

Low Carbon Cities and Carbon Market Development Project (LCCP)

Project Operations Manual

April 22, 2026

Annex F: Environmental and Social Safeguards Guidelines

The Export-Import Bank of Thailand (EXIM), the Borrower, and Krungthai Bank (KTB), the Project Implementing Entity (PIE) will implement the Low Carbon Cities and Carbon Market Development Project (LCCP), the Project. The Borrower will ensure that the Project, and the PIE will ensure that Part 2 of the Project, is carried out in accordance with the World Bank Environmental and Social Framework (ESF), relevant Environmental and Social Standards (ESSs) and this Environmental and Social Commitment Plan (ESCP).

This Annex outlines the implementation arrangements, clearly defines the roles and responsibilities of the Borrower and PIE, and offers comprehensive guidance for ESCP action items. The subsequent sections present the duties of the Borrower and PIE in distinct subsections to facilitate easy reference.

F.1. Roles and responsibilities of EXIM

EXIM has a robust Environmental and Social Management System (ESMS) including Sustainable Development Policy¹, Environmental and Social procedures and organizational structure², and stakeholder engagement². Most of EXIM's ESMS components are in line with WBG ESF requirements except for the following:

¹ Available at <https://www.exim.go.th/th/Sustainable-Development-Policy.aspx>

² Sustainability Report, 2024. Available at <https://www.exim.go.th/en/About-Exim-Thailand/Sustainable-Development/Sustainability-Report/%E0%B8%A3%E0%B8%B2%E0%B8%A2%E0%B8%87%E0%B8%B2%E0%B8%99%E0%B8%84%E0%B8%A>

[Report/%E0%B8%A3%E0%B8%B2%E0%B8%A2%E0%B8%87%E0%B8%B2%E0%B8%99%E0%B8%84%E0%B8%A](https://www.exim.go.th/en/About-Exim-Thailand/Sustainable-Development/Sustainability-Report/%E0%B8%A3%E0%B8%B2%E0%B8%A2%E0%B8%87%E0%B8%B2%E0%B8%99%E0%B8%84%E0%B8%A)

[7%E0%B8%B2%E0%B8%A1%E0%B8%A2%E0%B8%87%E0%B8%A2%E0%B8%99%E0%B8%9B-2567.aspx](https://www.exim.go.th/en/About-Exim-Thailand/Sustainable-Development/Sustainability-Report/%E0%B8%A3%E0%B8%B2%E0%B8%A2%E0%B8%87%E0%B8%B2%E0%B8%99%E0%B8%84%E0%B8%A)

- i) Sub-project risk categorization
- ii) Exclusion list for sub-project screening

- iii) Requirements for sub-project level ES instruments (ESMP/ESCOP, etc.), iv) Monitoring and supervision, and
- v) Reporting, including incident reporting.

These additional requirements are added into EXIM’s existing ESMS and a “Project ESMS” is developed as described in following. EXIM will adopt and use Project ESMS during implementation of the LCCP.

THE PROJECT ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM

List of Acronyms

Acronym	Meaning
BMA	Bangkok Metropolitan Administration
CTC	Clean Tech Companies
E&S	Environment and Social
ESCOP	Environmental and Social Codes of Practice
ERPA	Emission Reduction Purchase Agreement
ESAP	Environmental and Social Action Plan
ESCP	Environmental and Social Commitment Plan
ESDD	Environmental and Social Due Diligence
ESF	Environmental and Social Framework
ESG	Environment, Social and Governance
ESHS	Environmental, Social, Health and Safety
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management Systems
ESS	Environmental and Social Standards
EXIM	Export Import- Bank of Thailand

FI	Financial Intermediary
GIIP	environmental, social, health, and safety
GM	Grievance Mechanism
GRS	Grievance Redress Service
IEAT	Industrial Estate Authority of Thailand
IFC	International Finance Corporation
KTB	Krungthai Bank
LCCP	Low Carbon Cities and Carbon Market Development Project
LTA	Lender's Technical Advisor
MoF	Ministry of Finance
OHS	Occupational Health and Safety
PIE	Project Implementing Entity
PSO	Public Sector Organization
SBN	Sustainable Banking Network
SDG	Sustainable Development Goals
SEA/SH	Sexual exploitation and abuse/sexual harassment
SEP	Stakeholder Engagement Plan
SOGI	Sexual Orientation and Gender Identity
SROI	Social Return on Investment
STEP	Systematic Tracking of Exchanges in Procurement
WBG	World Bank Group

Introduction

This Environmental & Social Management System (ESMS) is for Low Carbon Cities and Carbon Market Development Project (LCCP) (“the Project”) and is financed by the World Bank as a Financial Intermediary (FI) operation in which Export Import- Bank of Thailand (EXIM) is the borrower (“the Borrower”) and implementing FI, and the Ministry of Finance (MoF) provides a sovereign guarantee.

The Project is designed to address the underlying barriers that prevent Thailand from scaling distributed low-carbon investments in cities. Public entities face obstacles in mobilising capital to finance economically and financially viable low-carbon upgrades, primarily due to fiscal and capital constraints, and both public and private actors lack a national system that can verify, aggregate, and monetise emission reductions. The Project responds by introducing a replicable financing model for upgrading public assets and by establishing a national mechanism that can measure and convert verified emission reductions into predictable financial value. These interventions are expected to generate measurable energy savings and emission reductions, demonstrate the viability of standardized approaches, and build the foundation for a scalable and financially sustainable model for urban decarbonization. Over time, these results are expected to support broader systemic transformation that extends beyond the project life.

The purpose of the Project ESMS is to ensure that sub-projects deliver climate benefits while preventing, minimizing, or mitigating adverse E&S risks, and to assign clear accountability for compliance in line with E&S Policy (see Annex I). The Project E&S supplementary gap filling measures applies to all subprojects financed or on financed- by EXIM under the LCC Project.

Implementation is anchored in the World Bank Environmental and Social Framework (ESF), including the specific requirements for FI operations under ESS9 (for Component 1 activities), and is complemented by Project’s Environmental & Social Commitment Plan (ESCP) and Stakeholder Engagement Plan (SEP), and all relevant national permits and regulations.

Institutional roles and responsibilities.

Below summarises the roles for each actor under the Project:

- EXIM: acting as Borrower and FI, operates the ESMS, screens and classifies all candidate subprojects, determines the proportional E&S instruments to be prepared, incorporates E&S covenants in sub-loan agreements, supervises implementation, maintains the Project grievance mechanism (GM), and reports to the World Bank in accordance with the ESCP.
- MoF: fulfils the functions of guarantor and provides policy level oversight; it does not undertake day-to-day implementation but may receive copies of periodic reports as stipulated in the Guarantee Agreement.
- PSOs: are responsible for site access and permitting, for conducting local stakeholder engagement consistent with the SEP, and for supervising contractor E&S performance during construction and operation of public assets.

- Clean tech service providers: and their contractors prepare and implement sites specific Environmental and Social Management Plans (ESMPs) or Environmental and Social Codes of Practice (ESCOPs), together with Occupational Health and Safety (OHS) plans, maintain a dedicated labor grievance mechanism, submit periodic environmental, social, health, and safety (ESHS) reports, and comply with codes of conduct that address risks of sexual exploitation and abuse/sexual harassment (SEA/SH).
- Lender's Technical Advisor (LTA) that is appointed by EXIM to review sub-loans and monitor E&S performance, among others, of the sub-loan beneficiaries, in accordance with terms of reference that have been approved by the Bank, that are consistent with the ESSs and will require the LTA to participate in training on the ESSs.

Objectives

The Project ESMS is set out to identify, assess, manage, and monitor the E&S risks and impacts of subprojects on an ongoing basis under the Project, taking into account the national and local laws and regulations in Thailand and the requirements of the World Bank. As such the key objectives are:

- To integrate E&S considerations into the lifecycle of loans to eligible sub-projects (sub-borrowers) to ensure that E&S risks and impacts are consistently identified, screened, and managed;
- To set out the responsibilities for E&S risk and impact identification, assessment, decision-making, as well as monitoring and escalation; and
- To work with sub-borrowers to manage E&S risks and impacts and support ongoing capacity building in the implementation of the Project.

Applicable Standards and Guidelines

The following are the standards at a minimum that the ESMS will apply to all transactions:

- Exclusion List (see Annex F-1: Exclusion List);

Applicable local, provincial and national laws and regulations (see Moderate Risk Activities

The potential adverse risks and impacts on human populations and/or the environment are not likely to be significant. This is because the activity is not complex and/or large, does not involve activities that have a high potential for harming people or the environment, and is located away from environmentally or socially sensitive areas. The activity's risk and impacts can be easily mitigated in a predictable manner.

Characteristics may include:

- Predictable and expected to be temporary and/or reversible;
- Low in magnitude;
- Site-specific, without likelihood of impacts beyond the actual footprint of the activity; and

- Low probability of serious adverse effects to human health and/or the environment (e.g. do not involve use or disposal of toxic materials/substances, routine safety precautions are expected to be sufficient to prevent accidents, etc.).
- Relevant Laws in Thailand); and
- Screening out of any substantial and high-risk activities (see Annex F-2: Environmental and Social Risk Categorisation Guidance).

Substantial and High-Risk activities are also described below. Also see Annex F-2: Environmental and Social Risk Categorisation Guidance. This also includes descriptions of the types of activities that would be eligible under the ESMS (Low and Moderate Risk activities).

Substantial and High-Risk Activities

Characteristics may include:

- A range of significant adverse risks and impacts;
- Mostly temporary, predictable and/or reversible, and the nature of the Project does not preclude the possibility of avoiding or reversing them (although substantial investment and time may be required);
- Possibility of avoiding or reversing but with substantial investment and time to some that cannot be mitigated or require complex, unproven mitigation, sophisticated social analysis
- Medium in magnitude and/or in spatial extent (the geographical area and size of the population likely to be affected are medium to large) to high in magnitude and/or in spatial extent (large to very large area or population);
- The potential for cumulative and/or transboundary impacts may exist;
- Medium to low probability of serious adverse effects to human health and/or the environment (e.g. due to accidents, toxic waste disposal, etc.) with known and reliable mechanisms to prevent or minimize such incidents to a high probability of serious adverse effects to human health and/or the environment
- Effects of the project on areas of high value or sensitivity to impacts on higher value and sensitivity (e.g. protected and internationally recognized areas)
- High value, sensitive lands or rights of indigenous peoples¹ and other vulnerable minorities
- Involuntary resettlement or land acquisition

¹ Under ESS7 of the World Bank ESF Indigenous Peoples which is used in a generic sense to refer exclusively to a distinct social and cultural group possessing the following characteristics in varying degrees: (a) Self-identification as members of a distinct indigenous social and cultural group and recognition of this identity by others; and (b) Connection to geographically distinct habitats, ancestral territories, or areas of seasonal use or occupation, as well as to the natural resources in these areas; and (c) Customary cultural, economic, social, or political institutions that are distinct or separate from those of the mainstream society or culture; and (d) A distinct language or dialect, often different from the official language or languages of the country or region in which they reside.

- Impacts on cultural heritage or densely populated urban areas
- the adverse social impacts of the project, and the associated mitigation measures, may give rise to a limited degree of social conflict, harm or human security risks
- A history of unrest in area or sector, concerns about use of security forces

Moderate Risk Activities

The potential adverse risks and impacts on human populations and/or the environment are not likely to be significant. This is because the activity is not complex and/or large, does not involve activities that have a high potential for harming people or the environment, and is located away from environmentally or socially sensitive areas. The activity's risk and impacts can be easily mitigated in a predictable manner.

Characteristics may include:

- Predictable and expected to be temporary and/or reversible;
- Low in magnitude;
- Site-specific, without likelihood of impacts beyond the actual footprint of the activity; and
- Low probability of serious adverse effects to human health and/or the environment (e.g. do not involve use or disposal of toxic materials/substances, routine safety precautions are expected to be sufficient to prevent accidents, etc.).

Relevant Laws in Thailand

All sub-projects financed need to be compliant with the provisions of legal framework of Thailand, (e.g. environment, social, health, safety & labour laws, construction and operation permits etc.) as such there is a need to screen to ensure that material aspects are met in addition to sub-borrowers confirming compliance with the relevant laws as part of the loan agreement.

Key relevant legislation includes:

- Occupational Safety, Health and Environment Act, 2011: This Act covers the general requirements for an employer to establish administration and management measures for occupational safety, health and working environment including an occupational safety, health and working environment committee, risk assessments and to manage and control occupational safety, health and the working environment in the workplace.
 - Ministerial Regulation on the Standard for Administration and Management of Occupational Safety, Health and Environment in Relation to Fire Prevention and Control, 2012: Supplements the above Act with additional provisions relating to fire safety.
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- Ministerial Regulations Specification of administration standard and the process of safety, industrial hygiene and environment at workplace in respect of machine, crane and boiler, 2009: This regulation covers requirements relating to specific risk operations, including the use of forklifts.

- Factory Act, 1992 (which replaces the Factory Act of 1969, 1975 and 1979): This Act stipulates regulations for factory establishment and operation, factory expansion, and safety requirements.
- Enhancement and Conservation of the National Environment Quality Act, 1992: Overall, this Act seeks to promote and control natural resources and the environment using environmental policies, standards, guidelines and management. This includes impact assessment evaluation.
- Public Health Act, 1992 and Public Health Act, No. 2, 2007: Both of these Acts prescribe general requirements for local government to issue requirements regarding control of operations that cause health hazards, control of domestic waste collection and disposal activities, sanitation for building, nuisance prevention, etc.
- Labour Protection Act, 1998: This Act establishes the minimum rights of employees working in Thailand, covering working hours, overtime, holidays, sick leave, maternity leave, severance and other basic employee rights.
- Gender Equality Act, 2015: This Act establishes the Gender Equality Promotion Committee and the Committee on Consideration of Unfair Gender Discrimination (WorLorPor) with the underpinning aim of promoting gender equality. Defines the meaning of gender discrimination and sets out penalties and compensation.

Scope

The provisions of the Project ESMS are applicable to all lending to sub-projects under the Project, with no exceptions.

Project ESMS Communication & Disclosure

Ensuring awareness of relevant stakeholders (see the Stakeholder Engagement Plan) of the existence of the ESMS which supports its implementation, including to all relevant personnel at EXIM and KTB. The Project ESMS is available here:

- [Add link to disclosure site]

EXIM will ensure that the ESMS is disclosed and available to relevant parties.

Training

EXIM will:

- (a) Provide training to relevant Borrower and PIE staff, which are involved in the Project, regarding ESF requirements of the Project.
- (b) Borrower and PIE will organize trainings for Project's ESF requirements to:
 - i. Orientation for Clean Tech Companies (CTCs).
 - ii. Training for public sector organizations such as relevant BMA and IEAT officers.

In addition to the above, there are other World Bank-related training courses (in English) as below:

World Bank ESF Fundamentals

The “ESF Fundamentals” course delves into each of the ESF Environmental and Social Standards (ESS). It includes videos and two case studies with stakeholders demonstrating and sharing helpful approaches, mindsets and behaviours that are key to successful implementations of the ESF. It comprises 8 modules and takes about 8 hours to complete.

<https://www.worldbank.org/en/projects-operations/environmental-and-social-framework/brief/esftraining>

(Note that this includes requirements of the ESF that are not triggered by this Project.)

IFC Sustainability Training and E-Learning Program (STEP)

This program has been designed for managers and staff of financial institutions (FIs) including banks, private equity funds, and others. This free e-training aims to help FIs better understand sustainable finance, social and environmental risk management and explore sustainability-related business opportunities.

It will take you approximately 3 hours to complete the free training.

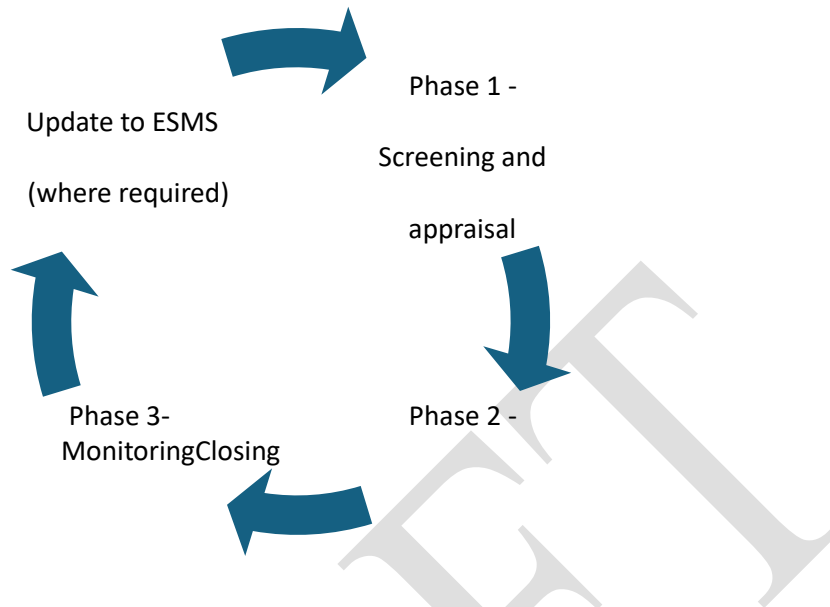
<https://academy.worldbank.org/en/planet/environment/sustainability-training-and-e-learning-program>

Environmental & Social Procedure

The overall summary of the process of E&S review under the ESMS is set out below:

- Phase 1 – Screening and Appraisal
 - o Screen against exclusion list activities
 - o Categorise
 - o Conduct an E&S appraisal of the sub-project
- Phase 2 – Closing
 - o Confirm commitments in the loan agreement (and any actions required)
- Phase 3 – Monitoring
 - o As part of regular monitoring follow-up on E&S aspects and also any E&S issues reported by the sub-project

Figure 1 E&S Review Process



Details are further set out in the sections below.

Phase 1: Screening and Appraisal

Entity	Responsibilities	Documents
Loan Officer	1. Screen a sub-project’s activities against the Exclusion List (in Annex F-1). ☐ If any excluded activities are identified, then the loan should proceed no further.	Completed screening assessment refer to Annex F-3:
Entity	Responsibilities	Documents

	<p>☑ If no exclusion list activities are identified, then the application can proceed to the next Phase.</p> <p>2. Categorisation should be undertaken (see Annex F2: Environmental and Social Risk Categorisation Guidance) of the sub-borrower also see Table 1 below.</p> <ul style="list-style-type: none"> - Where “high” or “substantial” risk activities are identified, the sub-project processing should not proceed. <p>3. EXIM uses its ESDD checklist to check compliance with local laws and identify gaps.</p> <ul style="list-style-type: none"> • The sub-borrower must be able to demonstrate compliance with applicable local, provincial and national laws and regulations in Thailand (including permits and approvals) and the requirements under the Project. • Where compliance cannot be demonstrated, an E&S Action Plan (ESAP) must be agreed with the sub-borrower in order for the sub-loan to proceed. The plan must specify all of the necessary actions to bring the sub-borrower into compliance. A target completion date for each specified action must also be agreed. A template is included in Annex F-4: Template Environmental and Social Action Plan. • ESDD also identifies the need for ESMP (for low to moderate risk activities) or ESCOP (for low risk activities) (see Annex F-5 for contractor package regarding templates) <p>4. EXIM reserves the right to withhold financing if the procurement outcome by the PSOs does not align with the standards or the version approved by EXIM.</p>	Screening and Appraisal Format
EXIM E&S Focal Point	5. Provide input and support where required in screening of the sub-loan, including categorisation and identifying any gaps to be addressed.	-

Credit	<p>6. This is the last part of evaluation, and is required to confirm:</p> <p style="padding-left: 40px;"><input type="checkbox"/> No exclusion list activities (including high/substantial risk activities)</p> <p style="padding-left: 40px;"><input type="checkbox"/> The E&S risks have been appropriately understood, including the category, and where necessary an ESAP and relevant requirements have been captured</p> <p style="padding-left: 80px;"><input type="checkbox"/> Reject to provide loan (Exclusion List/categorisation/non-compliance issue)</p>	Reviewed screening assessment refer to Annex F-3: Screening and Appraisal Format
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Table 1 E&S Categorisation

Category	Definition	Notes
High Risk	High Risk means any business activity which is likely to have significant adverse environmental impacts that are sensitive, diverse or unprecedented, and which includes, for the avoidance of doubt, activities involving (a) involuntary resettlement, (b) risk of adverse impacts on ethnic minorities, (c) significant risks to or impacts on the environment, community health and safety, biodiversity, cultural heritage, or (d) significant occupational health and safety risks (risk of serious injury or fatality to workers).	Not allowed to proceed under the ESMS.
Substantial Risk	Substantial Risk means any business activity that is not as complex as High-Risk activities, however, has some significant risks and impacts with the possibility of avoiding or reversing but with substantial investment and time and may give rise to limited degree of social conflict, harm, human security risk.	Not allowed to proceed ESMS.
Moderate Risk	Moderate Risk means any business activity that has potentially limited adverse environmental or social risks and/or impacts that are few in number, generally sitespecific, largely reversible, and readily addressed through mitigation measures. Impacts are often site-specific without likelihood of impacts beyond the activity's footprint and routine safety precautions are expected to be sufficient to prevent accidents.	Allowed, but requires review (see Annex F3).*

Low Risk	Low Risk means any business activity minimal or negligible risks to and impacts on human populations and/or the environment with few or no adverse risks and impacts and issues.	Allowed but should be straightforward to review (see Annex F-3). *
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Note – also see Annex F-2 for further detail.

*Annex F-3 is not applicable for Part 2 activities.

Phase 2: Closing

Entity	Responsibilities	Documents
Loan Officer	<p>7. Review legal documentation in relation to E&S related definitions, representations and undertakings, including the incorporation of any actions required to address gaps. Include followings in the loan agreement: i) hiring LTA; ii) E&S Action Plan (developed as per Annex D template upon completion of ESDD); iii) Annex E. Contractor’s reporting templates (ESMP/ESCP, Code of conduct, etc.); iv) incident reporting requirements as per ESCP; v) GRM requirements; vi) Supply Chain Requirements (as per Annex H); vii) WB ESF, ESSs and ESCP requirements.</p> <p>8. Key inclusions of the legal agreement with the subborrowers are:</p> <ul style="list-style-type: none"> - Not to engage in any activities on the Exclusion List 	Legal Agreement with E&S inclusions for the sub-borrower
Entity	Responsibilities	Documents
	<ul style="list-style-type: none"> - To comply with all legal requirements. - To report to EXIM if there is a substantial change in the nature of the operations. - To report to EXIM if there are any material E&S incidents. - (If required) to address any gaps identified. 	

Credit	9. Ensure that the legal agreement with the borrower meets ESMS requirements on E&S aspects.	Legal Agreement with E&S inclusions for the sub-borrower
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Phase 3: Monitoring

Entity	Responsibilities	Documents
Loan Officer/LTA	<p>10. Ensure there is reporting of material adverse E&S events. Annex F-6: Material E&S Incidents and Report Template for EXIM to formally report these types of incidents. Examples of material E&S incidents may include:</p> <ul style="list-style-type: none"> - Major injuries or fatalities (employees, the general public or contractors); - Strikes or significant employee disputes; - Regulator action in relation to E&S matters; - Spills, pollution incidents, fires, explosions; and - etc. <p>11. The category will determine the extent of monitoring and oversight required of the sub-loan during the postfinancial close monitoring phase. Monitoring will be as follows:</p> <ul style="list-style-type: none"> - Low risk sub-loans do not require monitoring. - Medium risk sub-loans require straightforward follow-up to find out if there have been any significant changes in business activities, confirm ongoing compliance with the exclusion list and local requirements and any actions required to be addressed have been closed out. Monitoring will be undertaken semi-annually. <p>12. In the event of non-compliance in relation to E&S matters (including material issues reported or a grievance raised) EXIM will seek to resolve the issue with the sub-borrower in order to address the</p>	<p>Annex F-6: Material E&S Incidents and Report Template</p> <p>An example (that can be tailored) is included as Annex F5: Contractor E&S Implementations Pack for annual monitoring.</p>

	issue. Actions will be documented, and EXIM will work with the sub-borrower to ensure that corrective actions are implemented. If the issue cannot be addressed through engagement, EXIM may seek to remedy the situation through available clauses in the loan	
Entity	Responsibilities	Documents
	documentation. Material developments will be reported to World Bank.	

Reporting

Material Adverse Events/Incident Reporting

Borrower notifies the WB of any incident or accident relating to the project which has, or is likely to have, a significant adverse effect on the environment, the affected communities, the public or workers, including those resulting in death or significant injury to workers or the public; acts of violence, discrimination or protest; unforeseen impacts to cultural heritage or biodiversity resources; pollution of the environment; dam failure; forced or child labor; allegations of sexual exploitation or abuse (SEA), or sexual harassment (SH); or disease outbreaks. Borrower notifies the WB no later than 48 hours after learning of the incident or accident and provide available details upon request from WB. Types of reportable incidents and reporting content are provided in Annex F-6. For initial incident reporting format, and incidents related to SOGI and SEA/SH, reach out to WB for further guidance.

Borrower arranges for an appropriate review of the incident or accident to establish its immediate, underlying and root causes, and prepares, agrees with the WB, and implements a Corrective Action Plan that sets out the measures and actions to be taken to address the incident or accident and prevent its recurrence.. For incident reporting format and incidents related to SOGI and SEA/SH reach out to WB for further guidance.

Borrower provides review report and Corrective Action Plan, which is implemented through relevant parties and overseen by Borrower, to the WB no later than 10 days following the submission of the initial notice, unless a different timeframe is agreed to in writing by the WB.

Routine Reporting

Borrower and PIE to prepare regular monitoring reports on the environmental, social, health and safety (ESHS) performance of the Project, including but not limited to the implementation of the ESCP, status of preparation and implementation of E&S documents required under the ESCP, stakeholder engagement activities, performance of the grievance mechanism(s) and ESMS

implementation. Regular reports are submitted to the WB through the Project Steering Committee semi-annually. Annex F-7 provides sample regular reporting format.

Organizational Capacity and Competency

EXIM will maintain existing staffing arrangement, including a Project director and Environmental and Social focal point (FP) assigned for implementing of this Project, and ensure the PIE maintains the existing staffing arrangement within the PIE assigned for implementing Part 2 of the Project, all with clearly defined roles and responsibilities, and leverage internal coordination mechanism to support management of environmental, social, health and safety (E&S) risks and impacts of the Project, satisfactory to the WB. EXIM will appoint and maintain a Lender's Technical Advisor (LTA) for monitoring of E&S performance, among others, of its Sub-loan Beneficiaries, in accordance with terms of reference acceptable to the Bank, that are consistent with the ESSs and will require the LTA to participate in training on the ESSs.

EXIM will assign and maintain clear management responsibility for E&S compliance at a senior level (e.g. the Project director or manager will have oversight of E&S risk management).

Stakeholder Engagement Plan

EXIM will implement existing internal and external stakeholder engagement policies and practices consistent with ESS10, which will include measures to, inter alia, provide stakeholders with timely, relevant, understandable and accessible information, and in a culturally appropriate manner, free of manipulation, interference, coercion, discrimination and intimidation.

The POM outlines the Project key stakeholders including who are members of the Low Carbon Cities and Carbon Market Development Project Working Group and Steering Committee; relevant private sector actors, and CSOs that may be impacted by or have a direct or indirect impact or interest in the project.

Borrower and PIE will conduct stakeholder engagement following inclusive consultation principles consistent with ESS 10 including:

- **Conduct of Transparent engagement:** Carry out internal consultations in a transparent manner, devoid of manipulation, interference, coercion, or intimidation throughout the Project life cycle.
- **Informed participation and feedback:** conduct wider project information dissemination targeting relevant stakeholders in accessible and appropriate format; obtain stakeholder feedback, suggestions, needs/expectations and address concerns in a timely manner. **Inclusive engagement:** Conduct periodic stakeholder identification and analysis to enhance consultation and build effective relationships with Sub-loan Beneficiaries, especially small and medium-sized enterprises (SMEs) to have equal and fair access to funding and information from Borrower. **Information Disclosure:** Borrower and PIE will ensure timely and transparent information disclosure about the project in

accessible manner through the Borrower's website, with summaries in Thai language as appropriate. Borrower's website shall maintain information on the Project throughout the Project implementation period. Documentation: Borrower and PIE will document all stakeholder engagement activities (attendance, topics discussed, feedback received) and how concerns are responded to. These will be summarized in annual reports to the Bank and used to improve project implementation.

- Adaptive management of stakeholder engagement: Review internal and external communication procedures on the project at least annually and update it if necessary to reflect on any new stakeholders (e.g. if new municipalities join the project or new concerns emerge from stakeholders) or a change in engagement strategy. Any significant changes in stakeholders or consultation process shall be cleared with the Bank and disclosed to stakeholders.
- Resources: Borrower and PIE will allocate sufficient resources for stakeholder consultations and focal point to oversee stakeholder consultations to build and maintain client and public trust and support, manage expectations, and ensure that stakeholder input is considered in project decisions

Grievance and redress mechanism

EXIM will publicize, maintain, and operate an accessible grievance and whistleblowing mechanism, to receive and facilitate resolution of concerns and grievances in relation to the Project, promptly and effectively, in a transparent manner that is culturally appropriate and readily accessible to all Project stakeholders, at no cost and without retribution, including concerns and grievances filed anonymously, in a manner consistent with ESS10. EXIM will also manage SEA/SH risks during implementation, all in a safe, confidential, and survivor-centered manner.

EXIM will make CTCs to establish a site-level intake system and cooperate with EXIM's grievance redress mechanism. CTCs will consolidate and maintain records of grievances and resolutions and shall report back to EXIM Bank as per its loan agreement.

Site-level GRM should include followings:

1. Different ways in which users can submit their grievances, which may include submissions in person, by phone, text message, mail, email or via a web site;
2. A log where grievances are registered in writing and maintained as a database;
3. Publicly advertised procedures, setting out the length of time users can expect to wait for acknowledgement, response and resolution of their grievances;
4. Transparency about the grievance procedure, governing structure and decision makers; and
5. An appeals process (including the national judiciary) to which unsatisfied grievances may be referred when resolution of grievance has not been achieved.

The grievance mechanism will address concerns promptly and effectively, in a transparent manner that is culturally appropriate and readily accessible to all project-affected parties, at no cost and without retribution. The mechanism, process or procedure will not prevent access to judicial or

administrative remedies. The CTC will inform the project-affected parties about the grievance process in the course of its community engagement activities, and will make publicly available a record documenting the responses to all grievances received; and handling of grievances will be done in a culturally appropriate manner and be discreet, objective, sensitive and responsive to the needs and concerns of the project-affected parties. The mechanism will also allow for anonymous complaints to be raised and addressed.

World Bank Grievance Redress Service (GRS) and Accountability Mechanism. Affected individuals and communities who believe they are adversely affected by a World Bank-supported project may submit complaints to the Project GM or directly to the World Bank's GRS. Complaints may be submitted through the GRS website (<https://www.worldbank.org/grs>) or by email to grievances@worldbank.org. Affected people may also submit complaints to the World Bank Inspection Panel / World Bank Accountability Mechanism (<https://www.inspectionpanel.org>). These mechanisms are independent of the Project-level grievance channels.

Review and Update of the ESMS

The Project ESMS will be updated and reviewed:

- In the first year after initial deployment by EXIM, and thereafter annually.
- If there are modifications in the Applicable Standards under the ESMS (for example significant changes to local legalisation).
- Incorporation of feedback from the SEP/Grievance Mechanism.
- Documentation of lessons learnt and/or good practice based on implementation.

Note that revisions will need to be communicated to all relevant partners such World Bank.

Annex F-1: Exclusion List

These are a list of activities that form part of the Project ESMS where any involvement would trigger a "no go" on providing a loan to a sub-borrower.

- Production or trade in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements, or subject to international bans, such as pharmaceuticals, pesticides/herbicides, ozone depleting substances, PCBs, wildlife or products regulated under CITES.
- Production or trade in weapons and munitions².
- Production or trade in alcoholic beverages (excluding beer and wine)².
- Production or trade in tobacco².
- Gambling, casinos and equivalent enterprises².

² This does not apply to project sponsors who are not substantially involved in these activities. "Not substantially involved" means that the activity concerned is ancillary to a project sponsor's primary operations.

- Production or trade in radioactive materials. This does not apply to the purchase of medical equipment, quality control (measurement) equipment and any equipment which is considered to be the radioactive source to be trivial and/or adequately shielded.
- Production or trade in unbonded asbestos fibers or use of asbestos-containing materials. This does not apply to purchase and use of bonded asbestos cement sheeting where the asbestos content is less than 20%.
- Drift net fishing in the marine environment using nets in excess of 2.5 km in length.
- Production or activities involving harmful or exploitative forms of forced labor³/harmful child labor⁴.
- Commercial logging operations for use in primary tropical moist forest.
- Production or trade in wood or other forestry products other than from sustainably managed forests.
- Sub-loans involving any transaction that will require acquisition of private land, physical relocation of households or displacement of livelihoods.
- Activities involving major construction and civil works that would cause significant adverse impact and in line with WB ESF policies (e.g. higher risk activities).
- High and Substantial risk sub-loans (following the definitions of World Bank’s Environmental and Social Framework (also see Annex F-2).

Annex F-2: Environmental and Social Risk Categorisation Guidance

Categorisation

This document is intended to provide guidance on the categorization of sub-borrowers. Whilst this guide provides an overview to the characteristics and some examples of each category, categorisation should be considered on a case by case basis factors such as location, environmental & social context, scale, and magnitude of impacts need to be considered. Table B1 - Categories

Category	Definition	Example Activities
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³ Forced labor means all work or service, not voluntarily performed, that is extracted from an individual under threat of force or penalty.

⁴ Harmful child labor means the employment of children that is economically exploitive, or is likely to be hazardous to, or to interfere with, the child’s education, or to be harmful to the child’s health, or physical, mental, spiritual, moral, or social development.

<p>High and Substantial Risk</p>	<p>High Risk means any business activity which is likely to have significant adverse environmental impacts that are sensitive, diverse or unprecedented, and which includes, for the avoidance of doubt, activities involving (a) involuntary resettlement, (b) risk of adverse impacts on indigenous peoples, (c) significant risks to or impacts on the environment, community health and safety, biodiversity, cultural heritage, or (d) significant occupational health and safety risks (risk of serious injury or fatality to workers).</p> <p>Substantial Risk means any business activity that is not as complex as High Risk activities, however, has some significant risks and impacts with the possibility of avoiding or reversing but with substantial investment and time and may give rise to limited degree of social conflict, harm, human security risk.</p>	<p>Examples may include:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Large-scale acquisition of land. <input type="checkbox"/> Permanent loss of income or assets involving multiple households. <input type="checkbox"/> Direct impact on traditional landowners or clan groups, including resettlement of communities. <input type="checkbox"/> Refinery construction and operation. <input type="checkbox"/> Operations that involve large scale extraction of minerals, coal or building materials, via underground or open-pit mining. <input type="checkbox"/> Development of large mineral processing facilities/integrated mills. <input type="checkbox"/> Large hydropower developments. <input type="checkbox"/> Large scale electric power transmission and distribution. <input type="checkbox"/> Large infrastructure projects, including development of new ports and harbours, airports, road, rail, and mass transit systems.
<p>Moderate Risk</p>	<p>Moderate Risk means any business activity that has potentially limited adverse environmental or social risks and/or impacts that are few in number, generally site-specific, largely reversible, and readily addressed through mitigation measures. Impacts are often sitespecific without likelihood of impacts beyond the activity's footprint and routine safety precautions are expected to be sufficient to prevent accidents.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Activities Installation of rooftop solar projects; <input type="checkbox"/> Small-scale processing of agricultural produce e.g. rice. <input type="checkbox"/> Building of small warehouses or renovation of existing physical premises with no involuntary resettlement, land acquisition and restrictions on land use; <input type="checkbox"/> Acquisition of assets such as industrial machines, medium sized tools and equipment.

Low Risk	Low Risk means any business activity minimal or negligible risks to and	<input checked="" type="checkbox"/> Office based activities such as marketing, consultancy, etc.
Category	Definition	Example Activities
	impacts on human populations and/or the environment with few or no adverse risks and impacts and issues.	<ul style="list-style-type: none"> <input type="checkbox"/> Working capital needs (loans for payment of salaries, marketing costs, audit and accounting costs); <input type="checkbox"/> Acquisition of communications equipment (phone and fax equipment, computers, printers, servers, software, other hardware, etc.); <input type="checkbox"/> Purchase of construction materials for shops selling construction material, <input type="checkbox"/> Purchase of feed stock, and feed mixer machine; <input type="checkbox"/> Acquisition of fixed small assets (refrigerators, replacement parts, etc.), small tools and equipment etc.). <input type="checkbox"/> All types of retail outlets (except those dealing in hazardous or toxic chemicals, flammable materials); and <input type="checkbox"/> Restaurants and other food premises.

Annex F-3: Screening and Appraisal Format

EXIM's ESDD together with exclusion list and risk categorization described in this ESMS.

Annex F-4: Template Environmental and Social Action Plan

An Environmental and Social Action Plan (ESAP) should be tabular in format and designed to address the gaps identified in the sub-loan assessment (Annex F-3) and should be incorporated into the loan documentation. The aim is for the ESAP to be as succinct as possible, but clear, and set realistic timelines with clarity on what is required.

Reference No.	Action Description AND Related Standards/Requirement	Completion Indicator	Due Date (DD/MM/YYYY or defined number of days linked to an event)
1	e.g. Obtain a waste management license for the disposal of hazardous wastes to meet e.g. Water Use Regulations.	Waste disposal license obtained	30 days prior to disposal of waste
2	e.g. Ensure that all workers have written contracts that explain their rights and obligations and have had these contracts explained to them this should be in line with Labour Code.	Contracts signed by all workers	Prior to loan disbursement.
etc.	etc.	etc.	etc.

Annex F-5: Contractor E&S Implementations Pack

Purpose and Use: This Implementation Pack provides the minimum contractor-facing templates and clauses that PSOs shall attach to their procurement documents and include in executed contracts (including rooftop PV EMAs). Clean tech companies shall complete and implement these templates on each site, and PSOs shall retain them for supervision and audit.

Site-Specific ESMP/ESCOP (Rooftop Solar PV on Public Buildings)

Project and Site Information - Sub-project name/code:

- Site name and address:
- PSO:
- Clean tech company:
- Reporting period (if applicable):
- Site E&S/OHS focal point (name/contact):
- Permit status (roof access, electrical works, utility approvals):

Risk Summary and Key Activities

- Key works (roof access, lifting, electrical tie-in, commissioning, O&M):
- Key risks (working at height, electrical hazards, falling objects, fire risk, waste, community safety, traffic safety risks, noise, sexual exploitation and abuse, lack of or weak grievance mechanism, use of child and forced labor). The minimum age for employment of workers shall be 18 years.

Mitigation Measures and Monitoring Commitments (Contractor shall implement and record evidence) 1) Working at height: Fall protection (harness/anchors), edge protection, permit-to-work, trained workers only.

- 2) Electrical safety: Lock-out/tag-out, qualified electricians, insulated tools, testing before energization, fire prevention controls.
- 3) Lifting and logistics: Safe lifting plan, exclusion zones, rigging checks, trained operators.
- 4) Waste management: Segregation, licensed disposal for hazardous waste (e.g., damaged modules, packaging, oils), records retained.
- 5) Dust/noise/community nuisance: Work-hour controls, housekeeping, traffic/pedestrian control and signage where applicable.
- 6) Roof integrity and waterproofing: Protection of roof membrane, sealing and reinstatement, leak checks after installation.

- 7) Worker welfare and labor conditions: Contracts, fair and non-discriminatory recruitment processes, no child/forced labor, worker accommodations (if any) meet minimum standards.
- 8) Community and worker grievance mechanisms: See Templates F-1.3 and PSO GRM requirements.

Monitoring and Reporting

- Daily/weekly site checks (use checklist below).
- Monthly E&S/OHS reporting to PSO as part of progress reporting.
- Immediate incident reporting per Template F-1.5.

Sign-off

Prepared by (Contractor E&S/OHS): _____ Date: _____

Reviewed by (PSO E&S focal point): _____ Date: _____

Code of Conduct (including SEA/SH)

All clean tech company personnel and subcontractors shall sign and comply with this Code of Conduct. Zero tolerance applies to harassment, exploitation, and abuse.

Minimum commitments:

- Treat all persons with respect; no harassment, discrimination, intimidation, or violence.
- Prohibition of sexual exploitation⁷ and abuse⁸ (SEA) and sexual harassment⁹ (SH).
- Prohibition on photographing, filming, or recording children using any device, including mobile phones including social media without consent and authorisation of the Borrower.
- No child labor and no forced labor; no trafficking; no retention of IDs.
- Follow all safety rules, wear PPE, and comply with site access requirements.
- No alcohol/drugs at site; no weapons.
- Participate in trainings and orientation that will be provided related to the environmental and social aspects of the Contract, including on health and safety matters, and SEA/SH.
- No retaliation against anyone who raises a concern in good faith about any behavior prohibited by this Code of Conduct. Such retaliation shall be a violation of this Code of Conduct.

Acknowledgement:

Name: _____ Signature: _____ Date: _____

Worker Grievance Redress Mechanism
(Worker GRM) Channels (at least two must
be provided): - Supervisor/HR contact:

- Anonymous box / hotline / email: _____ Principles:
- Confidentiality and non-retaliation.
- Simple intake, prompt acknowledgement, documented resolution.
- Escalation to PSO if unresolved or sensitive.

Minimum Log Fields:

- Date received:
- Issue type:
- Description:
- Complainant (anonymous allowed):
- Action taken:
- Outcome/closure date:

Site Safety Inspection Checklist (Weekly or as required)
Checklist (tick/record issues and corrective actions):

- [] Working at height controls in place (harness, anchors, edge protection)
- [] Electrical lock-out/tag-out used where applicable
- [] PPE available and used
- [] Fire extinguisher available and accessible
- [] Lifting operations controlled and exclusion zones in place
- [] Housekeeping and waste segregation adequate
- [] Signage/barriers in place to protect staff/public
- [] First aid and emergency contacts posted
- Corrective actions required (what/who/when): _____

⁷ Sexual exploitation: Any actual or a emptied abuse of a posi on of vulnerability, differen al power, or trust, for sexual purposes, including, but not limited to, profi ng monetarily, socially, or poli cally from the sexual exploita on of another. ⁸ Sexual Abuse: the actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive condi ons

⁹ Sexual Harassment: unwelcome sexual advances, requests for sexual favours, and other verbal or physical conduct of a sexual nature.

Annex F-6: Material E&S Incidents and Report Template

1- Initial Incident Reporting

The Borrower will reach out to WB to request initial incident reporting template. Initial incident reporting will include following points:

- Date and time of the incident
- Name of the contractor
- Type of incident (as indicated in Annex 1 below)
- Short description of incident
- Short description of initial actions taken

Reportable Incident Types

The following are incident types to be reported using the environmental and social incident response process:

- 1) **Fatality:** Death of a person(s) that occurs within one year of an accident/incident, including from occupational disease/illness (e.g., from exposure to chemicals/toxins).
- 2) **Lost Time Injury:** Injury or occupational disease/illness (e.g., from exposure to chemicals/toxins) that results in a worker requiring 3 or more days off work, or an injury or release of substance (e.g., chemicals/toxins) that results in a member of the community needing medical treatment.
- 3) **Acts of Violence/Protest:** Any intentional use of physical force, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, deprivation to workers or project beneficiaries, or negatively affects the safe operation of a project worksite.
- 4) **Disease Outbreaks:** The occurrence of a disease in excess of normal expectancy of number of cases. Disease may be communicable or may be the result of unknown etiology.
- 5) **Displacement Without Due Process:** The permanent or temporary displacement against the will of individuals, families, and/or communities from the homes and/or land which they occupy without the provision of, and access to, appropriate forms of legal and other protection and/or in a manner that does not comply with an approved resettlement action plan.
- 6) **Child Labor:** An incident of child labor occurs: (i) when a child under the age of 14 (or a higher age for employment specified by national law) is employed or engaged in connection with a project, and/or (ii) when a child over the minimum age specified in (i) and under the age of 18 is employed or engaged in connection with a project in a manner that is likely to be hazardous or interfere with the child's education or be harmful to the child's health or physical, mental, spiritual, moral or social development.
- 7) **Forced Labor:** An incident of forced labor occurs when any work or service not voluntarily performed is exacted from an individual under threat of force or penalty in connection with a

project, including any kind of involuntary or compulsory labor, such as indentured labor, bonded labor, or similar labor-contracting arrangements. This also includes incidents when trafficked persons are employed in connection with a project.

- 8) Unexpected Impacts on heritage resources: An impact that occurs to a legally protected and/or internationally recognized area of cultural heritage or archaeological value, including world heritage sites or nationally protected areas not foreseen or predicted as part of project design or the environmental or social assessment.
- 9) Unexpected impacts on biodiversity resources: An impact that occurs to a legally protected and/or internationally recognized area of high biodiversity value, to a Critical Habitat, or to a Critically Endangered or Endangered species (as listed in IUCN Red List of threatened species or equivalent national approaches) that was not foreseen or predicted as part of the project design or the environmental and social assessment. This includes poaching or trafficking of Critically Endangered or Endangered species.
- 10) Environmental pollution incident: Exceedances of emission standards to land, water, or air (e.g., from chemicals/toxins) that have persisted for more than 24 hrs or have resulted in harm to the environment.
- 11) Dam failure: A sudden, rapid, and uncontrolled release of impounded water or material through overtopping or breakthrough of dam structures.
- 12) Other: Any other incident or accident that may have a significant adverse effect on the environment, the affected communities, the public, or the workers, irrespective of whether harm had occurred on that occasion. Any repeated non-compliance or recurrent minor incidents which suggest systematic failures that the task team deems needing the attention of Bank management.

2- Investigative reporting

Borrower reaches out to WB to receive the reporting template for investigation findings. Investigation findings should include the following:

- Investigation findings
- Corrective actions from investigations
- In case of fatality, reason for fatality (see Annex 2 for fatality types)
- Financial support/compensation type ☐ Supplementary narrative

Definition of fatality/injury immediate causes

- 1) Caught in or between objects: caught in an object; caught between a stationary object and moving object; caught between moving objects (except flying or falling objects).
- 2) Struck by falling objects: slides and cave-ins (earth, rocks, stones, snow, etc.); collapse (buildings, walls, scaffolds, ladders, etc.); struck by falling objects during handling; struck by falling objects.
- 3) Stepping on, striking against, or struck by objects: stepping on objects; striking against stationary objects (except impacts due to a previous fall); Striking against moving objects; Struck by moving objects (including flying fragments and particles) excluding falling objects.
- 4) Drowning: respiratory impairment from submersion/emersion in liquid.

- 5) Chemical, biochemical, material exposure: exposure to or contact with harmful substances or radia ons.
- 6) Falls, trips, slips: falls of persons from heights (e.g., trees, buildings, scaffolds, ladders, etc.) and into depths (e.g., wells, ditches, excava ons, holes, etc.) or falls of persons on the same level.
- 7) Fire & explosion: exposure to or contact with fires or explosions.
- 8) Electrocu on: exposure to or contact with electric current.
- 9) Homicide: a killing of one human being by another.
- 10) Medical Issue: a bodily disorder or chronic disease.
- 11) Suicide: the act or an instance of taking, or a emp ng to take, one’s own life voluntarily and inten onally.
- 12) Others: any other cause that resulted in a fatality or injury to workers or members of the public.

Vehicle Traffic

- 13) Project Vehicle Work Travel: traffic accidents in which project workers, using project vehicles, are involved during working hours and which occur in the course of paid work.
- 14) Non-project Vehicle Work Travel: traffic accidents in which project workers, using non-project vehicles, are involved during working hours and which occur in the course of paid work.
- 15) Project Vehicle Commu ng: traffic accidents in which project workers, using project vehicles, are involved while travelling to (i) the worker's principal or secondary residence; (ii) the place where the worker usually takes his or her meals; or (iii) the place where he or she usually receives his or her remunera on.
- 16) Non-project Vehicle Commu ng: traffic accidents in which project workers, using non-project vehicles, are involved while travelling to (i) the worker's principal or secondary residence; (ii) the place where the worker usually takes his or her meals; or (iii) the place where he or she usually receives his or her remunera on.
- 17) Vehicle Traffic Accident (Members of Public Only): traffic accidents in which non-project workers/members of the public are involved in an accident while travelling for any purpose.

Annex F-7: Regular E&S Monitoring Report

Semi-Annual Environmental & Social Monitoring Report for
Name of FI and Project

Name of Organization			
Completed by (name):			
Position in organisation:		Date:	

Reporting period	From:	To:
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Introduction

IBRD's Legal Agreement(s) requires EXIM to prepare a comprehensive Semi-Annual Environmental and Social Performance Report (AEPR) describing (i) the implementation and operation of the Environmental and Social Management System (ESMS), and (ii) the environmental and social performance of the subborrowers/clients of the Financial Institution. This document comprises IBRD's preferred format for E&S performance reporting. The following template may be supplemented with annexes as appropriate to ensure all relevant information on project performance is reported.

Notes:

- (1) Please provide responses to all questions and as detailed information as possible to avoid followup requests. If information is not available, please provide a brief explanation. Please ensure all documents were required (as indicated) are attached to your AEPR.
- (2) A selected number of questions (indicated with *) requires the provision of client specific information. If you are not allowed as per the local legislation to share information such as the name of the client, please indicate so and use 'Client 1, 2, 3, ..' instead of the name.

Part 1: Client's Representation Statement by authorized representative

I (name) in my role of (position) and representing EXIM certify that

- a) Beyond what is reported in this AEPR for the current reporting period, to the best of my knowledge and belief, after due inquiry I confirm:
 - There are no material social and environmental risks and issues in respect of the relevant financing operations other than those identified through the application of the ESMS.
 - EXIM has not received nor is aware of (a) any existing or threatened complaint, order, directive, claim, citation or notice from any authority, or (b) any material written communication from any person concerning the failure by any client/sub-borrower to undertake its operations and activities in accordance with the E&S requirements.
 - We have not amended, waived or materially restricted the scope or effect of the ESMS.
 - There have been no changes in the scope of the relevant financing operations since the legal agreement with IBRD has been signed.
 - We are using all reasonable efforts to ensure the continued operation of the ESMS to identify, assess and manage the social and environmental performance of the relevant financing operations in compliance with the E&S requirements.
 - If a client/sub-borrower has not undertaken its activities in accordance with the E&S requirements, we have (a) agreed with the client/sub-borrower to undertake corrective actions to remedy these, (ii) if the client/sub-borrower failed to implement the corrective actions used all reasonable efforts to dispose of the client/sub-borrower.

- We have informed IBRD during the reporting period of all proposed activities we have become aware of and ensured that the ESMS has sufficient capacity to eliminate High and Substantial risk projects and review the E&S performance of Moderate and Low risk activities.
- We have informed IBRD of all social, labor, health and safety, security or environmental incident, accidents or circumstance in relations to any client/sub-borrower in accordance with the legal agreements.

b) All information contained in this AEPR is true, complete and accurate in all respects at the time of submission and no such document or material omitted any information the omission of which would have made such document or material misleading.

Signature

Date

Part 2: Development and Implementation of Environmental and Social Management System

A) POLICIES AND PROCEDURES

2.1) Does your organization have a functioning ESMS which was approved by senior management during the reporting period?

Yes

No

Date of Approval:

If yes, please attach a copy of the ESMS to this report.

2.2) If there has been an ESMS already in place and agreed upon with IBRD, have there been any revisions/updates to the ESMS (policy and/or procedures) adopted by your organization during the reporting period?

Yes

No

If yes, please provide the details of the revisions made and reasons for the same

(i)

(ii)

(iii)

(iv)

Please attach a copy of the revised ESMS.

2.3) Please describe your loan/credit review process and how E&S assessments have been incorporated into this process (only in case it was not provided earlier) Credit Review Process:

E&S Assessment Process (including assessment of compliance with Exclusion List, national laws and the Environmental and Social Standards, if applicable):

2.4) Please provide two sample internal E&S assessment reports (ESDDs) conducted for projects considered in the year under review.

Documents provided:

- (i)
- (ii)
- (iii)

2.5) Please provide the following information regarding the E&S Risk profile of the portfolio supported by IBRD and E&S assessments undertaken.

Type of Financing	Number of Loans in Portfolio	Number of Loans screened for E&S issues to date	Number of Loans screened for E&S issues during the reporting period	Number of Loans/Clients categorized as – Only Moderate or Low are eligible for this WB financing		Number of Accidents/Incidents reported by clients during the reporting period	Number of field visits conducted by staff to review E&S aspects during loan appraisal	Number of field visits conducted by staff to review E&S aspects after loan appraisal (monitoring)
				M	L			
SME finance								
MSME								

2.6) Please give details of any transactions rejected on environmental, health, safety or social grounds during the reporting period.

Number of Loans/Clients:

Details including name of clients and reasons for rejection*:

- (i)
- (ii)
- (iii)

2.7) Please provide details of loans/clients in portfolio that have become Non-Performing Loans (NPLs) due to E&S issues during the reporting period (indicate if information is not available).

Number of Loans/Clients:

Details including name of clients and reasons for becoming NPL's*:

- (i)
- (ii)
- (iii)

B) E&S CAPACITY

2.8) Please provide the name and contact information of the Environmental and Social Officers or Coordinator who has the overall responsibility for the implementation of ESMS and specifically for IBRD portfolio.

Name:

Contact Information:

Position:

2.9) Please provide details of any other core persons in the organization involved with ESMS implementation (name, contact details, position), (including internal staff and external consultants if utilized).

(i)

(ii)

2.10) Please describe the training or learning activities the Environmental and Social Officers/other E&S staff, as well as other staff attended in the year under review.

(i) E&S staff: (ii) Other staff:

2.11) Please provide information on your training programs available to new and existing staff, training materials developed and budget allocation for ESMS development and implementation during the reporting period:

(iii) Training Programs:

(iv) Budget allocation (e.g. including for external consultants, training etc):

C) MONITORING

2.12) Do you require clients to provide any E&S reports?

Yes No Sometimes

If yes, describe the monitoring requirements:

If yes, please provide two of such reports provided within the last year.

2.13) Please describe how you monitor the E&S performance of clients after disbursement, including compliance with national laws and applicable Environmental and Social Standards and implementation of corrective action plans (only required if not provided earlier already).

Monitoring Procedure:

Please provide three sample monitoring reports conducted for projects by staff to review environmental and social aspects.

Documents provided:

(i)

(ii)

(iii)

2.14) Please give details of any material adverse environmental and social issues associated with clients during the reporting period. Include details of any major accidents/incident, non-compliances, fines levied, negative media attention, complaints raised against your clients etc.

- (i)
- (ii)
- (iii)

D) REPORTING AND AUDITING

2.15) Please describe your internal process for reporting social and environmental issues to Senior Management, including which information is provided. (If your internal reporting process had already been discussed and agreed upon with IBRD, please provide details on where it is included in your ESMS).

If newly developed or revised, describe your Reporting Process and information provided:

Indicate in which section of the ESMS your reporting mechanism is included:

2.16) Has your organization conducted any internal audit of the implementation of the ESMS?

Yes No

If yes, please provide the following details of the audit:

Date of audit:

Findings of the audit:

Recommendations from the audit:

E) EXTERNAL COMMUNICATION MECHANISM

2.17) Do you have a mechanism in place to receive, register and respond to external communication regarding your activities? Describe the mechanism and how often it has been used.

Yes No

If yes, please provide the following information:

Description of mechanism including how you screen, assess and address concerns received, as well as track and document them internally:

Number of complaints/inquiries to date:

Number of complaints/inquiries received during the reporting period: Key
issues raised in complaints/inquires:

Part 3: Labor and Working Conditions; and Life, Fire and Safety Measures

3.1) Were your organization's HR Policy and Procedures revised in the year under review?

Yes No

If yes please describe in detail the changes to the previous policy/procedures.

- (i)
- (ii)
- (iii)

Please attach a copy of the revised HR Policy/Procedures

3.2) Were there any labor-related issues in the year under review? (Labor issues include – e.g. court cases, union disputes, staff grievances, sexual harassment complaints, negative media report on labor issues). Did your organization retrench a substantial⁵ number of employees in the year under review? Labor related Issues:

If yes, please provide details.

- (i)
- (ii)
- (iii)

Retrenchment:

Yes No

⁵ Substantial means retrenchment of more than 50 persons or 5% of the total number of employees within a three month period

If yes, please provide details on the retrenchment:

- (i) Number of employees retrenched:
- (ii) Cause of retrenchment: (iii) Retrenchment plan:

3.3) Did you retain valid Fire Safety permits for all buildings during the reporting period and undertake regular fire drills? Have there been any fire incidents during the reporting period in any of your offices or branches?

Fire Safety Permits valid:

Yes No If no, please provide details:

Fire Incidents:

Yes No

If yes, please provide the following:

Details of the incident including cause of fire:

Corrective Actions taken:

Please attach a copy of the Fire Incident report

Part 4: Implementation status of the ESCP

[Please insert the Project ESCP here and include a separate column for the updates]

Annex F-8: Supply Chain Requirements

[To be advised]

EXIM to have oversight adding supply-chain due-diligence steps and contractual no-forced-labor clauses for contractors and key suppliers, with remedies for non-compliance. Need to identify the steps and language (and be back-to-back with the language to be included in loan agreement between EXIM and ESCOs and contracts between PSOs and ESCOs).

Annex F-9: E&S Policy

The Sustainable Development Policy of EXIM Thailand¹¹ defines how it operates as a responsible development bank by balancing economic growth, social responsibility, and environmental protection. The policy aligns the EXIM's mandate with the United Nations Sustainable Development Goals (SDGs) and internationally recognized sustainability standards to ensure long term- value creation for Thailand's economy, society, and environment. EXIM Thailand's sustainability approach is guided by:

- The Environment, Social and Governance (ESG) Framework
- The Sustainable Banking Network (SBN) Framework
- ISO 26000 on social responsibility
- The Principles for Responsible Banking

These frameworks provide a consistent and internationally accepted basis for governance, operations, and financial services.

Building on ISO 26000, EXIM Thailand has established nine core values that guide institutional culture and staff conduct:

- Accountability and transparency
- Ethical behavior
- Respect for stakeholder interests
- Respect for the rule of law and international norms
- Respect for human rights
- Strong social and environmental risk governance
- Innovation for sustainable development

These values underpin decision making- at all organizational levels. The policy is implemented through three integrated frameworks:

1. **Responsible Financial and Business Management:** EXIM Thailand integrates ESG principles across lending, guarantees, insurance, investment, and funding activities. Key commitments include promoting green and sustainable finance, equitable access to finance, innovation driven financial products, responsible portfolio management, digital and data- enabled- banking, environmental management (including resource efficiency and pollution prevention), customer protection, data privacy, and impact measurement using Social Return on Investment (SROI).

2. **Creating Balanced Social and Environmental Value:** The Bank systematically manages social and environmental risks by embedding them into daily operations. This includes fair labor practices, human

rights protection, community development, enterprise wide- risk management, contractual safeguards, grievance and complaint mechanisms, performance evaluation, monitoring, and transparent sustainability reporting.

3. Good Corporate Governance for Sustainable Banking: Strong corporate governance is recognized as the foundation of sustainability. The Board of Directors and senior management are responsible for integrating sustainability into strategy, ensuring fair and ethical business conduct, preventing corruption, promoting stakeholder participation, linking sustainability to performance management, and reporting in line with international standards. The policy is reviewed annually by the Board.

11 Available at <https://www.exim.go.th/th/Sustainable-Development-Policy.aspx>

Through this policy, EXIM Thailand aims to:

- Strengthen its role as a sustainable development bank
- Enhance resilience through effective ESG risk management
- Deliver long term- economic, social, and environmental benefits
- Maintain alignment with national priorities and global sustainability standards

EXIM Thailand will implement, the Low Carbon Cities and Carbon Market Development (LCC) Project (“the Project”) that supports Thailand’s transition toward low-carbon urban development by accelerating investments in energy efficiency, renewable energy, and other emissions-reducing upgrades in publicsector assets, while simultaneously establishing the institutional and technical foundations for a national carbon crediting mechanism. The Project is designed to reduce greenhouse gas emissions, lower publicsector energy expenditures, and demonstrate scalable delivery models that can be replicated across cities and asset classes. It combines investment financing with results-based carbon payments and targeted technical assistance to address both near-term implementation barriers and longer-term market development needs.

In support of this EXIM adopts the Project Environmental and Social Management System (ESMS) with the following policy objectives:

- There will be no financing of excluded activities, as defined in this Project ESMS;
- Committing that the operations of sub-borrowers are adequately assessed against the environmental & social requirements as defined by the applicable environmental & social national and local laws and regulations in Thailand and require compliance;
- Environmental and social risk management is adequately integrated into the credit review cycle to ensure they are all screened for environmental & social risks and impacts;
- Ensuring that there a designated people with roles and responsibilities to support the implementation of the Project ESMS;
- Ensure that updates to the Project ESMS are made as required; and
- EXIM reports as required to our stakeholders on Project ESMS implementation.

Annex F-10: Roles and responsibilities of KTB

KTB has a robust Environmental and Social Management System including E&S policy, procedures, operational capacity, and stakeholder engagement⁶. The LCC project will rely on KTB's ESMS, supplemented by the requirements in this section (Section F.2 of POM E&S Annex), for implementation of Part 2 activities of the LCC Project.

KTB will maintain existing staffing arrangements, including a Project director and Environmental and Social focal point (FP) (or equivalent) assigned for this Project, with clearly defined roles and responsibilities to support management of E&S risks and impacts of Part 2 of the Project. In accordance with Project Agreement, KTB as Project Implementing Entity (PIE) will implement Part 2 of the Project in accordance with Section F.2 of the POM ES Annex, the ESCP, ESSs, WBG EHS Guidelines and Good International Industry Standards (GIIPs).

KTB will ensure that all Verified Emission Reductions (VERs) purchased under Part 2(a) of the Project have been issued under the Gold Standard, and therefore meet all stakeholder consultation, safeguards, and due diligence requirements to identify and manage environmental and social risks and impacts in accordance with the Gold Standard. To this end, the PIE will: (a) only enter into Emission Reduction Purchase Agreements (ERPA) and related purchase transactions for VERs that have been issued under the Gold Standard and that comply with the ERPA eligibility and Gold Standards safeguarding requirements and requirements specified in this section; (b) ensure that all VER purchase transactions under Part 2(a) are executed and recorded through the Gold Standard registry; and (c) maintain documentation, satisfactory to the Bank, evidencing that each VER purchased under Part 2(a) has been certified and transacted in accordance with the Gold Standard and the ERPA requirements, including evidence of registration, issuance, third party- verification, and registry transfer.

Public sector and Private sector subprojects receiving VERPF payments under Component 2 are subject to the same E&S eligibility rules, exclusion list, and risk classification requirements under KTB's ESMS & this Annex.

In its role as CME/payment agent, KTB will:

- Apply its own exclusion list and E&S eligibility rules, exclusion list, and risk classification threshold specified in this POM ES Annex during: i) a preparation of new Program of Activities (PoA) or revision of approved POA and before inclusion of Voluntary Program Activity (VPA) into the POA; and ii) before Emission Reductions Purchase Agreement (ERPA) signature. High and Substantial E&S risks subproject will not be eligible for financing under Thailand LCC project;

⁶ Available at <https://krungthai.com/en/sustainability/esg-policy/social/fairness#>

- maintain E&S screening records in the subproject file, available for audit, and World Bank review; ensure ERPAs include appropriate E&S covenants and remedies consistent with Project ESMS; and
- refuse eligibility / withhold payments for any subproject found non-compliant with E&S eligibility requirements.

EXIM retains overall responsibility for E&S oversight as per ESCP of the Project.

Eligibility, screening and risk classification. As above, only subprojects assessed as Moderate or Low risk are eligible for financing under the LCC Project. High -risk- and Substantial-risk activities are excluded. See Table 1 above. Exclusions include:

- Involuntary land acquisition including any economic and physical resettlement.
- Significant risks to or impacts on the environment, community health and safety, biodiversity, or cultural heritage;
- Risk of significant retrenchment;
- significant occupational health and safety risks to workers (e.g. through chemical, physical or biological risks); and
- Risk of adverse impacts on Indigenous People.

Screening is carried out by KTB's E&S focal point during: i) a preparation of new Program of Activities (PoA) or revision of approved POA and before inclusion of Voluntary Program Activity (VPA) into the POA; and ii) before Emission Reductions Purchase Agreement (ERPA) signature. The screening will consider site sensitivity, the nature and scale of the activities (construction and operation), the labour profile and OHS risks, traffic and public -interface risks, waste and hazardous materials management, cultural heritage considerations, and community dynamics. Screening records will be maintained for WB review and reported in regular reporting.

Under Component 2 it is required that all Verified Emission Reductions (VERs) purchased have been issued under the Gold Standard, and therefore meet all stakeholder consultation, safeguards, and due diligence requirements to identify and manage environmental and social risks and impacts in accordance with the Gold Standard. To this end, the KTB will:

- Only enter into Emission Reduction Purchase Agreements and related purchase transactions for VERs that have been issued under the Gold Standard and that comply with the ERPA eligibility and E&S requirements specified in this POM;
- Ensure that all VER purchase transactions under Part 2(a) are executed and recorded through the Gold Standard registry; and
- Maintain documentation, satisfactory to the Bank, evidencing that each VER purchased under Part 2(a) has been certified and transacted in accordance with the Gold Standard and the ERPA

requirements, including evidence of registration, issuance, third party verification, and registry transfer.

Regular reporting and incident reporting as described under the Project ESMS are applicable for Part 2. KTB will prepare and submit the reports to Steering Committee to be shared with WB.

KTB will undertake E&S monitoring on a select basis and report findings in the regular reports to the WB on bi-annually basis.

KTB will use its GRM and report to WB as part of its regular reporting to WB.

KTB, as PIE, is responsible for implementing Project ESCP. KTB will report regarding ESCP implementation as part of its regular reporting to WB.

Annex F-10-1

KTB Semi-Annual Environmental & Social Monitoring Report

Thailand Low Carbon City (LCC) Project – Component 2 (VER Payment Facility)

1. Basic Information

Organization

Krung Thai Bank (KTB)

Project

Thailand LCC Project – Component 2 (VER Payment Facility)

Completed by

Position

Date

Reporting Period

From: ____ To: ____

2. Introduction

KTB prepares this report in accordance with the Project Agreement, ESCP, and POM E&S Annex. It covers ESMS implementation, subproject/VPA performance, exclusion list compliance, and risk classification.

3. Representation Statement

KTB confirms that all VERs are issued under Gold Standard, all VPAs screened, no High/Substantial risks financed, and all incidents reported.

4. Portfolio Summary

Type	Total	Screened	Low	Moderate	Rejected
Energy Efficiency Retrofits for Buildings					
Solar PV					
Transition to Electric Vehicles					
LED retrofits for public lighting					

5. VPA Tracking

VPA ID	PoA	Type	Location	Risk	ERPA	GS Issued

7. Incidents and E&S Issues

Client/VPA	Incident	Severity	Action	Status

8. External Communication / GRM

Indicator	Number
Total complaints	
This reporting period	
Resolved (%)	

9. ESCP Implementation

Action	Status	Remarks