues regarding its oceans. The work on plastics management under this project is following the World Bank’s East Asia and Pacific (EAP) Region’s Engagement Framework and Action Plan for Marine Plastics Debris, intended to guide EAP engagement on marine plastics pollution. As part of Project Preparation, the potential will be explored to attach regional IDA for Plastics in Mekong countries to the Project and which provides top-up to national IDA.

#### D. Environmental and Social Overview

D.1. Project location(s) and salient characteristics relevant to the ES assessment [geographic, environmental, social]  
The project will be implemented country-wide on the part related to strengthening the capacity of central ministries under Component 1, focusing on the following strategic priorities: (i) regulatory/legislative framework, solid waste sector monitoring, and regulatory oversight; (ii) policy development related to waste reduction and plastic waste management; and (iii) institutional capacity building.



The project will support pilot municipalities/pilot cities, by providing technical assistance (TA) under Component 2, to identify and prepare targeted investments into solid waste/plastic waste management infrastructure, and to improve the performance of private solid waste collection services, financial stability of solid waste management through local government regulations and waste fees and to increase public awareness and citizen engagement. This will also include training to make sure the use of participatory techniques for community engagement plus measures for the re-employment and development of alternative livelihoods for waste-pickers working in some of the project locations.

Targeted priority lower-costs investments in pilot municipalities/pilot cities among those which benefited from the Component 2 TA will be provided under Component 3. Such investments will support the closure of the existing dumps and construction of new sanitary landfills, or rehabilitating the dumps with adequate environmental infrastructure ; improvement of solid waste/plastic waste collection and transportation; and establishment of solid waste/plastic waste management information system. The pilot cities/municipalities for the purposes of Component 2 and 3 will be identified during the project preparation as commitment to reforms is a requirement for pilot cities to join. Siem Reap is in principle confirmed to meet the criteria for inclusion in Project preparation. Further criteria for participation in the pilot project are applicable, such as the agreement to a cost-recovery plan for solid/plastic waste investments/operational costs under the project and agreement to how such costs will be recovered through (increase) of waste fees, the establishment of a solid waste management unit. It is foreseen that more pilot cities will be included in the Project under Component 2 (Technical Assistance) than under Component 3 (solid waste investments).

#### D. 2. Borrower's Institutional Capacity

The project will be implemented by the Central Project Implementation Unit (CPIU) to be composed of three PIUs within the Ministry of Environment (MoE), Ministry of Public Works and Transport (MPWT) and Ministry of Interior (Mol) in alignment with respective sectoral and institutional mandate of each ministry. In addition, regional PIUs will be established in each of the selected pilot provinces/municipalities to handle the project implementation at the local level. A Steering Committee will be created to provide overall project guidance and coordination. Further capacity assessment of each involved ministry will be done during the project preparation. All three ministries are experienced with the implementation of Bank-funded projects under the safeguard policies, but not in solid waste management. An added complication is the requirement to coordinate across three separate ministries and within separate municipal jurisdictions. This would add to the challenges of standardizing approach and practice.

Considering that this project is the first type of its kind in the country, a Capacity Need Assessment will be carried out, and building capacity and knowledge with the new ESF ESSs requirements will be planned for. Training will also be provided to regional PIUs to enhance its capacity on Environmental and Social Management(ESM). To support institutional sustainability, the project will provide support to CPIU, PIUs under Ministries and regional PIU by funding ES consultancy services in CPIU and PIUs within ministries. As part of achieving the project objectives as well as ES risk management, capacity will also be build regarding managing solid waste under international standards in the public sector. For example, MPWT has an Environmental and Social Office (ESO) with staff who graduated in the field of engineering, environment, and public administrations. There is relevant experience working on environmental management, resettlement, Indigenous Peoples or stakeholder engagement, but mostly for the road sector. Social waste and plastic management in line with international practice experience will be built under the project at all ministries at national level.



Since this will be one of the first projects in Cambodia applying the ESF, the staff of the CPIUs of the line ministries will receive training through the project consultancy services to ensure adequate capacity to implement and monitor all applicable ESSs. The overall Environmental and Social Management System (ESMS) at the national level for MoE, MPWT and MoI still needs strengthening in terms of the number of staff, allocation of role and responsibility, monitoring and reporting skills. Ministries capacity strengthening will include environmental, social/gender staff to the ESOs for this project as required, based on the assessment of institutional capacity conducted during the project preparation in view of the project activities that will be implemented by each of the ministries. Specific institutional capacity strengthening/ building measures such as the provision of additional resources, training needs will be identified and listed in the Environmental and Social Commitment Plan (ESCP) to ensure ownership and sustainability of the resources.

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

**A. Environmental and Social Risk Classification (ESRC)**

High

**Environmental Risk Rating**

High

A - type, location, sensitivity and scale of the Project including the physical considerations of the Project: The overall environmental risk is rated as High. There is a risk of poor site selection resulting in adverse ES impacts, as the project will be implemented countrywide potentially close to natural habitats and forest cover (northeastern region); cultural heritage sites (Siem Reap); and coastal areas (Kampot, Koh Kong, and Preah Sihanouk). The Siem Reap Province is known for its historical sites and rich biodiversity resources, such as Angkor Archaeological Park, and Angkor Center for Conservation of Biodiversity (ACCB). Other important protected areas and biodiversity conservation sites are Sam Veasna Center for Wildlife Conservation, Prek Toal Bird Sanctuary, Banteay Srey Butterfly Center, and Pearaing Biodiversity Conservation center. At the concept stage, the Siem Reap has been identified as a candidate site due to strong commitment expressed by provincial administration to improve the solid waste infrastructure.

B - nature and magnitude of the potential ES risks and impacts, the nature of the potential risks and impacts (e.g. whether they are irreversible, unprecedented or complex): The main environmental risk is associated with the closure and rehabilitation of the existing dumps and construction of new sanitary landfills and related facilities. Anticipated adverse impacts include: (i) air and noise pollution from earthworks and movement of materials and heavy equipment; (ii) soil and water resources pollution due to accidental spillage of oil and other lubricants from washing of construction equipment and discharge of domestic sewage at construction camps; and (iii) accumulation of construction wastes and (iv) failure to ensure occupational health and safety. The operation of the solid waste management facilities built or rehabilitated under the project is associated with the generation of leachate, landfill gas, litter and dust, which might bring about the local proliferation of flies, rodents and other disease-carrying vectors, and expose workers to health risk.

The closure of dumps, if not properly undertaken, could lead to uncontrolled emission of waste gases, waste burning, and the exposure of deposited waste to the atmosphere. Collectively, these could affect air quality. Poor leachate control in both closed and new waste management facilities could adversely impact groundwater and surface water

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resources and pose a human health hazard (via contaminated drinking water). Poorly executed waste cover could contribute to the spread of pests and disease-carrying vectors.

C - capacity and commitment of the Borrower to manage risks and impacts in a manner consistent with the ESSs: The clients have had experience with Bank financed-projects either under old safeguard policies. National and regional training sessions on the ESF were provided to technical staff and management of national ministries, including the three clients. However, considering the fact that ESF is new and the solid waste intervention is the first WB financed-project in Cambodia, and that there are three different agencies to implement the project, the existing capacity and inter-agency coordination modalities might not be sufficient to manage ES risks properly.

D - other areas of risk that may be relevant: Some cities/provinces in costal regions such as Kampot and Sihanouk Ville are known to be susceptible to flash floods and typhoons. The resulting risks will be included in the ESIA for the landfill and specifically site suitability criteria application for landfills.

**Social Risk Rating**

High

The social risk is categorized as “High” due to the low Borrower capacity on solid waste management, plus the available mitigation measures to restore and improve the livelihoods of the vulnerable groups (trash-pickers) are less reliable since they are considered informal users and their livelihood activities are considered illegal or unrecognized. This project will apply similar mitigation and compensation measures that have been successfully applied in other countries (e.g. Indonesia, Azerbaijan), but they are new in Cambodia. Special attention will be needed to address the fact that some of the trash-pickers are children.

This project is expected to bring remarkable benefits to both the quality of life of the communities around the current dumps and the health and working conditions of the trash-pickers. However, this type of project often causes and/or exacerbates conflicts since some communities may complain because they do not want to rehabilitate the existing dumps located close to them or disagree when the construction of a new landfill is planned (Not in My Backyard syndrome). Others may also complain because of the increased number of garbage trucks going back-and-forth to the landfill. Besides, if not well managed, trash-pickers can consider the project activities as a threat to their current source of livelihoods. Specific citizen engagement and consultations will be undertaken, including potential study tours to rehabilitated landfills will be undertaken to work with communities.

It is expected that special attention will need to be paid to monitor and enforce compliance in the application of ESS2 (Labor and Working Conditions), particularly to child labor; ESS4 (Community Health and Safety), especially related to road safety and community exposure to health problems like legacy issues on pollution of groundwater resources. Similar for ESS5 (Land Acquisition, Restrictions on Land Use and Involuntary Resettlement) due to the risk of permanent or temporary economic displacement of the trash-pickers plus some potential for land taking if plans to build new landfills are selected.

**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**

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**Overview of the relevance of the Standard for the Project:**

This standard is relevant because there will be a need to handle respective environmental risks during the construction phase and implementation of the project activities such as closure or rehabilitating the dumps with adequate environmental infrastructure and construction of new sanitary landfills and related facilities. The Environmental and Social Management Framework (ESMF) covering all target provinces as well as site specific Environmental and Social Impact Assessments (ESIAs) and Management Plans (ESMPs), if specific locations for landfill development are known, will be developed and disclosed before appraisal. The ESMF will specifically refer to the WBG Environmental Health and Safety Guidelines (EHSG) and Good International Industrial Practices (GIIP) on the part of using landfill siting criteria. The ESMF will also have provisions for dump site closure and post closure management. The selection of sites to be proposed will be guided by the site selection studies to be implemented under Component 2 TA.

Social risks and impacts anticipated for this project are: (a) potential conflicts with communities who may disagree to rehabilitate the existing dumps located close to them or disagree when the construction of a new landfill is planned (Not in My Backyard syndrome) and/or trash-pickers who may consider that the project activities are a threat to their current source of livelihoods; (b) risk of enhancing impoverishment of vulnerable groups to be economically displaced by the project (mainly trash-pickers), in case livelihood restoration plans are not adequately implemented; (c) risk of not being able to find and agree an inclusive solution, in compliance with the ESF, to the children currently working as trash-pickers; (d) if not appropriately managed labor, safety and working conditions impacts related with the construction works; (e) potential increase of heavy traffic (especially garbage trucks) close to the new or improved sanitary landfills and related facilities; (f) community exposure to health problems like legacy issues on pollution of groundwater resources which may impact the quality of drinking water coming from wells; (g) temporary labor influx of workers, which might increase the risk of gender-based violence; (h) some potential for land taking if plans to build new landfills are selected.

To address these risks and impacts at all stages of the project implementation, the Borrower will develop, consult and disclose the following environmental and social due-diligence instruments prior to appraisal:

- Environmental and Social Impact Assessment and Management Plan (ESIA and ESMP) for the investments in the city of Siem Reap (this candidate pilot city was confirmed at the early stage of the project preparation) together with other pilot cities for which specific locations for landfill development are identified under the landfill siting studies to be implemented under the Component 2 TA. The findings and recommendations of the ESIA and ESMP will duly inform the development of the detailed engineering design of the proposed landfill facilities (including operation and closure) to ensure that environmental and social risks and impacts are fully addressed from the early stage. Once the scope of the construction/rehabilitation is known, specific technical and environmental design standards will be determined and incorporated.

The ESIA and ESMP will also include a stand-alone section a Resettlement Plan (in case land acquisition is needed) and Livelihood Restoration Plan for trash-pickers working at the current Siem Reap dumpsite. It will be required as well in case there are trash-pickers operating in the additional pilot city selected (under ESS5). Also, a stand-alone Indigenous People Development Plan (IPDP) will be required in case in the additional pilot cities there is presence in, or have collective attachment to the proposed project area, of Indigenous Peoples following the four criteria stated on ESS7: self-identification, collective attachment, customary institutions and distinct language or dialect.



- Environmental and Social Management Framework (ESMF) for the locations for landfill development not known prior to appraisal stage The ESMF will be integrated into the Operations Manual and will provide an overview of the regulatory and legislative framework governing solid waste management and national procedure for the environmental and social assessment; describe environmental and social baseline in the country; develop and define screening criteria (positive and negative) for selecting candidate pilot sites, from the environmental and social perspective (from WBG EHS landfill siting criteria); provide criteria for rating ES risks of pilot sites as they get identified during the project implementation; develop process and TOR for the development of site-specific ESAs and ESMPs; develop criteria for the suitability of sites as landfill areas and ensure they are mainstreamed into the project's design standards, describe institutional responsibilities and implementation arrangements for the development and implementation of site-specific ESAs and ESMPs; set procedures for public disclosure and consultations for the ESMF and each site-specific ESIA and ESMP. The project's ESMF will also include as a stand-alone section a generic Resettlement Policy Framework (RPF) and Indigenous Peoples Development Framework (IPDF).

The project-specific ESIA/ESMP for Siem Reap and applicable other cities and the ESMF for the landfill site developments not identified prior appraisal will consider, in an integrated way, all relevant direct, indirect and cumulative environmental and social risks and impacts of the project. They will include specific provisions for Labor-Management Procedures (under ESS2); Pollution management (air, noise, solid and liquid wastes, etc.) and use of resources (construction materials, water and energy usage) measures (under ESS3); Community Health and Safety and road safety assessment and plan during construction and operation phases (under ESS4); provisions to prevent sexual harassment, Gender-Based Violence and violence against child (under ESS4); Biodiversity conservation and sustainable management of living natural resources (under ESS 6); and Cultural Heritage (ESS8);

- The project's Stakeholder Engagement Plans (SEP) -including a Grievance Mechanism- will be prepared prior to appraisal to guide the Borrower to identify stakeholders and build and maintain a constructive relationship with them, in particular, project-affected parties (under ESS10). The version consulted and disclosed prior appraisal will include detail information about the proposed projects in Siem Reap and the additional pilot cities. Once new project/site locations are known (after appraisal), its contents will be updated, consulted and re-disclosed.

ESM capacity development will be provided to the Borrower throughout the course of the project. Needs Assessment for the ESM training will be carried out before appraisal. By then, the team would be able to conclude training contents and staff (national and sub-national) to be involved.

The project ESF tools will be prepared, reviewed and disclosed for consultations by the Borrower, after being reviewed and cleared by the World Bank. The ESF tools will be disclosed in-country by the Borrower prior to the project appraisal. Due to the potential risk of this project and low institutional knowledge on solid waste management, independent consultants will need to be engaged in supporting the Borrower in the preparation of this project. The findings of the ESMF and ESIA/ESMPs for the first pilot cities/landfill development locations will inform the Environmental and Social Commitment Plan (ESCP) to be prepared and disclosed by the Borrower also by the project appraisal.



**Areas where “Use of Borrower Framework” is being considered:**

The Borrower's E&S Framework will not be used for the Project, in whole or in part.

**ESS10 Stakeholder Engagement and Information Disclosure**

The implementing agencies will prepare a Stakeholder Engagement Plan (SEP) before the appraisal stage. The SEP will be implemented, updated, and disclosed throughout the different phases of the project life cycle.

At this early stage, various affected and interested stakeholders have been identified: (a) line ministries: Ministry of Environment (MoE), Ministry of Public Works and Transport (MPWT), Ministry of Interior (MoI), Ministry of Labor and Vocational Training (MoLVT), General Department of Resettlement (GDR) under the Ministry of Finance (MEF), Ministry of Land Management, Urban Planning and Construction (MLMUPC), (b) local individuals or groups: provincial and local authorities and village chiefs, Community Based Organizations (CBOs), women organizations and religious leaders, Indigenous Peoples leaders and organizations -in case applies- (c) private waste management companies, waste-pickers representatives, farmers, communities located nearby the project area, (d) academia, environmental organizations, NGOs working with children and women.

The SEP will ensure that beneficiaries and affected communities will be engaged, especially regarding project design options. Specific and good quality public communications campaign, citizen engagement and consultations about the risks, impacts and project benefits will be undertaken. It may include potential study tours to rehabilitated landfills to work with communities, managing perceptions associated with the landfills (Not in My Backyard). The approach to engagement activities will consider the needs of vulnerability, language and literacy to ensure not only risks are managed, but benefits are accessible to all. The Livelihood Restoration Plan for trash-pickers will include specific engagement requirements to reach out to stakeholders to ensure accessibility and inclusiveness 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. As part of the information disclosure arrangement, the ESIA/ESMP, ESMF and the SEP will be disclosed publicly on the websites of the implementing agencies. The 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**

Labor practices in the country are governed by the Labor Law (1997), which includes provisions on health and safety in the workplace, non-discrimination in employment and wages. The ESIA/ESMPs and the ESMF will develop a Labor Management Procedure to address any gaps between the national law with ESS2 and its inclusion in the bidding documents. The project’s labor provisions will include any necessary measures with regard to the following forms of labor to be deployed under the investments. Project workers include MoE, MPWT and MoI staff and their consultants working directly for the Implementing Agencies (direct workers), employees of civil works contractor and



subcontractors (contracted workers) and primary supply workers (e.g., providers of construction materials). No community workers are anticipated for this project. The procedures will need to take into account the needs of women workers, including female apprentices and provide a safe working environment.

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 Labor Management Procedure and bidding documents. Strong emphasis will be placed on monitoring compliance, so the ESMF/ESIAs/ESMPs will include requirements on Occupational Health and Safety (OHS) 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. The contractor will develop a dedicated labor grievance mechanism for direct and contracted workers.

### **ESS3 Resource Efficiency and Pollution Prevention and Management**

This standard is relevant because the project, by its nature, will contribute to pollution prevention through improved solid waste management system to be established in Cambodia. Any pollution-related risks including but not limited to underground and surface water contamination, air pollution, water-borne diseases, and pests and disease-carrying vectors which might be associated with the phases of construction/rehabilitation/closure, will be addressed by the implementation of respective mitigation measures to be identified in the ESMF and further detailed in site-specific ESIAs/ESMPs. The ESIAs/ESMPs will consider, inter alia, impacts associated with closure, rehabilitation and construction and/or operation of the new sanitary landfills as part of the project Component 3, in line with WBG EHSO. Construction contractors will be required to prepare specific waste management and pollution prevention plans. The project implementation will require the use of resources such as water and energy. Site-specific ESIAs/ESMPs will define measures to ensure efficient use of resources. Also, the project design will provide for the collection of landfill gases. The project, by its design, is expected to reduce existing adverse impacts related to air and groundwater pollution by reducing gaseous emissions from landfills (smoke, CH<sub>4</sub>, H<sub>2</sub>S, CO<sub>2</sub>, etc) as well as the seepage of contaminated leachate into the groundwater as well as surface water bodies.

### **ESS4 Community Health and Safety**

The upgraded or new landfills and related facilities have a risk to be a source of annoyances for the local communities: odor generation and, potentially, noise, dust, air pollution) for the communities living nearby. In some project locations, community exposure to health problems like legacy issues on pollution of groundwater resources which may impact the quality of drinking water coming from wells. In addition, some project activities (e.g. closure of existing sites) may impact health and safety aspects for the trash-pickers. Because of that, a Community Health and Safety Plan (CHSP) with site-specific mitigation measures will need to be included in the respective ESIA/ESMP and ESMF, plus the Livelihood Restoration Plan (LRP) in case there are trash-pickers in the project area. Its results and recommendations will need to be considered in engineering design solutions.

Those measures shall be in line with the WB Environmental Health and Safety Guidelines (EHSO) and Good International Industrial Practices (GIIP). If well managed, this project has an extraordinary potential to improve the environmental, social, and health conditions of the communities living nearby existing dumpsites.



Besides, the project activities may increase heavy traffic, especially garbage trucks going back-and-forth to the landfill. To address road safety risks during construction and operation phases, the project's ESIA/ESMP and ESMF will include road traffic safety assessments and plans. They will pay special attention to children and sellers working close to the access roads.

The scale of labor influx and the installation of temporary workers' camps is unknown at this stage of project preparation. Based on the results of the WB's Gender-Based Violence (GBV) toolkit, the GBV risk for this project is likely to be "low". However, since this risk is unlikely but still possible, the project's ESIA/ESMP and the ESMF will include provisions to properly prevent and manage sexual harassment, GBV, and violence against children (VAC). Among others, it will include provisions to promote local recruitment of workforce plus mitigation measures such as a worker code 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 and human trafficking.

#### **ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement**

The Standard Operating Procedures (SOP) for Externally Financed Projects, finalized in 2018 by the MoF's General Department of Resettlement (GDR), will apply for this project. In many aspects, SOP and the ESS5 are mostly consistent, but gaps remain on compensation at replacement cost or full livelihood restoration. A recurrent problem in development projects in the country is land acquisition. Robust coordination at an early stage with GDR will be required.

Specific project locations are not known at this stage of project preparation. Even in Siem Reap (pilot municipality already selected), it is not clear yet if the project will rehabilitate the actual dump or create a new landfill. Choosing one or another option will have different implications in terms of land acquisition and economic displacement. As there may be some land taking and new sites identified, the project's ESMF will include a stand-alone section with a Resettlement Policy Framework (RPF). Site-specific Resettlement Plans (RP) will be needed if land acquisition is needed in any of the selected pilot cities (including Siem Reap).

During the field visits carried out during the pre-identification mission, it has been reported that in the current Siem Reap dumpsite, there are around 200 trash-pickers (some of them children). All of them are socially vulnerable. This number changes depending on the time of year. Some temporary structures (huts) are located inside the plot, but none of them are houses.

This project may cause the loss/reduction of the existing livelihood of vulnerable groups: trash-pickers plus other groups like informal recyclers that rely on the waste stream for their livelihood (e.g. small-scale waste buyers). Because of that, for the projects in Siem Reap and the additional city to be selected from the participating pilot municipalities (in case there are operating trash-pickers as well), once the specific project locations are defined (prior appraisal), its ESIA/ESMP will include as a stand-alone section a Livelihood Restoration Plan (LRP) mainly for the trash pickers.



The LRP for the trash-pickers will, among other activities: (1) carry out a census and socio-economic survey in line with the ESS5, (2) develop alternative livelihoods strategies, including the possibility of their integration into more formal labor arrangement in the new facilities funded by this project, and (3) propose tailored solutions for each of the children (under 18 years old) currently working part- or full-time as trash-pickers in the dump area. The Livelihood Restoration Plan will include specific engagement requirements to reach out to stakeholders to ensure accessibility and inclusiveness effectively. The LRP will also include a clear budget, timeframe, assigned responsibilities, monitoring and evaluation procedures for each of the proposed actions. Part of the proposed activities by the LRP will be funded by Component 2 of this project. The project's ESMF will include a stand-alone section with a Livelihood Restoration Framework (LRF) as well.

### **ESS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources**

This standard is relevant because the provinces for which investments are targeted, might be characterized by rich biodiversity resources (for example Siem Reap) which might be adversely impacts by the project activities. To address the requirements of this standard, site selection criteria will be developed, and the ESIA will carefully assess whether the proposed site is within or in the vicinity of the biodiversity conservation area. The ESMF and site-specific ESIA/ESMPs will have specific measures and provisions to be implemented by the Borrower and contractors. If so identified by respective ESIA/ESPMS, Biodiversity experts will be involved and the Biodiversity Management Plans might be prepared prior to the commencement of physical works. In the selection criteria for new landfill sites, locations adversely impacting critic / natural habitats will not be eligible. This will be a firm exclusion criteria.

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

Cambodia's regulatory framework related to Indigenous Peoples (2009 National Policy on the Development of Indigenous Groups) is mostly in line with ESS7.

The project's ESIA/ESMP and ESMF will assess if in the project area there is a presence in, or have collective attachment to the proposed project area, of Indigenous Peoples (IP) following the four criteria stated on ESS7: self-identification, collective attachment, customary institutions, and distinct language or dialect.

For the project in Seam Reap, the preparation of an Indigenous Peoples Development Plan (IPDP) is not expected since the presence of IPs in the project area has not been reported. However, a stand-alone IPDP prior appraisal stage will be required in case in the additional pilot city there is a presence of IPs. Free, Prior and Informed Consent (FPIC) may be required if para 24 of ESS7 applies.

The project's ESMF will also include a stand-alone section of an Indigenous Peoples Development Framework (IPDF), which will consist of a methodology for screening for the presence of ethnic groups in the area of influence of the potentially eligible project sites. And to assess the nature and degree of the expected direct and indirect economic, social, cultural, and environmental impacts on Indigenous Peoples who are present in or have collective attachment to the project area. In case it applies, special attention will be paid to ensure the active participation of the different resident IPs and representatives in the project's stakeholder engagement activities, and that any information shared is sensitive to their cultural needs. A stakeholder grievance mechanism will be prepared, included requirements to



allow indigenous peoples to submit any feedback or grievances. In case the project finally includes project activities in areas inhabited by IPs, preparation of specific IPDPs will be required.

**ESS8 Cultural Heritage**

This standard is relevant because there might be tangible and intangible cultural heritage within the sites identified as pilots for the project properties. This will be determined by respective ESIA/ESMPs, and if this is the case, respective mitigation measures will be proposed to avoid or minimize any impact on cultural heritage. Where tangible or intangible cultural heritage sites are known to be in the vicinity of the proposed landfill sites, those sites will be excluded from consideration. The ESMF will provide an overview of steps to be taken by the Borrower and other stakeholders in case of chance finds.

**ESS9 Financial Intermediaries**

FIs will not be part of the project

**C. Legal Operational Policies that Apply**

**OP 7.50 Projects on International Waterways**

No

The project will not affect the efficient utilization and protection of international waterways.

**OP 7.60 Projects in Disputed Areas**

No

The project will not finance any activities within territorially disputed areas.

**III. WORLD BANK ENVIRONMENTAL AND SOCIAL DUE DILIGENCE**

**A. Is a common approach being considered?**

No

**Financing Partners**

NA

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

**Actions to be completed prior to Bank Board Approval:**

- ESMF, including LMP and ES design standards, CHSP, RPF, LRF and IPDF, prepared , consulted and disclosed prior to appraisal;

- ESIA/ESMP, including LMP, CHSP, LRP for trash-pickers and RP if needed, for Siem Reap prepared, consulted and disclosed prior to appraisal;

Public Disclosure



- ESIA/ESMP -including LMP, CHSP, if needed RP/LRP, if needed IPDP- for additional pilot cities with known locations for landfill site developments foreseen to be funded in the first year(s) of implementation prepared, consulted and disclosed prior the beginning of the construction works;
- Stakeholder Engagement Plan (SEP) -including a Grievance Mechanism- presented, consulted and disclosed prior to appraisal;
- ESCP prepared and disclosed prior to appraisal.

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

- Preparation and disclosure of site-specific ESIAs/ESMPs, as per the ESMF provisions;
- ESF capacity building for the implementing agencies, preparation and implementation of relevant instruments per ESS requirements (i.e. RAP, IPDP, ESIA/ESMP, ESMF, SEP, etc.);
- Allocation of adequate resources (human, financial) for the implementation of relevant ESF instruments;
- Operationalization and effective implementation of GRM.

**C. Timing**

**Tentative target date for preparing the Appraisal Stage ESRS**

25-Nov-2020

**IV. CONTACT POINTS**

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**Borrower/Client/Recipient**

Borrower: Ministry of Economy and Finance (MEF), KINGDOM OF CAMBODIA

**Implementing Agency(ies)**

Implementing Agency: Ministry of Public Works and Transport

Public Disclosure



Implementing Agency: Ministry of Environment

Implementing Agency: Ministry of Interior

**V. FOR MORE INFORMATION CONTACT**

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**VI. APPROVAL**

Task Team Leader(s):	Katelijan Van den Berg, Andre A. Bald
Practice Manager (ENR/Social)	Susan S. Shen Recommended on 01-Apr-2020 at 13:06:31 EDT
Safeguards Advisor ESSA	Peter Leonard (SAESSA) Cleared on 02-Apr-2020 at 12:40:13 EDT