



Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 23-Feb-2023 | Report No: PIDA30164



BASIC INFORMATION

A. Basic Project Data

Country Cambodia	Project ID P170976	Project Name Cambodia: Solid Waste and Plastic Management Improvement Project	Parent Project ID (if any)
Region EAST ASIA AND PACIFIC	Estimated Appraisal Date 20-Feb-2023	Estimated Board Date 28-Apr-2023	Practice Area (Lead) Environment, Natural Resources & the Blue Economy
Financing Instrument Investment Project Financing	Borrower(s) Kingdom of Cambodia	Implementing Agency Ministry of Interior, Ministry of Environment, Ministry of Public Works and Transport	

Proposed Development Objective(s)

To improve solid waste and plastic management in selected areas, and in case of an Eligible Crisis or Emergency, respond promptly and effectively to it.

Components

Institutional Strengthening for Solid Waste and Plastic Management
 Integrated Solid Waste and Plastic Management, Planning, Monitoring, and Capacity Building for Participating Provinces and Municipalities
 Solid Waste and Plastic Management Infrastructure
 Contingent Emergency Response

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	67.30
Total Financing	67.30
of which IBRD/IDA	60.00
Financing Gap	0.00



DETAILS

World Bank Group Financing

International Development Association (IDA)	60.00
IDA Credit	60.00

Non-World Bank Group Financing

Counterpart Funding	4.30
National Government	4.30
Trust Funds	3.00
PROBLUE MDTF	3.00

Environmental and Social Risk Classification

High

Decision

The review did authorize the team to appraise and negotiate

Other Decision (as needed)

B. Introduction and Context

Country Context

- Cambodia has experienced remarkable economic growth over the past two decades, attaining lower-middle-income status in 2015 and aspiring to attain upper-middle-income status by 2030.** Tourism, real estate development, garment manufacturing, and agriculture were the main drivers of growth that sustained an average gross domestic product (GDP) growth rate of 7.6 percent during 1995 and 2019. The poverty headcount ratio falling from 33.8 percent to 17.8 percent between 2009 and 2019¹. The COVID-19 shock reversed two years of Cambodia’s poverty reduction progress, pushing around 460,000 individuals into poverty². The 2022 growth forecast is 4.8 percent and growth is expected to further increase in subsequent years though not to the pre-pandemic levels³.
- The continuous growth of municipalities and increasing urbanization require higher levels of infrastructure investments and municipal service levels to sustain economic growth.** Despite improvements in public infrastructure, municipalities generally suffer from under-investments in municipal services to keep pace with

¹ Ministry of Planning. 2021. Poverty in Cambodia -Setting the poverty line. Phnom Penh.

² World Bank. 2022. Program Document for the first Cambodia Growth and Resilience Development Policy Financing (draft)

³ World Bank (2022). World Bank East Asia and Pacific Economic Update: Reforms for Recovery. Washington, DC. World Bank: <https://openknowledge.worldbank.org/handle/10986/38053>. See Section 2 for a detailed discussion on baseline and downside scenarios.



increasing urbanization and population growth.⁴ The lack of adequate investments in municipal infrastructure and services, combined with limited urban development planning and weak institutional capacity, provides a significant risk of hampering economic growth in the country.

- 3. Inadequate management of solid waste in many areas in Cambodia contributes to plastic leakage into its environment, waterways, and eventually the oceans.** The Mekong has been identified one of the top 10 major rivers globally that are estimated to collectively carry up to 95 percent of plastic to the oceans⁵. There is no data on marine plastic leakage at a country scale in Cambodia; however, the high levels of plastic consumption paired with SWM deficiencies, leave little doubt that substantial amounts of plastic end up in Cambodia's environment and rivers. With Phnom Penh and other major municipalities situated along the Mekong River or its tributaries, Cambodia's cities are considered major sources of plastic pollution in the Mekong—and ultimately the South China Sea. In Siem Reap, plastic bags were responsible for 60 percent of the waste obstructing wastewater runoff⁶. Studies conducted in Sihanoukville and Koh Rong and Koh Sdach islands revealed that plastic accounted for 80 percent of coastal pollution⁷.

Sectoral and Institutional Context

- 4. Solid waste generation has increased substantially over the years as a result of economic growth, urbanization, increase in tourism, and changing lifestyles.** Reliable waste data for Cambodia are missing and are often inconsistent and unverifiable. Total waste generation was estimated to be 4 million tons⁸ per year, equal to 0.73 kg per person per day⁹. Due to poor collection and handling, municipal solid waste (MSW) is typically disposed of at open dumpsites, with some 164 dumpsites operating countrywide in 2021¹⁰. In urban centers, 50-60 percent of the waste is estimated to be organic, with plastic reaching over 20 percent and increasing in share^{11 12}.
- 5. Inadequate solid waste management (SWM) is associated with a variety of social, environmental and economic impacts.** Uncollected waste is often openly burned, informally buried, or disposed of in the environment and waterways, leading to increased pest populations, disease outbreak and air pollution. Uncollected waste also lowers property values, damages tourism attractiveness and increases flooding by obstructing canals and drains. Ecosystems are damaged from uncontrolled waste leakage. A functioning SWM system is critical to protect sensitive tourism assets and attractions, estimated to have accounted for about 18.7 percent of GDP in 2019.
- 6. The Royal Government of Cambodia (RGC) acknowledges that poor SWM is a critical bottleneck to the country's economic and social development and improving SWM is therefore high on the national agenda.**

⁴ <https://www.statista.com/statistics/455789/urbanization-in-cambodia/>

⁵ <https://www.sea-circular.org/news/world-environment-day-2020-plastic-pollution-threatens-marine-biodiversity-in-south-east-asia/>.

⁶ EU. 2019. *Circular Economy and Plastics: A Gap-Analysis in ASEAN Member States*.

⁷ Fauna and Flora International. 2018. *Sihanoukville Plastics Study*.

⁸ Ton is metric tonne.

⁹ EU (European Union). 2019. *Circular Economy and Plastics: A Gap-Analysis in ASEAN Member States; World Bank; 2020. What a Waste 2.0*. Per person waste generation in line with countries of similar economic status.

¹⁰ Pheakdey, D.V.; Quan, N.V.; Khanh, T.D.; Xuan, T.D. Challenges and Priorities of Municipal Solid Waste Management in Cambodia. *Int. J. Environ. Res. Public Health* 2022, 19, 8458. <https://doi.org/10.3390/ijerph19148458>.

¹¹ World Bank staff calculations based on the project preparation pre-feasibility .

¹² Pheakdey et al. 2022.



Cambodia's *Law on Environmental Protection and Natural Resource Management* (1996) designates the Ministry of Environment (MOE) as the lead agency for SWM policy making, regulations, and sector coordination. *Sub-Decree No. 113* (2015) is the country's primary legal basis for municipal SWM, which aims to enhance the effectiveness, transparency, and accountability of waste services and protect public health and environment in Cambodia. The MOI is the key agency for supporting the delegation of urban SWM to municipal, city and district administrations and the MPWT is the key agency for public works construction. In addition, the *National Waste Strategy and Action Plan for Cambodia (2018–2030)* defines a roadmap for improving waste management practices.

7. **Despite the efforts to improve solid waste and plastic management, proper waste collection, recovery, treatment, and disposal remain a challenge in Cambodia.** The *Waste Management Strategy and Action Plan of Phnom Penh 2018-2035* reports an average citywide collection rate of 75 percent¹³. World Bank SWM assessments in secondary municipalities such as Siem Reap, Kandal, and Kampong suggest collection rates are often below 50 percent for households and mostly limited to urban centers and businesses. Organized solid waste collection outside of urban centers is almost non-existent. Disposal of waste is largely through uncontrolled dumpsites.
8. **The lack of appropriate resourcing and capacity at the municipal level to manage SWM is another major constraint of the sector.** The SWM sector requires substantial investments to enable proper waste services. High operating costs make it a difficult sector to operate and grow a viable business¹⁴. Establishing reliable revenue streams is thus regarded as a key priority, aimed at minimum towards operating cost financing/recovery. In addition, local governments also lack the staffing and technical capacity to plan and regulate waste service delivery.
9. **The privatization of waste services with deficient regulatory frameworks, policies, and enabling conditions has limited the efficacy of waste management efforts.** In Cambodia, waste services are fully outsourced to the private sector with limited or no regulatory oversight. Contracts do not include key performance benchmarks and indicators and lack clarity on service areas, equipment requirements, and many other essential contractual conditions, standards and payments. Service providers collect waste fees, but do not have the ability to enforce fee collection. They consequently focus on more profitable customers such as institutions, the commercial sector, and wealthier communities. Typically, fee collection is typically executed by the municipality, however, it needs to be supported by the establishment of a financial management (FM) and waste accounting system.
10. **The waste recovery and recycling industry in Cambodia is dominated by the informal sector.** In urban areas, around 20-30 percent of waste is estimated to be recyclable¹⁵. Cambodia has few small-scale recycling factories and exports most recyclable waste to Thailand and Vietnam, although these countries are now restricting plastic waste imports. Despite the high share of organic waste, ranging between 40 to 60 percent, composting facilities are lacking. Waste pickers are estimated to be responsible for 8 percent of total waste collection¹⁶. Countrywide, it is estimated that nearly 3,000 informal waste pickers operate in open dumps¹⁷.

¹³ Phnom Penh Waste Management Strategy and Action Plan of Phnom Penh 2018–2035.

¹⁴ World Bank, *What a Waste 2.0*, 2020. Solid Waste Management is labor-intensive and requires operation of environmental mitigation measures such as leachate treatment and landfill gas capture.

¹⁵ World Bank staff estimates.

¹⁶ <https://cambodiainvestmentreview.com/2022/08/15/2022-waste-summit-highlights-the-informal-sector-of-cambodias-waste-management-ecosystem/>.

¹⁷ <https://globalrec.org/law-report/cambodia/>.



Moreover, waste picking at open dumpsites traditionally attracts disadvantaged and vulnerable groups, including women and children. Their contributions to the recovery and recycling of valuable plastic and other materials in the face of underdeveloped formal systems are largely overlooked and unsupported¹⁸.

11. **The drastic increase of single-use plastics (SUPs) puts immense pressure on waste management services and requires urgent policy measures to reduce plastic pollution through reduction, reuse, and recycling.** While exact numbers are absent, consumption of SUPs has significantly increased in Cambodia over the last decade. Plastic waste is making up 20 percent of total garbage in urban areas¹⁹. Around 10 million plastic bags are used in Phnom Penh every day, and urban Cambodians use more than 2,000 plastic bags per person annually²⁰. In some areas, plastic waste makes up 80 percent of the debris found on Cambodia's beaches²¹.
12. **A World Bank analysis²² highlights that a few SUP items comprise the bulk of the waste that ends up in the environment, and by targeting a few selected plastic items through specific policy actions, plastic pollution can be significantly reduced in Cambodia.** The study shows that the top 10 plastic items leaking into the environment constitute over 70 percent of total plastic pollution, with food wrappers (PP), shopping bags (HDPE and LDPE), drinking cups and beverage bottles (PET), and straws (PP)²³ being the dominant items. Plastic bags alone account for over 30 percent of plastic pollution.
13. **Priorities for the improvement of SWM in Cambodia include** (a) strengthening of institutional capacity, policies, and regulations at the national and local government levels in line with Sub-Decree No. 113; (b) investments for collection, transport, sorting/treatment, and disposal at sanitary landfills; (c) enhancing private sector performance for waste services and enabling conditions; (d) improving waste fee schemes to increase financial sustainability of SWM; (e) integration of waste pickers in the solid waste sector; and (f) regulation of priority SUPs to reduce waste, mitigate environmental pollution, and increase recyclable materials recovery.
14. **The Solid Waste and Plastic Management Improvement project has been designed to address these priorities at the national and sub-national levels.** The project aims to strengthen the institutional capacity at national and sub-national level, enhance the performance of the private sector for waste services, and improve waste fees systems to sustain improved environmentally, financially and socially sustainable solid waste operations. Using qualifying criteria to select municipalities to participate in the project ensures readiness of these municipalities to sustain investments. A flexible approach allows for adequate support to municipalities, depending on available capacities and infrastructure. Support for additional municipalities and additional capacities could increase over time.
15. **The project is the first among the national level projects in the World Bank-financed Southeast Asia Regional Program on Combating Marine Plastics (SEA-MAP)²⁴ series of projects (SOP) to support marine plastic solutions at the national level.** Marine plastic pollution is a transboundary issue, with shared river systems acting as conduits for plastic waste, and shared coastlines receiving plastic waste carried by ocean

¹⁸ <https://cambodianess.com/article/waste-collectors-cambodias-recycling-heroes>.

¹⁹ <https://www.khmertimeskh.com/50648444/ministry-warns-of-rise-in-single-use-plastic-waste-2/>.

²⁰ <https://www.phnompenhpost.com/opinion/cambodias-plastic-problem>.

²¹ <https://asiatimes.com/2020/12/japan-undp-help-cambodia-reduce-marine-plastic-litter/>.

²² World Bank, A Plastics Action Plan and Roadmap for Cambodia (draft), 2022.

²³ HDPE = High Density Polyethylene; LDPE = Low Density Polypropylene; PET = Polyethylene Terephthalate; PP = Polypropylene. World Bank, Plastics Action Plan and Roadmap for Cambodia, draft, 2022.

²⁴ Approved in June 2022, the SEA-MAP supports marine plastic solutions in Southeast Asia at the regional level, and national plastic-related investments and policies.



currents. Accordingly, single country solutions to manage marine litter carry the risk of not being sufficient; there is a need for regional collaboration to combat marine plastic pollution in critical countries with mismanaged plastic waste. The development objective of the SEA-MAP program is to reduce plastic consumption, increase recycling, and minimize leakages to prevent land- and sea-based marine plastic pollution in Southeast Asia. The program follows a SOP approach under two pillars: Pillar 1 includes a US\$20 million regional IDA-financed project that will help strengthen institutional capacity, harmonize standards and guidelines, and promote innovative financing and technological solutions. Pillar 2 focuses on plastic-related investments and policy support at the national level. The regional IDA-financed SEA-MAP project under Pillar 1 was approved in June 2022. Cambodia is participating in the Regional IDA Window program on reducing marine plastics, along with ASEAN and Lao PDR.

C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

16. To improve solid waste and plastic management in selected areas, and in case of an Eligible Crisis or Emergency, respond promptly and effectively to it.

17. PDO Level Indicators

- (a) Proportion of population in selected areas with regular household waste collection (percentage)
- (b) Landfill disposal capacity operational per defined criteria (cubic meters [m³])
- (c) Plastics policies, guidelines, or standards developed (of which in alignment with the ASEAN Regional Action Plan) (number)
- (d) Municipal solid waste (MSW) recovered, recycled, composted and/or treated with other techniques in selected areas (percentage)

18. Direct and indirect project beneficiaries of the project are the inhabitants of Cambodia, approximated to be 16 million according to the last census²⁵. Benefits will be realized from improved policies, regulations, monitoring and enforcement, legislation, strengthened institutions, and increased capacities of SWM departments. Direct beneficiaries from improved waste management services and increased environmental sustainability are inhabitants of participating municipalities and districts under components 2 and 3. Provisionally, approximately 530,000 residents of Siem Reap municipality and its surrounding districts (Puok and Dam Daek) and communes (Sasar Sdam and Chan Sar) are estimated to directly benefit from waste infrastructure investments in the collection, treatment, transport, and disposal under component 3 and increased capacities at the provincial level under component 2. For the other two Provinces, the estimated beneficiaries are as follows: (a) Kampong Speu, specifically: Chbar Mon and Samraong Tong (105,000), (b) Kandal: specifically: Ta Khmau (140,000), (c) Battambang: specifically: Bavel and Thma Koul districts (370,000) and (d) Sihanoukville, specifically tourism hotspots and islands (200,000). There are significant regional and global beneficiaries of improved environmental conditions resulting from decreases in (plastic) waste polluting waters and air pollution and GHG releases.

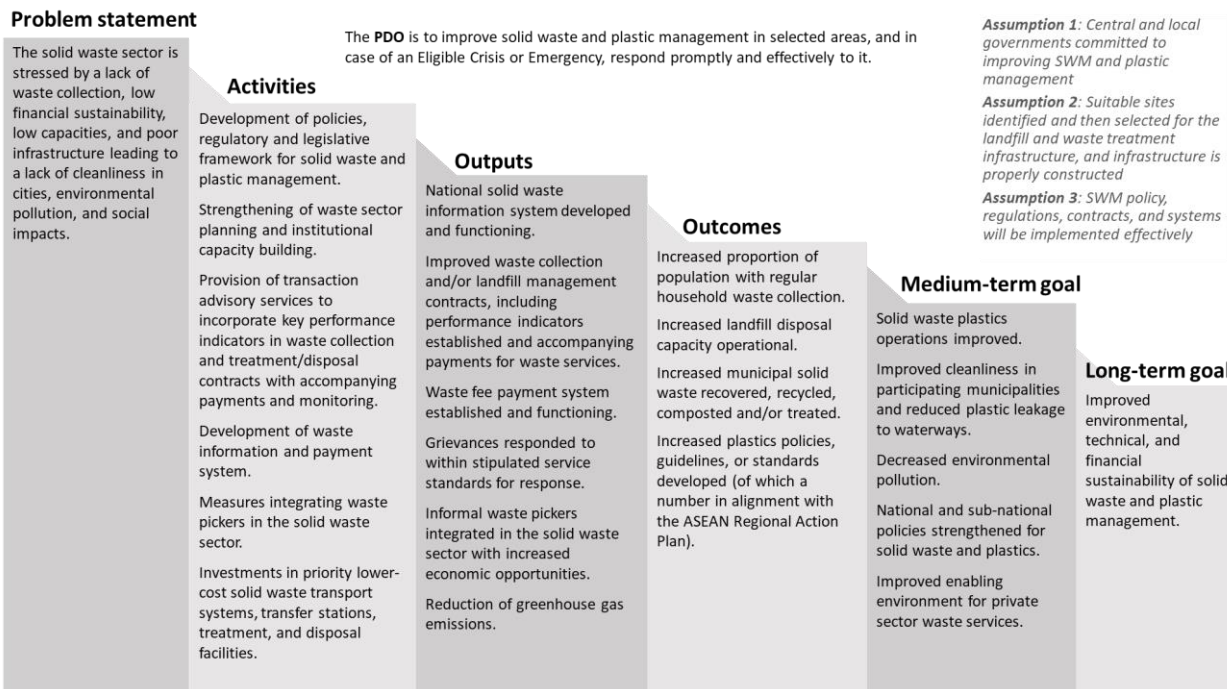
²⁵ <https://www.nis.gov.kh/index.php/en/15-gpc/79-press-release-of-the-2019-cambodia-general-population-census>.



- 19. **Roughly 18 percent of the population were identified as poor and are likely to experience significant positive impacts of collected waste, decreased waste burning, and reduced pollution.** Housing areas near existing dumpsites typically comprise higher than average poverty rates and will be key beneficiaries of improvements to waste disposal sites. Job opportunities along the SWM chain, and particularly at landfill sites, will arise particularly for nearby residents. Improved solid waste collection and cleanliness are also anticipated to benefit the tourism industry, which supports the majority of the jobs in Siem Reap.
- 20. **Women and vulnerable groups** are currently involved in informal (and formal) waste collection, sorting, and recycling activities at open dumpsites. Socioeconomic surveys and gender (gap) assessments undertaken for waste pickers in Siem Reap showed that the majority were female (64 percent). There were also children present. Waste pickers currently work at the dumpsite under hazardous and unsanitary conditions without adequate protection and safety. There is specific focus on waste pickers who are female to ensure that they benefit from skills development and training opportunities as well as support for children to stay in school.

Key Results

- 21. **Key project results are reflected in the Theory of Change.** ToC built around the PDO underpins an integrated approach to addressing solid waste and plastic leakage into the environment through policies, regulations, and capacity building at the national and local government levels and improvement of solid waste and plastic management and investments in participating provinces and municipalities. It includes improvements to the whole system of waste and plastic management in terms of financial and environmental sustainability in key urban regions in Cambodia, integration of urban and rural SWM systems, and a balance between investments in infrastructure and technical assistance/capacity building.





D. Project Description

22. **The project will support** policy development, regulatory improvements, and monitoring tools and systems at the national level that deal with waste management. At the sub-national level, the project will help enable the local governments to manage solid waste services in line with international good practice²⁶, through improvements to waste collection services, treatment and disposal, and related infrastructure investments.

The project is designed along four components.

Component 1. Institutional Strengthening for Solid Waste and Plastic Management – implemented by MOE

23. **Sub-component 1A: Strengthening of institutions, legislation, policies, and regulations for solid waste and plastic management** The sub-component will finance technical assistance to (a) strengthen national regulations for solid waste planning, management and waste services; (b) establish national landfill guidelines; (c) support public awareness, outreach, training, citizen engagement; and (d) strengthen plastics policies and regulations on reduction, recovery, and recycling.
24. **Sub-component 1B: Strengthening of waste information, cost calculations of solid waste services, and reporting systems.** This sub-component will finance technical assistance and goods to: (a) develop guidelines for financial planning and waste fee setting; and (b) strengthen the national waste information database. This sub-component will help to increase cost-recovery of waste services and strengthen the enabling environment for (private) sector service delivery.

Component 2: Integrated Solid Waste and Plastic Management, Planning, Monitoring, and Capacity Building for Participating Provinces and Municipalities - implemented by MOI

25. Component 2 will provide the support to currently eligible provinces and municipalities Siem Reap, Kampong Speu, and Kandal, Battambang and Sihanoukville.
26. **Sub-component 2A: Supporting capacity of participating provinces and municipalities in managing and monitoring waste services and improving solid waste and cleanliness conditions.** This sub-component will finance technical assistance to support MOI and municipalities to improve management of waste services; reduce plastics leakage; and support vulnerable groups, specifically (female) waste pickers and children.

Sub-component 2B: Providing transaction advisory services and developing geospatial waste information systems to enable improved waste collection and disposal services. This sub-component will finance technical assistance and goods. Transaction advisory services will support MOI and municipalities in establishing adequate waste service contracts. A municipal waste information system will be developed.

Component 3: Solid Waste and Plastic Management Infrastructure – implemented by MPWT

27. **The component supports** reducing waste (including plastic) leakage to the environment, improving resource efficiency and reducing environmental pollution in participating provinces and municipalities. It focuses on: (a) increasing landfill disposal capacities; (b) reducing E&S impacts of waste disposal and disposal sites; (c)

²⁶ The waste management system should be guided by appropriate legislation and controlled at the national, regional, and local levels, while local governments should be responsible for actual solid waste service delivery and implementation.



reducing the volume of GHG emissions from the solid waste sector; and (d) increasing the quantity of waste and plastic recovered, recycled, and composted.

28. **The project has adopted a framework approach for this component to accommodate site selection for waste infrastructure development during the first sixteen months of project implementation.** An Environmental and Social Management Framework (ESMF) and a Stakeholder Engagement Plan (SEP) have been prepared, together with other applicable ESF documents.
29. **Preliminary eligible provinces that are envisaged to receive investment financing under component 3** are (a) Siem Reap, (b) Kampong Speu, and (c) Kandal. For (d) Battambang and (e) Sihanoukville, landfills were already financed from other financing sources, but the project could support other infrastructure such as transfer stations and materials recovery facilities (MRFs) in these two provinces.
30. **Every province receiving financing under component 3 will be supported with related technical assistance and capacity building under component 2** to increase the quality of solid waste services and to enhance the sustainability of investments.
31. **Site suitability analysis.** For possible landfill site options, a site suitability assessment was undertaken following key parameters: (a) environmental and natural conditions criteria, (b) social criteria and public acceptability, (c) transport and logistical aspects; (d) presence of available infrastructure, and (e) land ownership characteristics²⁷. Based on the analysis, site suitability maps were produced for each municipality indicating potentially suitable and unsuitable landfill site areas, followed by field visits and site assessments. For Siem Reap, a preliminary Environmental and Social Impact Assessment has been prepared and consulted.
32. **This component will finance investments in solid waste infrastructure and equipment for transfer, recovery, treatment, and disposal of waste.** Investments in landfills will include closure (including remediation) or rehabilitation and extension of existing dumpsites to minimize their current E&S impacts. Landfills supported under the project will have sufficient capacity for a 10-year life span and potential site expansion for a 20-year life span. Investments will include leachate and landfill gas capture and treatment systems, as well as other landfill infrastructure as appropriate to the site. Investments in transfer stations will increase collection efficiencies and increase landfill coverage areas to enable regional landfills serving municipalities and neighboring districts. This regional landfill concept will ensure collaboration with more (rural) districts, thereby expanding waste coverage areas and the cost-effectiveness of landfills.
33. **Investments aimed at waste reduction and recovery will include** MRFs, composting facilities and, possibly, refuse-derived fuel (RDF) production. These facilities will enable (a) separation of recyclable material from mixed waste; (b) recovery and reuse of recyclable materials; (c) continuation of waste-based livelihoods; (d) reduction in volume of waste disposed of in landfills; (e) production of compost and, possibly, biogas; and (f) reduction in GHG emissions. Such facilities will be installed at transfer stations and/or landfill sites.

²⁷ These parameters are based on criteria from the MOE and the World Bank Environment, Health and Safety Guidelines for Waste Management Facilities.



34. The project supports the updated nationally determined contribution (NDC)²⁸ through the reduction of methane²⁹. Cambodia has made commitments in its updated NDC to reduce GHG emissions by 42 percent by 2030 compared to a business-as-usual scenario. 315,000 tons of CO2-equivalent over the six year project implementation period can be expected particularly as a result of reduction in waste dumping, installation of gas collection systems at landfills, and treatment of organic waste.

Legal Operational Policies

	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

Summary of Assessment of Environmental and Social Risks and Impacts

35. The environmental risks of the project are rated as high. The project will address serious environmental concerns related to the presence of the existing dumpsites which are the major source of contamination within the project area. Currently, the dumpsites have no engineered cells, experience uncontrolled leachate discharge and GHG (methane) emissions, practice open burning of mixed types of wastes. The dumpsites cause severe contamination of soil, surface and underground waters, and pose a serious risk to the environment and health of workers, waste pickers and surrounding communities. The project activities might cause the following potential adverse environmental impacts: (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; (iii) accumulation of construction wastes and (iv) failure to ensure occupational health and safety. There is also a risk to have impact on biodiversity and cultural heritage in case of improper landfill siting to be avoided by introduction of respective exclusion criteria when identifying each project site.

36. The social risks of the project are rated as high and are related to the following potential adverse social impacts: (i) potential conflicts with communities who may disagree to landfill construction and/or waste pickers; (ii) risk of impacts on vulnerable groups (mainly waste-pickers) and implementation of support measures for children; (iii) 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; (v) community exposure to health problems like legacy issues on pollution of water resources which may impact the

²⁸ An NDC is a climate action plan to cut GHG emissions and adapt to climate impacts. Each party to the Paris Agreement is required to establish an NDC and update it every five years.

²⁹ Methane is a powerful but short-lived climate pollutant that accounts for about half of the net rise in global average temperature since the pre-industrial era. Rapidly reducing methane emissions from energy, agriculture, and waste can achieve near-term gains in this decade. According to the Intergovernmental Panel on Climate Change, methane emissions must be cut with at least 30 percent by 2030 to keep the 1.5°C temperature limit within reach. Cambodia has joined the Global Methane Pledge which was launched at the 2021 United Nations Climate Change Conference. <https://www.globalmethanepledge.org>.



quality of drinking water coming from wells; (vi) temporary labor influx of workers, which might increase the risk of gender-based violence; (vii) some potential for land taking.

E. Implementation

Institutional and Implementation Arrangements

37. **The project will be implemented by existing sector institutions in alignment with sector institutional mandates and in accordance with the government's Standard Operating Procedures on project management for all externally financed projects/programs in Cambodia³⁰.** An inter-ministerial steering committee (SC) will be established to ensure inter-ministerial collaboration and coordination across all components and with local administrations. The SC will be chaired by the MOI and comprise high-level representation from the MOE, MPWT, and Ministry of Economy and Finance (MEF) and respective governors and mayors of the project provinces and cities. The MOI will be the executive agency (EA) of the project providing overall coordination, and (consolidated audit) reporting. According to the Standard Operating Procedures on project management for all externally-financed projects, when more than one line ministry is involved in the implementation of a project, one line ministry is designated as the EA while the others are the implementing agencies (IAs). Project management units (PMUs) will be established at the national level within the MOE, MOI, and MPWT that will be responsible for the implementation of the respective components that they are leading as IAs and in line with their respective legal mandates. Technical Support Units will be established in each participating municipality under PMU-2, which will also support PMU-1 and PMU-3.

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³⁰ Royal Government of Cambodia, Standard Operating Procedures on Project Management for All Externally Financed Projects/Programs in Cambodia, 2019.



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